

THE AB 32 CHALLENGE:
A Sustainable California
In
20 Years

**Pragmatic Land Use Strategies
To Reduce VMT, CO2 and
Energy Consumption**

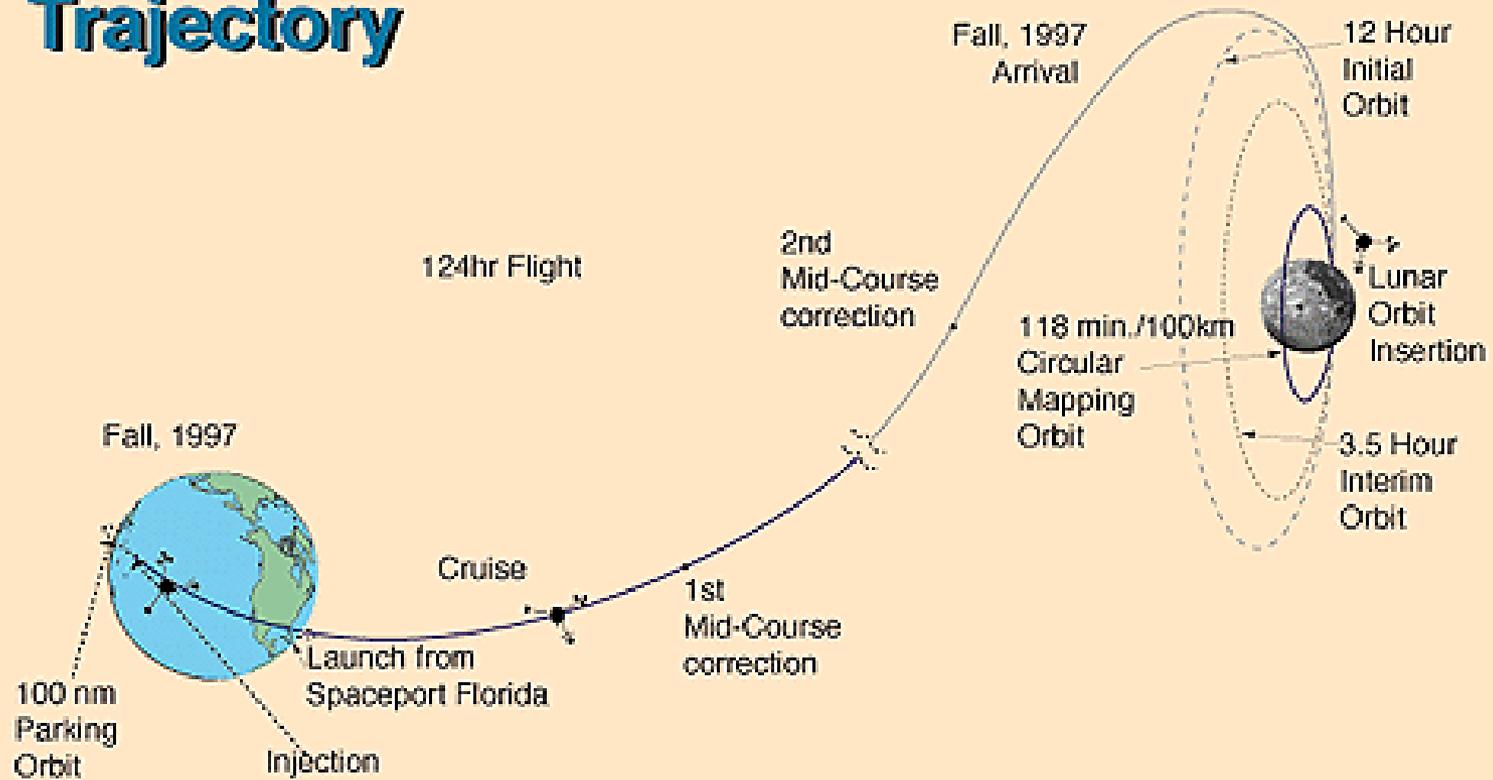
**Haagen-Smith Symposium
April 9, 2008**

**AB 32 MISSION --
LIKE GOING TO THE MOON?**



JFK GAVE NASA 9 YEARS...

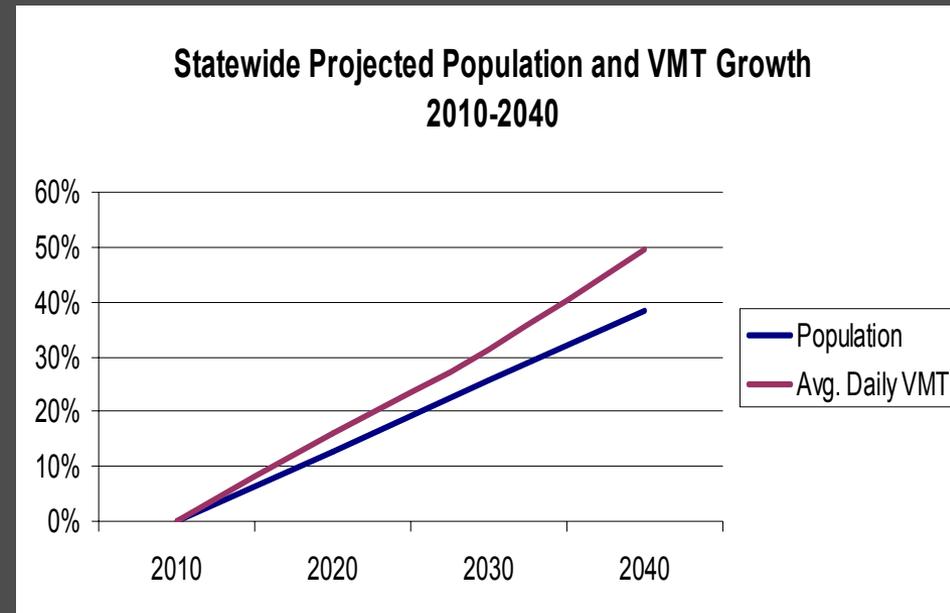
Trajectory



GROWTH WITHOUT VMT INCREASE

AB 32 Local Challenge:

How to alter the fundamental equation between growth of VMT and new development



LET'S PLAY THE AB 32 GAME



Door #1

**Improved Car Technology
(AB 1493)**

LET'S PLAY THE AB32 GAME



Door #1

Improved Technology



Door #2

Low Carbon Fuels

LET'S PLAY THE AB32 GAME



Door #1

Improved Technology



Door #2

Low Carbon Fuels



Door #3

Reduced VMT

FRAMING THE SOLUTION

CA: Where can we put 3.25 million units over the next 20 years?

(Assume additional 9,000,000 people by 2030 @ 2.77 Persons / Household)

Three Potential Options:

Urban Infill

Obsolete sites in core urban areas. May require demolition of outdated buildings or reclamation of vacant parcels.

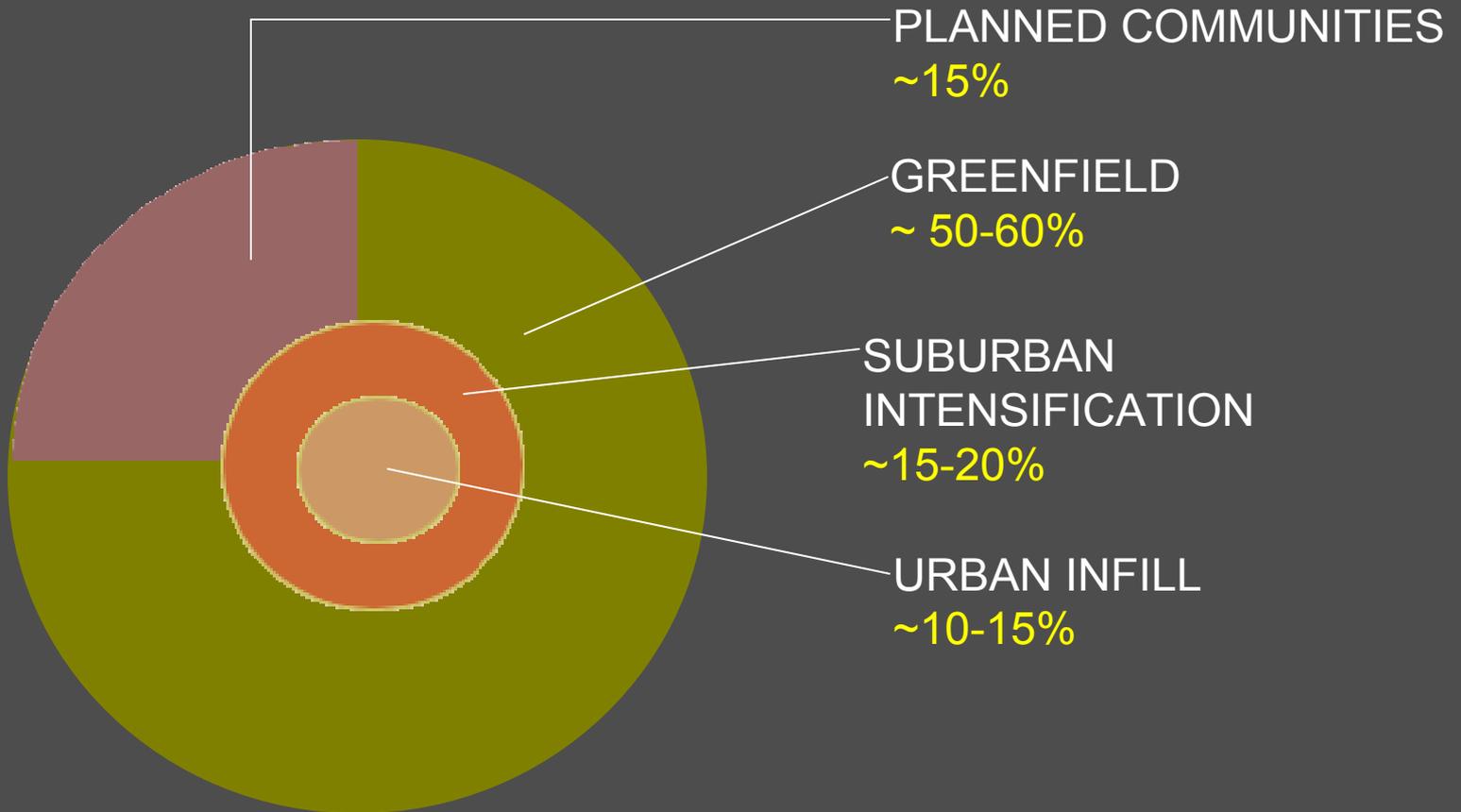
Suburban Intensification

Intensification of vacant, abandoned or underutilized sites in first ring suburban areas.

Greenfield

Previously undeveloped land that may be serving agriculture, open space or natural use. Typically in exurban setting, but may be also be part of suburban fabric.

% INFILL, SUBURBAN OR GREENFIELD



SPRAWL SCENARIO

ESTIMATED LAND CONSUMPTION CA.

	Assumed % of Total	Total Units	Average Density du/ac (gross)	Acres Consumed
Urban Infill	15%	487,500	40	12,200
Suburban Intensification	20%	650,000	25	26,000
Planned Communities – Greenfield	15%	487,500	8	61,000
Incremental Subdivisions	50%	1,625,000	3	541,700
Totals		3,250,000		640,900
				32,045 acres per year

ALTERNATIVE ASSUMPTIONS

- Establish connected **Urban Open Lands** system for region (very limited development):
 - **Water Recharge System**
 - **Habitat Buffers**
 - **Open Space Preserves**
 - **Bike / Historic Trails**
 - **Recreation, Community and Park Sites**
 - **Agricultural / Range Lands**
- Decrease **Subdivision share from 50% to 20%** due to conserved Urban Open Lands;
- Increase **average density in each category by 10%** ;
- Increase **Urban Infill Density to 50 DU/AC (gross)**
- Increase **Suburban Intensification allocation from 20% to 25%** focusing on mixed use along arterial roads;

ALTERNATIVE ASSUMPTIONS

- Establish locations for **Sustainable Development Corridor (SDC's)** in Metro area connecting to key destinations;
- Create development incentives along roughly **1 mile wide swath along SDC's @ 15-20% additional density overlay above conventional suburban density** (served by transit);
- Establish **Higher Density Station Districts approximately 1 mile radius from station** targeted for employment and workforce housing served by shuttles;
- Create **Infrastructure/Mobility Incentive Zones** to generate capital and operating funds within SDC's and Station Districts.

SANITY SCENARIO

**Save 338,360 acres for Urban Open Lands (53% of Sprawl Scenario)
16,918 acres per year**

	Assumed % of Total	Total Units	Average Density du/ac (gross)+10%	Acres Consumed
Urban Infill	15%	487,500	50	9,750
Suburban Intensification	25%	812,500	28	29,020
Planned Communities - Greenfield	15%	487,500	9	54,170
Incremental Subdivisions	20%	650,000	3.5	185,700
Development Corridor Overlay	25%	812,500	34	23,900
Totals		3,250,000		302,540 Acres

SANITY SCENARIO

**16% estimated VMT reduction over Sprawl Scenario by 2030
.... not high enough to meet AB 32 target**

	Assumed VMT/HH/yr	Total Units	VMT/Category	% Total VMT
Urban Infill	10,000	487,500	4,875,000,000	7.8 %
Suburban Intensification	20,000	812,500	16,250,000,000	26.0 %
Planned Communities - Greenfield	23,000	487,500	11,212,500,000	17.8 %
Incremental Subdivisions	28,000	650,000	18,200,000,000	29.0 %
Development Corridor Overlay	15,000	812,500	12,187,500,000	19.4 %
Totals		3,250,000	62,725,000,000	

SANITY SCENARIO

With a 25% reduction in VMT per category, achieve 37% estimated VMT reduction over Sprawl Scenario by 2030 Pricing matters.

