Chula Vista

LEED for Neighborhood Development Workshop

October 1, 2013

City of Chula Vista
U.S. EPA
Smart Growth America
Criterion Planners
Welcome

Ed Batchelder - City of Chula Vista

Workshop tasks:

- Prepare preliminary ND scorecard for L Street project.
- Test Climate Neighbor ND tool on L St project.
- Assess ND applicability in eastern Chula Vista using Planning Area 12/FC2.
- Identify ways that Chula Vista can leverage ND to help achieve local sustainability goals.
EPA Technical Assistance Program

- Roger Millar, Smart Growth America
  - EPA technical assistance
  - Building Better Budgets
Eliot Allen

- Urban planner specializing in sustainability indicators
- Original ND core committee
- USGBC program consultant, 2007-present
- LEED Faculty, Location & Planning TAG
- ND community consultant
San Diego USGBC - Global Green - GBCI

- **ND Scorecard** – Doug Kot
- **Climate Neighbor** – Walker Wells
- **ND Referee** – Robyn Eason
## Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>9:00</td>
<td>Welcome/introductions</td>
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<tr>
<td>9:30</td>
<td>LEED-ND rating system</td>
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<td></td>
<td>Climate Neighbor tool</td>
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<td>10:00</td>
<td>L Street &amp; PA 12 projects</td>
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<tr>
<td>10:30</td>
<td>Break</td>
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<tr>
<td>10:45</td>
<td>Smart location credits</td>
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<tr>
<td>11:30</td>
<td>Neighborhood design credits</td>
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<tr>
<td>12:00</td>
<td>Lunch</td>
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<tr>
<td>12:45</td>
<td>Neighborhood design continued</td>
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<td>1:15</td>
<td>Green infrastructure &amp; bldg credits</td>
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<td>2:15</td>
<td>Recap results &amp; next steps</td>
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<td>2:45</td>
<td>Adjourn</td>
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Workshop Project Sites
Smart Growth

Smart growth means building urban, suburban and rural communities with housing and transportation choices near jobs, shops and schools.

These strategies support thriving local economies and protect the environment.
What I hear about smart growth

Wengen, Switzerland
Smart growth is ugly.
We have no history with it.
Nobody would want to live there.
It just doesn’t work here.
Shut up and drive!
The way we **design** and **build** our communities has enormous consequences.
We must be aware of 3 important factors affecting the future of our communities.

1. The **market** is changing, especially for housing.

2. The recipe for **economic growth** is changing.
THE CHANGING MARKET
Your community is changing and preferences and the market are following.
Your community is changing

- There are two demographic changes that are driving the market and must drive your decision making.
  - The rise of the Millennials.
  - The aging of the Baby Boomers.
Demographic change and the labor force

PROSPERITY
Your community is changing

Households with and without children, 1960-2025

- **Households with children (blue)**
  - 1960: 52%
  - 2000: 67%
  - 2025: 72%

- **Households without children (orange)**
  - 1960: 48%
  - 2000: 33%
  - 2025: 28%

The graph shows the percentage of households with and without children from 1960 to 2025.
The market: Housing

U.S. real estate supply vs. demand, 2003-2025

Housing units (in thousands)

- 2003 housing supply
- Projected 2025 housing demand
- Net new units needed

Legend:
- Attached homes
- Small lot homes
- Large lot homes
How will your community meets the needs of millennials and aging boomers in order to improve your competitiveness?
PROSPERITY
The nature of the economy is changing and so is the role of communities in economic growth.
The Assembly Line City
(City as Machine)

- Economy focused on Making and Moving Things.
- Mass production, functional segregation, specialization, top-down hierarchies of control.
The Network City
(city as network)
The rise of the **millennials** and the **global economy** are driving the economy.
The labor force

- Millenials choose where to live before finding a job.
  - 64% looked for a job after they chose the city where to live. (Source: U.S. Census)
- How people want to work is changing and where they want to work is changing.
PROSPERITY

The labor force

From office space....
The labor force

...to office settings.

