

Chula Vista, California



LEED for Neighborhood Development Workshop Results & Recommendations

October 2013



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

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Location within or connected to existing communities



Compact, complete, connected **design**



Green **construction**

Chula Vista, California was selected in 2013 to receive U.S. EPA technical assistance in use of the LEED for Neighborhood Development (ND) rating system to foster and accelerate sustainable development. Chula Vista has a long-standing commitment to smart growth and the reduction of growth-related global warming emissions, and ND is seen as an additional tool for accomplishing these community goals.

The ND technical assistance was provided by U.S. EPA through its grantee Smart Growth America, and the SGA subcontractor Criterion Planners. The scope and objectives of the assistance included:

- A one-day workshop to apply the ND rating system to community-nominated conceptual project sites as a means of familiarizing local stakeholders with the rating system and its benefits, and to encourage further consideration of ND strategies by the projects during their planning processes. The two conceptual project sites were L Street and Planning Area 12.
- A set of recommendations for additional leveraging of the ND system on a community-wide scale to further accelerate achievement of local sustainability goals.

Additionally, the workshop was used as an opportunity to test Climate Neighbor, an ND tool developed in parallel by the City to estimate the energy and greenhouse gas emission savings of ND projects.

The L Street project was found to be ND certifiable without major obstacles; and the Planning Area 12 site was found to be largely ND eligible, except for NPDp2 Compact Development where non-residential density compliance may be problematic. In general, ND appears to be viable for projects in western Chula Vista where land-use density and diversity, and street network density, are all relatively favorable for ND-style development. Alternatively, eastern Chula Vista's relatively low density

and use mix, and topographically-influenced street network, can only be feasible for ND with careful location and design of project features, particularly non-residential floor area ratios and building height-to-street width ratios.

Beyond the L Street and Planning Area 12 results, and implications for western and eastern Chula Vista, a set of 15 community-wide options are recommended for the City's consideration in using ND as a tool to accelerate local sustainability.

The following sections summarize workshop proceedings, the conceptual ND projects and their evaluation results, and recommended options for further leveraging of LEED-ND.

Workshop

The LEED-ND workshop was held on October 1, 2013. Approximately 30 attendees represented the City, other local agencies, San Diego Gas & Electric, and development teams for two conceptual project sites: L Street and Planning Area 12.

Smart Growth America and Criterion Planners were assisted by City staff and representatives of the Green Building Certification Institute, the San Diego Chapter of the U.S. Green Building Council, and Global Green.

Using the agenda shown on the right, the participants applied the rating system in two ways:

