

The logo for WALH, consisting of the letters 'WALH' in a bold, sans-serif font, set against a light blue background with a white cloud pattern.

WESTERN ALBUQUERQUE LAND HOLDINGS, LLC

A semi-transparent white box containing the title 'SANTOLINA LEVEL A' in a large, serif font, followed by 'MASTER PLAN' in a smaller, serif font, and 'AUGUST 26, 2013' in a smaller, sans-serif font.

**BERNALILLO COUNTY PLANNING COMMISSION  
ENVIRONMENT AND OPEN SPACE HEARING  
MAY 2014**

The logo for SANTOLINA, featuring a stylized white leaf icon to the left of the word 'SANTOLINA' in a bold, sans-serif font, all contained within a dark blue rectangular box.

# WALH

WESTERN ALBUQUERQUE LAND HOLDINGS LLC

PROJECT DEVELOPMENT TEAM:

Garrett Development Corporation

Bohannon Huston Inc.

SEC Planning, LLC

Consensus Planning, Inc.

David Taussig & Associates

Planning Technologies, LLC

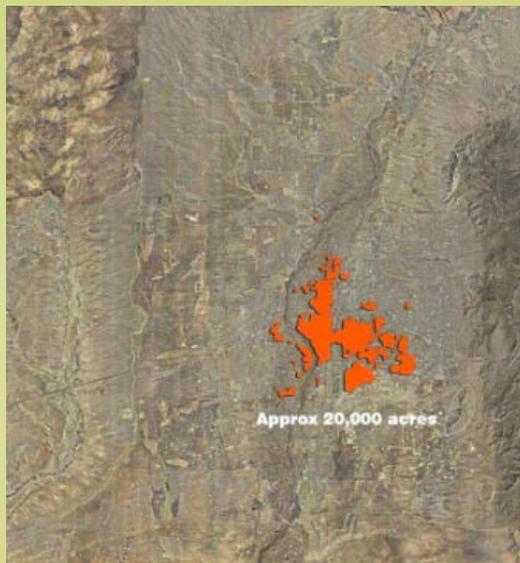
May 28, 2014

## COUNTY PLANNING COMMISSION HEARING

1. Why Here? Why Now? Why Plan?
2. Sustainability Framework
3. Water
4. Wastewater
5. Stormwater
6. Soils
7. Open Space
8. Conclusion
9. Next Steps

## WHY HERE?

### METROPOLITAN ALBUQUERQUE Historic Land Absorption



1951 —————> 2011

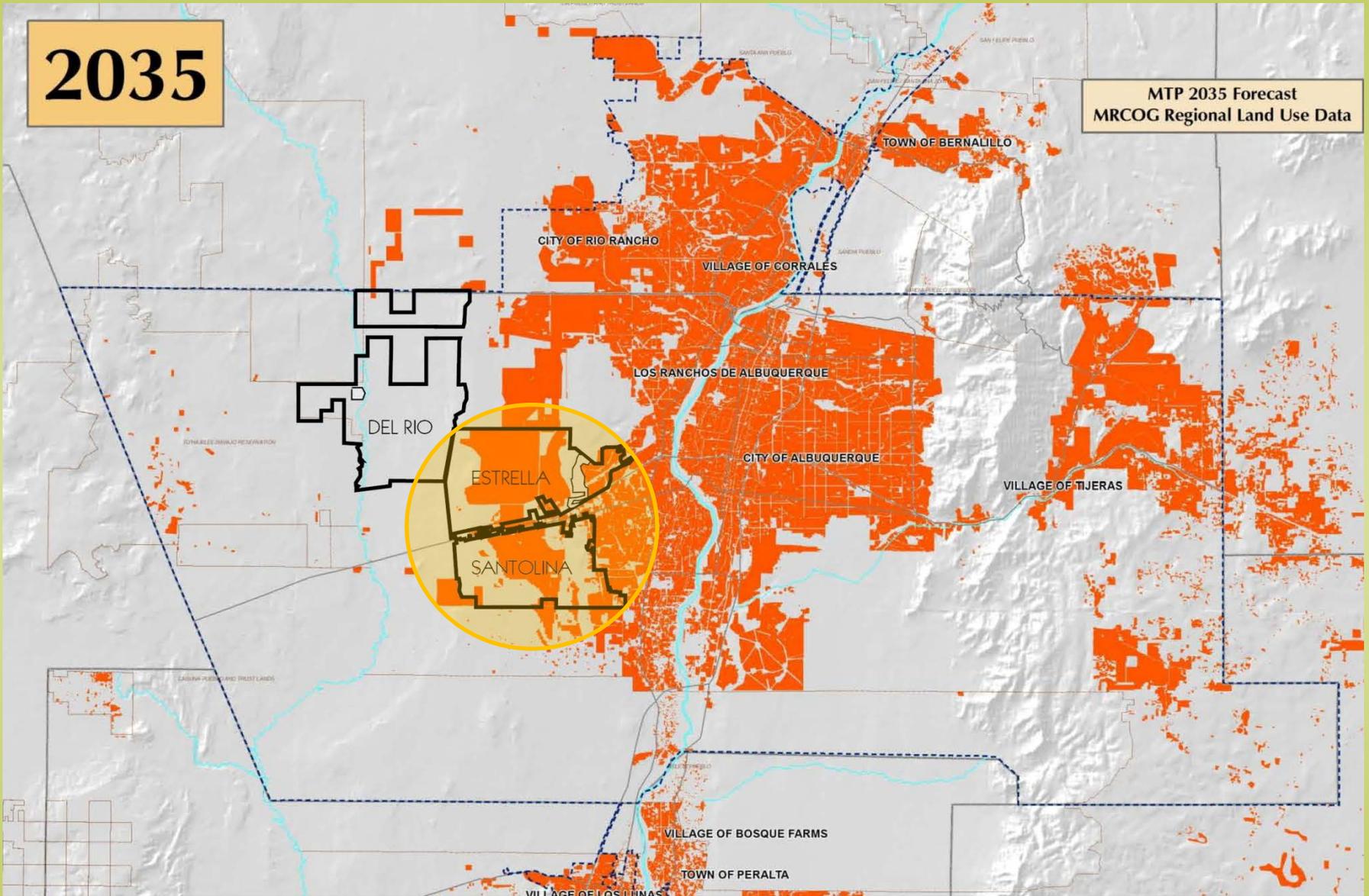
± 20,000 Acres Developed —————> ± 170,000 Acres Developed