Research Triangle Park, Raleigh, NC

Kendall Square, Cambridge, MA
Businesses respond to changing preferences

- Across the country corporations are responding to employee preferences and moving to the talent.
- They are choosing to relocate from suburban offices to downtown locations.
Businesses respond to changing preferences

Zappos, Las Vegas, NV

Hillshire, Chicago, IL
How can your community take advantage of the changing nature of the economy in order to create jobs and wealth?
How communities develop affects costs and revenue.
Municipal budgets are feeling pressure

- State and federal funds are disappearing
- Costs are escalating
- Tax bases have shrunk
Municipal budgets

• A large portion of municipal budgets go to *infrastructure* and *services*.
  – building and maintaining roads, bridges, sewer and water lines, etc
  – providing fire and police services, trash removal, paratransit, etc
Municipal budgets

- Costs are not just infrastructure related but also operations and maintenance.
- Burden usually falls on taxpayers.
Municipal budgets

• You have to spend on these things.

• You need to ensure that you are spending those funds in the most effective and efficient manner.

• Budgets are not just financial documents – they reveal are goals and what we value.
Development affects costs

- When it comes to infrastructure costs…
  - Compact development development is the best deal.
  - Low-density suburban development rarely pays for itself.
  - It makes sense to reuse existing infrastructure.
Building infrastructure to serve new development on the fringe can cost the city up to three times more per acre than urban infill development.
Development affects costs

- Compact development offers efficiencies in regards to **services** as well.
  - Police and fire departments have less area to cover.
  - Fewer miles of road to cover for snow removal and trash pickup.
When it comes to revenue…

– Compact development is the best deal.
– Low-density suburban development generates much less per acre revenue.
– You can increase your property tax base significantly simply by bringing back areas that already exist.
Development affects revenue

Per acre revenues by density and location in the State of California

Multifamily housing in near an area’s center can generate nine times more revenue per acre than traditional large-lot, single-family housing on the fringe.
Building infrastructure to serve new development on the fringe can cost the city up to three times more per acre than urban infill development.
Municipal property tax yield (per acre) 2011
Raleigh, NC
FISCAL HEALTH

Development affects revenue

Denser development can carry an entire city financially
Can your community continue to subsidize inefficiencies of development patterns, while not reaping the potential reward?
Thank you!

rmillar@smartgrowthamerica.org

www.smartgrowthamerica.org
LEED-ND Rating System - An Overview

- Goals
- Major uses of the system
- What it offers Chula Vista
Neighborhoods Matter

CO₂ savings available in neighborhood location/design

CO₂ Emissions Per Capita

- Low Density Single Use
  - Transportation
  - Building Operations
  - Materials

- Mixed High Density
  - Transportation
  - Building Operations
  - Materials

Norman, ASCE, 2006
LEED-ND Goals

**Location** within or connected to existing communities

**Compact, complete, connected** design

**Green** construction
Project + Community = ND

12 Prerequisites

- 6 on-site
- 6 off-site

100 Credit Points

- 62 on-site
- 38 off-site
Uses of the System

- Design excellence
- Triple bottom line development
- Accelerate community sustainability
Design Practitioners

- Compendium of best practices
- New professional opportunities, broader interdisciplinary palette
- Recognition of design excellence, green leadership
Development Projects

- Market differentiation, competitive advantage
- Attract investment
- Lower life-cycle costs
- Strengthen corporate responsibility commitments
- Partner in achieving community goals
Communities

- Sustainability audits of plans/codes
- Growth capacity of eligible lands: reduced infrastructure/operating costs, higher revenue/acre
- Incent/require use of ND:
  - Bonuses, green tape
  - Equivalency documentation
Policy-Based Credit Sets

Nat resource protection
Social equity
Smart growth
Water protection
Public health
Infrastructure efficiency
Climate protection

Credit

Criterion Planners
The Business Case for ND

ND distinctions

- Scale - beyond buildings to transportation/infrastructure
- Comprehensiveness - synergies among components
- Longevity – durability of measures

