# **SR004 ALI-ABA 179**

August 2009

***ALI-ABA COURSE OF STUDY MATERIALS***

**Course Number:** SR004

**Length:** 18590 words

**Author**

By Robert H. Freilich [[1]](#footnote-2)\*

**Land Use Institute: Planning, Regulation, Litigation, Eminent Domain, and Compensation**  
**Cosponsored by the Center for Urban Redevelopment Education**  
**Florida Atlantic University**  
**Fort Lauderdale, Florida CASE STUDY MATERIALS: CALIFORNIA HIGH SPEED RAIL AUTHORITY AND ALTERNATIVE RIGHT-OF-WAY STUDY**

**III. Population Impacts**

***A. High Speed Rail Land Use Patterns and Population Redistribution***

The statewide [[2]](#footnote-3)n1 and regional [[3]](#footnote-4)n2 high speed rail Environmental Impact Report documents that the high speed rail system will have a significant impact on future land use patterns. Population will increase by 15.2 million in Southern California and the Central Valley by 2040. The State EIR ( § 5.3) establishes extraordinary forecasts:

- A shift in residential population between Los Angeles and ***Kern*** counties due to change in accessibility between the Modal and HST Alternatives (long distance commutes)

- changes in densification/development patterns

- reallocation of population between developed and undeveloped areas including consumption of undeveloped land will be prominent

- the HST alternative will accelerate South Central Valley growth by 95.1% versus 47.1% for Southern California (Table 5-3-3).

- growth in the South Central Valley of 273,000 will out balance Los Angeles County of 118,000 (Table 5.3.4).

Without a Palmdale stop, the travel time from Bakersfield to Los Angeles declines from 2-4 hours by car to 47 minutes on high speed rail, distributing an excessive proportion of population increase to Bakersfield, as travel times become shorter and less expensive than automobile trips on 1-5 in severe congestion. [[4]](#footnote-5)n3 The State EIR ( § 5.3.6) states that: "An HST system would improve accessibility to labor and customer markets. With this second effect businesses that locate close to an HST station could operate more efficiently than elsewhere -- creating a competitive advantage for high-wage employment sectors." Bypassing Palmdale will severely accelerate the rate of growth in Bakersfield and ***Kern*** County by shifting growth from the Antelope Valley (Palmdale, Lancaster and unincorporated northern Los Angeles and southern ***Kern*** Counties), to the Central. Valley.***B. Transit Impacts on Growth***

Empirical evidence demonstrates that the high speed rail alignment will have a significant impact growth in north Los Angeles and the Central Valley. [[5]](#footnote-6)n4 This was demonstrated by the experience of "streetcar suburbs" at the turn of the century in all major metropolitan areas of the country including Los Angeles. [[6]](#footnote-7)n5 The availability of streetcars minimized the correlation between travel times and distance, thereby causing metropolitan areas to spread in a linear pattern along transportation corridors. [[7]](#footnote-8)n6 As congestion along 1-5 increases, the price of trips by automobile will increase relative to other modes of transportation such as high speed rail. [[8]](#footnote-9)n7 Rail transit has the greatest impact on station areas where it confers a distinct accessibility advantage because of the size or characteristics of the transit system operating in the region. [[9]](#footnote-10)n8

**IV. Agricultural Preservation**

***A. Need for Agricultural Preservation***

California's farmland is rapidly disappearing. The State EIR ( § 3.8) reports that California lost approximately 497,000 acres of farmland to urbanization in the decade between 1988 and 1998, a loss rate of approximately 49,700 acres per year, and will lose 850,000 acres by 2020. [[10]](#footnote-11)n9 According to the Department of Conservation, statewide urbanization of farmland from 1998-2000 exceeded 90,000 acres for the first time since 1990-1992, with prime farmland accounting for 19% of the 91,258 new urban acres. [[11]](#footnote-12)n10 Land use policies adopted by the State of California, the City of Bakersfield, ***Kern*** County, and Central Valley regional planning efforts place heavy emphasis on the preservation of agricultural land in the Central Valley. AB 857 provides that the protection of environmental and agricultural resources such as farms and other "working landscapes" is a state planning priority. Excessive growth in the Bakersfield region created by the Grapevine alignment will inevitably spill over into other parts of the Central Valley, which is the nation's most agriculturally productive region. By contrast, the Antelope Valley alignment stop in Palmdale will eliminate unnecessary conversion of agricultural land. Excessive conversion of agricultural land to urban uses under the Grapevine alignment would be inconsistent with state, regional, and local policies to balance future growth with the protection of agricultural lands.