	Assumed VMT/HH/yr @ 75%	Total Units	VMT/Category	% Total VMT
Urban Infill	7,500	487,500	3,656,250,000	7.8 %
Suburban Intensification	15,000	812,500	12,187,500,000	26.0 %
Planned Communities - Greenfield	17,250	487,500	8,409,375,000	17.8 %
Incremental Subdivisions	21,000	650,000	13,650,000,000	29.0 %
Development Corridor Overlay	11,250	812,500	9,140,625,000	19.4 %
Totals		3,250,000	47,043,750,000	

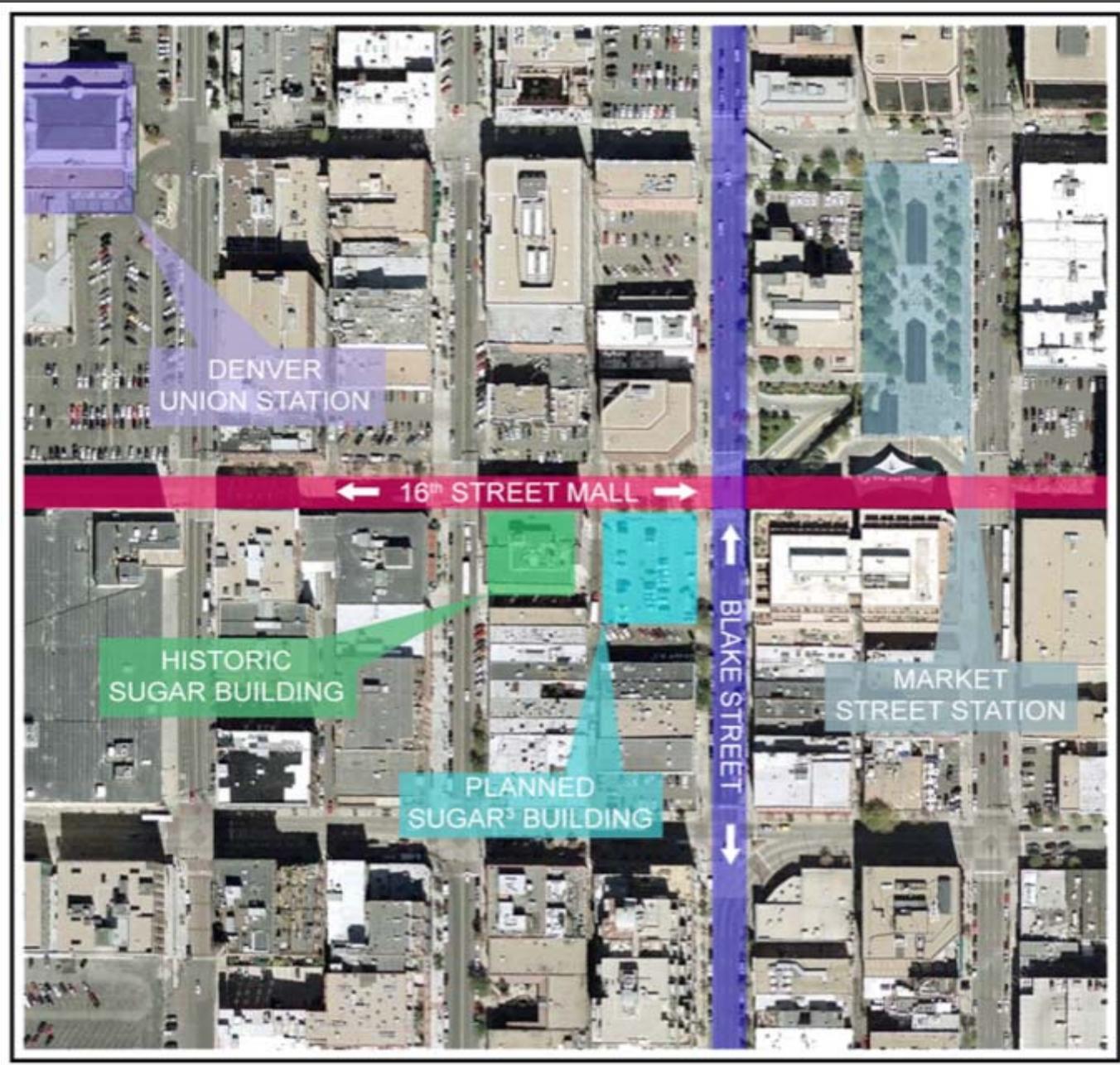
MIXED USE IMPERATIVE

- The “Right” Answer = shift to mixed use projects served by transit wherever feasible to reduce growth of VMT and CO2
 - City Core
 - Refill along Suburban Arterials
 - Redeveloped Malls
 - New Mixed Use Town Centers
- BUT, ACHIEVING MXD NEAR TRANSIT IS A VERY RISKY INVESTMENT:
 - Community resistance to increased densities (equals higher impacts).
 - Funding for new infrastructure severely restricted and competitive.
 - Local leaders must exercise the political will to create a collective vision, infrastructure financing tools, and by-right MXD zoning.
 - Few developers experienced in multi use design, marketing, leasing and financing.
 - Current lending criteria discount mixed-use value

5 MIXED USE TYPOLOGIES

- **Urban Center** 16 Market Square (Denver)
Sugar3 (Denver)
- **Town Center**
Greyfields Belmar (Lakewood, CO)
- **Main Street** East Pearl Street (Boulder)
- **Greenfields** West Village (Davis, CA)
- **Arterial** Alameda Blvd (Lakewood)

URBAN CENTER



DENVER
UNION STATION

← 16th STREET MALL →

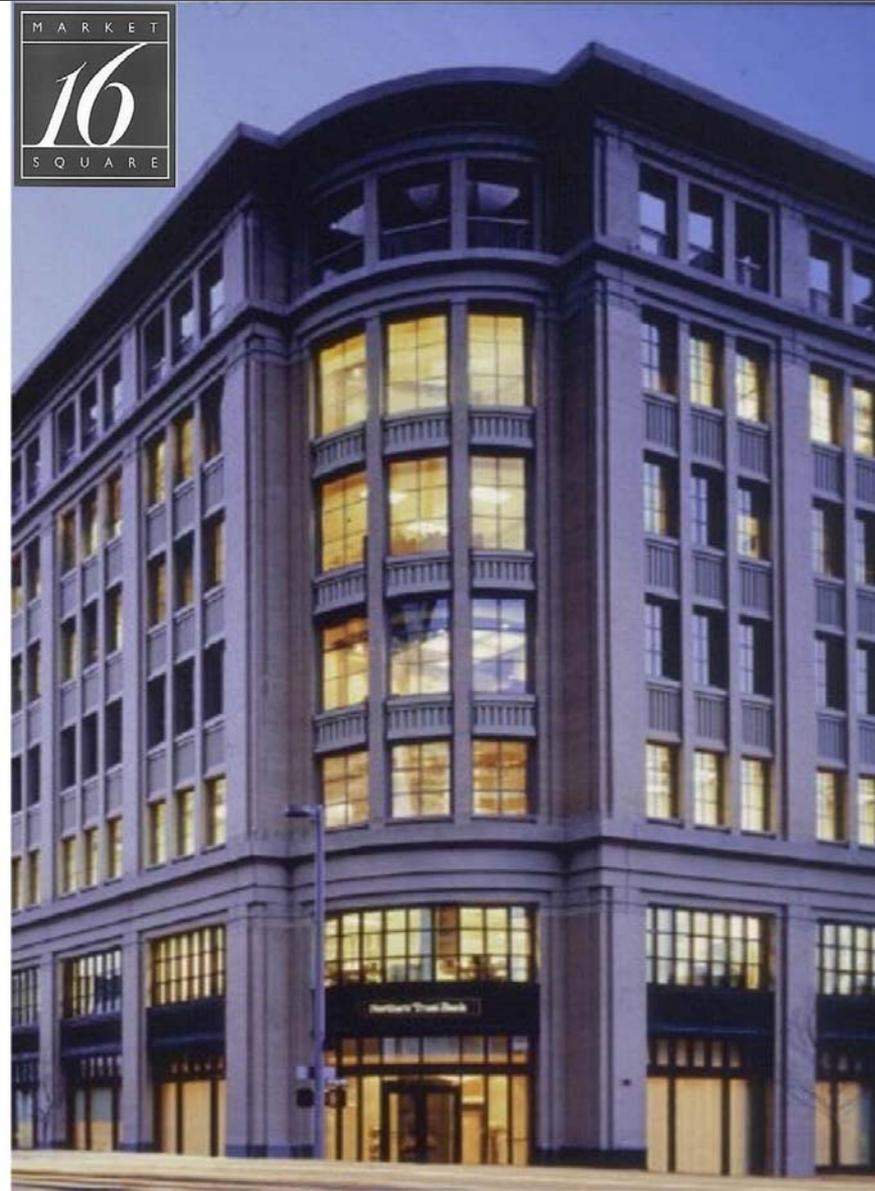
↑
BLAKE STREET
↓

HISTORIC
SUGAR BUILDING

PLANNED
SUGAR³ BUILDING

MARKET
STREET STATION

16 MARKET SQUARE









DO NOT
BUSES EXCEPTED
ENTER

Wazee
1600

GUMBOS

SPEED
LIMIT
25

P







Small sign on the top left corner of the mural building.

Sponsored by Denver Art Museum

Gifted by William A. Lash

16 PARK

EXECUTIVE TAHS

HIGH-SPEED INTERNET AND
COVAD







16 Market Square



Millennium Financial Center



1899 Wynkoop



Weighted Average Effective Lease Rates

Office: \$25.85 Full Service Gross

Retail: \$21.00 NNN

Weighted Average Effective Lease Rates

Office: \$27.86 Full Service Gross

Retail: \$17.31 NNN

Weighted Average Effective Lease Rates

Office: \$30.20/RSF Full Service Gross

Retail: \$31.24/RSF NNN

Information courtesy of Cushman & Wakefield
Denver, CO

8	Residential					
7	Residential					
6	#600 Accenture 50,974 RSF - \$30.62 Gross					
5	#510 Pennaco Energy 16,905 RSF - \$30.13 Gross			#600 Accenture		
4	#400 Vantas Officing Solutions / HQ Global Workplaces 37,645 RSF - \$30.90 Gross					
3	#310 Crestone Energy 19,729 RSF - \$30.76	#300 Heidrick & Struggles 10,154 RSF - \$31.60	#320 Bank of America 5,175 RSF - \$27.59	#330 Schauss & Gage 3,343 RSF - \$26.21		
2	#250 CreoScitex 15,049 RSF - \$27.65	#200 Resource Capital 8,550 RSF - \$30.85	#250 Kamlet et al 7,860 RSF - \$29.14	#210 McKenzie et al 4,629 RSF - \$29.20		
1	Northern Trust 14,338 RSF \$29.99 NNN	Noodles 2,761 RSF \$37.03 NNN	Chipotle 3,104 RSF \$36.32 NNN	Starbucks 2,213 RSF \$36.25 NNN	Reel Books 1,272 RSF \$28.36 NNN	Title IX Sports 2,534 RSF \$22.90 NNN

6	#600 IMA Corporation 25,000 RSF - \$27.00 Gross	
5	#500 Davis, Graham & Stubbs, LLP 25,000 RSF - \$24.75 Gross	
4	#400 Davis, Graham & Stubbs, LLP 25,000 RSF - \$24.75 Gross	
3	#300 Davis, Graham & Stubbs, LLP 25,000 RSF - \$24.75 Gross	
2	#200 Juniper Networks 25,000 RSF - \$28.00 Gross	
1	#100 Vacant 4,992 RSF	Sugarbeat Cafe 2,000 RSF - \$21.00 NNN (est.)

9	#900 Greystar Real Estate Partners, LLC 6,870 RSF - \$26.75 Gross	#920 Two Degrees 5,484 RSF - \$29.40 Gross
8	#800 Bartliitt, Beck, Herman, Palenchar & Scott 12,673 RSF - \$26.50 Gross	
7	#700 Perkins Coie, LLP 21,539 RSF - \$28.40 Gross	
6	#600 Webb Interactive Services, Inc. / jabberinc.com 21,398 RSF - \$26.80 Gross	
5	#500 Sapient Corporation 21,398 RSF - \$27.50 Gross	
4	#400 Idea Integration 19,000 RSF - \$28.00 Gross	#450 IntelliSource 2,651 RSF - \$25.00
4	#425 Land Title 2,000 RSF - \$25.00	
3	#300 Qwest Cyber Solutions, LLC (Subtenant: Policy Studies, Inc.) 20,000 RSF - \$29.00 Gross	
2	#200 Qwest Cyber Solutions, LLC (Subtenant: Policy Studies, Inc.) 20,000 RSF - \$29.00 Gross	
1	#100 Horizon Bank 4,431 RSF - \$17.00 NNN	#125 & #150 Vacant 4,120 RSF





SUGAR³



BUILDING

PROGRAM

- 3 level underground parking (136 spaces)
- 8,000 sf ground floor retail
- 50,000 sf Class AA Office
(Floors 2-4)
- 37 Luxury for rent residential units
(Floors 5-10)

SUGAR3 SUSTAINABLE FEATURES

- Building designed for 100+ year lifecycle
 - Selected exterior materials and building systems that have long lifecycles
- Energy Efficiency
 - High efficiency HVAC building system (4 pipe centralized system)
 - High performance building envelope
 - Low E insulated glazing
 - Double insulated wall cavities
 - 36 Kwh Photovoltaic system on roof provides electricity to building common areas
 - Sun shades around windows to reduce heat gain
 - Large windows to allow for ample daylighting
 - Operable windows in residential portion to allow for natural ventilation

TOWN CENTER GREYFIELDS

EMERGING DOWNTOWN DISTRICT -- BELMAR



OLD VILLA ITALIA



BELMAR PROGRAM

PHASE ONE

- Retail 634,000 SF
- Office 153,850 SF
- Housing 960 DU
- Parking 5,400 SP
(60% structured)

TOTAL PROGRAM

- Retail 954,300 SF
- Office 832,500 SF
- Housing 1,300 DU
- Parking 9,008 SP
(74% structured)

Total **1,750,000 SF**
(w/o garage)

3,686,900 SF
(w/o garage)

BELMAR SITE PLAN



CONTINUUM

2003 - 2008
STANLEY D. HILL
PLANNING &
ARCHITECTS

- Red: Retail
- Blue: Office
- Green: Office



STANLEY D. HILL
PLANNING &
ARCHITECTS

2003 - 2008

STANLEY D. HILL
PLANNING &
ARCHITECTS

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PLANNING &
ARCHITECTS

2003 - 2008

STANLEY D. HILL
PLANNING &
ARCHITECTS

CONTINUUM

BASED, MAINTENANCE
LANDSCAPE PLAN
LANDSCAPE ARCHITECTURE

- ASPHALT
- ASPHALT DRIVE
- PLANTING

SEE SHEET 19900 11

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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1/2" = 1'-0"





BELMAR • Masterplan superimposed.

CONTINUUM

Wadsworth & Alameda • Lakewood, Colorado



Bally
TOTAL FITNESS

Goldens Gym

CENTURY





GUESS

GUESS

300

Bally
TOTAL FITNESS

Bally
TOTAL FITNESS

Coldwater Creek

340

STOP









Red and white vertical banner with text.

Yellow vertical banner with text.

X PARKING
FREE
CINE
PARK

ENTRANCE

Blue parking sign with 'P' and 'R' symbols.



SHARPER IMAGE

GALYAN'S
OUTDOOR ADVENTURE





CULTURE
ART HOME
OFFICE
RETAIL

7
block 7

What you see
is only the first
5 out of 22
blocks.