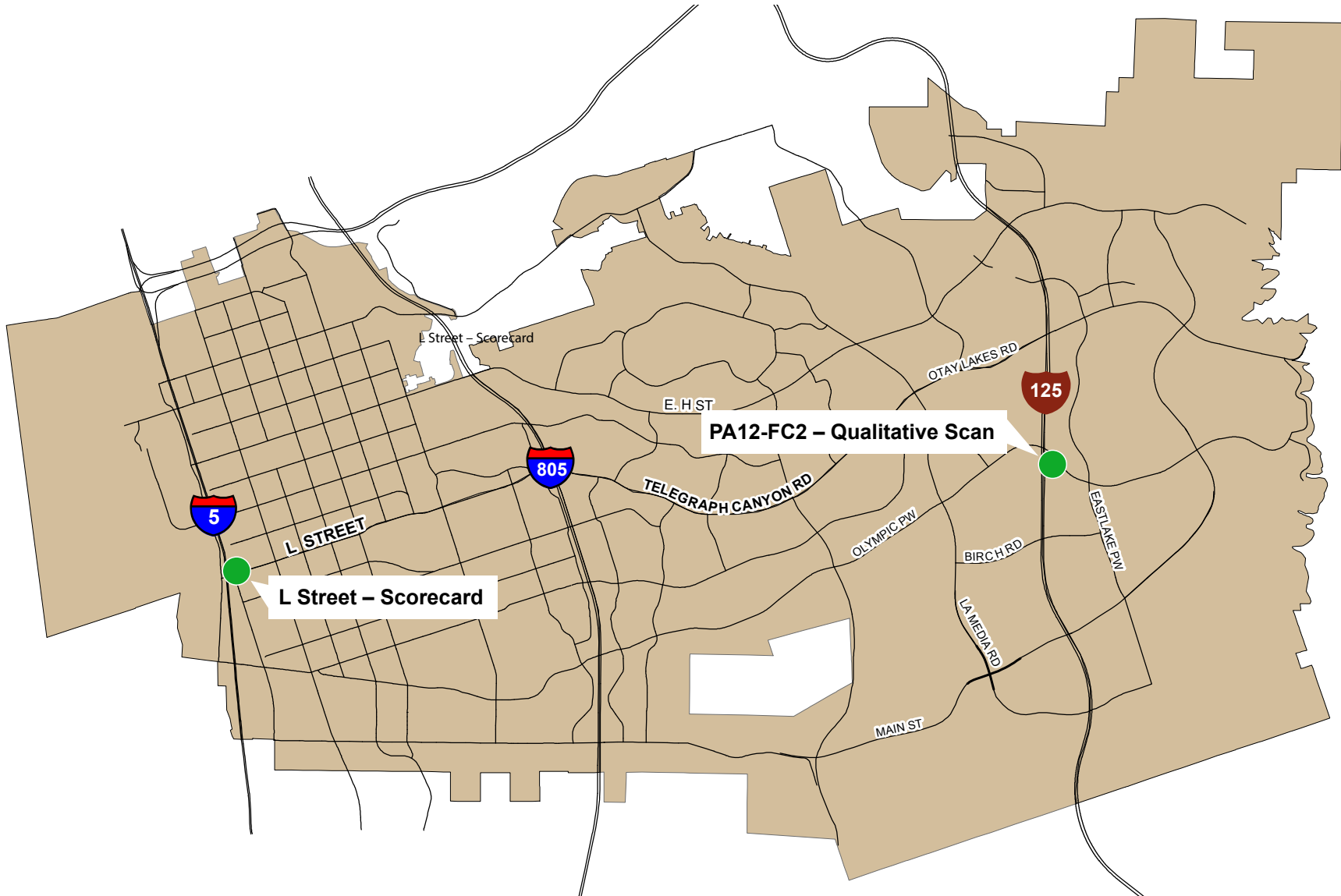
- A preliminary scorecard was prepared for the L Street project.
- A qualitative scan of feasibility was discussed for the Planning Area 12 project and eastern Chula Vista generally.

A follow-up regional workshop on LEED-ND, including Chula Vista's initiatives, will be held by the San Diego chapter of the U.S. Green Building Council on December 9, 2013.

Agenda

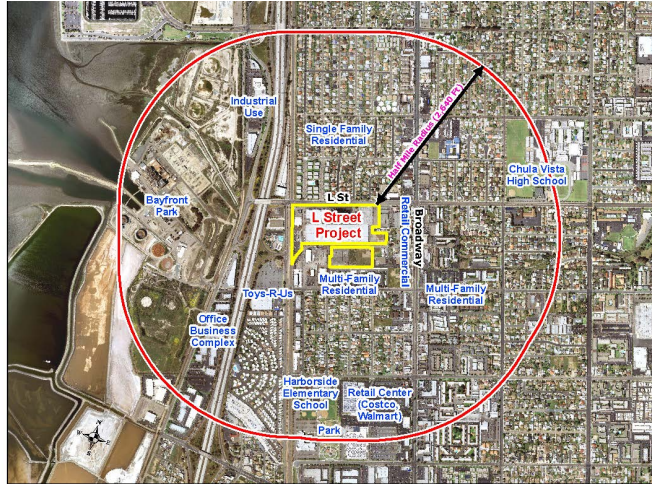
- 9:00 Welcome/introductions
- 9:30 LEED-ND rating system
Climate Neighbor tool
- 10:00 L Street & PA 12 projects
- 10:30 *Break*
- 10:45 Smart location credits
- 11:30 Neighborhood design credits
- 12:00 *Lunch*
- 12:45 Neighborhood design continued
- 1:15 Green infrastructure & building credits
- 2:15 Recap results & next steps
- 2:45 Adjourn