**150,000 acres of absorption over 60 Years or 2,500 Acres per Year**

# MRCOG – REGIONAL LAND USE FORECAST

2035

MTP 2035 Forecast  
MRCOG Regional Land Use Data



# METROPOLITAN ALBUQUERQUE Available Land

Interstate Highways and  
Proposed Regional Roadways

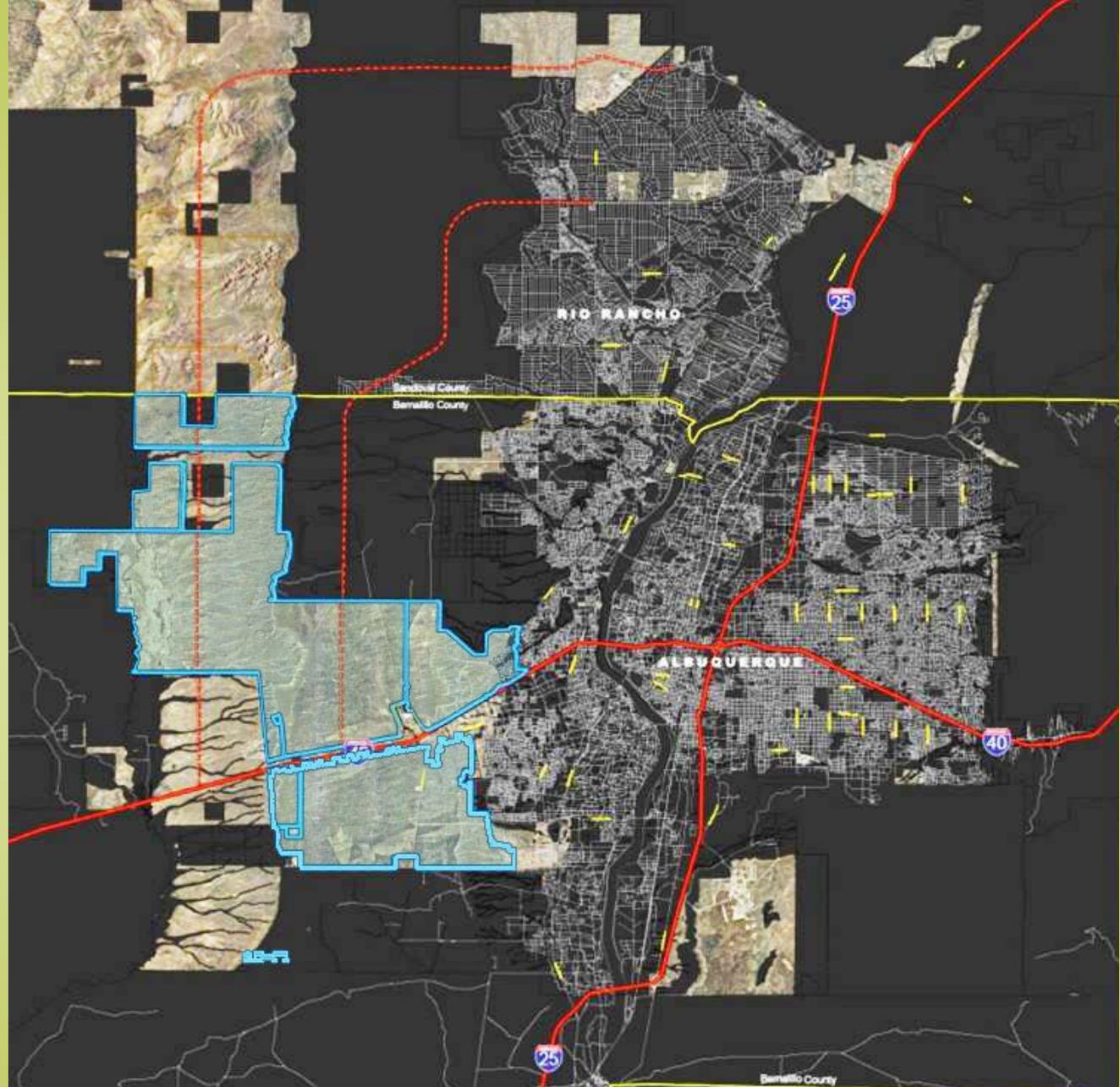
Public Land (State Trust, BLM,  
Military Reservation, Bureau of  
Reclamation, Federal Land,  
National Forest, National  
Monument, Proposed Open  
Space)

Tribal Land

Floodplains and Irrigated Lands

Antiquated Subdivisions and  
Areas of Limited Development  
(Lack of Utilities and Fractured  
Ownership)

→ Available Land with WALH  
Properties Highlighted



# WHY HERE? WHY NOW?

## METROPOLITAN AREA

### Growth vs. Land Availability

- **MRCOG Projects Metropolitan Area Growth**
  - ✓ 1.3 Million People by 2035
  - ✓ On Numbers Economic Index predicts the Albuquerque Population will reach **one million by 2018**
- **Limited Land Availability to Accommodate Growth**
  - ✓ Access
  - ✓ Public Land
  - ✓ Tribal Land
  - ✓ Floodplains and Irrigated Agriculture
  - ✓ Antiquated Subdivisions
  - ✓ Fractured Ownership
  - ✓ Lack of Regional Infrastructure
- **Logical Location for Growth**
  - ✓ Santolina and Estrella Master Planned Communities

# WHY PLAN?

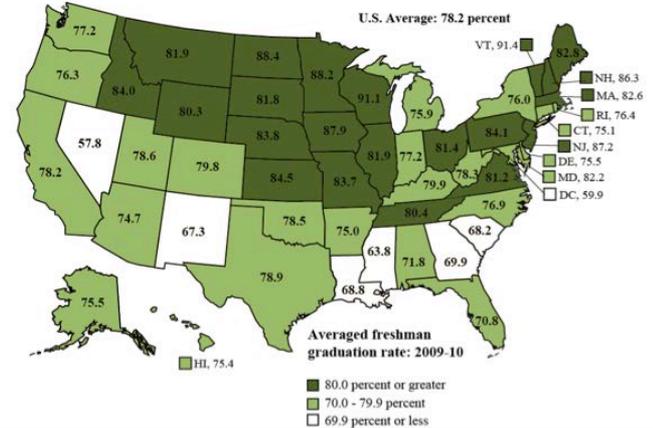


## JOBS



## EDUCATION

Averaged freshman graduation rate for public high school students, by state or jurisdiction: 2009–10