BUILDING 2M-3

- Silver LEEDs rating
- Low flow showers and lavatories
- Recycled Materials
- Underfloor HVAC and Electrical/Telecom Service
- Indirect/Direct Evaporative Cooling



LEEDS COST PREMIUM

BLDG 2M-3

Design	\$120,000
Staff	15,600
GC Staff	18,720
General Conditions (recycling)	12,500
Wood and Plastic	10,000
Flooring	8,900
Shower Construction	24,000
Mechanical System	714,045
Electrical System (\$4,000 - \$46,000 credit)	(42,000)
Third Party Commissioning	33,502
TOTAL	\$915,267
	\$6.10/SF

PROJECTED ENERGY SAVINGS 31% = \$60,000 YR

FUNDING SOURCES AND USES

\$222 Million

PHASE ONE

\$ 125 Million

Buildings (Hard and Soft)

97 Million

Infrastructure (Hard and Soft)

\$135 Million

4.35% Construction Loan (6 Banks)

30 Million

Continuum Partners Equity

53 Million

Unrated Bonds from Metro District

4 Million

Brownfields Loans/Insurance

BUILDOUT INFRASTRUCTURE COSTS AND FINANCE

- Land and related costs
(remediation, demolition, relocation, consolidation, etc.)
\$ 25 million \$ 5.52/S.F.
- Infrastructure and related soft costs
\$ 154 million \$ 33.99/S.F.
- Total for land, infrastructure, and related soft costs
\$ 179 million \$ 39.51/S.F.
- Total bond proceeds (TIF via Urban Renewal and .025% PIF via
Metro District)
\$120 million \$ 26.50/S.F.

MAIN STREET

MIXED USE ZONES (BOULDER, CO)

- **MU-X** **Mixed-Use Redeveloping:**
 - *Offices, shops and high density housing along major transit corridor*
- **BMS-X** **Business Main Street Redeveloping:**
 - *“Village center” with neighborhood services*
- **MU-D** **Mixed Use Developing:**
 - *Transition between Main Street and mixed-density residential*
- **RMS-X** **Residential Main Street Redeveloping:**
 - *Transition between Main Street commercial and established residential districts*
- **IMS-X** **Industrial Main Street Redeveloping:**
 - *Live/Work transition between Main Street and Industrial districts*

MIXED-USE ZONING DISTRICTS

	MU-X	BMS-X	MU-D	RMS-X	IMS-X
Max FAR	1.0:1	1.0:1 (1.85:1 in pkg. District)	0.6:1	0.6:1	0.6:1
Non-Residential FAR		0.67:1			
Residential FAR		1:1 (if .33 FAR is resident)		Min 50% resident use	
Parking	1 per DU; 1:300 non- resident > 50%	1 per DU; 1:400 max non-resident > 50%	Varies by bedroom; 1:400 non- resident > 50%	Varies by bedroom; 1:400 non- resident > 50%	Varies by bedroom; 1:400 non-resident > 50%
Minimum Setbacks (maximum's also apply)	0 ft front 0 ft side 15 ft rear	0 ft front 0 ft side 0 ft rear	15 ft front 5 ft side 10 ft rear	0 ft front 10 ft side 10 ft rear	0 ft front 0 ft side 10 ft rear

MU-D

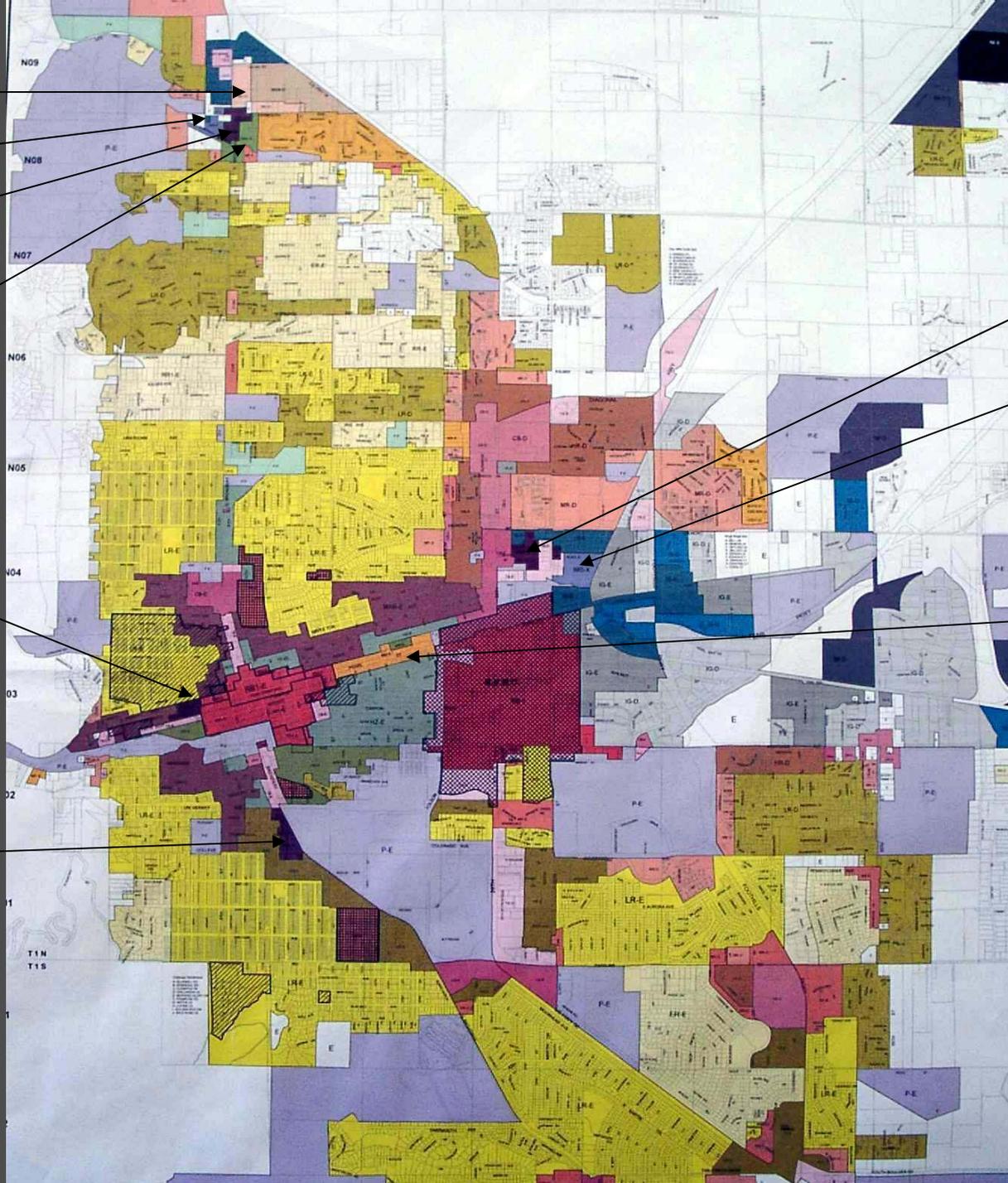
IMS-X

BMS-X

RMS-X

BMS-X

BMS-X



BMS-X

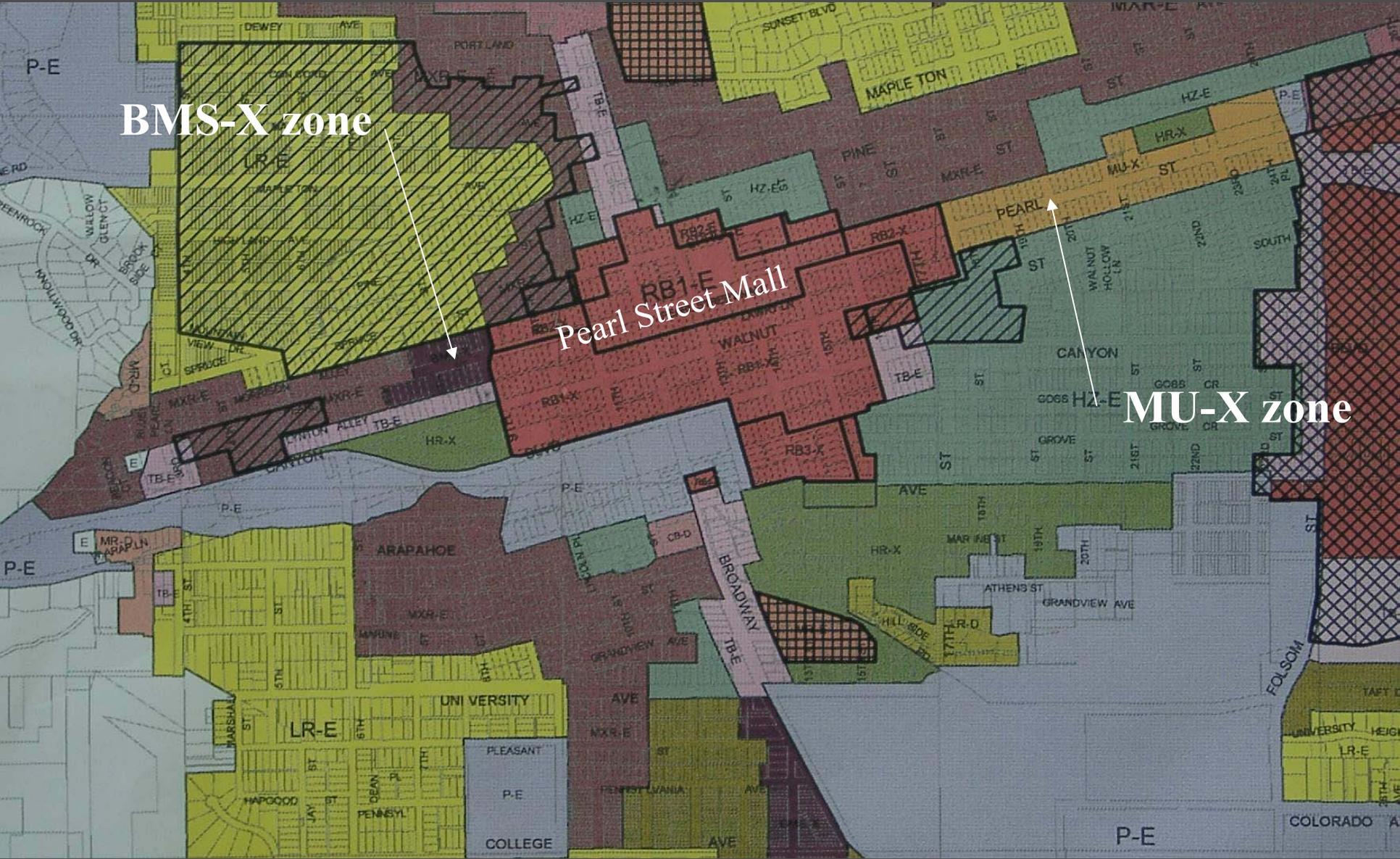
IMS-X

MU-X

BMS-X zone

Pearl Street Mall

MU-X zone



HOP/SKIP/JUMP SHUTTLES



EAST PEARL STREET

Mixed-Use Redeveloping (MU-X)







20% OFF
HOLIDAY SALE



18th and Pearl Mixed-Use Redeveloping (MU-X)