Results

- Triple bottom line payoff
- The 30% neighborhood
Environmental Performance

**Reductions**
- Land consumption
- Vehicle miles traveled
- Energy use, GHG emissions
- Stormwater runoff

**Gains**
- Habitat protection
- Water efficiency
- Renewable energy
- Recycling rates
## Financial & Economic Performance

### ND Strategy

<table>
<thead>
<tr>
<th>Compact redev with existing infrastructure</th>
<th>Benefits to Real Estate Developers/Investors</th>
<th>Benefits to Businesses</th>
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<tbody>
<tr>
<td></td>
<td>✔ Reduced land &amp; infrastructure costs</td>
<td>✔ Increased productivity, investment attraction</td>
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<th>Walkable places</th>
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<td>✔ Increased sales &amp; sale prices</td>
<td>✔ Increased economic activity</td>
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<tr>
<th>Diverse housing, stores, workplaces, transportation</th>
<th>Benefits to Real Estate Developers/Investors</th>
<th>Benefits to Businesses</th>
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<tr>
<td></td>
<td>✔ Increased sales &amp; investment value</td>
<td>✔ Increased employee &amp; customer attraction</td>
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Criterion Planners

EPA, Smart Growth & Economic Success, Dec 2012
Community Performance

- Cost savings: 38% lower capital costs, 10% lower operating costs
- Revenue increase: 10 times more per acre
- Greater choice/affordability in housing & transportation
- Enhanced social equity
- Improved public health
ND Prerequisites & Credits

Location

- 5 Prerequisites
- 9 Credits
- 27 Points

Design

- 3 Prerequisites
- 15 Credits
- 44 Points

Construction

- 4 Prerequisites
- 17 Credits
- 29 Points
Location Prerequisites

Within water & wastewater service area, and...

- **Infill/adjacent**
  - 75% surrounded or
  - 25% adjacent

  *or*

- **Transit-served**
  - 50% of dwellings/ businesses within 1/4-1/2 mile walk of quality service

  *or*

- **Walkable amenities**
  - 30% residential & 1/4-1/2 mile walk of 5-7 diverse uses
Location Credits

Location

- Previously developed
- Street connectivity
- Transit service
- Jobs/housing
- Bike network
- Brownfields & incentive areas

Resource protection

- Site design
- Restoration
- Long-term management
- Slope protection
Design Prerequisites

**Buildings**
Height 33% of street width, 15% of streets

**Density**
7-12 dwellings/acre
0.5-0.8 FAR

**Street Network**
90-140 intersections/sq mile
800 ft boundary intervals
90% with sidewalks
Design Credits

- Density & mixed-uses
- Walkable/connected streets
- Public outreach
- Diverse/affordable housing
- Access to amenities
- Visitability/universal design
- TDM programs
Green Infrastructure & Building Prereqs

One certified green building and...

**Energy**
- 90% of large bldg floor area
- 10% better than 90.1-2007;
- 90% of small bldgs
- Energy Star

**Water**
- 100% of large bldgs 20% less than EPA 92;
- 90% of small bldgs equiv 3 pts Homes WEc3

**ESC plan**
- BMPs from Western Wash State
Infrastructure & Building Credits

**Energy**
- Buildings
- Heat islands
- Solar
- Renewable power
- DHC
- Infrastructure

**Buildings**
- Green certification
- Water efficiency
- Reuse/historic adaptation

**Site**
- Tree protection
- Stormwater/wastewater
- Solid waste
- Light pollution
Project Eligibility Criteria

**ND 2009 guidelines:**

- Applicant - any kind of entity
- No minimum/maximum acreage
- Contiguous site (connecting ROWs ok)
- Must control majority of buildable land area
- Two building minimum
- Majority of total bldg floor area new or major renovation
Certification Process

By project development stage:

**Stage 1:** pre-entitlement plan

**Stage 2:** entitled plan or partially-constructed

**Stage 3:** fully constructed

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**Fees**

Registration $1500

Certification of first 20 acres $18,000, each additional acre $350
ND Projects in the San Diego Region

Civita - Gold

Market Creek - Silver

Westfield UTC - Gold

Paradise Creek - pending
A Workshop Tool

climate neighbor
for Chula Vista

An energy & greenhouse gas savings estimator based on LEED-ND neighborhood strategies
CN Savings Estimates & Inputs

- CN produces order-of-magnitude, sketch-level estimates to screen for strategies warranting further evaluation.