## POVERTY



# WHY A PLANNED COMMUNITY?



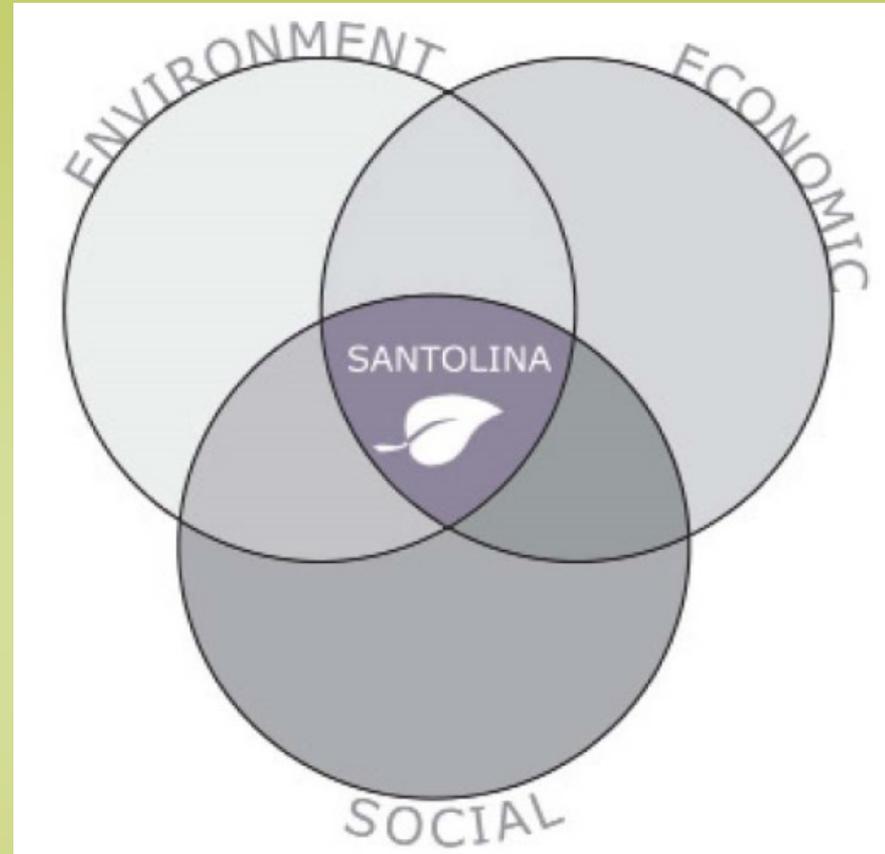
Suburban Sprawl

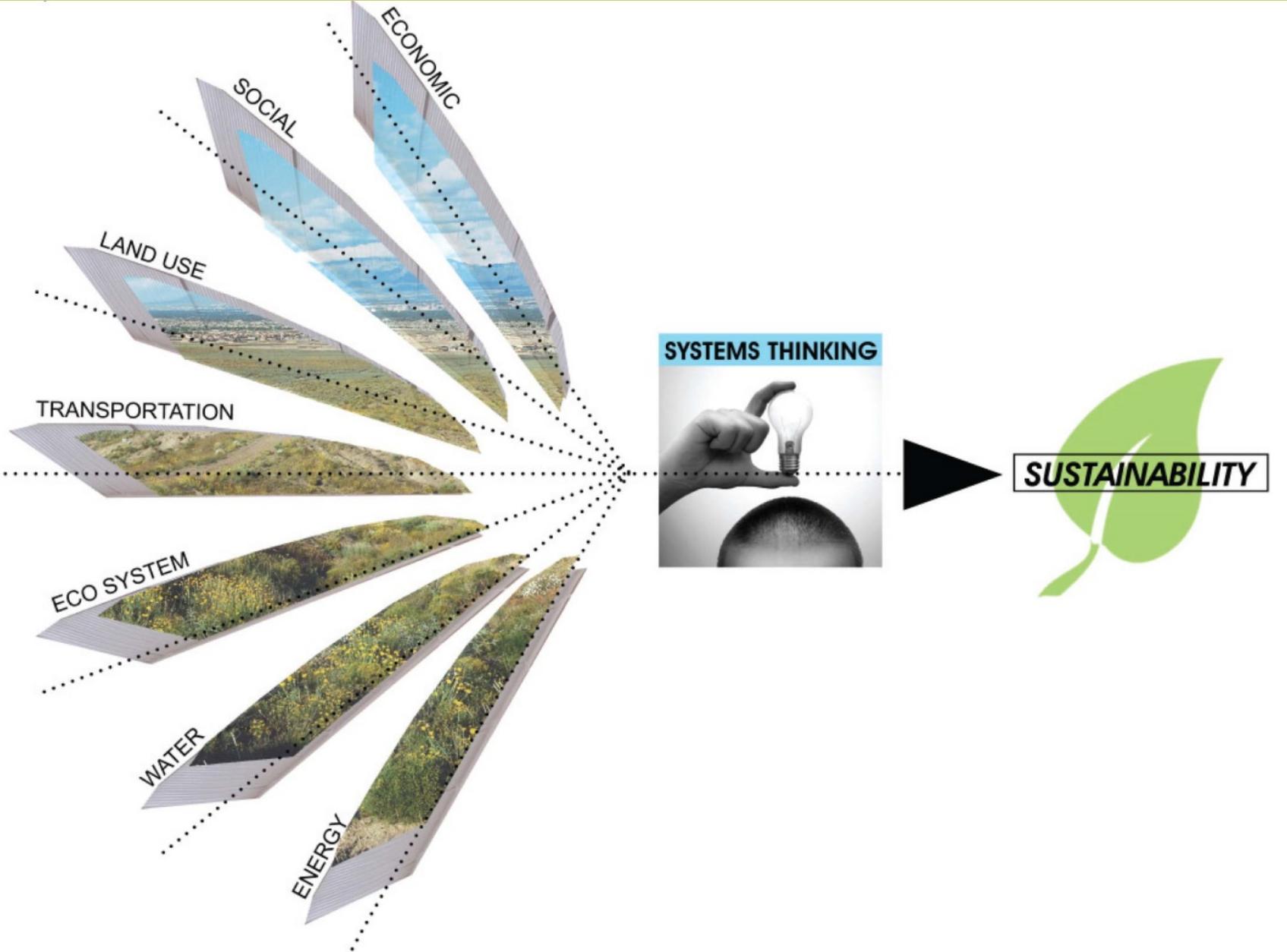
vs.

Master Planned Community

# SUSTAINABILITY:

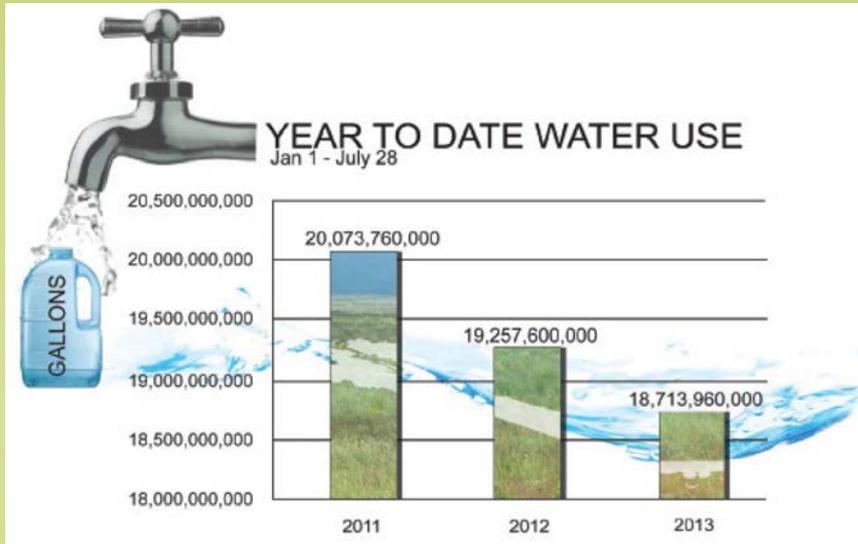
Balances the needs and resources of the present community with that of the future.



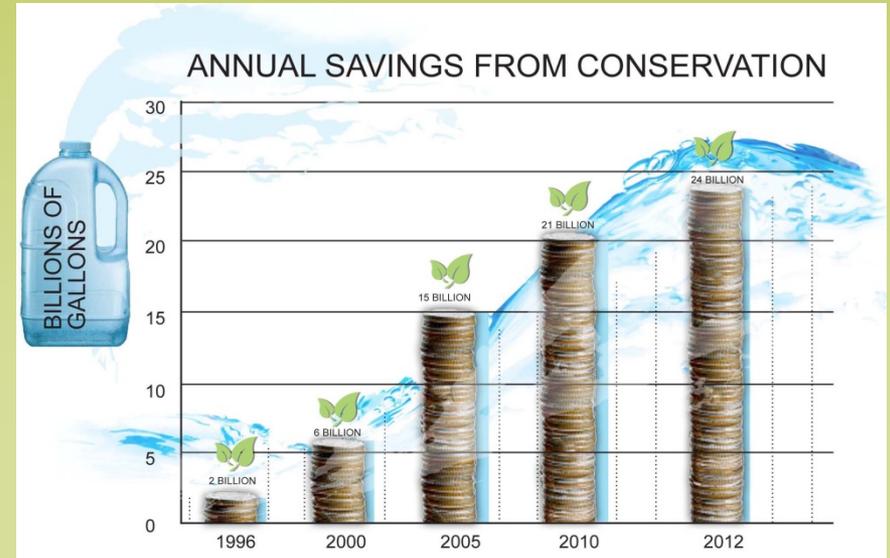


# ELEMENTS OF SANTOLINA SUSTAINABILITY

## Water



Source: ABCWUA



Source: ABCWUA

These conservation standards applied at the scale of Santolina on a system wide level, offer the rare opportunity to ensure a sustainable water supply for the region. Santolina's water efficiency will help make up for existing inefficiencies of older development in the regional water system.