20th and Pearl MU-X





2 HOUR PARKING 8:00 AM - 6:00 PM



19

WOLFE & VON

99

8th St

Pearl St



WOLFE & VON

The West End Store



ST END V
FINE WINE



BEDELL & CO.
Fine Antiques
+ Estate Jewelry



STOP

NO PARKING
ANY TIME



Parking garage access



W Pine Ave

cleaners

OPEN

PRUCE CONFECTIONS

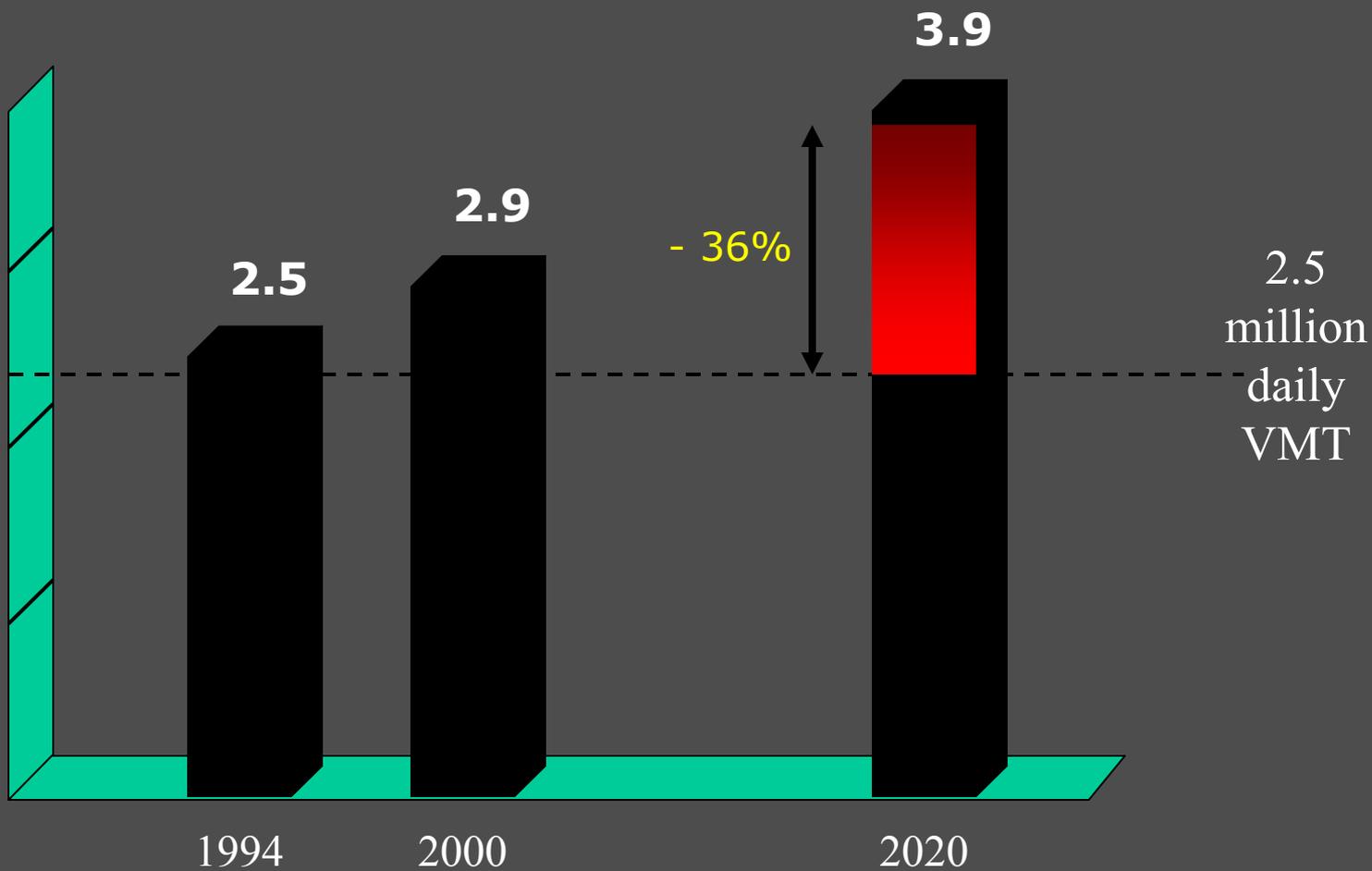
DENVER
ST
POS



26th and Pearl



DAILY VEHICLE MILES OF TRAVEL

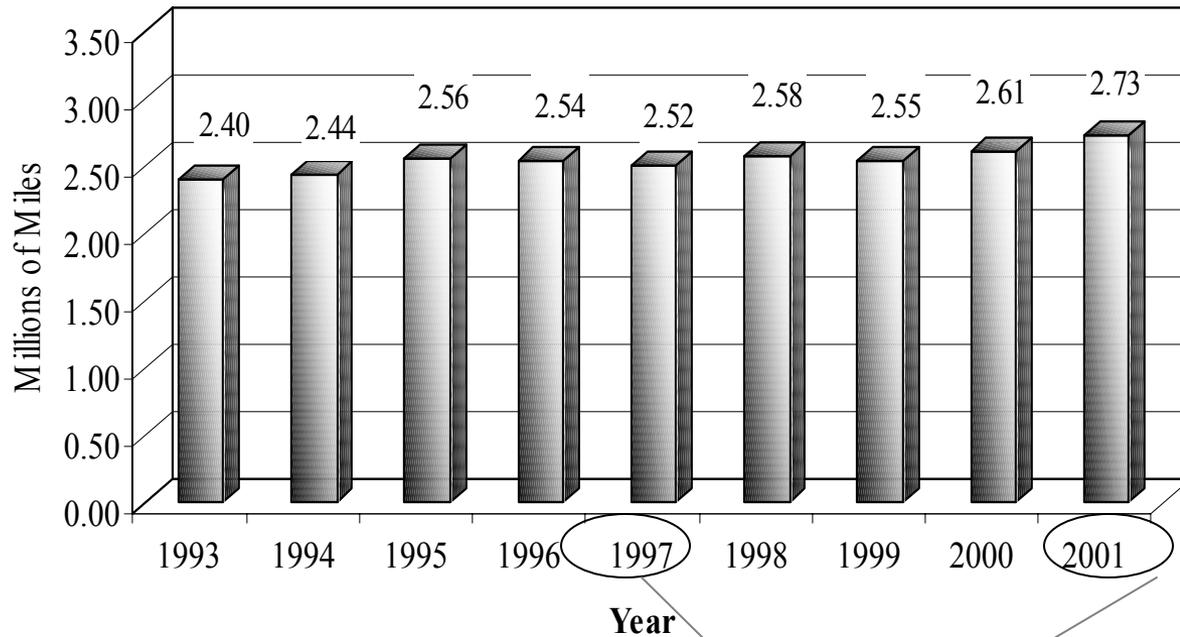


LIMITING GROWTH IN VMT

- Measured in million vehicle miles of travel on an average annual weekday in “Boulder Valley”
- Original estimate provided by traffic models
- Monitored based on average daily traffic trends
- **Concept: we don't want traffic to continue to grow relentlessly**

