MEETING NOTICE AND AGENDA

REGIONAL PLANNING TECHNICAL WORKING GROUP

The Regional Planning Technical Working Group (TWG) may take action on any item appearing on this agenda.

Thursday, January 12, 2012

10:30 a.m. to 12 noon

SANDAG, Conference Room 8A
401 B Street, Suite 800
San Diego, CA 92110

Staff Contact: Susan Baldwin
(619) 699-1943
sba@sandag.org

AGENDA HIGHLIGHTS

- PRESENTATION BY SAN DIEGO FOUNDATION ON LAND USE SCENARIOS DEVELOPED DURING “OUR GREATER SAN DIEGO VISION” PROJECT

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To request this document or related reports in an alternative format, please call (619) 699-1900, (619) 699-1904 (TTY), or fax (619) 699-1905.
REGIONAL PLANNING TECHNICAL WORKING GROUP
Thursday, January 12, 2012

ITEM # | RECOMMENDATION
---|---
1. | WELCOME AND INTRODUCTIONS
2. | PUBLIC COMMENTS AND COMMUNICATIONS

Members of the public shall have the opportunity to address the Regional Planning Technical Working Group (TWG) on any issue within the jurisdiction of SANDAG that is not on this agenda. Anyone desiring to speak shall reserve time by completing a “Request to Speak” form and giving it to the TWG coordinator prior to speaking. Public speakers should notify the TWG coordinator if they have a handout for distribution to working group members. Public speakers are limited to three minutes or less per person. TWG members also may provide information and announcements under this agenda item.

+3. | PRESENTATION BY SAN DIEGO FOUNDATION ON LAND USE SCENARIOS DEVELOPED DURING “OUR GREATER SAN DIEGO VISION” PROJECT
(San Diego Foundation representatives)

Representatives from the San Diego Foundation working on the “Our Greater San Diego Vision” project will discuss the land use scenarios developed during the Foundation’s visioning process. Attached is a letter sent to SANDAG from Fregonese and Associates (consultants for the “Our Greater San Diego Vision” project) requesting this meeting, which was provided to the TWG at its December 1, 2011, meeting.

4. | ADJOURNMENT AND NEXT MEETING

The next Regional Planning Technical Working Group meeting will be held on Thursday, February 9, 2012, from 1:15 to 3:15 p.m.

+ next to an agenda item indicates an attachment
November 30, 2011

Mr. Gary Gallegos
Mr. Charles Muggs Stoll
San Diego Association of Governments
401 B St # 800
San Diego, CA 92101-4231

RE: Scenario “D” and SANDAG

Dear Gary and Muggs,

I’d like to clarify the use of the SANDAG RTP forecast in the creation of Scenario D. We used the SANDAG forecast to create a land use scenario that matches the jobs and households numbers of the forecast to the TAZ level.

In this respect, the Scenario D matches the SANDAG forecast in many ways that I believe you agree with, such as:

1) The housing mix of more than 80% multifamily.
2) The thousands of houses in low density developments, mostly in the northern part of the County.
3) Having a small number of cities in southern part of the County accommodate the large majority of new growth at very high rates, most notably in the City of San Diego.

The one area where our scenario varied from the local plans is the density of infill. In order to achieve the numbers of units in infill sites, we designed Scenario D to develop higher density building types on fewer sites, whereas the SANDAG forecast modeled large scale redevelopment of all the land designated for infill — a result that would result in more than 30,000 acres of currently developed land being completely redeveloped, and redeveloped at fairly low densities. Our analysis led us to believe that this development pattern would be unlikely, and our modeling led us to build the scenario with what we think is a more feasible design — denser buildings on fewer redevelopment sites.

While the density of the buildings may differ from what is in current plans, the numbers of units developed matches the SANDAG forecast.

In comparing Scenario D to the other scenarios, we found some troubling indications that should be discussed in the region. Scenario D was a poor performer on several of the indicators: beyond the obvious housing demand mismatch, Scenario D also performed poorly for land use diversity,
access to jobs by transit, and several others. In many respects, the alternative scenarios B and C performed better, and we believe will be easier to implement in the region.