# EFFICIENCY OF NEW CONSTRUCTION



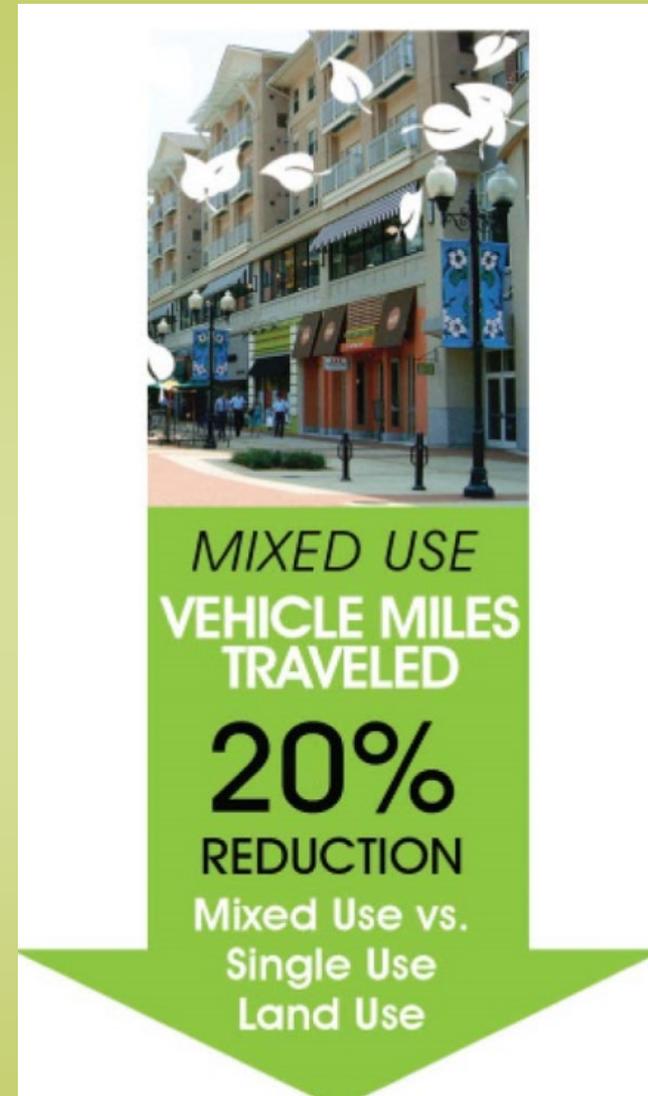
Source: Us Department of Energy



Source: Aquacraft, Inc.

# TRANSPORTATION & LAND USE

- Mixed use community with convenient services
- Multi-modal connectivity
- Preservation of open space



Source: US HUD

# ECONOMIC SUSTAINABILITY

-  Plan Area designed to accommodate approximately 75,000 jobs
-  \$22.4 million – annual recurring fiscal surplus to Bernalillo County
-  \$20 million – annual non-General Fund revenues contributed by Santolina
-  Annual recurring revenues projected to equal 1.78 times the General Fund costs associated with Santolina
-  \$47.7 million General Fund and \$40.9 million non-General Fund revenues in one time construction GRT
-  \$10.9 billion annual recurring direct and indirect impacts to the County
-  \$18.1 billion one time construction wage output

# SOCIAL SUSTAINABILITY

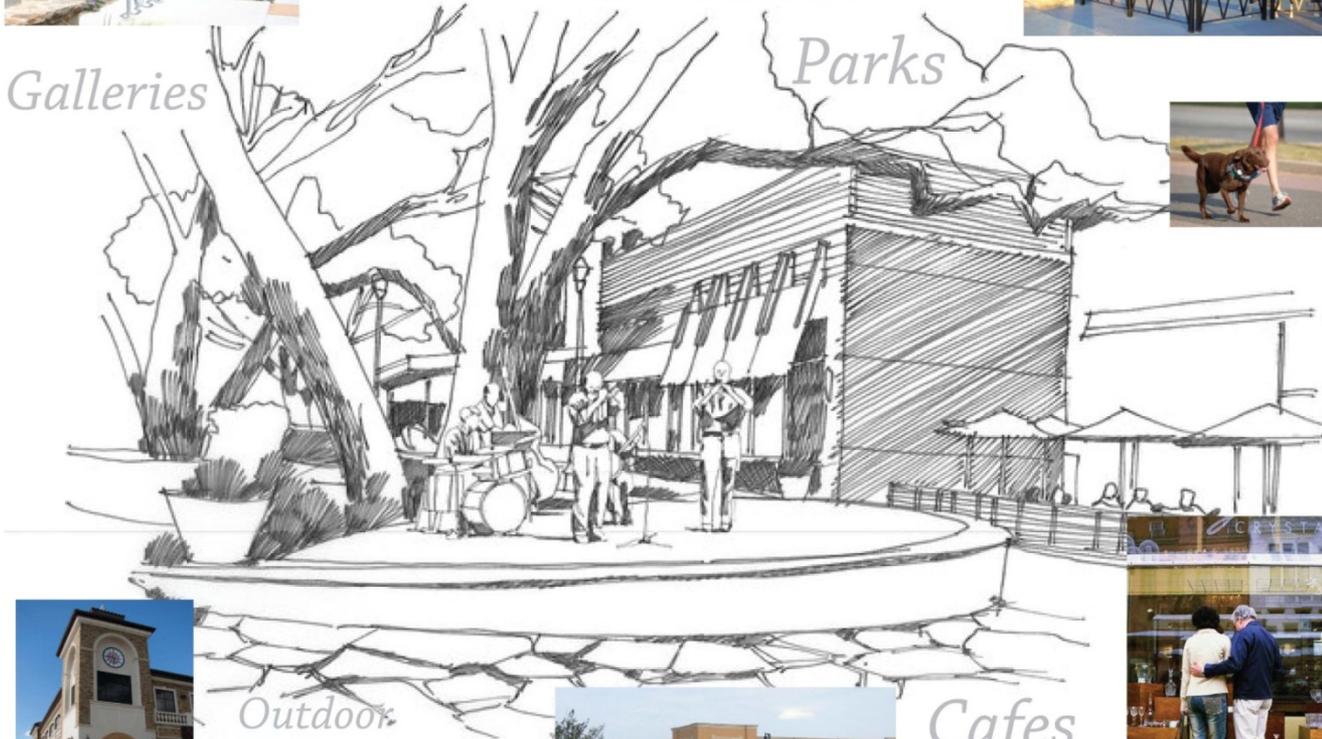


*Community Spaces*



*Galleries*

*Parks*



*Outdoor Classrooms*



*Cafes*



# RIGHT PLACE, RIGHT TIME

- Demonstrated Need & Trends
  - ✓ Population Growth
  - ✓ Land Absorption
  - ✓ Historic Building Permit Data
- Limited Supply
  - ✓ Public and Tribal Land, Flood Plains and Irrigated Agricultural Land, and Antiquated Subdivisions
- Anticipated
  - ✓ Comprehensive Plan
  - ✓ Planned Communities Criteria
  - ✓ PC Zone
- Efficiency & Sustainability
  - ✓ Master Planned Communities
  - ✓ Systems Thinking

# PLANNED COMMUNITY CRITERIA (PCC)

1. **Water System:** A conceptual strategy for providing (water) utilities, emphasizing efficient use of resources.
2. **Sewer/Wastewater System:** Strategy for wastewater management.
3. **Stormwater System:** Drainage Strategy for management and maintenance of watersheds and floodplains.
4. **Soils:** Suitability analysis.
5. **Open Space:** Identification of land forms and environmental features for protection and to inform land use.
6. **Archaeology:** Class I Archaeological Study.
7. **Sustainable, No Net Expense and Self-Sufficiency**

# SANTOLINA WATER OVERVIEW

- ABCWUA is anticipated to provide service to Santolina
- ABCWUA 40-Year Water Plan for the State of New Mexico
- ABCWUA has indicated that there is ample water supply to meet the area's needs over the next forty years
- Santolina does not increase the population growth rates nor water demands of the ABCWUA's ultimate service area

# SANTOLINA WATER OVERVIEW

## Santolina Actual Projected Water Use: 14,380 acre-feet per year (135 gpcd) at Ultimate Buildout

- Based on the water rights the ABCWUA has now, Santolina at ultimate buildout is only:
  - 30% of the commonly referred-to San Juan Chama water supply (48K ac-ft)
  - 14% of today's water usage in the ABCWUA water service area
  - 9% of the total water usage estimated in 2060 by Water ABCWUA
  - 6% of the total water rights permitted to/assumed by the ABCWUA