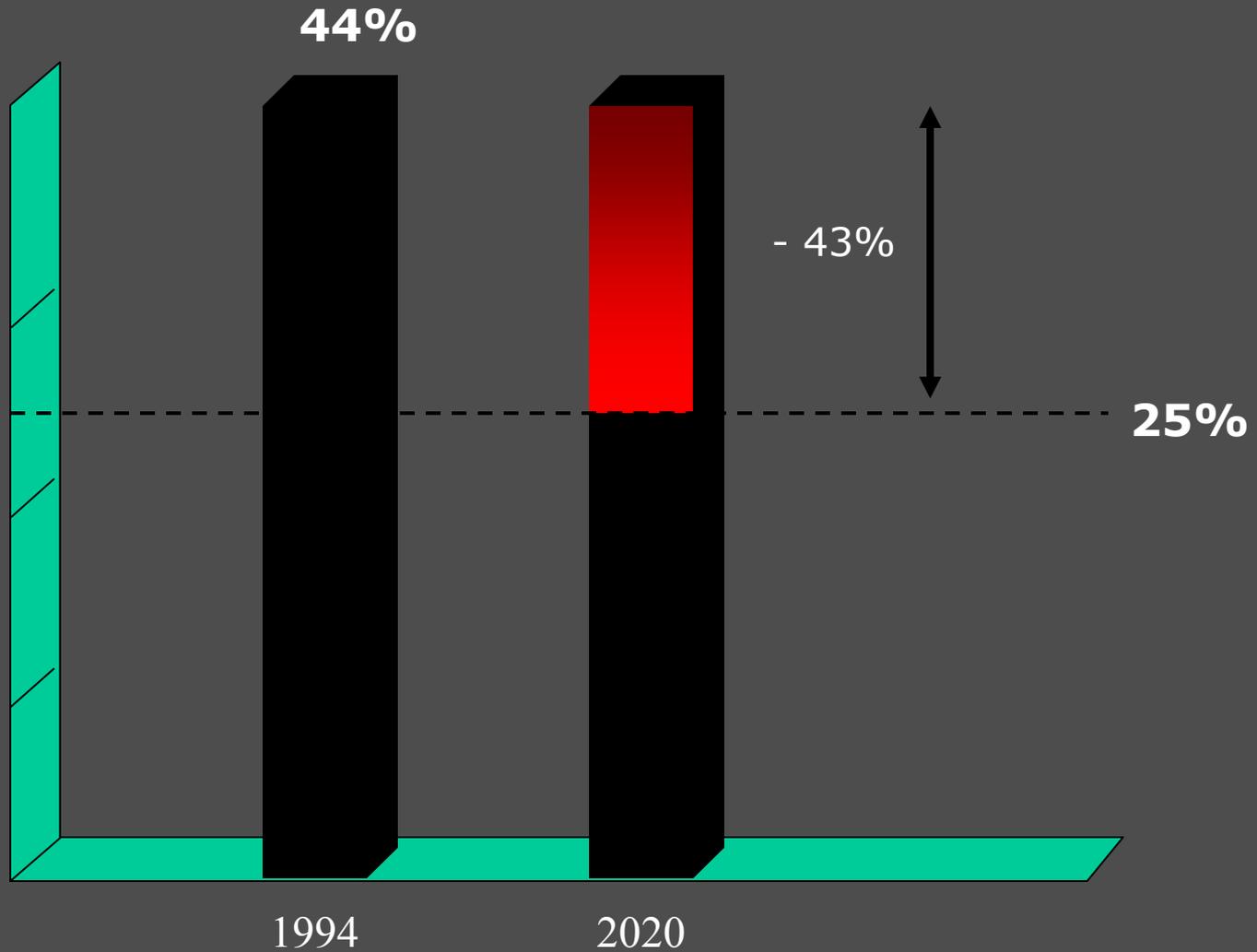
ACTUAL VMT TREND

Average Weekday Vehicle Miles of Travel

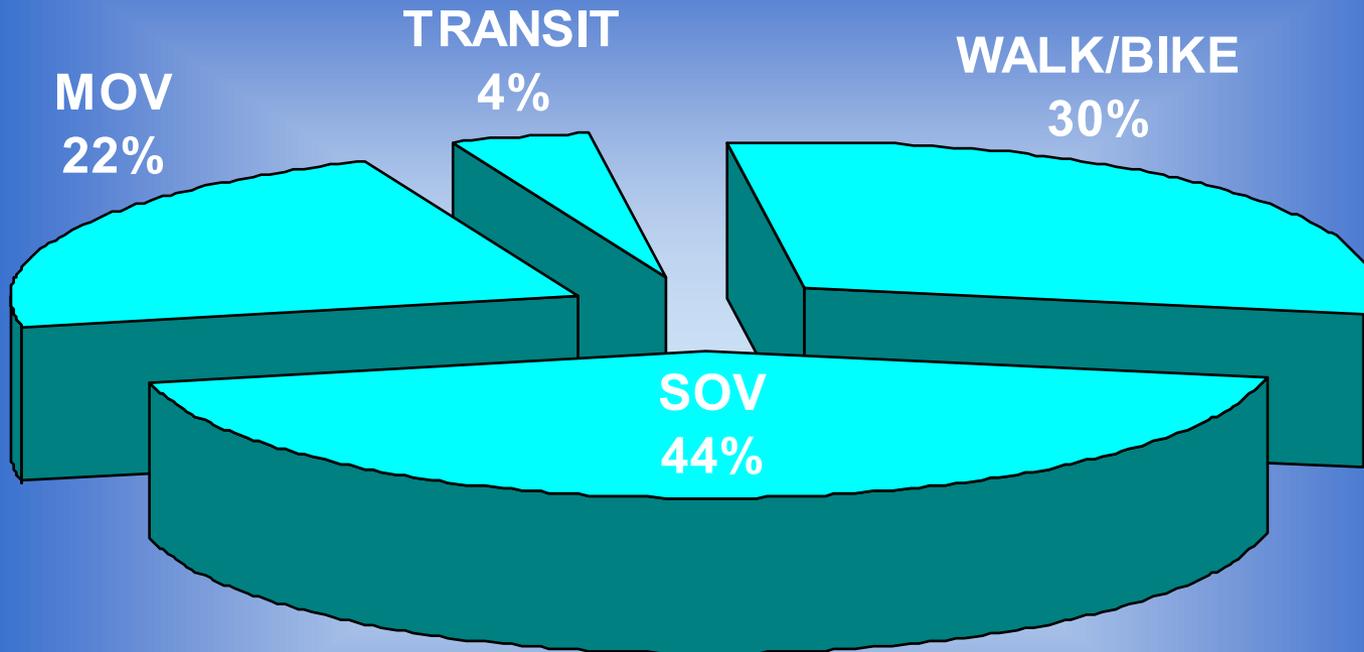


+ 7.5% since 1996

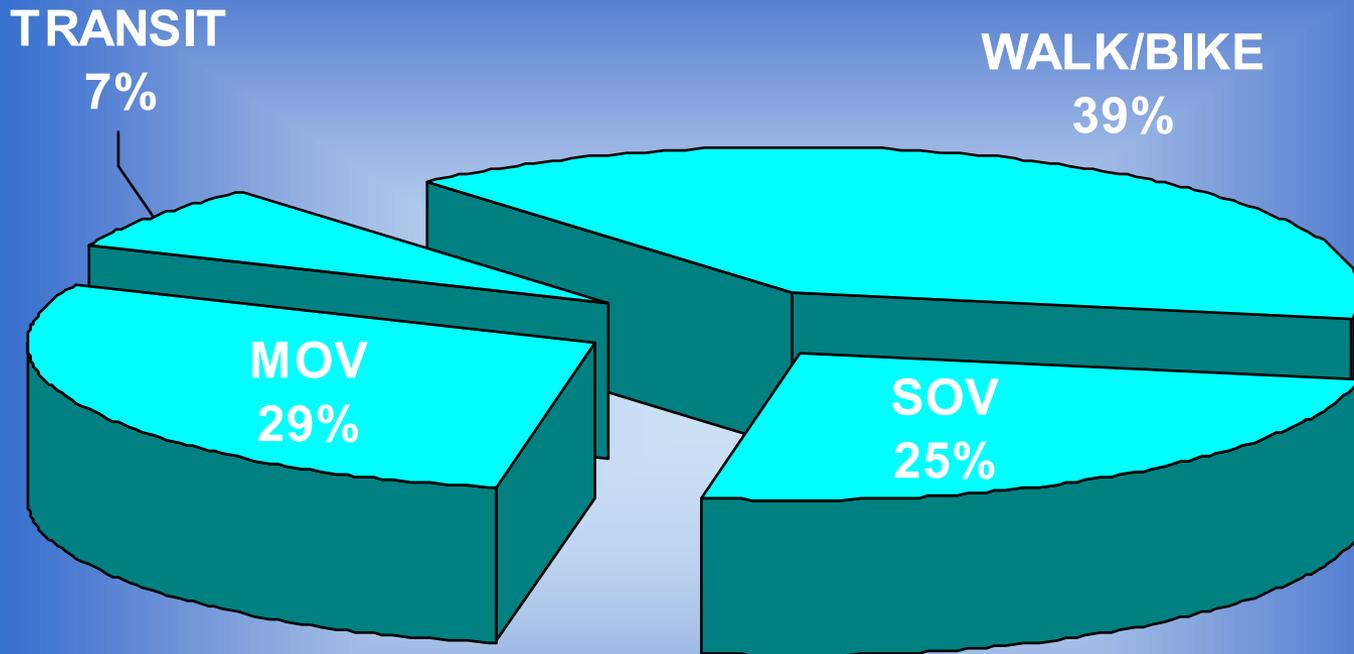
SOV MODE SHARE



1994 BOULDER MODE SHARES

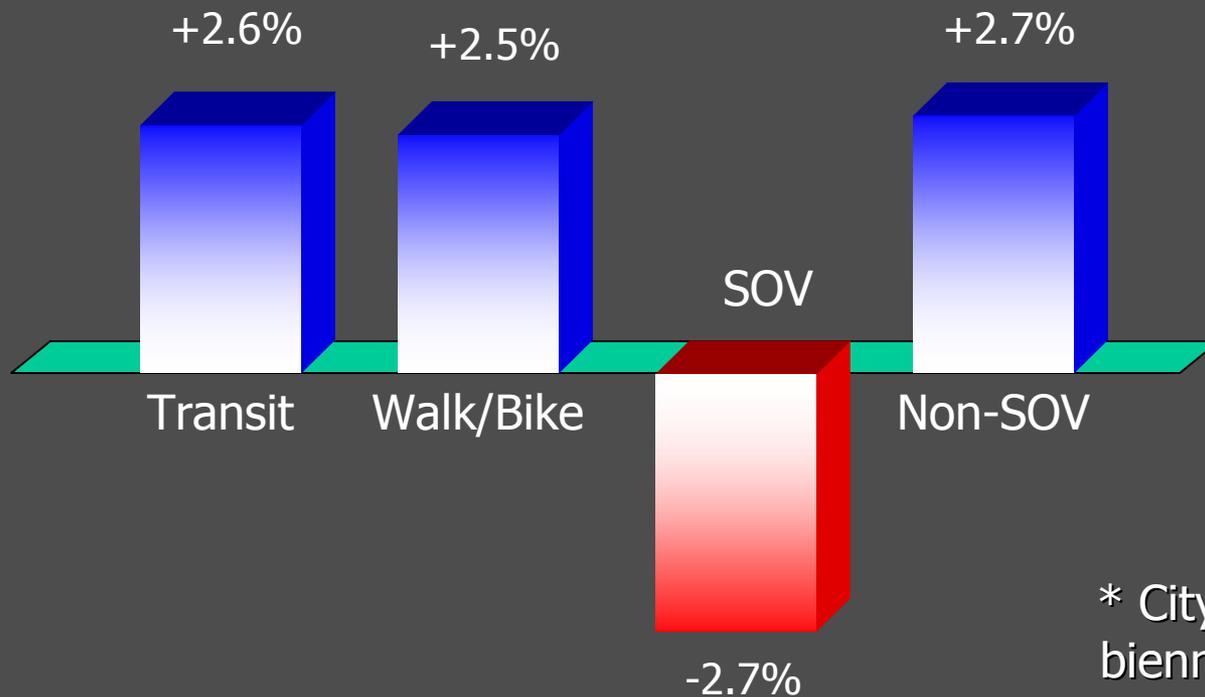


2020 OBJECTIVES



TRENDS IN RESIDENT MODE CHOICE

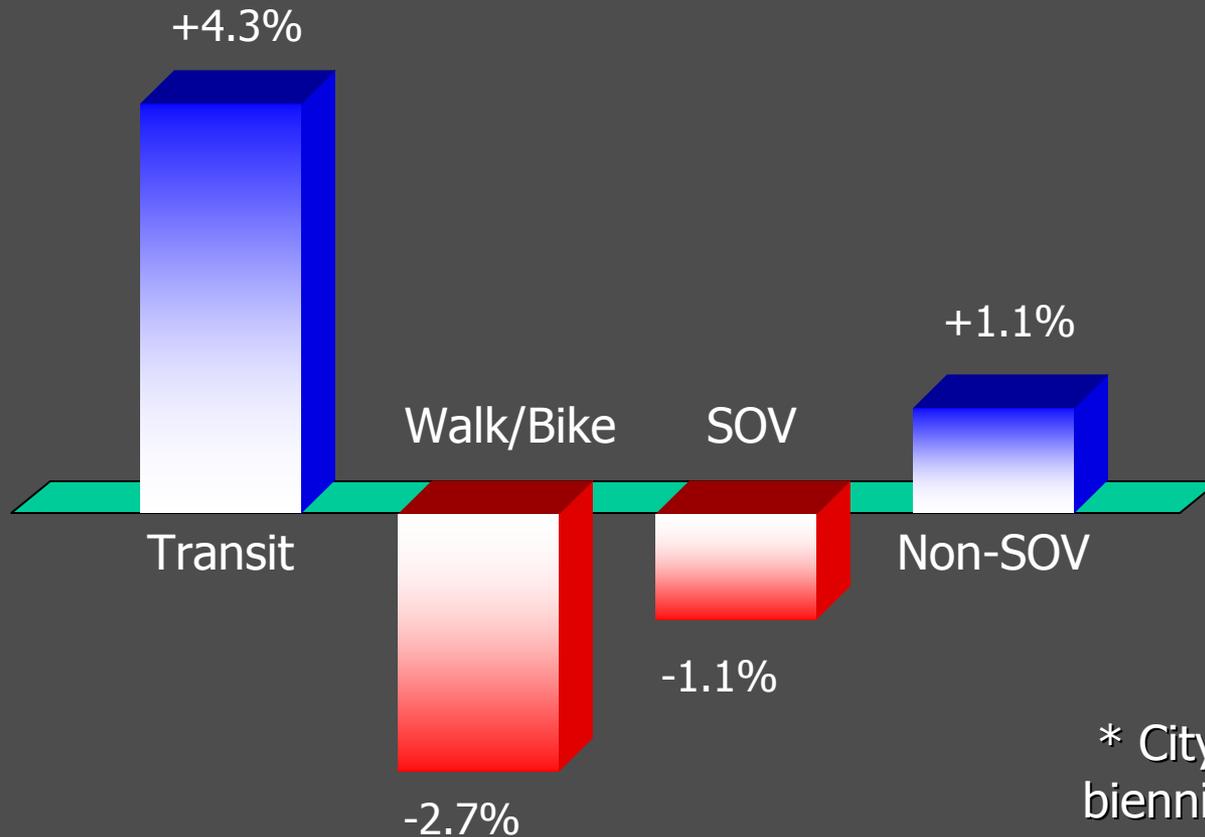
1990 - 2000



* City of Boulder
biennial resident
travel diary

TRENDS IN EMPLOYEE MODE CHOICE

1991 - 2001



* City of Boulder
biennial employee
travel survey

GREENFIELDS

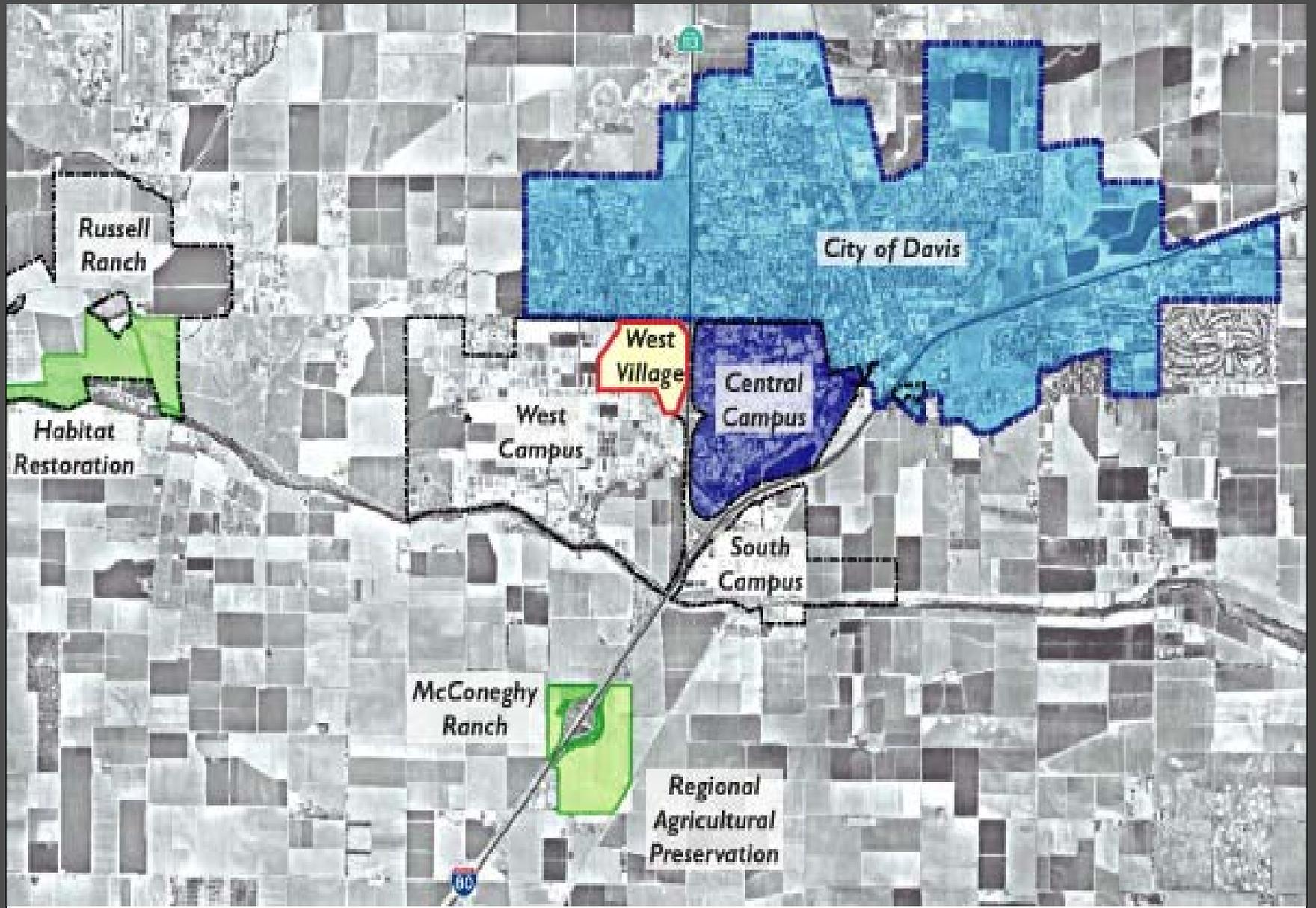
UNIVERSITY OF CALIFORNIA, DAVIS

West Village Community Partnership LLC Joint Venture Urban Villages and Carmel Partners

West Village Core Principles:

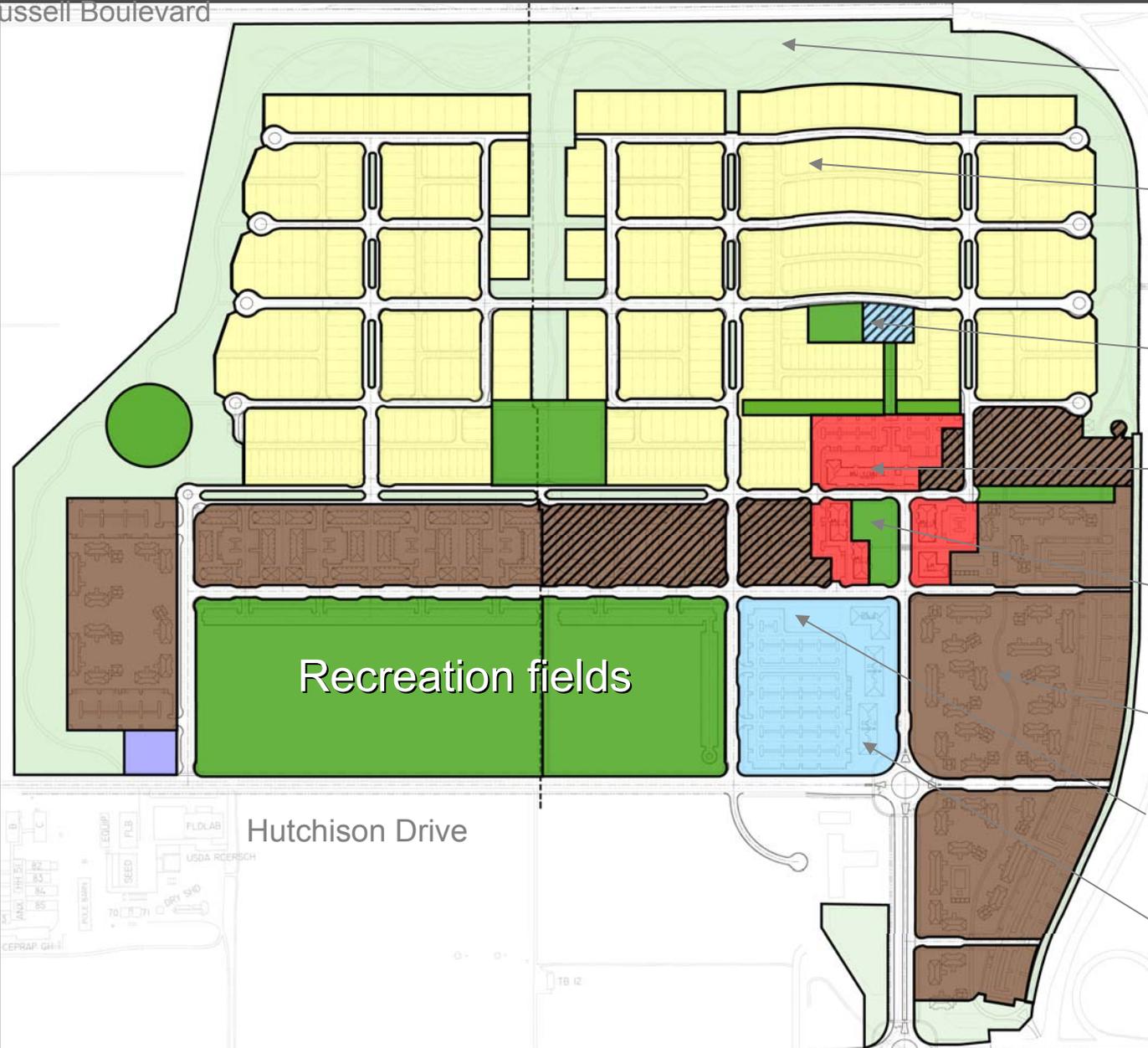
- Housing Affordability
- Environmental Responsiveness
- Quality of Place
- Developer Equity, Financing and Risk
(Off Balance Sheet to University)





WEST VILLAGE LAND USE

Russell Boulevard



- Habitat ponds
- Faculty & staff housing
- Daycare/preschool & park
- Mixed-use
- Village Square
- Student housing
- Satellite High School
- Los Rios CC