In the spirit of Our Greater San Diego Vision, I would like to suggest that the planning and development community come together to discuss these scenarios in detail, and discuss if there might be a more effective and strategic way to achieve the goals of the region. We do not presume to suggest that the scenarios used in the Visioning process are a solution, but they do offer some intriguing ideas, and can give a new and valuable perspective on current plans.

In the next month we will have the written documentation for each of the scenarios finished, and would like to suggest a larger meeting to discuss the implication of the scenarios and what possible course of action they might suggest.

Thank you for your helpful suggestions and guidance in this process.

Sincerely,

John Fregonese
President, Fregonese Associates
4 Task Forces

- 4 Task Forces
  - Housing, Environment, Mobility and Cost of Living
    - Economic Development
    - Arts and Amenities
    - Education
Six Public Workshops, September 13-15, 2011
Santee | Southeast SD | Downtown | Bonita | Oceanside | Escondido

Distill Findings Into Strategic Choices

Values & Input

Analysis

Strategies and Trade-offs
Regional Scenario Modeling

How have you been growing?
What are the plans for growth?
Other ways of achieving goals?

Why Use Scenario Planning?

- Weigh choices against consequences
- Test policy options quickly
- Prepare for uncertainty
- Develop strategies to optimize outcomes
Traditional Approach

The Present

The Future

Scenario Approach

Plausible stories about the future
Develop a Range of Scenarios

A

B

C

D

Choosing; Vision Decision Process
DATA COLLECTION

- SANDAG TAZ Forecast to 2050: housing units and jobs
- Buildable lands supply (SANDAG)
  - Vacant & Infill
- Existing & Planned Land Use
- Environmental constraints
  - Hard constraints: national parks and military base
  - Soft Constraints:
    - Slopes 15-25%, 25%+
    - FEMA Flood Zones
    - Open space corridors
    - Habitat conservation planning
    - Key agricultural lands (Williamson Act and other prime lands)
- Existing and Planned Roads and Transit
Scenario Building Process

Calibrate Prototype Buildings for San Diego Region

- Prototype Library of 30 Building Types
  - Full range from industrial, office park, low density single family to 30-story mixed use condos and office
Building Prototypes Use Real World Examples

DETAILED RECENT DEVELOPMENT INVENTORY FROM PORTLAND

- Square feet, unit count, unit size, net density, lot size, parking, FAR
RIVERSCAPE TOWNHOMES
PORTLAND (WATERFRONT)
• 3 Stories
• 40 units / acre
• Avg Unit Size: 2,000 sq ft

IRVINGTON PLACE CONDOS
PORTLAND (NE BROADWAY)
• 4 Stories
• 62 units / acre
• Avg Unit Size: 1,439 sq ft
THE LEXUS PORTLAND (PEARL)

- 5 Stories
- 151 units / acre
- Avg Unit Size: 975 sq ft

THE MERRICK PORTLAND (LLOYD DISTRICT / MLK)

- 6 Stories
- 191 units / acre
- Avg Unit Size: 973 sq ft
10th @ Hoyt
Portland (Pearl)

- 6 Stories
- 191 units / acre
- Avg Unit Size: 773 sq ft

The Elizabeth
Portland (Pearl)

- 15 Stories
- 227 units / acre
- Avg Unit Size: 1,453 sq ft
THE PINNACLE PORTLAND (PEARL)

- 15 Stories
- 195 units / acre
- Avg Unit Size: 1,330 sq ft

Place Types for San Diego Region

- Combination of Planned Land Use Categories and Smart Growth Areas
  - Metropolitan Center
  - Urban Center
  - Town Center
  - Community Center
  - Rural Village
  - Multi-family Residential
  - Traditional Neighborhood
  - Master Planned Community
  - Single-family Residential
  - Mobile Homes
  - Spaced Rural Residential
  - Commercial
  - Office Park
  - Light Industrial Flex
  - Heavy Industrial
  - Hotel
  - Civic
Used SANDAG Place Type Characteristics