- It is not intended for environmental impact analysis or regulatory use.

**Proposed Development Inputs**
- Location
- Land-use
- Buildings
- Dwelling units
- Employment
- Street network
- Infrastructure
Chula Vista Climate Zones
Select ND Strategies

- Location & development character
- Transportation demand management
- Building energy & water efficiency
- Renewable energy production
- Infrastructure energy efficiency
## CN Test Results

### Conceptual Project Locations by Super TAZ

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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>% VMT reduction from location &amp; design character</td>
<td>18.5%</td>
<td>10.1%</td>
<td>10.6%</td>
<td>22.3%</td>
<td>20.0%</td>
<td>20.4%</td>
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<tr>
<td>% VMT reduction with all other transportation strategies</td>
<td>15.9%</td>
<td>15.9%</td>
<td>15.9%</td>
<td>11.4%</td>
<td>11.4%</td>
<td>11.4%</td>
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<tr>
<td>% energy reduction with all building strategies</td>
<td>15.1%</td>
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<tr>
<td>% energy reduction with all infrastructure strategies</td>
<td>0.1%</td>
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</tr>
<tr>
<td>% energy reduction with location &amp; all efficiency strategies</td>
<td>24.4%</td>
<td>20.2%</td>
<td>20.5%</td>
<td>24.4%</td>
<td>23.1%</td>
<td>23.6%</td>
</tr>
<tr>
<td>% GHG reduction with 0.25 MW renewable power (90% availability)</td>
<td>7.2%</td>
<td>7.4%</td>
<td>7.3%</td>
<td>6.9%</td>
<td>7.1%</td>
<td>6.6%</td>
</tr>
<tr>
<td>% GHG reduction with location, all efficiency strategies &amp; renewable power</td>
<td>32.9%</td>
<td>28.5%</td>
<td>28.7%</td>
<td>32.5%</td>
<td>31.3%</td>
<td>31.3%</td>
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Climate Neighbor Questions?
# L Street Scorecard Preparation

- **Base case**
- **Best case**

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<tr>
<th><strong>Certified</strong></th>
<th>40-49 points</th>
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<tr>
<td><strong>Silver</strong></td>
<td>50-59 points</td>
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<tr>
<td><strong>Gold</strong></td>
<td>60-79 points</td>
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<tr>
<td><strong>Platinum</strong></td>
<td>80+ points</td>
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</table>
L Street Project – Mixed-Use Redevelopment
L Street – Existing Uses
L Street - Site Plan

- 22.81 acres
- 869 DU
- 26,400 sq ft commercial
- Park 2.86 ac
L Street - Street Cross-Sections

Street Section 1

Street Section 2
L Street - Elevations
L Street – Illustrative Facades
ND Applicability to Eastern Chula Vista
Planning Area 12/FC 2 and Vicinity
FC 2 Project Area Concept

PA12/FC2 SITE PLAN CONCEPT

Visibility from SR 125
Visibility from Olympic Pkwy
Visibility from Olympic Pkwy & Eastlake Pkwy

Commercial (hotel)
Commercial (retail)
Residential (apartments)
Park

Residential setback @ SR125
Pedestrian connection to OR Village 6 via BRT overpass
BRT guideway
Pedestrian/Vehicular Connection to Otay Ranch Town Center
Transit stop: Walkable from residential
BRT stop
FC 2 Site Plan Concept – Illustrative Only
LEED-ND Rating System

**Smart Location & Linkage**
- 5 prerequisites
- 27 points

**Neighborhood Pattern & Design**
- 3 prerequisites
- 44 points

**Green Infrastructure & Buildings**
- 4 prerequisites
- 29 points
SLLp1 Smart Location: All Projects

- Existing water & wastewater service
- Or planned service in legally-adopted service area and services provided as part of project
SLLp1 Option 1: Infill