# WATER

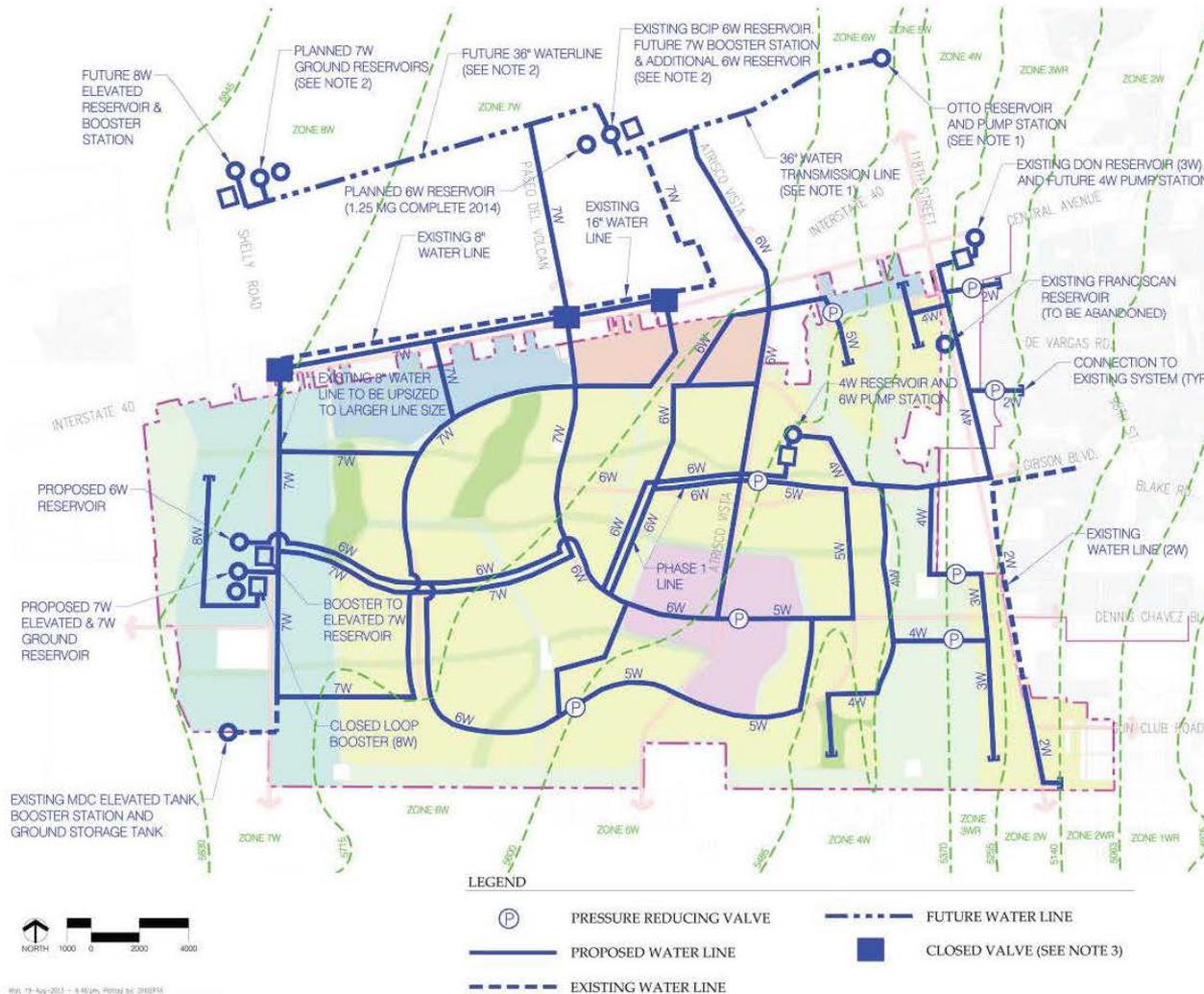
## Projected Use Vs. Design Capacity

	Avg. Day	Avg. Day	Per Capita Avg. Day (All Uses)	Avg. Day Use (New Residential)
<b>ACTUAL</b>	<b>PROJECTED</b>	<b>USE:</b>		
135 GPCD	12.82 MGD	14,380 Ac-Ft/Yr	135 GPCD	Less than 75 GPCD
<b>DESIGN</b>	<b>CAPACITY:</b>			
All Land Uses:	19.93 MGD	22,340 Ac-Ft/Yr	210 GPCD	-----
Residential Uses:	7.68 MGD	8,610 Ac-Ft/Yr	81 GPCD	203 GPD /DU

# WATER SYSTEM

- Over time, Santolina water supply sources may be multi-faceted:
  - Existing ABCWUA system points of connection (multiple)
  - Reuse/reclaimed wastewater for appropriate uses
  - New innovative water supply sources
  - Subject to ABCWUA final approvals
  
- Santolina will comply with all applicable County and ABCWUA water conservation policies
  - Commercial
  - Residential (180 gpd/DU today)
  - Landscaping, Plumbing Codes
  - Overall 135 gpcd (goal for 2024, or earlier)

# WATER SYSTEM MASTER PLAN – FULL BUILD



**NOTES:**

1. THE OTTO PUMP STATION AND 36" TRANSMISSION LINE ARE CURRENTLY UNDER CONSTRUCTION (COUNTY OF BERNALILLO /WALH PROJECT).
2. THE 7W RESERVOIR, BCIP PUMP STATION / RESERVOIR AND 36" TRANSMISSION LINE ARE UNDER DESIGN AND PLANNED FOR CONSTRUCTION IN 2014.
3. WITH CONSTRUCTION OF ALL REQUIRED LINES, BOOSTERS & RESERVOIRS IN ATRISCO TRUNK, ALL CONNECTIONS (VALVES) BETWEEN COLLEGE AND ATRISCO TRUNKS SHALL BE CLOSED.
4. ALL WATER INFRASTRUCTURE SHOWN IS ILLUSTRATIVE ONLY AND SUBJECT TO CHANGE.

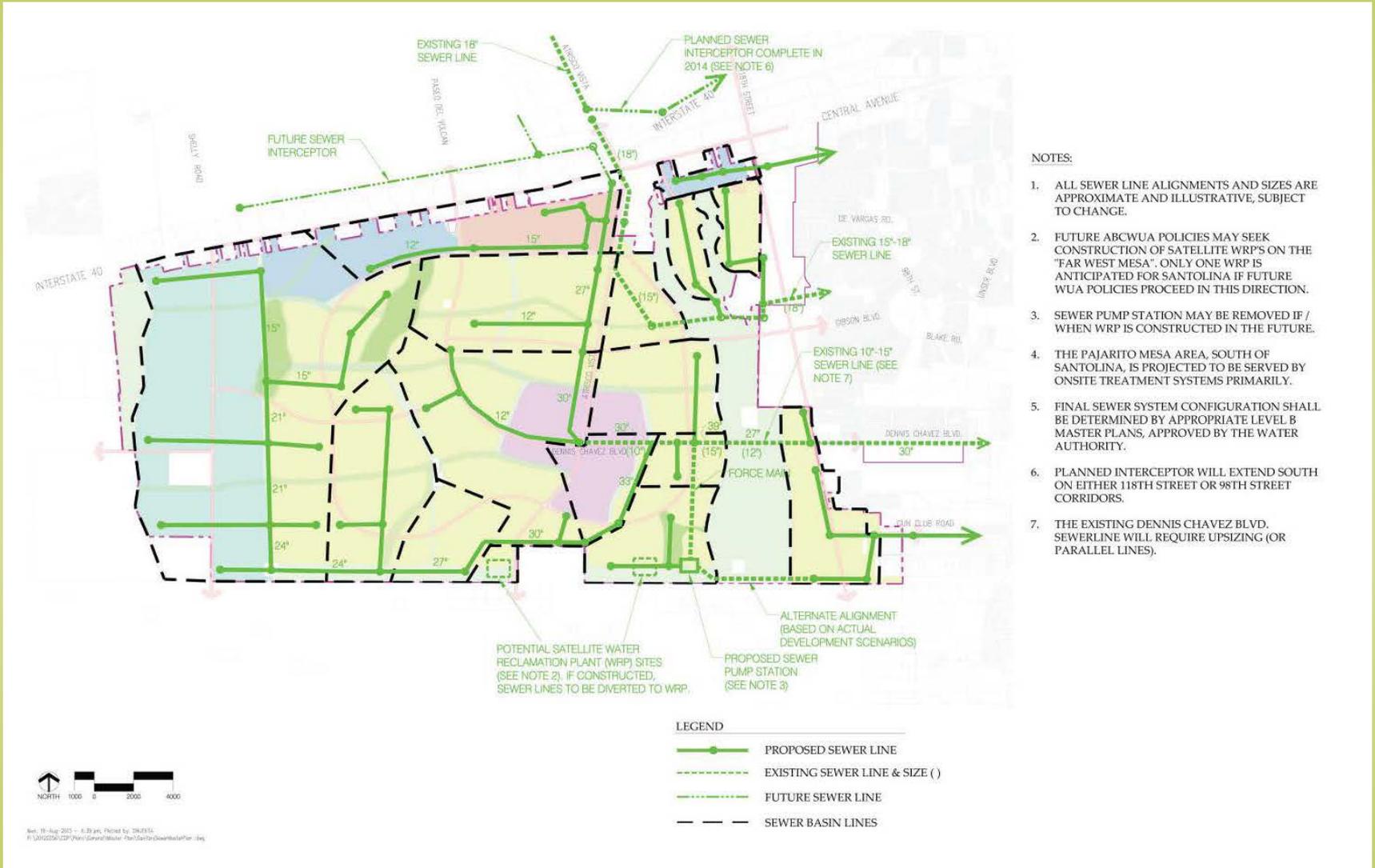
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# SANITARY SEWER/WASTEWATER SYSTEM