Conceptual ND Project Sites

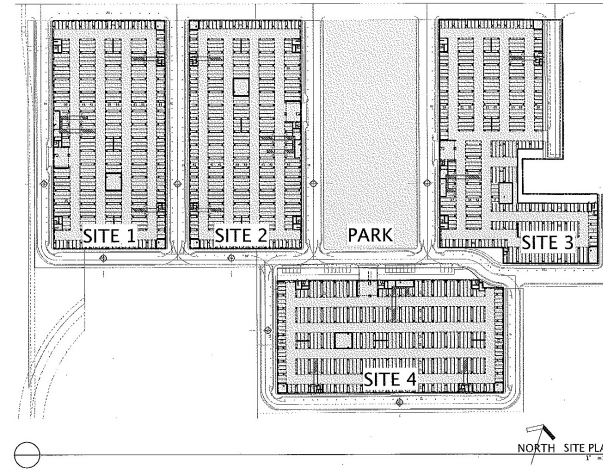


L Street Project

Vicinity Uses



Site Plan



- 22.81 acres
- 869 DU
- 26,400 sq ft commercial
- Park 2.86 acres

Perspectives

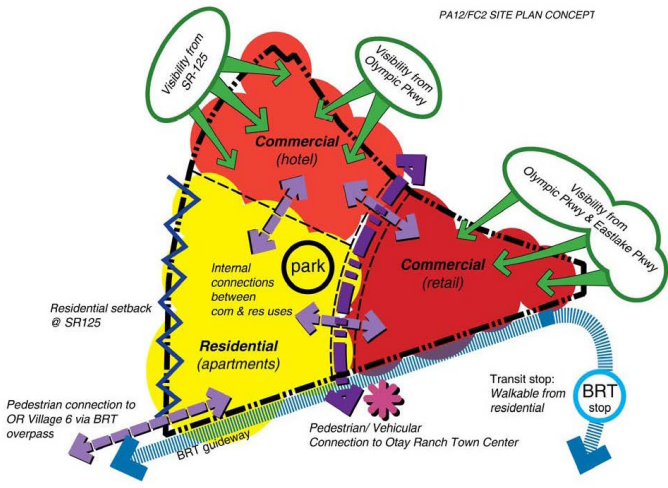


Planning Area 12 Project

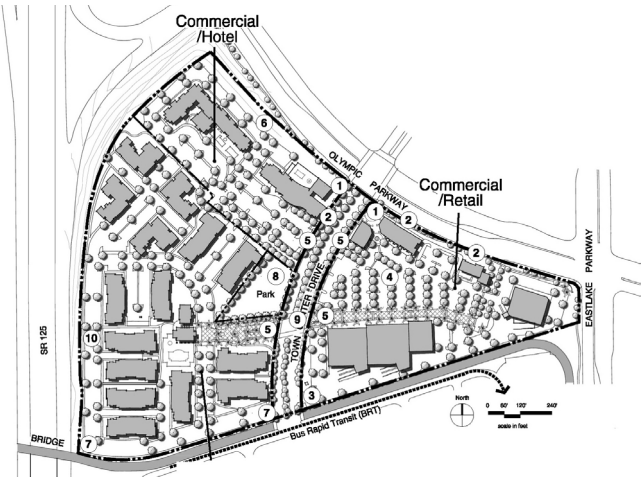
Vicinity Uses



Project Area Concept



Site Plan Concept – Illustrative Only



L Street Scorecard



LEED 2009 for Neighborhood Development

Project Checklist

L Street Project, Chula Vista, CA

PRELIMINARY LEED ND 2009 Workshop 01 Oct 2013

22.86 acre site includes 869 DU, 26K+ sf retail use and 2.8 ac park

10 1 16

Smart Location and Linkage

Possible Points: 27

Base	Best	N
Y		
Y		
Y		
Y		
Y		
5		5
1		1
1		6
		1
1		2
1		0
1		0
		1
	1	0

Prereq	Credit	Points	Req
Prereq 1	Smart Location		Req
Prereq 2	Imperiled Species and Ecological Communities		Req
Prereq 3	Wetland and Water Body Conservation		Req
Prereq 4	Agricultural Land Conservation		Req
Prereq 5	Floodplain Avoidance		Req
Credit 1	Preferred Locations	10	
Credit 2	Brownfield Redevelopment	2	
Credit 3	Locations with Reduced Automobile Dependence	7	
Credit 4	Bicycle Network and Storage	1	
Credit 5	Housing and Jobs Proximity	3	
Credit 6	Steep Slope Protection	1	
Credit 7	Site Design for Habitat and Wetland and Water Body Conservation	1	
Credit 8	Restoration of Habitat or Wetlands and Water Bodies	1	
Credit 9	Long-Term Conservation Management of Habitat or Wetlands and Water Bodies	1	

Notes:

Served by Water and Sewer District, 100 percent surrounded--serves an infill site, adequately transit-served, diverse uses may not be reachable within radius per program

Non-issue for L-Street

Non-issue for L-Street

Non-issue for L-Street

Non-issue for L-Street

Option 1, path d: infill site that is also a previously developed

Site is reported to be contaminated and will require remediation work, not currently listed as 'brownfield'

Design Criteria: Half of residential entrances must be within radius

Requirement for bike storage was deemed to be cost-prohibitive. Depending on final unit mix, attainment may require 400+ "secure, enclosed bicycle storage" space.