<table>
<thead>
<tr>
<th>Smart Growth Place Type</th>
<th>Housing Units per Acre</th>
<th>Employees per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan Center</td>
<td>75</td>
<td>80</td>
</tr>
<tr>
<td>Urban Center</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>Town Center</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Community Center</td>
<td>20</td>
<td>n/a</td>
</tr>
<tr>
<td>Rural Village</td>
<td>10.9</td>
<td>n/a</td>
</tr>
<tr>
<td>Mixed-use Transit Corridor</td>
<td>25</td>
<td>n/a</td>
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</tbody>
</table>

Place Types Composed of Regionally Calibrated Prototype Buildings

Mix of Buildings

Place Types
Urban Center

<table>
<thead>
<tr>
<th>Housing Units per Acre</th>
<th>Jobs per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 DU/Gross Acre</td>
<td>50 Jobs/Gross Acre</td>
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</tbody>
</table>

Multifamily Residential

<table>
<thead>
<tr>
<th>Housing Units per Acre</th>
<th>Jobs per Acre</th>
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</thead>
<tbody>
<tr>
<td>24 DU/Gross Acre</td>
<td>4 Jobs/Gross Acre</td>
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</table>
### Traditional Neighborhood

<table>
<thead>
<tr>
<th>Housing Units per Acre</th>
<th>Jobs per Acre</th>
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</thead>
<tbody>
<tr>
<td>8 DU/Gross Acre</td>
<td>2 Jobs/Gross Acre</td>
</tr>
</tbody>
</table>

![Traditional Neighborhood Images]

### Master Planned Community

<table>
<thead>
<tr>
<th>Housing Units per Acre</th>
<th>Jobs per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 DU/Gross Acre</td>
<td>0.5 Jobs/Gross Acre</td>
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</tbody>
</table>

![Master Planned Community Images]
### Office Park

<table>
<thead>
<tr>
<th>Housing Units per Acre</th>
<th>Jobs per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 DU/Gross Acre</td>
<td>40 Jobs/Gross Acre</td>
</tr>
</tbody>
</table>

### Light Industrial Flex

<table>
<thead>
<tr>
<th>Housing Units per Acre</th>
<th>Jobs per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 DU/Gross Acre</td>
<td>18 Jobs/Gross Acre</td>
</tr>
</tbody>
</table>
Civic

<table>
<thead>
<tr>
<th>Housing Units per Acre</th>
<th>Jobs per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 DU/Gross Acre</td>
<td>28 Jobs/Gross Acre</td>
</tr>
</tbody>
</table>

THE FOUR SCENARIOS
Building the Scenarios

- Quickly paint scenarios using financially feasible building blocks
- Compare multiple scenarios across a variety of indicators
- Track progress in real-time

Real-time Scenario Building and Evaluation

Select
Paint
See Changes Instantly
Scenario A

In Scenario A’s vision of the future we will continue to grow and develop the region like we have in the past.

The county and each of the cities will continue to pursue their own plans for the future—indeed each of them will pursue their own plans for the future—independent of others in our region.

In this vision of our future, most people will be living in single-family homes like we are now and much of our new housing will be in neighborhoods which are separated from jobs, shopping, recreation, and public transportation.

If we choose this direction, we use more water and consume somewhat more land than the other scenarios.

SCENARIO A

[Map showing different types of developments and land uses, including Metropolitan Center, Urban Center, Town Center, Community Center, Mixed-use Transit Corridor, Rural Village, Multi-Family Residential, Traditional Neighborhood, Master Planned Community, Single Family Residential, Mobile Homes, Spaced Rural Residential, Commercial, Office Park, Light Industrial Flex, Heavy Industrial, Hotel, Civic, and Education areas.]
In Scenario B’s vision of the future we will build the types of housing that people will want and be able to afford, including a mix of single family homes, apartments, and townhomes.