Agricultural preservation plays a critical role in state and national land use policy. Agricultural preservation is important for a number of reasons, including:

- ***Economic development***. California has the nation's most productive agricultural economy. The American Farmland Trust reports that: "California is by far the number one agricultural producer and exporter in the United States. With 1999 production values reaching $ 26.7 billion, California produced more than Texas and Iowa combined--the nation's second and third agricultural states." [[12]](#footnote-13)n11

- ***Environmental protection***. The Williamson Act states that agriculture "constitutes an important physical, social, esthetic and economic asset to existing or pending urban or metropolitan developments." (Government Code § 51220(d)).

- ***Establishing efficient regional growth patterns***. The Williamson Act, Government Code § 51220(c), states: "discouragement of premature and unnecessary conversion of agricultural land to urban uses is a matter of public interest and will be of benefit to urban dwellers themselves in that it will discourage discontiguous urban development patterns which unnecessarily increase the costs of community services to community residents."

The importance of the high speed rail alignment is illustrated by the confluence of the Antelope Valley (the northern reach of SCAG's planning area) and ***Kern*** County (the southern reach of the Central Valley). As is illustrated in Figure 1, below, the Antelope Valley is not within an FZA County, while ***Kern*** county is within a contiguous eleven (11) county region of FZA counties. These areas should be protected by the careful siting of high speed rail facilities, emphasizing areas outside of these important agricultural resources.

[SEE Figure 1 Williamson Act Counties (Source: California Department of Conservation, The California Land Conservation (Williamson) Act Status Report 2002, at http://www.consrv.ca.gov/DLRP/lca/stats\_reports/) IN ORIGINAL]

***B. The Central Valley***

California's great Central Valley stretches from Shasta County to ***Kern*** County. It includes over five million people on 42,000 square miles. Bakersfield and ***Kern*** County lie in the San Joaquin Valley, which encompasses eight counties at the southern end of the Central Valley. [[13]](#footnote-14)n12 The Central Valley, anchored on the south by Bakersfield, is the most productive agricultural region in the world. ***Kern***, Tulare and Fresno Counties are consistently ranked among the top three counties in the nation in agricultural production. [[14]](#footnote-15)n13 Providing over 30% of employment, it is the region's leading industry. [[15]](#footnote-16)n14

Rapid growth in the Central Valley is threatening California's agricultural land resources. The American Farmland Trust (AFT) rates the Central Valley as the nation's most threatened farming region. [[16]](#footnote-17)n15 The Central Valley's rapid growth has caused the loss of considerable amounts of farmland to urban development. [[17]](#footnote-18)n16 A seminal 1995 study by AFT forecasts that the Central Valley will lose 1 million acres of agricultural land by 2040 if current growth trends continue. [[18]](#footnote-19)n17

This impact is especially pronounced in ***Kern*** County. The State Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) has documented that urban land in the county has increased by 29,202 acres and irrigated farmland has decreased by 76,318 acres since 1990, with forty percent of the irrigated land decreases containing prime soils. [[19]](#footnote-20)n18 The California Department of Conservation reports that nearly 50,000 acres of important farmland were converted to urban or built up uses in the 8-year period from 1992-2000, the latest figures available (see Table 1, below).

Table 1 Farmland Converted to Urban and Built-Up Land (acres)