- ABCWUA is anticipated to provide sanitary sewer service
  
- Santolina will comply with all applicable County and ABCWUA water conservation policies
  
- Sewer planning includes:
  - Large area collection facility located in the community's southeast corner
  - Installation of a satellite Water Reclamation Plant
  - Wastewater treated for reuse
  - Some areas will continue draining to existing Southside treatment plant

# SANITARY SEWER/WASTEWATER MASTER PLAN – FULL BUILD





# STORMWATER (DRAINAGE) SYSTEM

## 'Stormwater Retention' Zone

- Drainage to natural depression
- Develop drainage to retention ponding areas
- Discharged by infiltration, evaporation, shallow groundwater recharge, and reuse
- Water harvesting opportunity
- Stormwater quality opportunities

## 'Stormwater Detention' and Release to River

- Eastward-flowing drainage flowpaths (to river)
- AMAFCA facilities (channels, dams) control
- Drainage is detained strategically (ponds, dams) and discharged at controlled rates
- Water harvesting and stormwater quality opportunities

# STORMWATER (DRAINAGE) SYSTEM

## 'Stormwater Detention' and Release to South

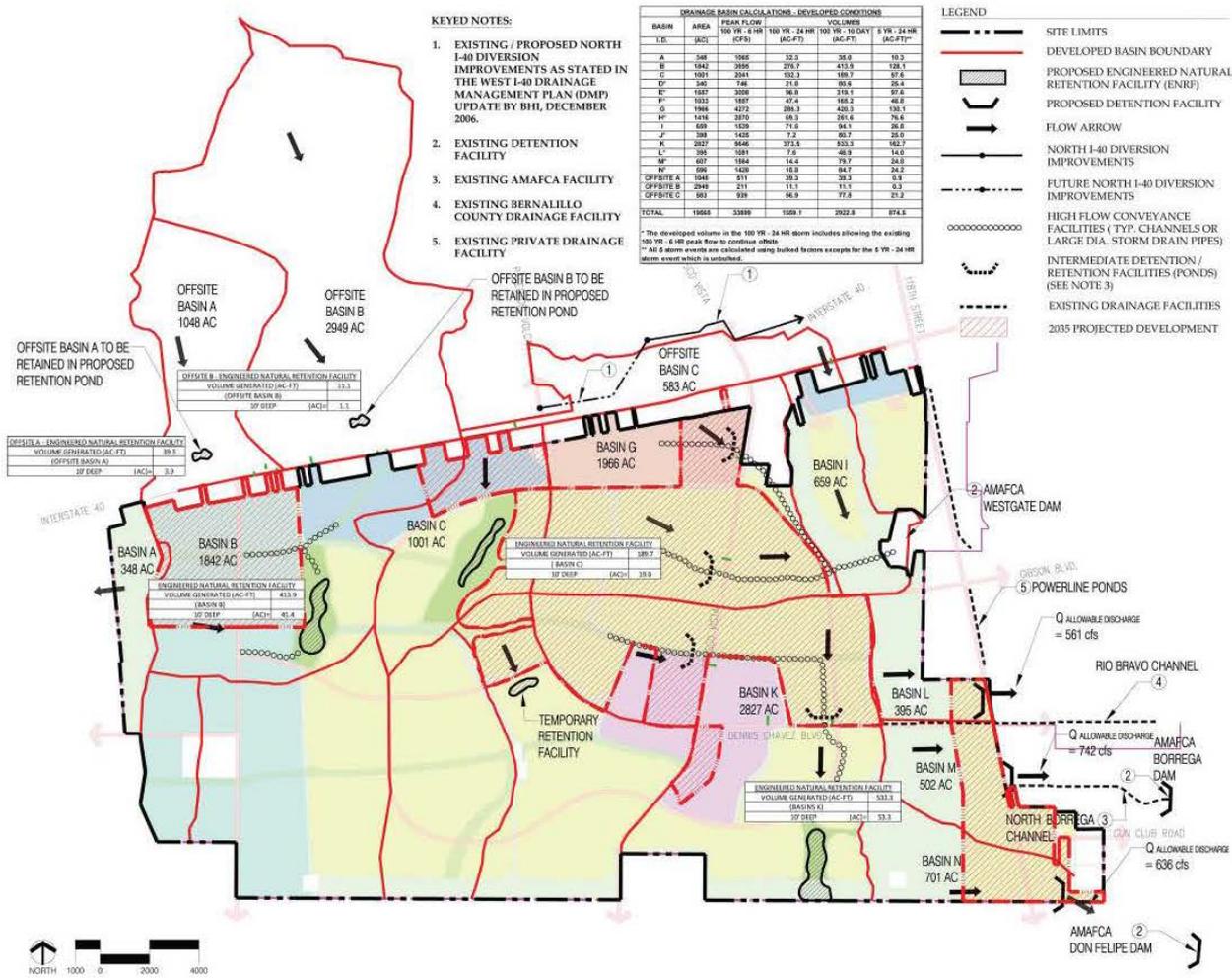
- Southward-flowing existing drainage flowpaths
- Detention of flow (ponds and dams) to control discharge to undeveloped conditions
- Water harvesting and stormwater quality opportunity

## Low Impact Development (LID)

- On-site water harvesting – parking lots, building hardscapes, rooftops, etc.
- Grassed swales, bioretention ponds, porous pavements, etc.
- Collection and treatment of 'first flush' small storm events (typically high in pollutants) – addresses MS4 issues