In this vision of the future, the County and cities will need to cooperate and work together to build new regional job centers that help the entire region and locate jobs, shopping, recreation, and public transportation closer to where people live.

While focusing on creating new job centers and meeting peoples’ housing choices, Scenario B also uses less vacant land, sensitive land, and water.
In Scenario C’s vision of the future we will concentrate new housing into more compact types of development further reducing growth on vacant and sensitive lands as well as overall water consumption.

More people will live in townhomes than in any other scenario and a lot fewer people will live in single-family homes than today.

In this vision of the future, the County and cities will need to cooperate and work together.

By working together we will be able to locate jobs, shopping, recreation, and public transportation closer to where people live.
Scenario D is the vision of what might happen if we follow current city and county growth projections for their communities.

The key to this vision of the future is that most of the new housing will be in the form of mid and high rise apartments and condo towers—more than a third of new housing will be in high-rise buildings and an additional one fourth of all the housing will be in 3 to 6 story buildings. Overall there will be far fewer people living in single family homes. At the same time, more vacant land will be consumed by rural housing on lots larger than one acre.

Because the County and each city continue to do independent planning in this scenario, some cities will avoid any growth in their community while others will end up building a lot of new mid and high-rise housing. This scenario puts more people closer to the coast and public transportation than any other scenario.
SCENARIO D

Metropolitan Center
Urban Center
Town Center
Community Center
Mixed-use Transit Corridor
Rural Village
Multi-Family Residential
Traditional Neighborhood
Master Planned Community
Single Family Residential
Mobile Homes
Spaced Rural Residential
Commercial
Office Park
Light Industrial Flex
Heavy Industrial
Hotel
Civic
Education
SCENARIO EVALUATION

ONLY ~50,000 ACRES
DIFFERENCE BETWEEN SCENARIOS
TOTAL PERCENT OF COUNTY URBANIZED IN 40 YEARS

- Scenario A: 17.9%
- Scenario B: 17.4%
- Scenario C: 16.1%
- Scenario D: 17.5%

Buildable lands may seem significant...

Over 465,000 acres identified as buildable
...But the truth is, this is a land constrained region...
Easily serviceable vacant and infill lands are quite limited, especially large contiguous parcels

...And most of what’s available is planned for Spaced Rural Residential in the County

94% of vacant land is planned for low density single family
Infill is Important Strategy for the Future – How to Achieve it is a Key Question

Growth on Infill vs. Vacant Land

Infill vs. Vacant Land

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Households</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>89%</td>
<td>80%</td>
</tr>
<tr>
<td>B</td>
<td>71%</td>
<td>62%</td>
</tr>
<tr>
<td>C</td>
<td>66%</td>
<td>58%</td>
</tr>
<tr>
<td>D</td>
<td>51%</td>
<td>52%</td>
</tr>
</tbody>
</table>

Scenario A: 11% Infill, 89% Vacant
Scenario B: 29% Infill, 71% Vacant
Scenario C: 34% Infill, 66% Vacant
Scenario D: 49% Infill, 51% Vacant

Scenario A: 20% Infill, 80% Vacant
Scenario B: 38% Infill, 62% Vacant
Scenario C: 42% Infill, 58% Vacant
Scenario D: 48% Infill, 52% Vacant

PORTLAND’S INFILL CAPTURE RATE

- Scenario D is accommodating 49% of it’s growth through infill and redevelopment
  - A very aggressive assumption
- Portland Metro region captures about 33% of new growth through infill
- Scenario C captures 34%
What type of housing do people live in today?

Housing Stock Today

- Over half housing is Single Family
- Median home value is $516,000 in 2005-2009 (Census)
- Cost of living is #1 concern among residents

COST OF LIVING IS #1 CONCERN

- San Diegans spend 33% of their incomes on housing
- More than almost every other region in the country
- More than: Los Angeles, Miami, New York, and San Francisco
Affordability (Ratio of Median Home Price to Median Household Income)
San Diego County, CA vs. United States 1981-2009

The ratio of median home price to median household income in San Diego County is nearly twice as high as the national average.