Hutchison Drive

Recreation fields





Bay Illustration Studio
www.Bayillustration.com

Be. Gray
2006

Bay Illustration Studio
www.Bayillustration.com



Illustration Studio
BayArea.com
EI GUAN 2006



Bei Guan 2006 Bay Illustration Studio
www.BayIllustration.com



Bay Illustration Studio
www.bayillustration.com

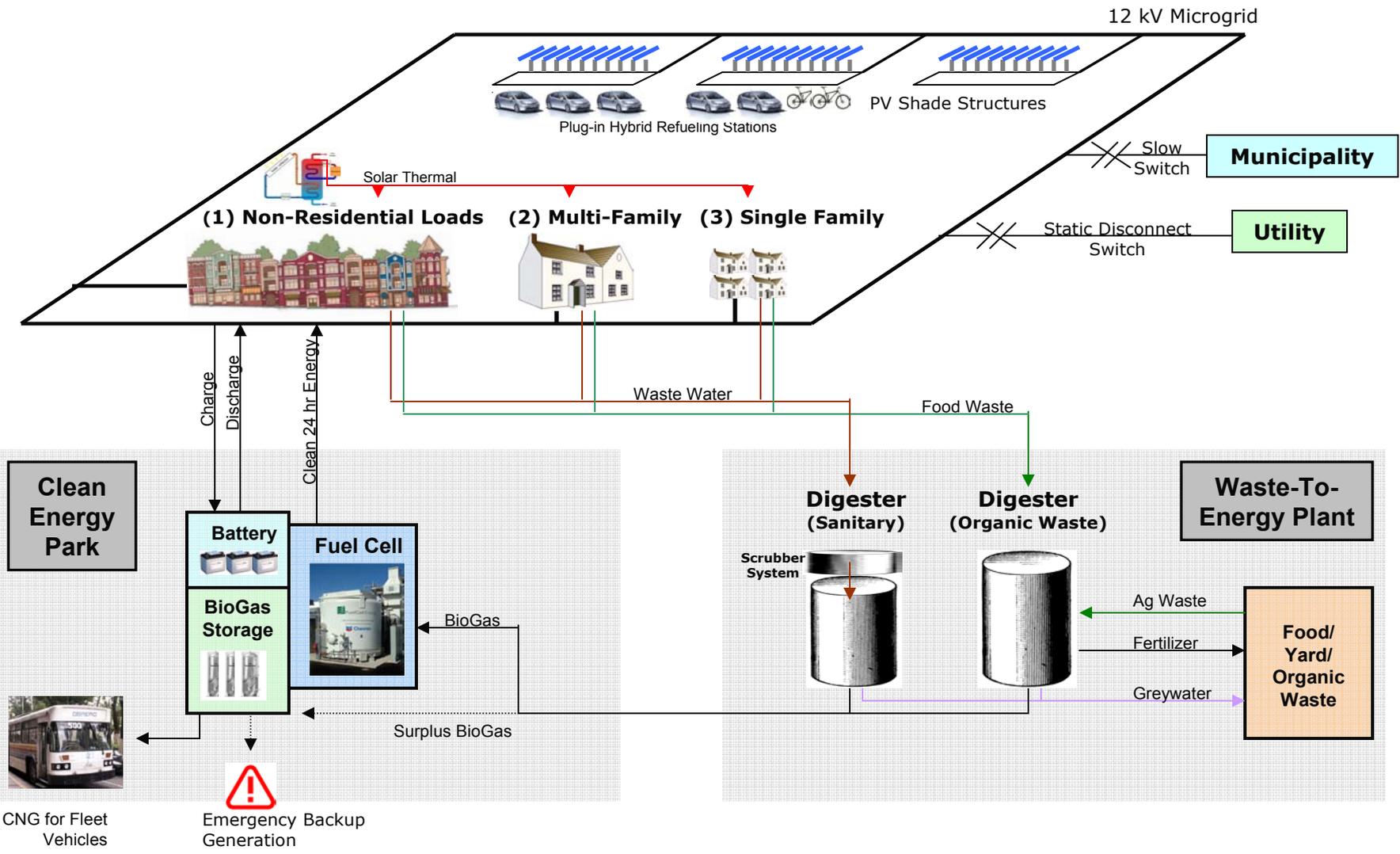
Sei Quan 2006 Bay Illustration Studio
www.bayillustration.com



WEST VILLAGE TARGETING NET ZERO, LOW CARBON

- Pilot project for West Village
 - Distributed Electricity Production
 - Highly Efficient Buildings
 - Low Energy Transportation
 - Carbon Neutral Footprint
 - Education & Outreach
- Constrained by Affordability
- Launched the **West Village Energy Efficiency Project**
 - Focused on feasible business strategies to attain goals
 - *UC Davis, Energy Efficiency Center*
 - *UC Davis, Graduate School of Management*
 - *Davis Energy Group*
 - *West Village Community Partners*

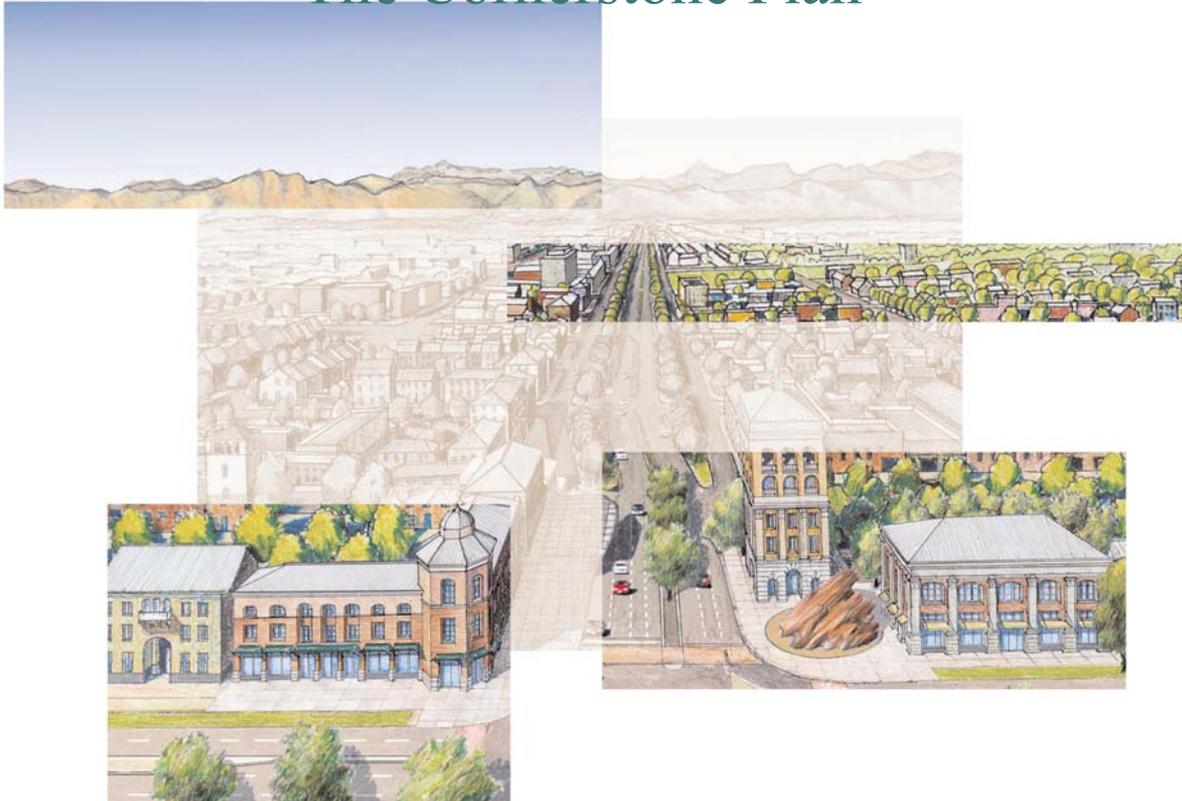
NET ZERO, LOW CARBON MICROGRID DESIGN

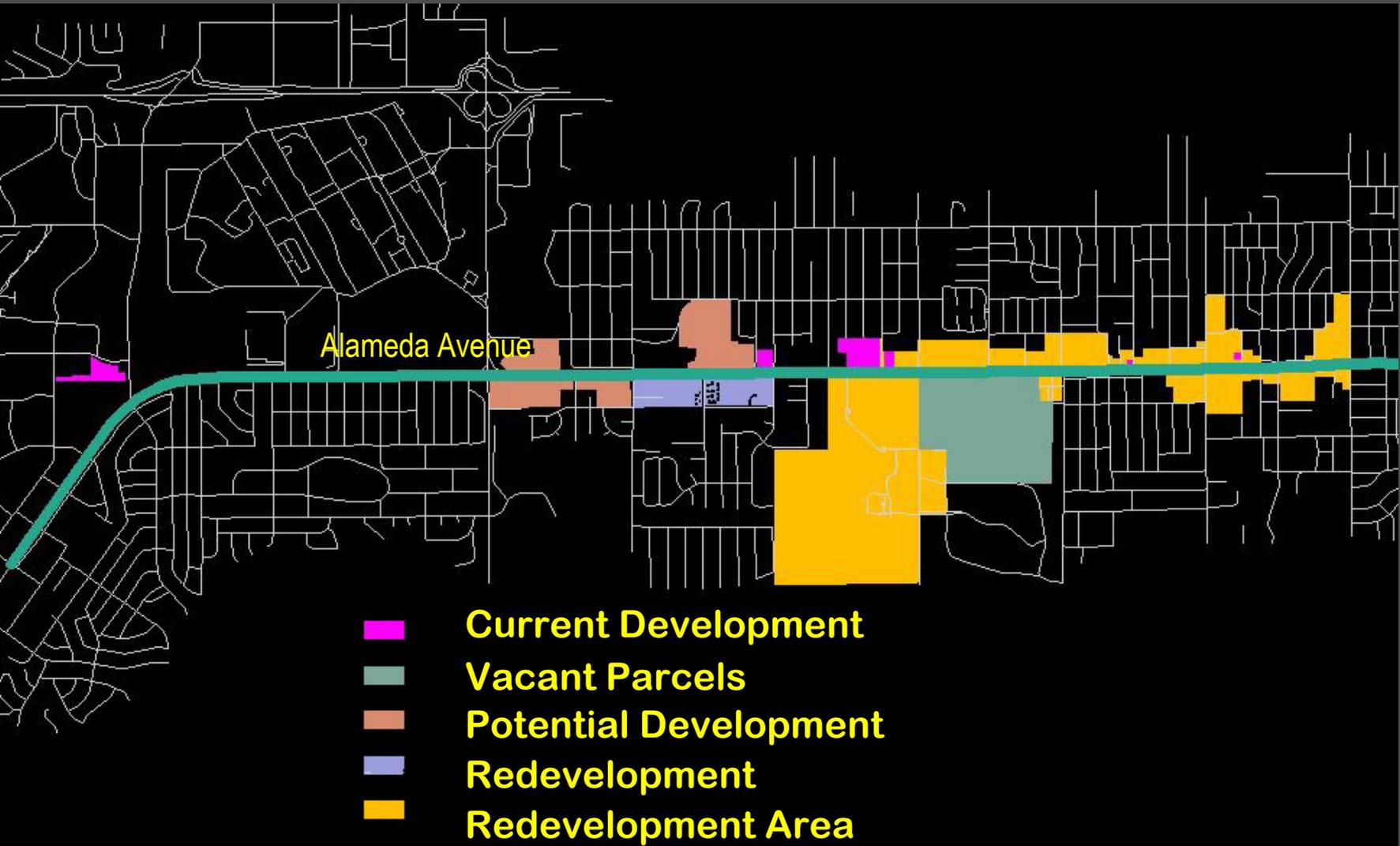


ARTERIALS

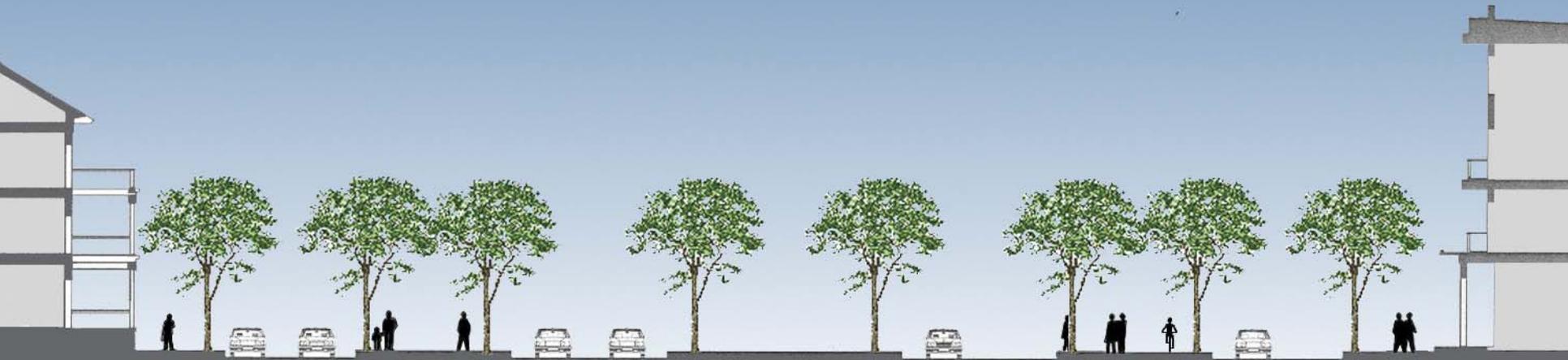
ALAMEDA (LAKEWOOD)