# STORMWATER SYSTEM MASTER PLAN – 2035



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# INFRASTRUCTURE COSTS

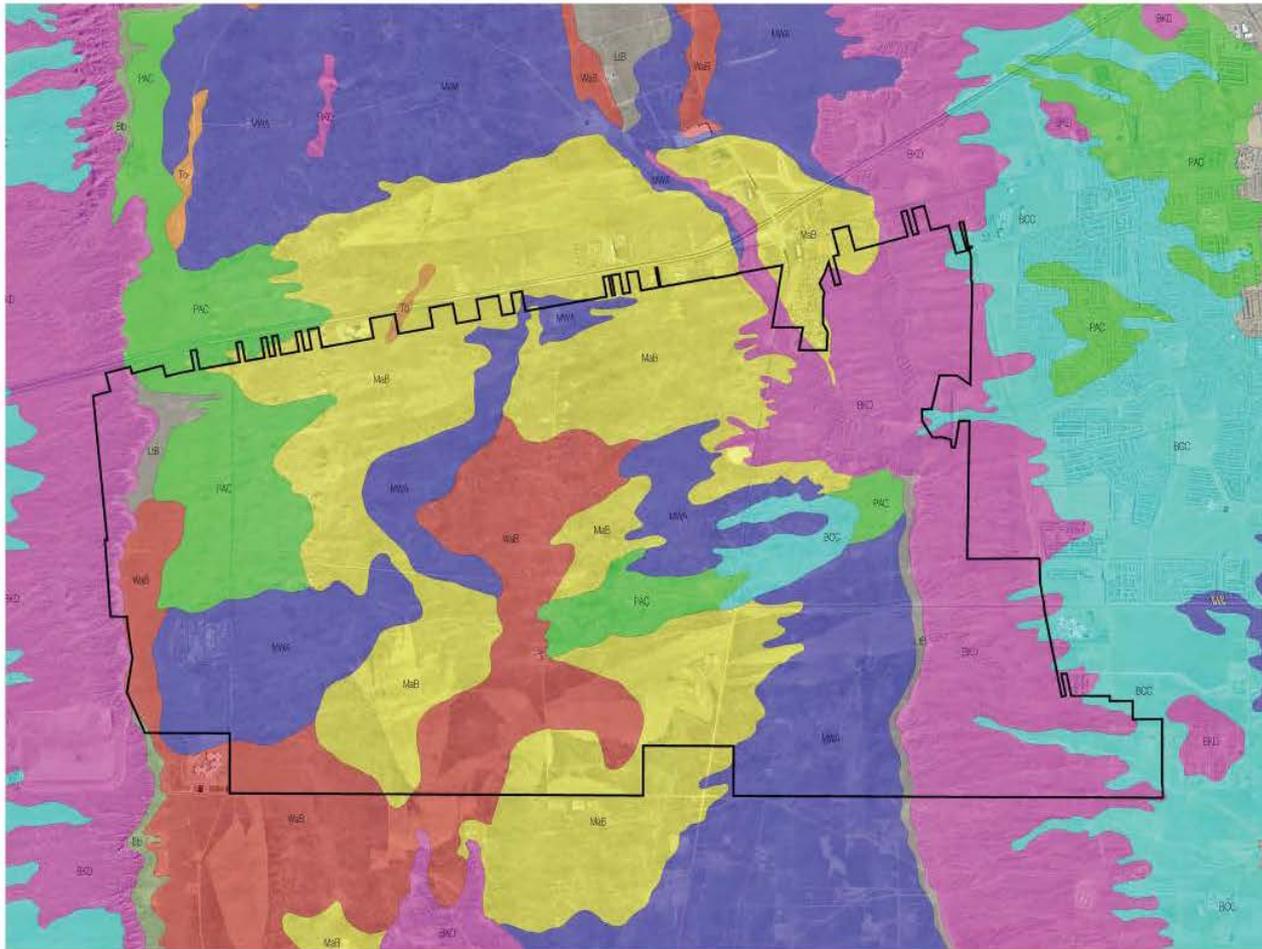
- Responsibility for on-site and regional water and sewer infrastructure will be determined by the ABCWUA Development Agreement
- WALH has already invested \$35 million in water infrastructure for water zones 5W-7W
- New ABCWUA customers outside the existing service area (including Santolina) are required to pay a water supply charge (approximately \$53 million) in addition to a UEC
- Development will not be “front-loaded” by public dollars

# SANTOLINA SOILS ANALYSIS

Soils in the area are eolian deposited and subject to wind erosion. Santolina development practices will be constrained to minimize wind and stormwater erosion. Including the following techniques:

- Scheduled grading to expose least land for least time
- Soil erosion control practices
- Long term treatment through re-vegetation
- Balanced cut and fill
- Preservation of open space

# SANTOLINA SOILS ANALYSIS



## LEGEND

- Bb - Bluepoint fine sand, hummocky
- BCC - Bluepoint loamy fine sand, 1 to 9 percent slopes
- BKD - Bluepoint-Kokan association, hilly
- LIB - Latene sandy loam, 1 to 5 percent slopes
- MaB - Madurez loamy fine sand, 1 to 5 percent slopes
- MWA - Madurez-Wink association, gently sloping
- PAC - Pajarito loamy fine sand, 1 to 9 percent slopes
- To - Tome very fine sandy loam
- WaB - Wink fine sandy lam, 0 to 5 percent slopes

## NOTES:

1. ALL SOIL TYPES LOCATED ON SANTOLINA ARE DEVELOPABLE WITH PROPER REMEDIATION.
2. SOIL SURVEY IS APPROXIMATE AND ILLUSTRATIVE, SUBJECT TO CHANGE
3. APPROXIMATE 27 SOIL BORINGS WERE CONDUCTED. NO BEDROCK NOR GROUNDWATER WAS ENCOUNTERED IN THE 20' - 60' DEEP BORINGS.
4. ALL BORINGS REVEALED PRIMARILY SANDY SOIL CONDITIONS WITH OCCASIONAL CLAY LENSES.
5. SITE SOILS ARE SUITABLE FOR STORMWATER INFILTRATION & PERCOLATION.
6. LOW R-VALUE TEST RESULTS SUGGEST SANTOLINA PAVEMENT SECTIONS MAY BE THICKER THAN COUNTY AVERAGES.



# OPEN SPACE

- Differentiate between “Open Space” and “open space”
- Amount of open space appears to be used for density bonuses
- Will open space track with development?

# OPEN SPACE

- Does fiscal analysis assume the cost of acquisition will be borne by Bernalillo County?
- Who will pay increased maintenance?