- 75% surrounded by previous development
- Site and bordering parcels 75% surrounded
- 75% previous development within one-half mile
- 140 intersections per square mile within one-half mile
SLLp1 Option 2: Adjacent & Connected

- 25% adjacent previous development
- 90 intersections per square mile
- ROW intersects average 600 feet
SLLp1 Option 3: Transit-Served

- 50% of dwellings and non-residential uses within one-quarter to one-half mile walk of transit stops
- Transit rides: 60 trips weekdays; 40 trips per weekend day
- Planned transit fully committed, including funding
SLLp1 Option 4: Nearby Assets

- Walkable existing diverse uses
- Project square footage minimum 30% residential
- Walk distances:
  - One-quarter mile from boundary to five uses
  - Project center within one-half mile of seven uses
Three compliance pathways:

- No species or communities present or likely
- Species or communities found: Comply with HCP
- Species or communities found: Prepare HCP
Locate on site with no wetlands, water bodies, or land within 50 feet of wetlands, and land within 100 feet of water bodies.

Two compliance pathways if wetlands and/or water bodies located on site:

- Wetlands and buffers not impacted unless minor improvement or previously developed
- Earn 1 point under GIB c8 – Stormwater Management and impact limited to a percentage of land based on project density
Do not develop within state or locally-designated agricultural preservation districts

Five compliance pathways:
- Locate on non-prime soils
- Infill
- Transit served
- Development rights receiving area
- Site with impacted prime soils must mitigate based on density
Three compliance paths:

1. Sites without floodplains
2. Locate on infill or previously developed site, and comply with NFIP within floodplain portion.
3. Other sites with floodplains: only develop outside floodplain or previously developed portions.
SLLc1: Preferred Locations

- **Option 1**
  - Previously developed/adjacent/infill sites

- **Option 2**
  - Over 200 intersections per square mile

- **Option 3**
  - Federally-designated high-priority redevelopment areas, eg enterprise zones
Option 1: Locate on a designated brownfield and remediate.

Option 2: Locate in EPA superfund site, federal empowerment zone, etc.
SLLc3: Reduced Auto Dependence

- **Option 1**
  - Transit-served locations
  - Detailed calculation based on transit type, number of trips and project acreage

- **Option 2**
  - Traffic analysis zone with 90% or less of regional average Vehicle Miles Traveled (VMT)
**SLLc3: Reduced Auto Dependence**

Minimum daily transit stops rides for bus, streetcar, rail or ferry

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<th>Weekday Trips</th>
<th>Weekend Trips</th>
<th>Points</th>
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<td>246</td>
<td>150</td>
<td>6</td>
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<tr>
<td>320</td>
<td>200</td>
<td>7</td>
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At least 1 of 3:

- Existing bike network of 5 miles + within ¼-mile.

- If 100% residential, existing network within ¼-mile connecting to school or job center within 3 miles.

- Existing network within ¼-mile connecting 10+ diverse uses within 3 miles.

And storage:
1 space/occupant for 30% of res units; 1 space/worker for 10% of workforce plus 1 space/5000 sq ft for visitors, etc.
Option 1
30% residential share of total sq ft, and center within ½-mile walk of existing jobs equal or greater than projects DU count, and earn Affordable Housing point.

Option 2
Same as Option 1 but without affordable housing.

Option 3
30% non-residential share of total sq ft, on infill site, and within ½-mile walk of heavy transit, and existing DUs equal or greater than 50% of new jobs in project.
Option 1
Locate on sites without slopes greater than 15%, or do not disturb such slopes.

Option 2
On previously developed sites with 15+% slopes, restore slopes with native plantings.

Option 3
On sites not previously developed, protect 15+% slopes: no disturbance of 40+%, limited development of 25-40% slopes, CC&R protections.
Option 1
Locate on site without significant habitat.

Option 2
Delineate and protect significant habitat.

Option 3
Conserve 100% of all wetlands, water bodies, and buffers.
SLLc8 Restoration of Habitat/Water Resources

Restore native ecological communities or water resources in an area equal or greater than 10% of the project development footprint.