Option 2 good for 1 point, 700,000 square feet of non-res with 336 business licenses in area

Flat site equals easy points

Option 1 is an automatic

Does not apply to project

Consideration of the residual parcel along MTS right-of-way to be developed as native habitat

15 1 28

Neighborhood Pattern and Design

Possible Points: 44

Base	Best	N
Y		
Y		
Y		
3		9

Prereq	Credit	Points	Req
Prereq 1	Walkable Streets		Req
Prereq 2	Compact Development		Req
Prereq 3	Connected and Open Community		Req
Credit 1	Walkable Streets	12	

Notes:

To be determined by design. Entrances (as conceived) will enter to HOA common area (deemed to be okay), street-wall to street-width is okay, sidewalks okay, driveway entrances to comply via design

Outside project area calculates to 175 acres per square mile

Correlates to prereq 1, more can be done here with the design of the neighborhood (designation of internal streets and the street to building connection points) see detailed notes to right >>>>

3	1	2
1		3
3		4
		1
		2
		1
		2
1		0
1		0
1		0
		2
		1
1		1
1		0

Credit 2 Compact Development

Credit 3 Mixed-Use Neighborhood Centers

Credit 4 Mixed-Income Diverse Communities

Credit 5 Reduced Parking Footprint

Credit 6 Street Network

Credit 7 Transit Facilities

Credit 8 Transportation Demand Management

Credit 9 Access to Civic and Public Spaces

Credit 10 Access to Recreation Facilities

Credit 11 Visitability and Universal Design

Credit 12 Community Outreach and Involvement

Credit 13 Local Food Production

Credit 14 Tree-Lined and Shaded Streets

Credit 15 Neighborhood Schools

6

4

7

1

2

1

2

1

1

1

2

1

2

1

Will depend on the intensity of non-residential use... as calculated for LEED ND this may result in a LEED ND FAR for non-res around 1.0

Focus on the leasing plan for the project can help to achieve higher point values

Preliminary calculation as 0.72 diversity index score

Does not apply to project

Does not apply to project

Does not apply to project

Requires interpretation of Car2go (park anywhere model), and developer commitment to unbundle parking

Achieved through park developed within site boundary

To be precisely calculated walking route to active park, or a dedicated portion of the park for active rec

Option 2 to be considered, design guidelines may be needed to confirm compliance

The design is too far along to capture this point

Not desired by the developer

Tree-lined street attained, shaded streets not likely

Project complies with nearby schools

7	3	16
---	---	----

Base Best N

Y		
Y		
Y		
Y		
1	1	3
1	1	
		0
1		0
		0
		0
1		0
		4
1		0
1		0
		3
		2
	1	0
		2
		1
1		0
		1

Green Infrastructure and Building

Possible Points: 29

Prereq 1	Certified Green Building	Req
Prereq 2	Minimum Building Energy Efficiency	Req
Prereq 3	Minimum Building Water Efficiency	Req
Prereq 4	Construction Activity Pollution Prevention	Req
Credit 1	Certified Green Buildings	5
Credit 2	Building Energy Efficiency	2
Credit 3	Building Water Efficiency	1
Credit 4	Water-Efficient Landscaping	1
Credit 5	Existing Building Use	1
Credit 6	Historic Resource Preservation and Adaptive Reuse	1
Credit 7	Minimized Site Disturbance in Design and Construction	1
Credit 8	Stormwater Management	4
Credit 9	Heat Island Reduction	1
Credit 10	Solar Orientation	1
Credit 11	On-Site Renewable Energy Sources	3
Credit 12	District Heating and Cooling	2
Credit 13	Infrastructure Energy Efficiency	1
Credit 14	Wastewater Management	2
Credit 15	Recycled Content in Infrastructure	1
Credit 16	Solid Waste Management Infrastructure	1
Credit 17	Light Pollution Reduction	1

Notes:

Must be written into the post-entitlement transfer. Can include Build It Green Green Point Rated, LEED for Homes, or other LEED.