The Cornerstone Plan





200' Right-of-Way



14'
Sidewalk

8'
Parking

12'
Access Lane

24'
Median

12'
Thru Lane

12'
Thru Lane

36'
Median

12'
Thru Lane

12'
Thru Lane

24'
Median

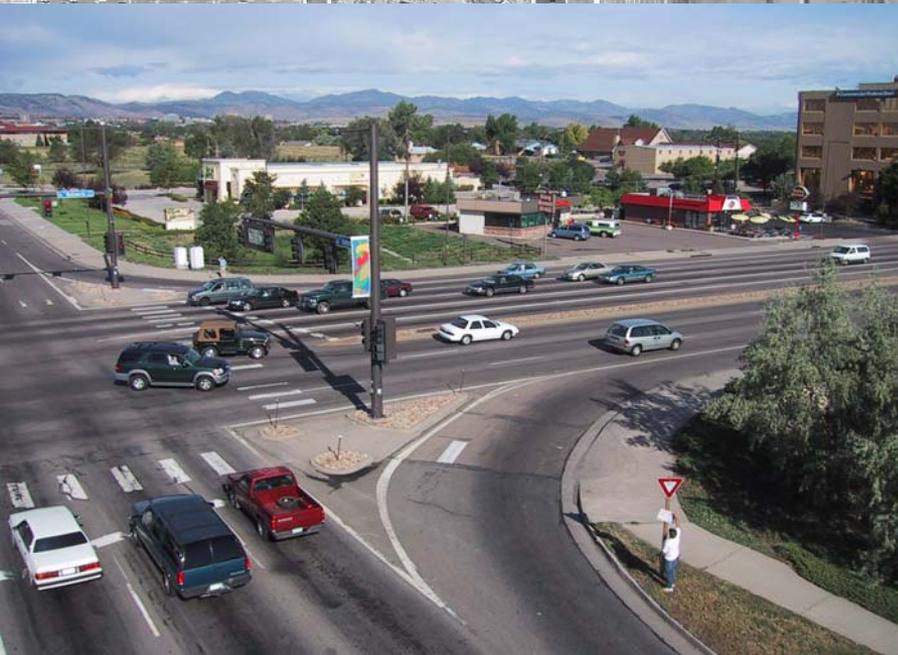
12'
Access Lane

8'
Parking

14'
Sidewalk

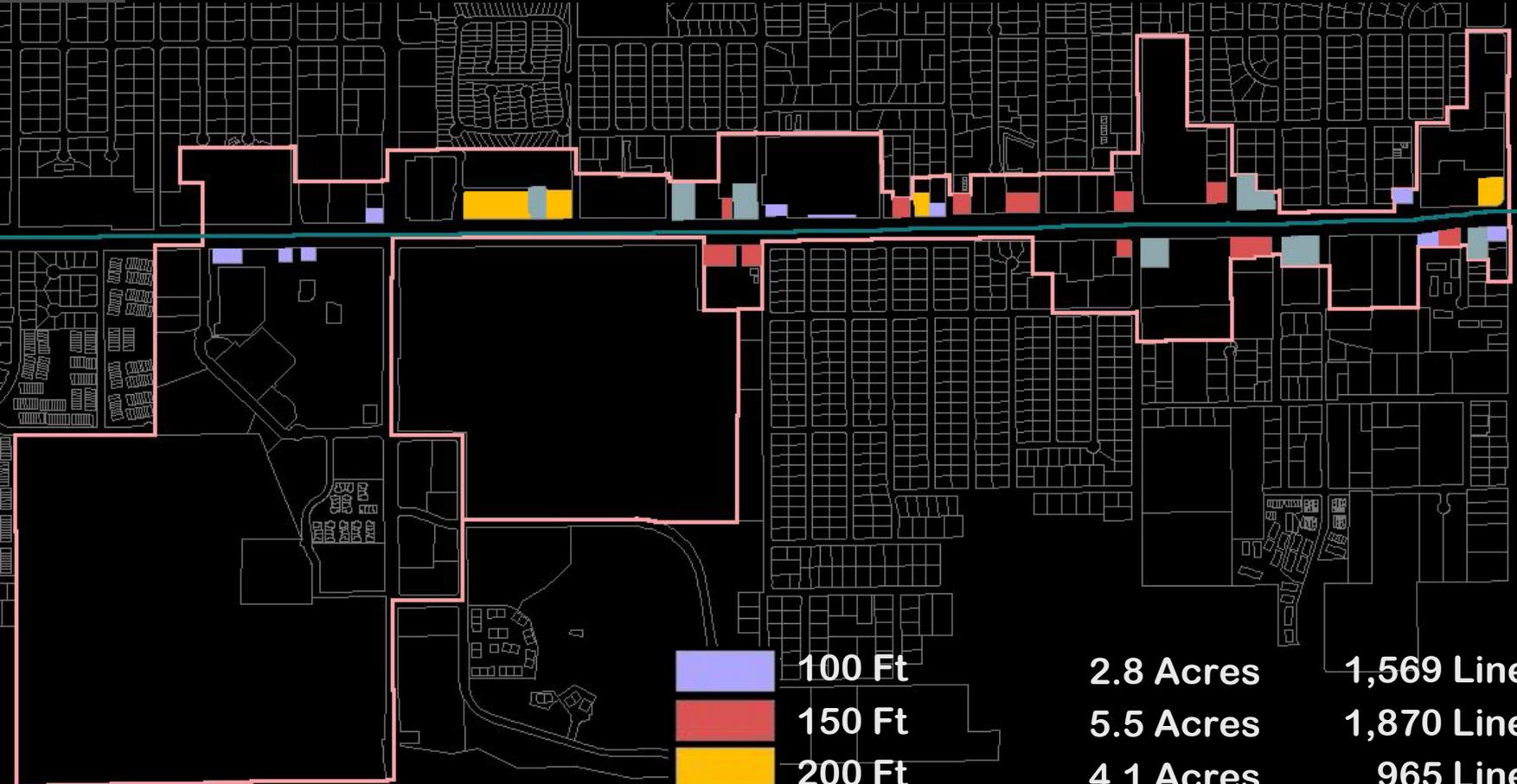
Double Left Turn

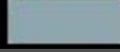




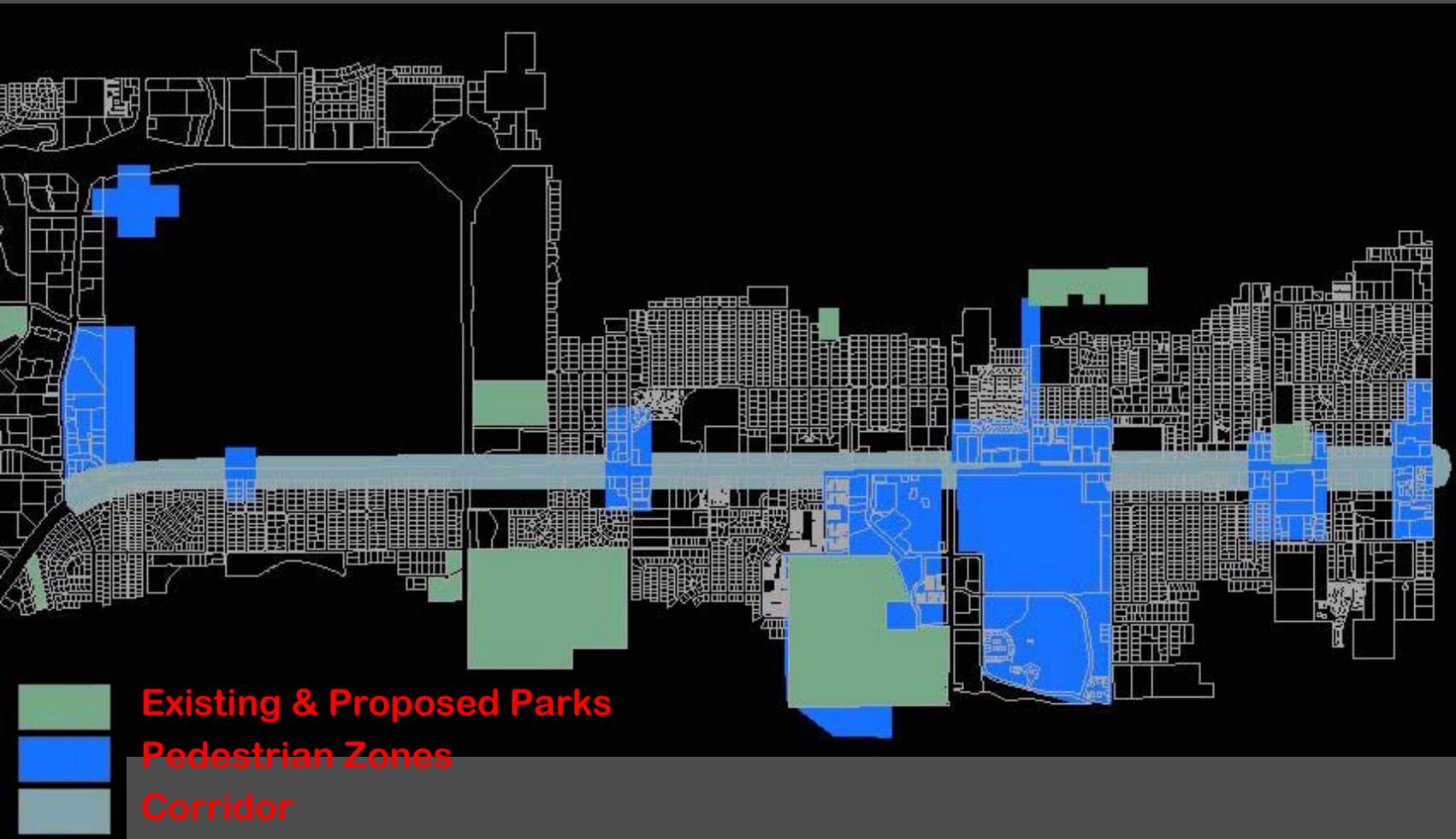


Lot Depths

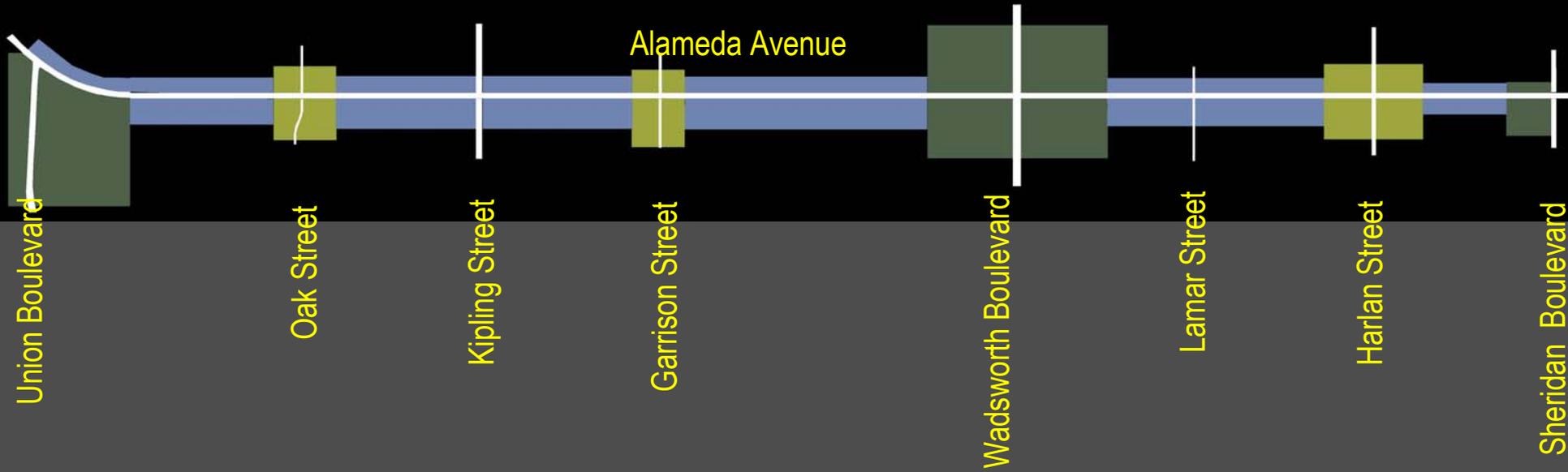


	100 Ft	2.8 Acres	1,569 Linear Ft
	150 Ft	5.5 Acres	1,870 Linear Ft
	200 Ft	4.1 Acres	965 Linear Ft
	250 Ft	6.6 Acres	1,346 Linear Ft
		19 Acres	5,750 Linear Ft

Pedestrian Shed



Alameda Avenue Centers Locations





Harlan Street Neighborhood Center



Harlan Street Neighborhood Center



Alameda Ave looking east, just east of Harlan



Alameda Ave looking east, just east of Harlan



Alameda Ave looking east, just east of Harlan



Alameda Ave looking east, just east of Harlan



Alameda Ave looking east, just east of Harlan



Alameda Ave looking east, just east of Harlan

AB 32 IMPLEMENTATION – AT FOUR SCALES

Majority of new residential and employment growth occurs in low -VMT development:

- State: Mega regions connected with High Speed Transit
- Regional: Metro Corridors with Intercity Rail
- Sub Regional: Rail and Bus Rapid Transit along Arterial Corridors
- Local: Station areas, carbon-neutral villages served by frequent shuttles and street cars

10 Emerging Megaregions

Cascadia

The vision for Cascadia links Seattle, Portland, and Vancouver, British Columbia with high-speed rail, while protecting the area's unique and pristine environment. Other strategies highlight these cities' shared high-tech competencies, commitment to environmental sustainability, and creative clusters in film, music, and green building.

Northern California

The high quality of life, cultural heritage, and environmental assets of the Northern California region make it an attractive – and expensive – place to live. How can sustainable land use strategies be employed while limiting the skyrocketing cost of living?

Southern California

With some of the largest ports in the nation, the economy of Southern California is closely tied to the logistics and goods movement industry. This region is taking aggressive action to build infrastructure that enhances its role as a global gateway while providing opportunities for its fast-growing native-born and immigrant populations.

Arizona Sun Corridor

The Sun Corridor is equivalent to Indiana in size and population but will add another Indiana's worth of residents by 2040. Located in a desert environment, Phoenix and Tucson – the megaregion's biggest metropolitan regions – have instituted water conservation requirements and are promoting the use of desert landscaping. These efforts provide the two metros with enough water for perhaps up to twenty million people, preparing the Sun Corridor for current and future growth.

Texas Triangle

By 2050 about 35 million people, or 70 percent of the population of Texas, will live in the metropolitan areas that compose the Texas Triangle. Three of the nation's 10 largest cities are in the Triangle, including Houston, which has a port that handles more foreign tonnage than any other in the U.S. Cultural cohesion creates the potential for collaboration among the metro regions of the Triangle to address land use, transportation, and environmental concerns.

Gulf Coast

The devastation of Hurricanes Katrina and Rita and the displacement of victims along the I-10 corridor highlighted the environmental, transportation, and economic links of the Gulf Coast. Despite the recent destruction, the region is expected to grow due to the continued in-migration of retirees from the Midwest.

Great Lakes

The Great Lakes megaregion is exploring ways to grow its economy in face of the shrinking role of the manufacturing sector. The region's assets include the environmental resources and amenities of the Great Lakes and a strong research and cultural tradition tied to its leading public universities.

Northeast

The Northeast is a powerhouse of density and economic output, producing 20 percent of the nation's Gross Domestic Product with 18 percent of the population and only two percent of the nation's land area. Over the next generation, the Northeast will add 18 million new residents. This population growth will demand infrastructure investments and economic growth to accommodate these new residents while preserving quality of life.

Piedmont Atlantic

The low cost of living and high quality of life in the Southeast are two reasons for this megaregion's booming population, which is anchored by Atlanta but stretches east to Raleigh, North Carolina and west to Birmingham, Alabama. The region is facing challenges associated with its growing population, such as increased traffic congestion, runaway land consumption, and inadequate infrastructure, which it hopes to address with sustainable solutions.

Metro Area Population



Florida

The Florida megaregion is one of the fastest growing in the nation and possesses a wealth of diversity, with six of every 10 new residents in the last decade coming from foreign countries. It is both dense and populous, with the major international city of Miami acting as a gateway to Latin America. Regional strategies to protect the Everglades have preserved the natural heritage of the state.