(development footprint = total imperviousness)
Create & implement a minimum 10-year management plan for habitat and/or water resources.
LEED-ND Rating System

Smart Location & Linkage

5 prerequisites
27 points

Neighborhood Pattern & Design

3 prerequisites
44 points

Green Infrastructure & Buildings

4 prerequisites
29 points
NPDp1: Walkable Streets

- Minimum 90% of building entries facing public spaces.

- Minimum 15% of street frontages with 1:3 BH-SW ratio.

- Sidewalks on both sides of 90% of streets.

- Maximum 20% of street frontages devoted to garage/service bay openings.
Option 1: Projects with 76+ weekday transit rides

- Residential density: 12 DU/acre
- Nonresidential density: 0.8 FAR
All other projects

- Residential densities: 7 DU/acre
- Nonresidential densities: 0.5 FAR
Intersections per square mile: 140 internal or 90 external

Internal streets intersect boundary every 800 feet

Gated areas not counted in intersection density denominator
NPDc1 Walkable Streets

- 50-80% of facades with 1-25 ft setbacks.

- Ground-level uses and parking: clear glass facades, blank walls, unshuttered windows, on-street parking on 70% of streets, sidewalks on 100%, raised ground-floor DUs, mixed-use ground floors, 1:3 BH-SW on 40% of streets.

- 70-75% of internal streets at 20-25 mph.

- Driveway crossings no more than 10% of sidewalk length.
### NPDc2 Compact Development

#### Residential Density
- **(DU/ac)**
  - 10-13
  - 13-18
  - 18-25
  - 25-38
  - 38-63
  - 63+

#### Non-Res Density
- **(FAR)**
  - 0.75-1.0
  - 1.0-1.25
  - 1.25-1.75
  - 1.75-2.25
  - 2.25-3.0
  - 3.0+
NPDc3 Mixed-Use Neighborhood Centers

- 50% of DUs within ¼-mile walk of 4+ diverse uses.

- Projects over 40 acres must cluster diverse uses with 3-9 uses per cluster, and maximum 300-400 ft between uses in cluster.

- Projects with 150k+ retail sq ft must earn Reduced Auto Dependence point.
# Diverse Uses

## Food Retail
- Supermarket
- Other food store with produce

## Community-Serving Retail
- Clothing
- Convenience
- Farmer’s market
- Hardware
- Pharmacy
- Other retail

## Services
- Bank
- Gym, health club
- Hair care
- Laundry, dry cleaner
- Restaurant (no drive-throughs)

## Civic and Community Facilities
- Adult or senior care
- Child care
- Community or recreation center
- Cultural arts facility
- Educational facility
- Family entertainment venue
- Government office
- Place of worship
- Medical clinic
- Police or fire station
- Post office
- Public library
- Public park
- Social services center
NPDC4 Mixed-Income Diversity

Option 1: Housing Type Diversity
  - Categories: 20
  - Simpson diversity index

Option 2: Affordable Housing
  - Rental and for-sale percentages of total units
  - A 15-year affordability commitment

Option 3: Combined Options 1 & 2
  - Bonus point if two points achieved in both Options 1 and 2
### NPDc4 Mixed-Income Diversity

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<tr>
<th></th>
<th>Rental dwelling units</th>
<th>For-sale dwelling units</th>
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<td></td>
<td>Priced up to 60% AMI</td>
<td>Priced up to 80% AMI</td>
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<td>Percentage of</td>
<td>Points</td>
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Off-street surface lots: at rear or side of buildings; maximum 2 acres each; total lots maximum 20% of development footprint.

Bike parking per SLLc4.
NPDc6 Street Network

- Intersect boundary at least every 400 ft with through-connection or stub-out.
- 90% of cul-de-sacs must have non-motorized through-connection.
- Internal connectivity: 300-400 intersections/sq mi or 400+. 
NPDc7 Transit Facilities

- Transit stop shelters: roof, partial wall, seating, lighting, route info.
- Reserve space for future stops/shelters.
Option 1: TDM program that reduces peak-period auto trips 20%.