Achieved through the energy reach code

Achieved through CalGreen

Achieved through standard practice

Under consideration

Basic performance required by Chula Vista code

Believed to be difficult to attain with primarily residential use

Likely attained by landscape materials and irrigation technology

Does not apply

Does not apply

Attainable via site condition

Likely not attainable on-site (based on attainment of NPD credits)

Attainable via energy code compliance

To be reviewed for precise alignment with development of the plan

Not likely to be pursued

Not likely to be pursued

Attainable through street lighting standards (if lights are installed)

Not likely to be pursued

Not likely to be pursued

Required by City

Not likely to be pursued

1	3	0
---	---	---

Base Best N

	1	
	1	
	1	
		0
		0
1		

Innovation and Design Process

Possible Points: 6

Credit 1.1	Innovation in Design: Quantified carbon reductions for in-situ remediation	1
Credit 1.2	Innovation in Design: Green Cleaning	1
Credit 1.3	Innovation in Design: Green Education	1
Credit 1.4	Innovation in Design: Specific Title	1
Credit 1.5	Innovation in Design: Specific Title	1
Credit 2	LEED Accredited Professional	1

Notes:

May qualify for an ID credit if carbon savings can be quantified

Common ID credit

Common ID credit

Other options available

Other options available

Assumed

2	0	0
---	---	---

Base Best N

1		
1		
		0
		0

35	8	60
----	---	----

Regional Priority Credits

Possible Points: 4

91910

Credit 1.1	Regional Priority: Mixed-income Divers Communities (NPD c4)	1
Credit 1.2	Regional Priority: Mixed-Use Neighborhood Centers (NPD c3)	1
Credit 1.3	Regional Priority: Specific Credit	1
Credit 1.4	Regional Priority: Specific Credit	1

Notes:

Regional Priority Credit options for 91910 include:
 SLL c4, NPD c3, NPD c4, NPD c5, GIB c3, or GIB c14
 Performance threshold to be verified for each option
Note: only 4 points can be achieved from 6 RP options

Total

Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

Note: Best case points are additive to the Base Case, giving L Street a total Best Case score of 43, or Certified.

Climate Neighbor L Street ND Strategies



LEED-ND Strategy Selection

Climate Neighbor estimates savings from LEED-ND strategies, rather than credit compliance for ND certification. In some cases, project characteristics may fall below ND thresholds, but nonetheless produce valuable savings that are included in CN estimates. For projects pursuing ND certification, CN should be used in conjunction with credit threshold information in the LEED-ND rating system. ND regional priority credits for Chula Vista can be found by zip code at www.usgbc.org/rpc.

PREVIEW
% Total Project
Energy Saved

Location & Development Character

Location assets (attempt at least 5 of 9 strategies to check box)

- Preferred location - infill/connected
- Reduced auto use - rail/BRT transit service
- Jobs/housing proximity
- Compact development
- Mixed-use neighborhood centers
- Civic space/park access
- Recreation facility access
- Local food access
- School access
- Bike network proximity (within 0.5 mi)
- Walkable/shaded streets
- Mixed-income housing

% DU that are deeded affordable units

19.47%

0.51%
0.81%
0.00%

Transportation Demand Management

Vehicle sharing

0.60%

Unbundled off-street parking

Monthly parking cost on project site (\$)

0.00%

The following strategies are only available to projects with non-residential components:

Transit passes

% employees eligible
Subsidy amount

0.00%

Private shuttle service

% employees eligible
Average employer size

0.00%

Telecommuting/alt. work schedules

% employees participating
Work schedule:

0.00%

Price workplace parking

% employees subject to pricing
Daily parking charge (\$)

0.00%

Employee parking cash out

% employees eligible

0.00%

Commute trip reduction programs

% employees eligible

0.00%

Building Energy & Water Efficiency

Building energy efficiency

% annual energy use reduction

2.28%

Building indoor water efficiency

% annual water use reduction

0.77%

Water efficient residential landscape irrigation

% annual water use reduction

0.00%

Heat island reduction (projects 10 ac or larger)

0.12%

Solar orientation of residential buildings

0.00%

Renewable Energy Production

Renewable energy production

Annual renewable energy production (MWh)