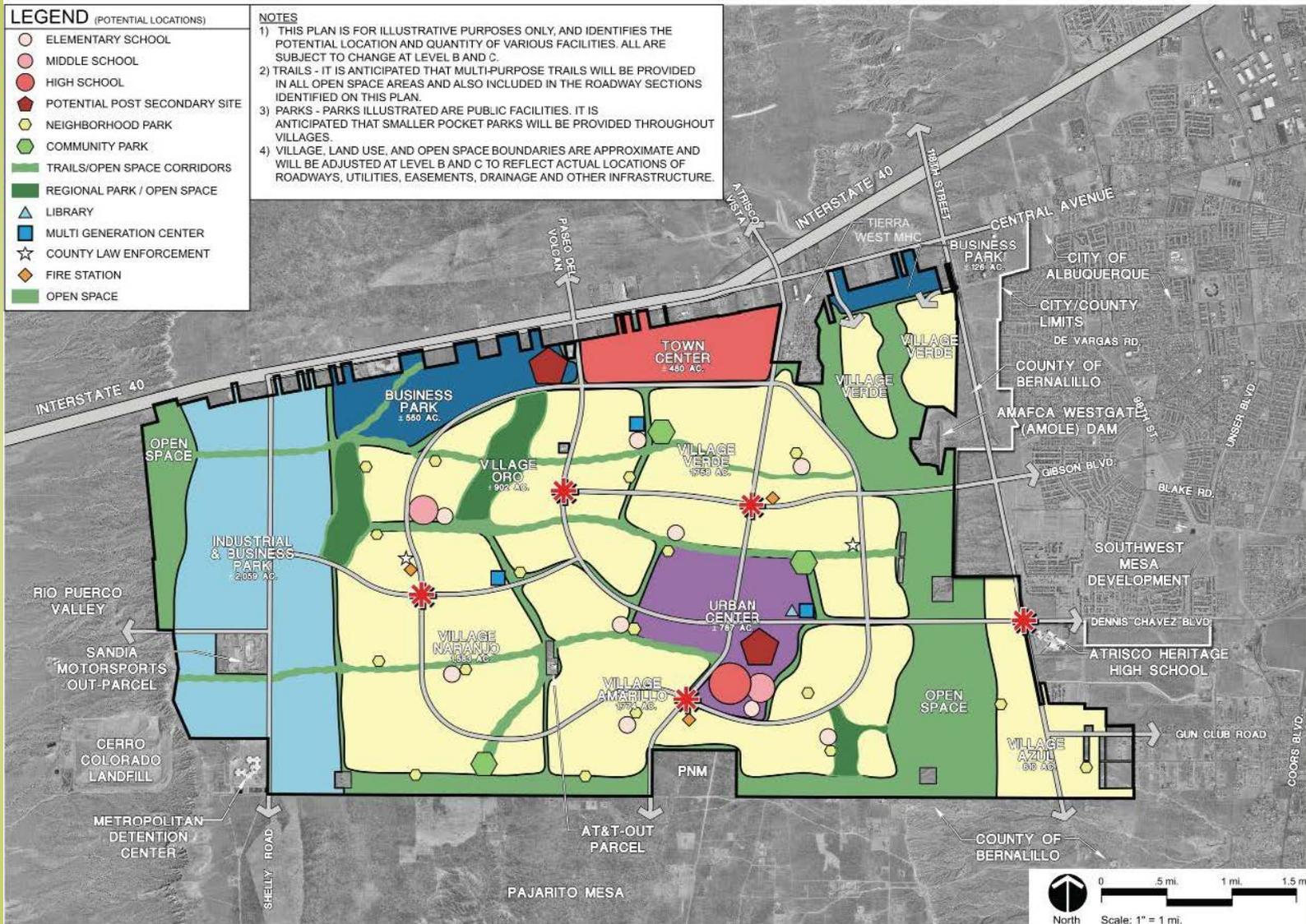
# OPEN SPACE MASTER PLAN

**LEGEND (POTENTIAL LOCATIONS)**

- ELEMENTARY SCHOOL
- MIDDLE SCHOOL
- HIGH SCHOOL
- POTENTIAL POST SECONDARY SITE
- NEIGHBORHOOD PARK
- COMMUNITY PARK
- TRAILS/OPEN SPACE CORRIDORS
- REGIONAL PARK / OPEN SPACE
- LIBRARY
- MULTI GENERATION CENTER
- COUNTY LAW ENFORCEMENT
- FIRE STATION
- OPEN SPACE

**NOTES**

- 1) THIS PLAN IS FOR ILLUSTRATIVE PURPOSES ONLY, AND IDENTIFIES THE POTENTIAL LOCATION AND QUANTITY OF VARIOUS FACILITIES. ALL ARE SUBJECT TO CHANGE AT LEVEL B AND C.
- 2) TRAILS - IT IS ANTICIPATED THAT MULTI-PURPOSE TRAILS WILL BE PROVIDED IN ALL OPEN SPACE AREAS AND ALSO INCLUDED IN THE ROADWAY SECTIONS IDENTIFIED ON THIS PLAN.
- 3) PARKS - PARKS ILLUSTRATED ARE PUBLIC FACILITIES. IT IS ANTICIPATED THAT SMALLER POCKET PARKS WILL BE PROVIDED THROUGHOUT VILLAGES.
- 4) VILLAGE, LAND USE, AND OPEN SPACE BOUNDARIES ARE APPROXIMATE AND WILL BE ADJUSTED AT LEVEL B AND C TO REFLECT ACTUAL LOCATIONS OF ROADWAYS, UTILITIES, EASEMENTS, DRAINAGE AND OTHER INFRASTRUCTURE.



# CONCLUSIONS

## Why a Master Planned Community???

# WHY A PLANNED COMMUNITY?

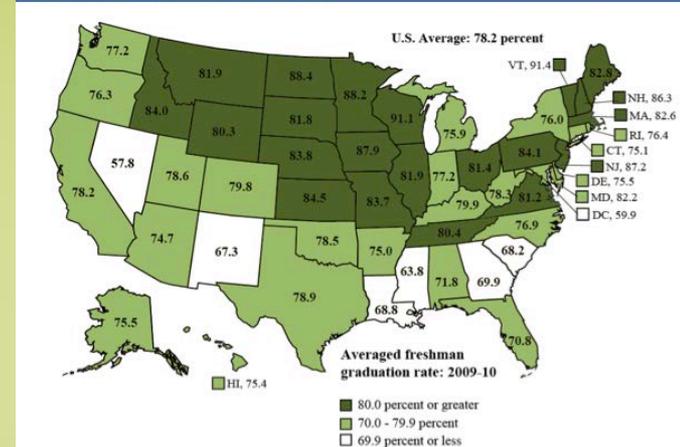


## JOBS



## EDUCATION

Averaged freshman graduation rate for public high school students, by state or jurisdiction: 2009–10



## POVERTY



# WHY A PLANNED COMMUNITY?

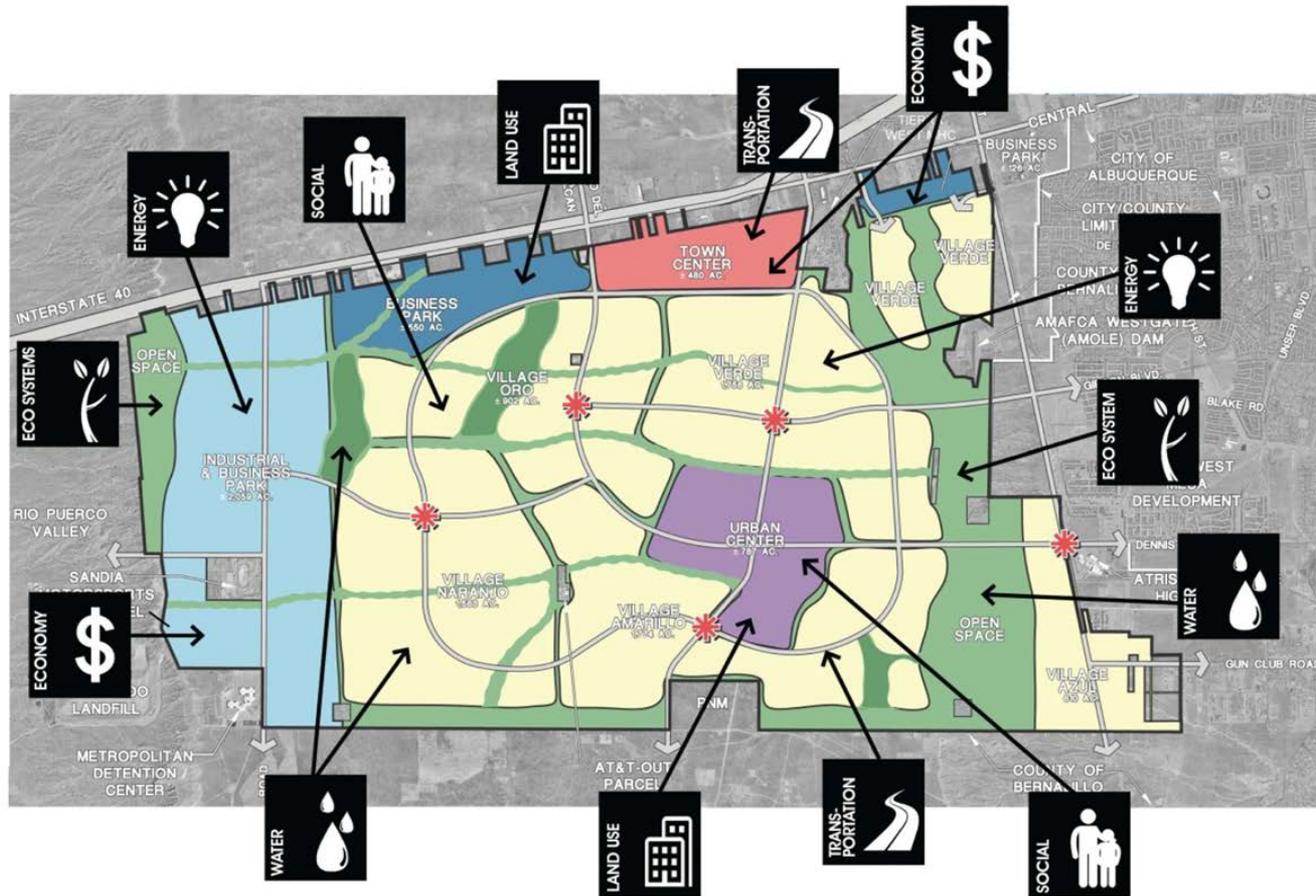


Suburban Sprawl

vs.

Master Planned Community

# WHY A PLANNED COMMUNITY?



## SUSTAINABILITY

## NEXT STEPS...

- The Santolina Team will meet with County and City departments and agencies. The team will submit a letter in response to written comments prior to the next hearing
- July 30, 2014, CPC Hearing Number 6 – Government and Public Services and  
**CPC RECOMMENDATION**