Option 2: Transit passes, 1 year, 50% subsidy, all occupants first three years.

Option 3: Developer-sponsored transit from project to public transit/employment centers.
Civic spaces: square, park, paseo or plaza

90% of dwelling units within 1/4-mile walk distance

Minimum size: 1/6 acre

Projects over 7 acres: median size must be half acre or more

Spaces under quarter acre: must be no narrower than 1 unit wide by 4 units long
NPDc10 Access to Recreational Facilities

- 90% of dwellings and jobs within 1/2-mile walk of recreational facilities

- Minimum size
  - Outdoor: 1 acre
  - Indoor: 25,000 square feet

- Must consist of physical improvements
NPDc11 Visitability & Universal Design

- Option 1: at least 20% of DUs comply with stipulated design criteria.
- Option 2: construct/retrofit public ROWs for ADA/ABA compliance.
NPD c12 Outreach & Involvement

- Community outreach beyond official proceedings
- Charrette
- Local endorsement from smart growth evaluation program
NPD c13: Local Food Production

- All projects: allow gardens/greenhouses in any yard
- Community garden on-site or within half mile
- Community supported agriculture (CSA) shares
- Farmers' market within ½ mile
Option 1
Tree-Lined Streets – 60% of streets both sides every 40 ft.

Option 2
Shaded Streets – 40% of sidewalks shaded by trees or structures.
NPDc15: Neighborhood Schools

- 30% of project residential; 50% of DU within 1/2 to 1 mile of elementary/ middle/high school
  - School campus maximum size:
    - Elementary: 5 acres
    - Middle: 10 acres
    - High: 15 acres
- Detailed walk route requirements
LEED-ND Rating System

Smart Location & Linkage

Neighborhood Pattern & Design

Green Infrastructure & Buildings

5 prerequisites  27 points

3 prerequisites  44 points

4 prerequisites  29 points
- One certified green building
- Any LEED rating system
- Allows other rating systems if meets ISO standard
GIBp2 Minimum Building Energy Efficiency

- 90% of square footage in non-residential, mixed-use, 4-story or higher multi-family buildings:
  - New construction: 10% savings
  - Renovations: 5% savings
  - Three documentation paths

- 90% single-family/multi-family under 4-story buildings:
  - ENERGY STAR (BOP or HERS)
Large non-residential and mixed use
- 100% of bldgs: 20 percent less than federal baseline

Small residential
- 90% of bldgs achieve equivalent of 3 LEED for Homes points
Erosion & sedimentation control plan
BMPs from Wash Dept Ecology Stormwater Mgmt Manual
Must address air pollution from construction.
**Option 1: Ten or Fewer Bldgs** - One to five additional certified buildings beyond prereq building.

**Option 2: All Projects** - Percentage of total building sq ft beyond prereq building: 10-50+%.
GIIBc2 Building Energy Efficiency

- New large buildings: 18-26% savings.
- Renovated large buildings: 14-22% savings
- Small residential: HERS of at least 75.
Minimum savings increases to 40% for 100% of large buildings.

Small residential – 90% of buildings must theoretically earn 3 points under LEED-H.
50% reduction from midsummer baseline for 100% of irrigated area within project.
Reuse buildings to achieve the *greater* of:

- 50% of one building structure and envelope
- 20% of total existing building stock

- Do not demolish any historic buildings
Historic building(s) and/or cultural landscape must be present.

Do not disturb; if restored, adhere to applicable standards.
Option 1
Locate 100% of development footprint on previously developed land.

Option 2
Leave undisturbed 10-20% of undeveloped portion based on project density.

All Projects
Survey and protect important trees.
GIBc8 Stormwater Management

- Reuse, infiltrate, or evapotransporate rainfall from 80-95\textsuperscript{th} percentile event.