N/A

Infrastructure Energy Efficiency

Infrastructure energy efficiency

% annual energy use reduction:
Street lights
Traffic signals

0.00%

Water efficient public landscape irrigation

% annual water use reduction

0.00%

Wastewater management

% annual wastewater reuse on-site

0.00%

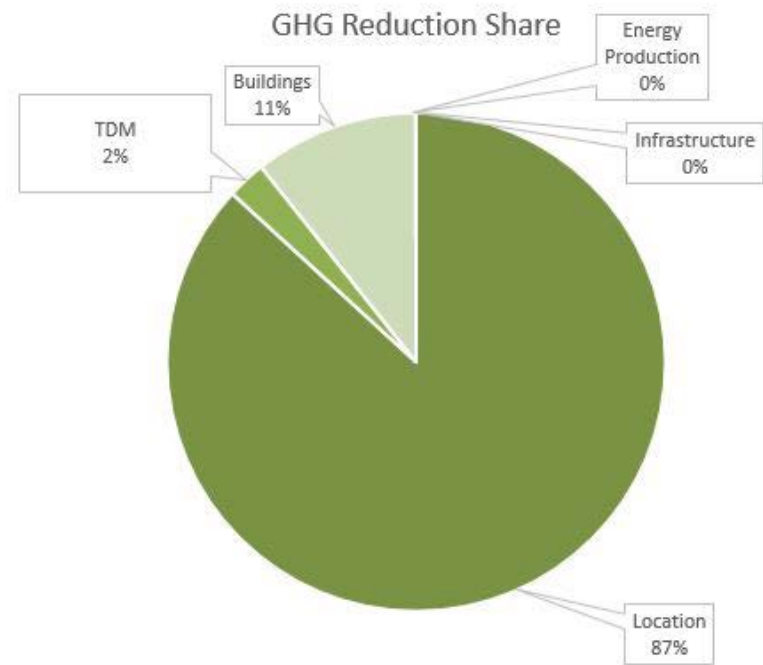
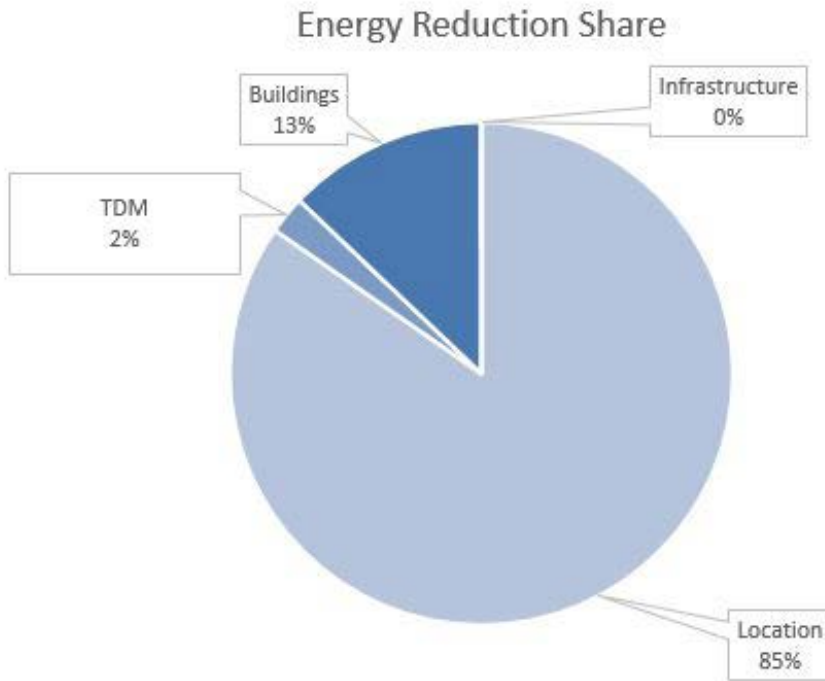
Total **24.56%**