From 1981 to 2001, the average ratio was 4.76 in San Diego County and 3.09 in the U.S.

This situation will likely become more challenging in the future.

Housing Demand Forecasts for SANDAG Region

RCLCo Housing Forecast | Dr. Nelson’s Housing Forecast
---|---
**Housing Type** | **Housing Type**
Multi-family | Multi-family
Attached/Plex | Attached/Plex
Single-family | Small Lot Single-family

<table>
<thead>
<tr>
<th>2050 Housing Mix</th>
<th>2035 Housing Mix</th>
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<tbody>
<tr>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>17%</td>
<td>18%</td>
</tr>
<tr>
<td>53%</td>
<td>18%</td>
</tr>
<tr>
<td>Single-family</td>
<td>Single-family (All Other Lot Sizes)</td>
</tr>
<tr>
<td>34%</td>
<td></td>
</tr>
</tbody>
</table>

Key Assumptions:

- **Changes in Household Size**: increased small households and very large households
- **Changes in Tenure**: reduction in homeownership, increase in renters
- **Changes in Product Preferences**: due to either increased rental demand or actual preference changes
Demographic Changes are Changing Housing Preference

*Significant shift from conventional and large lot single family to smaller units, such as compact single family and townhomes*

**Housing Stock Today**
- Conventional & Large Lot Single Family: 42%
- Compact Single Family: 13%
- Townhome: 16%
- Multi-family: 29%

**Future Market Demand**
- Conventional & Large Lot Single Family: 32%
- Compact Single Family: 19%
- Townhome: 17%
- Multi-family: 32%

**Scenario D vs. Housing Forecast**

*To get from 2010 to 2050...*

*...requires this housing mix for new housing.*

Housing Growth (2010-2050)
Implications of Scenario D Forecast

- Over 80% of all new units would be attached or multifamily
- City of San Diego would need to average 5,300 new multi-family units a year for 40 years.
- San Diego would receive

How Many Multifamily Units are Needed to Achieve Forecast?

<table>
<thead>
<tr>
<th>City</th>
<th>Multi-family Forecast Increment</th>
<th>Average Annual Production (5+ Units) 2000-2009</th>
<th>Annual Production Needed for 2050 Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chula Vista</td>
<td>25,066</td>
<td>411</td>
<td>597</td>
</tr>
<tr>
<td>El Cajon</td>
<td>14,057</td>
<td>-</td>
<td>335</td>
</tr>
<tr>
<td>National City</td>
<td>9,743</td>
<td>44</td>
<td>232</td>
</tr>
<tr>
<td>San Diego</td>
<td>225,016</td>
<td>2,717</td>
<td>5,358</td>
</tr>
<tr>
<td>Vista</td>
<td>11,951</td>
<td>37</td>
<td>285</td>
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</tbody>
</table>

Annual Multifamily Units Permitted in Comparable Cities
Scenario Housing Profiles

*Total Housing in 2050 Compared to Today*

How Well do the Scenarios Match Future Housing Market Demand?

---

<table>
<thead>
<tr>
<th>Scenario</th>
<th>87% Match</th>
<th>99% Match</th>
<th>93% Match</th>
<th>62% Match</th>
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<tbody>
<tr>
<td>Current</td>
<td>41.9%</td>
<td>13.2%</td>
<td>16.0%</td>
<td>16.0%</td>
</tr>
<tr>
<td>Scenario A</td>
<td>28.9%</td>
<td>16.0%</td>
<td>22.7%</td>
<td>28.9%</td>
</tr>
<tr>
<td>Scenario B</td>
<td>30.6%</td>
<td>17.4%</td>
<td>19.4%</td>
<td>17.4%</td>
</tr>
<tr>
<td>Scenario C</td>
<td>32.8%</td>
<td>17.6%</td>
<td>33.8%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Scenario D</td>
<td>40.5%</td>
<td>13.7%</td>
<td>32.8%</td>
<td>12.9%</td>
</tr>
</tbody>
</table>
UNDERSTANDING THE REDEVELOPMENT ASSUMPTIONS IN THE SCENARIOS

What Factors influence Redevelopment?