- Example:
  - The 95\textsuperscript{th} percentile event: 1.5 inches rainfall
  - Volume to retain on-site: 1.5 inches
  - Base points earned: 4

- Western Washington State BMPs or more stringent alternatives

- Earn additional points if previously developed site, brownfield, or high-scoring NPD design
GIBc9 Heat Island Reduction

Roofs - 75% at SRI 29-78 or 50% vegetated ("green") roofs

Non-roof measures: 50% of hardscape – shade, open grid or SRI 29 paving
Option 1
75% of blocks within 15 deg E-W.

Option 2
75% of building sq ft
GIBc11 On-Site Renewable Energy

- Solar; wind; geothermal; small-scale hydroelectric; biomass

- Must be located on-site

- Can be combination of measures

- Up to 3 points depending on percentage of annual energy cost covered
At least 2 buildings.

Minimum 80% of total annual thermal load (excluding existing bldgs and SF residential).

Each component must be 10% more efficient than baseline.
15% savings over baseline components.

All new infrastructure: traffic signals, street lights, water/wastewater pumps.
Retain onsite at least 25-50% of wastewater for reuse that replaces potable water.
Sum of postconsumer recycled content, in-place reclaimed material, and half of preconsumer recycled content, must equal at least 50% of infrastructure material mass.
GIBc16 Solid Waste Management

- Implement four of five measures:
  - Recycling
  - Drop-off point for hazardous materials
  - Compost station for occupants
  - Recycling containers on mixed-use blocks
  - Recycle 50% of construction debris
GIBc17 Light Pollution Reduction

- Shared residential areas – 50% of lights use motion sensors to reduce light levels by 50% with no activity for 15 minutes.

- All shared area lights must have daylight sensors.

- Comply with international standards for light power density, trespass, and glare.
Innovation & Design Process/Regional Priorities

- Innovative proposal not addressed by credits
- Exemplary performance for select credits
- LEED-AP on design team
- Attempt credits that are also regional priorities
1 to 5 proposals: potentially earn 1 to 5 points.
Exemplary performance: where offered by specific credits.
Innovation: proposals invited for items not already addressed by credits.
IDPc2 LEED Accredited Professional

- LEED AP on the project team.
- Also recognize CNU, NRDC, and SGA-approved credentials.
RPC Regional Priority Credits

- 1 to 4 points by achieving up to four regional priority credits.

- L Street zip code 91911 RPCs:
  - SLLc4 Bike net/storage
  - NPDc3 Mixed-use
  - NPDc4 Mixed income
  - NPDc5 Reduced parking
  - GIBc3 Bldg water efficiency
  - GIBc14 Wastewater mgmt
The Finish Line – Results!

- ND Scorecard
- Climate Neighbor savings
L Street - Preliminary ND Score

Certified
40-49 points

Silver
50-59 points

Gold
60-79 points

Platinum
80+ points
L Street - Climate Neighbor Results
1. **Gauge Community Conditions**
   - Prepare checklist audit of plan/codes for ND strengths, weaknesses, gaps, conflicts.
   - Inventory ND-eligible lands to locate & quantify community-wide development potential & infrastructure savings.

2. **Remove Code Barriers**
   - Use audit results to eliminate barriers to ND projects.

3. **Align Plans & Implementation Measures**
   - Amend plans/measures to incorporate ND objectives and strategies.
   - Establish an ND overlay or floating zone to facilitate projects.
   - Obtain “ND Ready” designations of sub-area plans from USGBC.
4. **Establish Incentives**
- Create incentives, eg green tape, development bonuses, fee reductions.

5. **Catalyze Projects**
- Sponsor technical education for local designers/developers.
- Include ND provisions in public agency RFPs for land development.
- Create public-private partnerships for ND projects.
- Provide data and assistance in documenting vicinity conditions around proposed projects.

6. **Require Consideration /Certification**
- Define covered projects and require ND-equivalent documentation without certification.
- Define covered projects and require ND certification (including minimum credits and points).
Next Steps

- Further L Street consideration of ND strategies
- Finalize Climate Neighbor tool and deployment
- Examine additional ways to leverage ND to achieve local goals, including eastern areas
- Encourage participation at Dec 9 regional ND workshop
Thanks!

- City of Chula Vista
- U.S. EPA
- Smart Growth America
- Criterion Planners