Climate Neighbor L Street Estimated ND Savings

Total Savings

17,825.07 MMBtu/yr

1,659.59 tons CO₂e/yr



Planning Area 12 Results

Planning Area 12 - LEED-ND Assessment			
Prerequisite/Credit	Option	General Feasibility for Planning Area 12	
SLLp1	Smart Location	1. Infill	Favorable
		2. Adjacent & connected	Favorable
		3. Transit service	Favorable based on committed BRT
		4. Walkable diverse uses	May be difficult to reach Town Center uses within 1/4-1/2 mi
SLLp2	Imperiled Species	1. No species	Yes
SLLp3	Wetland/Water Conserv	1. No wetlands/water	Yes
		2. Sites w/wetlands	N/A
SLLp4	Ag Land	No ag soil	Yes
SLLp5	Floodplains	No floodplain	Yes
SLLc1	Preferred Locations	1. Location type	Infill
		2. External Connectivity	Estimated below 200
		3. High priority location	N/A
SLLc2	Brownfields	1. Brownfield	N/A
		2. High priority redevelopment	N/A
SLLc3	Reduced Auto Dependence	1. Transit served	Committed BRT and existing bus may reach threshold
SLLc4	Bike Network	a. Bicycle network	Yes
		b. Bicycle storage	High ND space rates may be problematic
SLLc5	Housing/Jobs Proximity	1. Affordable residential	Unlikely to be in development program
		2. Residential	Possible
		3. Non-residential infill	Possible based on BRT
SLLc6	Steep Slopes	No slope over 15%	Yes
SLLc7	Habitat Site Design	No habitat	Yes
SLLc8	Habitat Restoration	Habitat restoration	N/A
SLLc9	Conserve Habitat	Habitat management	N/A
NPDp1	Walkable Street	a. Principal entry	Possible
		b. Building height-street width	Would require careful design considerations
		c. Sidewalks	Favorable
		d. Garage frontages	Favorable
NPDp2	Compact Development	1. Transit served	Favorable residential with BRT service; non-res may be problematic; location of ND boundary would require careful consideration
		2. All others	Favorable residential; non-res may be problematic; location of ND boundary would require careful consideration

NPDp3	Connected/Open	1. Internal streets	Possible
		2. No internal streets	N/A
NPDc1	Walkable Streets	a. 25 ft setback	Favorable
		b. 18 ft setback	Possible
		c. 1 ft setback	May be problematic
		d. Entries every 75 ft	Possible
		e. Entries every 30 ft	May be problematic
		f. Ground-level glass	Possible
		g. No blank walls	Possible
		h. Unshuttered retail	Yes
		i. On-street parking	Possible
		j. Sidewalks	Yes
		k. Ground floor dwellings	Unlikely to be included in project
		l. Ground floor retail	Possible
		m. Building height-street width	May be problematic; would require careful design considerations
		n. 20 mph streets	Possible
		o. 25 mph streets	Possible
		p. Driveways limited	Possible
NPDc2	Compact Development	Compact development	Favorable residential; non-res may be problematic
NPDc3	Mixed Use Centers	All	Favorable
NPDc4	Mixed Income	1. Housing type	Possible
		2. Affordable housing	Unlikely to be in development program
NPDc5	Reduced Parking	Reduced parking	Possible; 2-acre cap and bike storage may be problematic
NPDc6	Street Network	Street network	Possible
NPDc7	Transit Facilities	Transit stops	Possible
NPDc8	TDM	1. TDM program	Possible if project includes large employer
		2. Transit pass	Possible if project includes large employer
		3. Dev-sponsored transit	Dependent on final transit service in project; possible if project includes large employer
		4. Vehicle sharing	Possible; need to obtain recognition of car2go from USGBC
		5. Unbundled parking	Possible
NPDc9	Access to Civic Spaces	Access to civic space	Possible
NPDc10	Access to Recreation	Indoor or outdoor facilities	Possible
NPDc11	Universal Accessibility	1. Residential units	Possible

		2. Non-compliant ROW	Possible
NPDC12	Community Outreach	1. Community outreach	Unlikely to be available because of design before consultation
		2. Charrette	N/A
		3. Local endorsement	N/A
NPDC13	Local Food	1. Gardens	Possible
		2. CSA	Possible
		3. Farmers market	Possible
NPDC14	Shaded Streets	Shaded streets	Possible
NPDC15	School Proximity	School proximity	Data unavailable
GIBp1	Certified Green Bldgs	Certified green bldgs	Possible
GIBp2	Min Bldg Energy	Min bldg energy efficiency	Already achieved by City code
GIBp3	Min Bldg Water	Min bldg water efficiency	Already achieved by City code
GIBp4	Construction Pollution Prev	Const pollution prevention	Already achieved by City code
GIBc1	Certified Bldgs	1. 10 or fewer bldgs	N/A
		2. More bldgs	Possible
GIBc2	Energy Eff Bldgs	point categories	Possible
GIBc3	Reduced Water Use	Indoor	Possible
GIBc4	Water Eff Landscaping	Water eff landscaping	Possible
GIBc5	Bldg Reuse	Bldg reuse	N/A
GIBc6	Historic Preservation	Historic bldg protection	N/A
GIBc7	Min Disturb Thru Design	Dev footprint prev disturbed	Unavailable due to previous disturbance of site; no trees present
GIBc8	Stormwater Mgmt	Stormwater mgmt	Possible
GIBc9	Heat Island Reduction	1. Non-roof	Possible
		2. Roof	Possible
		3. Mixed	Possible
GIBc10	Solar Orientation	1. Blocks	Site planning not sufficiently advanced to determine block layout
		2. Buildings	Site planning not sufficiently advanced to determine building layout
GIBc11	On-Site Renew Energy	On-Site Renew Energy	Possible
GIBc12	Dist Heating & Cooling	Dist Heating & Cooling	Site planning not sufficiently advanced to determine thermal loads; feasibility in suburban setting questionable because of moderate climate
GIB c13	Infrastructure Energy Eff	Infrastructure Energy Eff	Possible
GIBc14	Wastewater Mgmt	Wastewater Mgmt	Possible
GIBc15	Recycled Infrastructure	Recycled Infrastructure	Possible