- How widespread is redevelopment likely to be?
  - Every parcel in certain neighborhoods?
  - Or will only a percentage of parcels in an area redevelop over 40 years?
- What influence does the area’s Plan and Zoning have?
  - Is growth focused in certain areas over others?
- Are building densities expected to be the same across the entire neighborhood?
  - Or are certain parcels going to redevelop with higher densities than others?
- How does parcel size influence the likelihood of redevelopment?
Example: North Park area in City of San Diego

Significant redevelopment opportunities AND planned capacity on corridors – such as El Cajon

Interior neighborhood is planned “multifamily” however:
• Market realities of parcel assembly are a challenge
• Some properties will probably remain stable for 40 years
• With the loss of redevelopment things will be even more of a challenge

Planned Land Use
North Park area - TAZ 3280

Legend
Planned Land Use smp!

Mixed Use planned on corridors
Dense housing planned for neighborhood
Nearly Every Parcel is Considered Redevelopable - ~78 Acres

~570 Parcels – average size ~7,000 sq ft

1,566 Units Across 78 Acres
= 20 DU / Acre Average
In Scenario D design units are not spread evenly across TAZ

Scenario D Unit Distribution

- The distribution of units is concentrated in the mixed use buildings along the corridors
- 15 story buildings get a sizable chunk
- We removed 30 story buildings from the scenarios altogether
Larger Area Surrounding TAZ

Implications of SANDAG’s Redevelopment Assumptions

- Total redevelopable acres: 31,321 acres
- Number of Parcels: 113,844
- Housing Units Displaced: 144,418

<table>
<thead>
<tr>
<th></th>
<th>SANDAG</th>
<th>Scenario D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Acres</td>
<td>31,321</td>
<td>6,694</td>
</tr>
<tr>
<td>Number of Parcels</td>
<td>113,844</td>
<td>37,199</td>
</tr>
<tr>
<td>Total Housing Units Displaced</td>
<td>144,418</td>
<td>64,379</td>
</tr>
</tbody>
</table>
Example: El Cajon Transit Center

Existing Land Use
TAZ - 2864
Planned Land Use

Legend
- AG
- CANC
- CDU
- HOTEL
- INDAN
- MIL
- ML
- ML_AIR
- ML_REGH
- ML_TRANS
- ML_USE
- MU
- OFF
- GS
- RESH
- RESI
- RESMH
- RESVL
- RET
- UTIL
- UNK

Mixed Use planned on corridor
Mixed Use west of Station
Attached housing in neighborhood

Buildable Lands Capacity - ~31 Acres

Legend
- Infill
- Developable Land
1,250 Units Across 31 Acres = 40 DU / Acre Average

Scenario D

Legend
Scenario_D <ACTIVE>
- <all other values>

DEV_TYPE
- Metropolitan Center
- Urban Center
- Town Center
- Community Center
- Rural Village
- Multi-Family Residential
- Traditional Neighborhood
- Master Planned Community
- Single Family Residential
- Mobile Homes
- Spaced Rural Residential
- Commercial
- Office Park
- Light Industrial Flex
- Heavy Industrial
- Mixed
- Civic
- Education
Unit Distribution in Scenario D

- Units are almost exclusively in 6 and 15 story buildings

### Key Assumption Differences

<table>
<thead>
<tr>
<th>SANDAG</th>
<th>Fregonese</th>
</tr>
</thead>
<tbody>
<tr>
<td>All lands identified as likely redevelopable are redeveloped in planning horizon</td>
<td>Not all land assumed to be redeveloped Land along corridors are more likely to be used than land within neighborhoods</td>
</tr>
<tr>
<td>Gross densities/FAR at TAZ level used to gauge building mix / appropriateness</td>
<td>Scenarios designed with variety of modeled buildings at parcel level</td>
</tr>
<tr>
<td>Constrained by city forecast input</td>
<td>Not constrained by city forecast input</td>
</tr>
<tr>
<td>Forecast is a negotiated product of city input and plans</td>
<td>Scenarios designed to achieve various goals, such as match future housing demand and affordability goals</td>
</tr>
</tbody>
</table>
Significant Rural Housing Growth North of Escondido