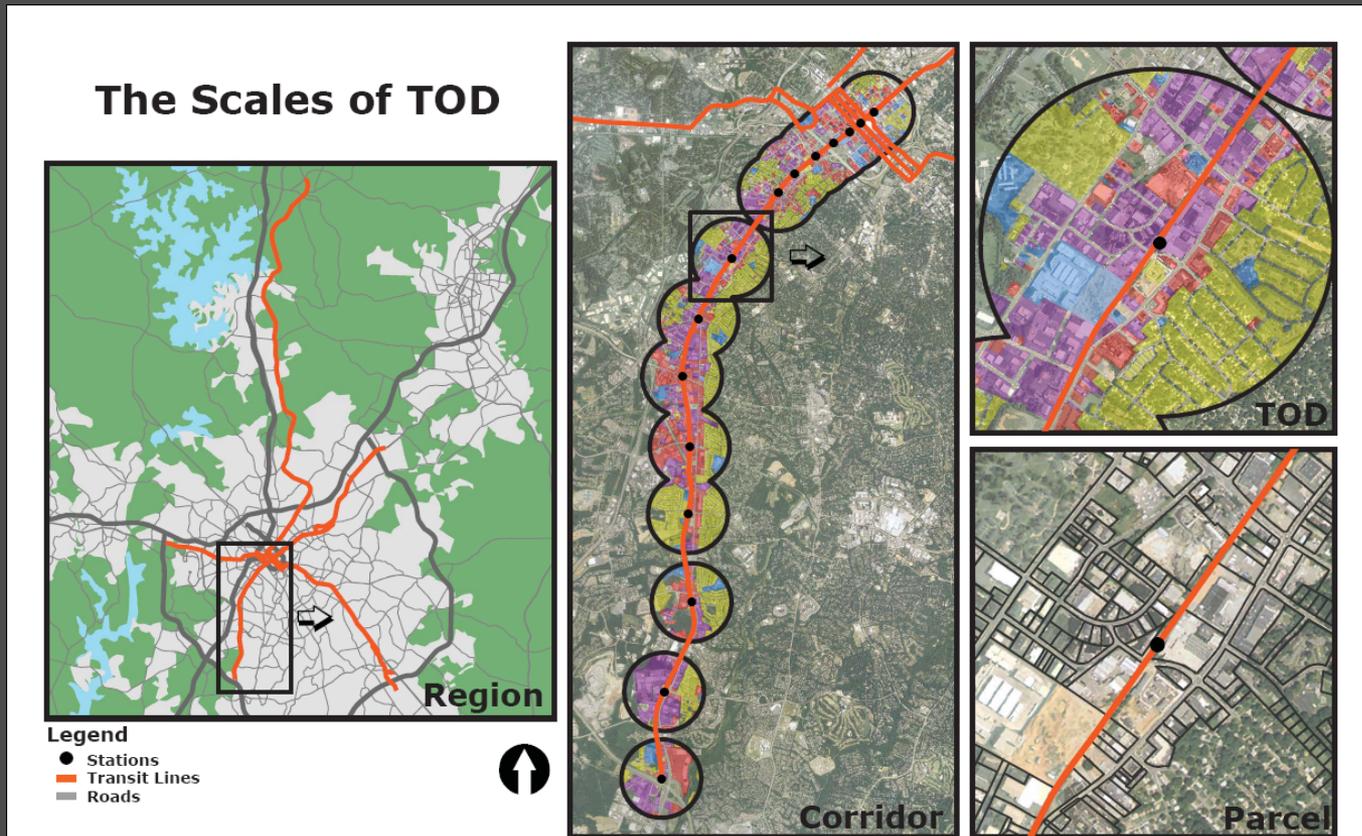
Projected Urbanization of '67 Million'



Interstates
Urban projected counties

ALLOCATING NEW LOW-VMT DEVELOPMENT

75-85% of future residential and office development permits will be allocated within a 2 mile swath of designated transit/arterial corridors – the key is a connected system.



EMERGING CA CORRIDORS

- BART Blue Line, Castro Valley-Dublin-Pleasanton
- CalTrain/El Camino Real, San Mateo County
- Mission Valley Line, San Diego
- Route 238 Bypass, Hayward
- E-BART Expansion, Pittsburgh-Concord-Antioch
- Sprinter Line, Oceanside-Vista-San Marcos-Escondido
- Exposition Light Rail Line, Los Angeles
- High-Speed Rail, Sacramento-Stockton-Modesto-Fresno-Bakersfield-LA-Riverside-Santa Ana-San Diego

REFRAMING THE QUESTION: RESTORATIVE GROWTH

Public policies direct future development that:

- cleans up toxic areas, create open lands, habitat areas, improved watersheds;
- stimulates economic opportunity for jobs, sales tax, community investment;
- replaces or reduces existing vehicle trips;
- generates energy and limit CO2 emissions;
- addresses housing needs for multiple generations; and
- creates walkable, distinctive identity

WHICH CAN REDUCE OVERALL IMPACTS

REFRAMING THE QUESTION: RESTORATIVE GROWTH and MONEY

Shift value toward development that:

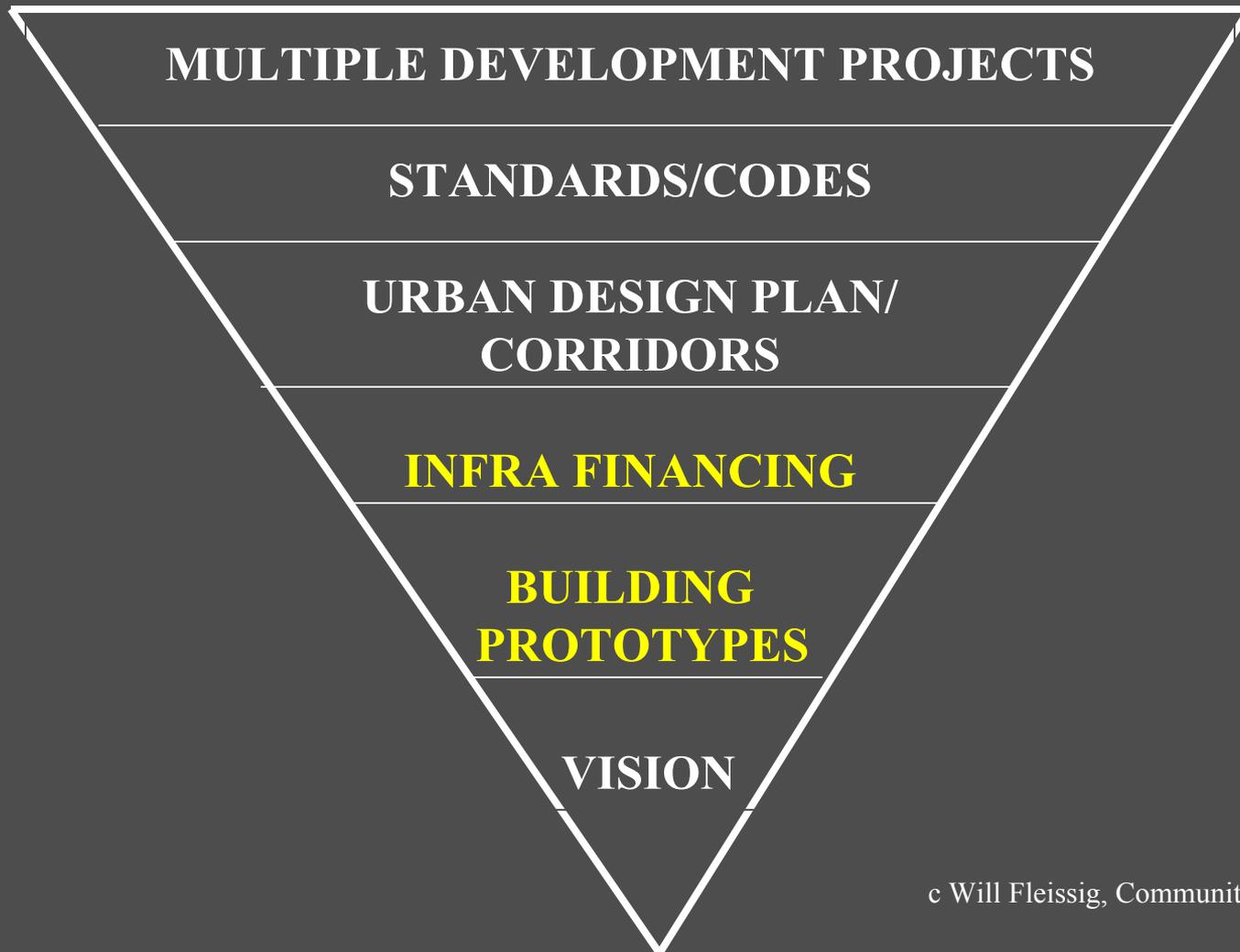
- Spreads market risk and absorption among several uses;
- Increases density to offset infrastructure costs;
- Offers increased access and mobility, which begets premium rents and sales prices;
- Generates greater long-term value for investors;
- Can offset upfront capital costs in order to reduce long term operating expenses.

**WHICH COMBINE TO
LOWER RISK AND INCREASE ROI**

TYPICAL PLANNING HIERARCHY



EMERGING DEVELOPMENT/ SUSTAINABILITY MODEL



AB 32 LAND USE FOCUS

Target New Housing and Employment using three strategies –

- **Incremental MXD along Suburban Arterials**
 - Older Mall Sites
 - Outmoded Big Box and Strip Retail
 - Class C Business Parks
- **New “Carbon Neutral” Communities (5,000+ population)**
 - 250+ acre brownfield/industrial/village center sites
 - Community-wide energy systems
 - Access to employment, town services and MXD village center
 - Carbon trading with agricultural communities for new Greenfield Communities
- **Sustainable Development Corridors**
 - 1- 4 municipalities with common interests
 - Transit line connected to shuttles that extend mobility
 - Expand range of densities within 1 mile either side
 - Create special financing districts via Inter Governmental Agreements (IGA's)

PUBLIC/PRIVATE SCENARIO

- Target new growth in CA in multiple corridors in metro regions:
Bay Area, Sacramento, Los Angeles, San Diego, Central Valley (Stockton-Modesto-San Bernardo)
- Enable financing districts that can capture additional property values and sales revenues
 - Transit Improvement Districts
 - Public Improvement Fees
 - Parking Districts
 - Special Assessment Districts
 - Business Improvement Districts
 - Urban Renewal Districts
- Foster Sustainable Development Districts that link funding for
 - Transit
 - Bicycle / Ped Connections
 - Parking Districts
 - School Enhancements
 - Bus and Shuttle Network
 - Urban Open Lands
 - Mixed Density (+10-20%)
 - Work Force Housing
- SDD's will attract equity capital from pension funds, foundations, and individuals seeking continuous, long term returns with lower risk.

DYNAMIC SUSTAINABILITY

Early Action Plan 2010 -- “Immediate Term”

(1.5 Years)

Level 1

- Fund alternative source incentives
- Assess relative GHG sources and targets
- Identify General Plan and COG Blueprint goals and policies
- Promote demonstration technologies and LEEDS
- Refine VMT reduction strategies -- TDM/TND/TOD

DYNAMIC SUSTAINABILITY

Reduce GHG 25% by 2020 -- “Mid Term”

(11 Years)

Level 2

- Implement Regional Blueprints and infrastructure priorities
- Expand CEQA to incorporate CO2 impacts/options
- Build comprehensive Carbon Neutral pilot projects at the community scale
- Fund new transit modes and increasing connectivity
- Upgrade LEED/Title 24/alt energy systems
- Establish energy market/\$ to incentivize public/corp entities

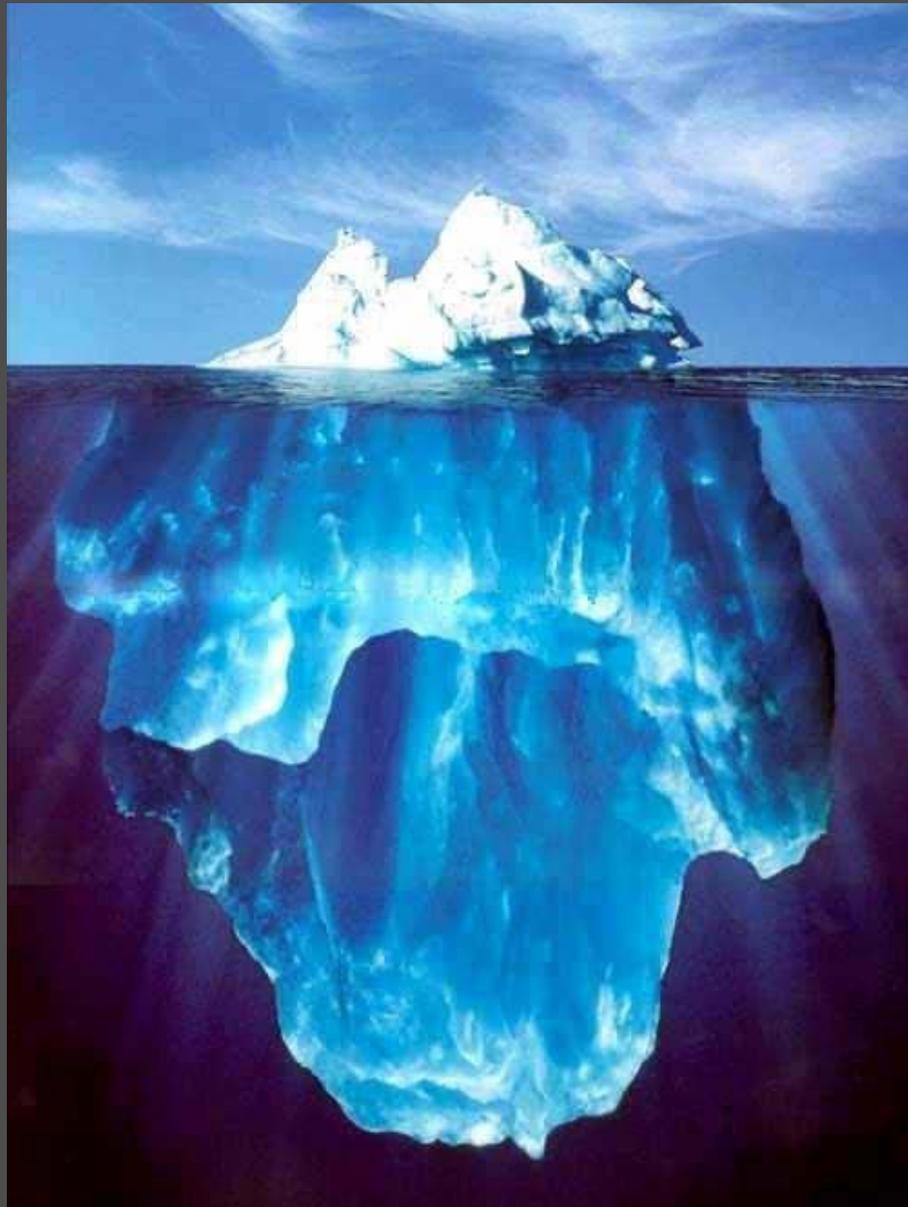
DYNAMIC SUSTAINABILITY

Reduce GHG 80% by 2050 -- “Long Term” Agenda
(41 Years)

Level 3 recalibrates “The Bottom Line” underlying all operating costs and investment (ROI) to achieve major VMT reductions:

- **Public Investment Strategy**
 - Infrastructure/mobility financing districts near transit
 - Transit Corridor land acquisition assistance for assembling sites
 - Value Recapture \$ fund transit improvements and operations
- **Pricing Incentives**
 - Permit pricing linked to VMT
 - Parking and congestion pricing
 - VMT Targets with incentives and penalties
- **Environmental/VMT Management**
 - CEQA project reviews waived if located within Corridor
 - Limited building permits available for higher per capita VMT projects
- **Underwriting Criteria include Generated VMT**
 - Lenders incorporate location and proximity to transit service as part of determining cost of capital





FOR DISCUSSION

- Catalytic Projects – Short and long term strategies to initially limit and eventually reduce VMT, CO2 and energy consumption.
- Leveraging Dollars – New approaches to use public and private investment to plan/finance Sustainable Development Districts.
- Continuity – New intermediaries to manage infrastructure planning and phasing over the long haul so that the results perform as expected.