GIBc16	Solid Waste Mgmt	Solid Waste Mgmt	Possible
GIBc17	Light Pollution Reduction	Light Pollution Reduction	Possible
IDPc1	Innovation	Innovation	Possible
IDPc2	LEED AP	LEED AP	Possible
RPC1	Regional Priority	Regional Priority	Possible

Likely/possible
achievement

Problematic/questionable
achievement

LEED-ND Local Government Leveraging Options

Beyond the October 1 workshop and its encouragement of ND strategies at the two conceptual project locations, the City of Chula Vista can also consider several options for further leveraging ND to accelerate community-wide achievement of local goals.

1. Gauge Community Conditions

- Prepare checklist audit of plan/codes to identify ND strengths, weaknesses, gaps, conflicts.
- Inventory ND-eligible lands to locate and quantify community-wide ND development potential, and estimate potential infrastructure savings from ND-style development at those locations.

2. Remove Code Barriers

- Using audit results, amend codes to eliminate barriers to ND projects.

3. Align Plans & Implementation Measures

- Amend plan policies and implementation measures to incorporate and adapt ND objectives and strategies.
- Amend the zoning ordinance to establish an ND overlay or floating zone to facilitate/accelerate projects.
- Obtain “ND Ready” designations of sub-area plans from USGBC, including potential ‘credit banking’ (this program is expected in 2014).

Uses of the System



Design excellence



Triple bottom line development



Accelerate community sustainability

ND Projects + Community = Sustainability



4. Establish Incentives

- Create formal incentive mechanisms for ND project certification or equivalent documentation (including minimum point levels and specific credits):
 - green tape
 - development bonus
 - fee reduction, tax credit

5. Catalyze/Assist Projects

- Sponsor technical education for local designers/developers; policy education for local officials.
- Calibrate and deploy the Climate Neighbor tool to estimate project energy/GHG savings.
- Include ND provisions in City RFPs for land development, and encourage other local agencies to take similar action in their RFPs.
- Create site-specific public-private partnerships for development of ND projects at showcase locations.
- Provide geographic data and assistance documenting vicinity conditions needed by projects for certification.
- Strategically use project certifications to increase funding available to the community under HUD's Choice Neighborhoods Initiative.

6. Require Consideration/Certification

- Amend the code to define covered projects by type and minimum size, and require ND-equivalent documentation (optionally including minimum credits and points) without certification.
- Amend code to define covered projects and require ND certification (including minimum credits and points).

LEED-ND Resources for Local Government

Criterion Planners:

- A Methodology for Inventorying LEED-ND Location Eligible Parcels, 2012.
- LEED-ND Community Audit Checklist, 2013. LEED-ND Planners Guide & Model Ordinance, 2011.
- LEED-ND Rating System Annotated With Local Government Interface Points, 2010.
- Local Planners Catalog of LEED-ND Measures, 2012.
- Local, Regional & State Government Use of LEED-ND, 2010.

Natural Resources Defense Council, A Citizen's Guide to LEED-ND, 2009.

U.S. Dept of Housing & Urban Development, Choice Neighborhood Initiative Implementation Grant Criteria, 2013.

U.S. Green Building Council:

- A Local Government Guide to LEED-ND.
- LEED v4 for Neighborhood Development, 2013.
- LEED-ND Reference Guide, 2009.



CRITERION
PLANNERS