Housing Units per Gross Acre

- Scenario A: 3.95
- Scenario B: 4.31
- Scenario C: 7.35
- Scenario D: 4.29
Percent of New Households within 5 Miles of the Beach

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Percent</th>
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<tbody>
<tr>
<td>A</td>
<td>15%</td>
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<tr>
<td>B</td>
<td>33%</td>
</tr>
<tr>
<td>C</td>
<td>39%</td>
</tr>
<tr>
<td>D</td>
<td>43%</td>
</tr>
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</table>

Growth on High Slope Areas (25%+)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Impacted Lands</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>129,089</td>
</tr>
<tr>
<td>B</td>
<td>28,113</td>
</tr>
<tr>
<td>C</td>
<td>19,012</td>
</tr>
<tr>
<td>D</td>
<td>11,412</td>
</tr>
</tbody>
</table>

Additional Impacted Lands from Each Scenario
Growth on Williamson Act and Agricultural Preservation Land

Percent of County’s Agricultural Land Used for Development
Transport Modeling – The MXD Methodology

The model developed used data from MXDs in six metropolitan regions (Boston, Atlanta, Houston, San Diego, Seattle, and Sacramento). Hierarchical Linear Modeling (HLM) techniques were used to quantify relationships between characteristics of the MXDs and the likelihood that trips generated by those MXDs will stay internal and/or use modes of transportation other than the private vehicle. Variables that proved successful in the latest (April 2009) version of the model include:

- Employment
- (Population + Employment) per square mile
- Land Area
- Total Jobs / Population Diversity
- Retail Jobs / Population Diversity
- # of intersections per square mile
- Employment within a mile
- Employment within a 30 minute trip by transit
- Average Household Size
- Vehicles Owned Per Capita

To date, 22 independent mixed use sites that were not included in the initial model were tested to help validate the model. 16 sites were originally used in the validation, then six sites in the San Diego area were added later as part of a study funded by SANDAG.
New Households Within ¼ Mile of Transit

![Bar chart showing the percentage of new households within ¼ mile of transit across different scenarios.]

New Jobs Within 30 Minutes by Transit from Home

![Bar chart showing the percentage of new jobs within 30 minutes by transit from home across different scenarios.]

1/12/2012
Households with Access to Jobs Within One Mile

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Access Percentage</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>21%</td>
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<tr>
<td>B</td>
<td>31%</td>
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<tr>
<td>C</td>
<td>35%</td>
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<tr>
<td>D</td>
<td>33%</td>
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</table>

Daily Time Spent Traveling (Minutes)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Time (Minutes)</th>
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<tbody>
<tr>
<td>A</td>
<td>104</td>
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<tr>
<td>B</td>
<td>101</td>
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<tr>
<td>C</td>
<td>100</td>
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<tr>
<td>D</td>
<td>103</td>
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</table>
SOME CONCLUSIONS

- San Diego County can meet its stated goals on transportation and GHG reduction in a number of ways – the region has options!
- Strategies are needed to achieve future housing demand
  - The current housing mix in scenario D, and that implied by the RTP forecast, is inconsistent with future housing forecasts from two authoritative sources
- Infill is a key strategy for future growth, however:
  - Redevelopment assumptions are very aggressive and infill rates may not be realistic
- Growth in Unincorporated County could be an issue
  - There is significant growth forecast for Unincorporated County, but the planned land use is for Spaced Rural Residential
  - Limited housing demand for that product type
  - Growing in that fashion could undermine transportation efficiency gains derived from even aggressive infill development