|  | **1998-2000** | **1996-1998** | **1994-1996** | **1992-1994** |
| --- | --- | --- | --- | --- |
| Prime Farmland | 1,300 | 1,491 | 987 | 2,030 |
| Farmland of Statewide Importance | 138 | 19 | 0 | 199 |
| Unique Farmland | 0 | 0 | 0 | 12 |
| Farmland of Local Importance | 0 | 0 | 0 | 0 |
| IMPORTANT FARMLAND SUBTOTAL | 1340 | 1,510 | 987 | 2,241 |
| Grazing Land | 487 | 183 | 90 | 149 |
| AGRICULTURAL LAND SUBTOTAL | 1,925 | 1,693 | 1,077 | 2,390 |
| Urban and Built-Up Land | -- | -- | -- | -- |
| Other Land<(1)> | 3,115 | 2,333 | 830 | 811 |
| Water Area | 0 | 0 | 0 | 0 |
| TOTAL ACREAGE CONVERTED | 5,040 | 4,026 | 1,907 | 3,201 |
| Total Important Farmland | 691,903 | 703,387 | 708,739 | 726,291 |
| (end of period) |  |  |  |  |
| Developed 1994-2000 <(2)> | 49,923 |  |  |  |

Source: California Department Of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, Land Use Conversion Reports, Table A-46.

(1) Includes conversion to Prime Farmland and Farmland of Statewide Importance primarily due to newly irrigated agriculture in the Antelope Valley area and agricultural boundary adjustments.

(2) The Important Farmland subtotal for 1992 was 741,826.

In addition, with much of the eastern portion of ***Kern*** county undevelopable due to government ownership or mountainous terrain, much of the growth pressure will occur in the agriculturally productive areas of the western county. These areas are contiguous to the incorporated areas of the City of Bakersfield (see Figure 2, below).

[SEE Figure 2 ***Kern*** County Permitted Cropland IN ORIGINAL]

Key: red - field crops, yellow - fruits, blue - nuts, and green -- vegetables. Source: ***Kern*** County Department of Agriculture/Measurement Standards Geographic Information System, April 2000 (at http://www.co.***kern***.ca.us/kernag/our\_gis.htm).

***C. Impact of Alignments on Agricultural Preservation***

If not carefully integrated with local land use policies and design, transit station locations can accelerate rather than deter urban sprawl. [[20]](#footnote-21)n19 The State EIR, § 5.4.7, states that the HST Alignment Options result in less farmland conversion than the base HST scenario with the Palmdale scenario showing the largest reduction (2,800 acres). Total farmland conversion for alignment right-of-way -- especially prime farmland - will experience the largest absolute loss of all four categories. While the right of way needs of either HST alternative will impact up to 1562 acres of farmland, [[21]](#footnote-22)n20 the secondary impacts will be enormous unless the Antelope Valley alignment diverts Central Valley growth. The Antelope Valley alignment is consistent with long established state growth policies. The Strategic Growth Report (discussed below) states, at ES-9: "The goal of State Policy in this regard should be to prevent conversion patterns - which means keeping development out of agricultural areas by either contiguous development to existing urban areas or by building new areas of development with a careful eye to the efficient delivery of services."

**V. Impact on Sprawl**

State and regional policy calls for the prevention of urban sprawl and "leapfrog" development into areas not served by infrastructure. In fact, the high-speed rail statute itself expressly provides that "the high-speed train system shall be planned and constructed in a manner that *minimizes urban sprawl* and impacts on the natural environment" (California Streets And Highways Code §§ 2704.09). The elimination of sprawl is statutorily required to be among the highest priorities of the system. To combat sprawl, there is sufficient capacity in the Antelope Valley to handle a significant portion of the rapid growth in Southern California and the Central Valley. According to the Brookings Institution Center On Urban And Metropolitan Policy, metropolitan Los Angeles is running out of land to accommodate an expected 6 million new residents over the next 20 years. [[22]](#footnote-23)n21 This makes the Antelope Valley a key part of the region's strategy to accommodate growth. The Antelope Valley has an abundant supply of vacant undeveloped land already served by transportation infrastructure (including arterials, transit, and airports), water, sewer, and other public utilities. By placing high capacity transportation infrastructure in the Antelope Valley, the region can absorb additional growth without extending new infrastructure beyond presently served areas. The Antelope Valley will accommodate this growth without further loss of agricultural lands, environmental resources, significant increases in trip lengths, air quality degradation, and declines in infrastructure capacity. If excess population is transferred to the Central Valley, extensive sprawl into agricultural areas not served by existing infrastructure will occur.

Local governments can ill afford to waste taxpayer dollars to expand infrastructure into areas not served by existing infrastructure. According to the American Society of Civil Engineers, a $ 1.3 trillion investment is needed to bring transportation infrastructure conditions to acceptable levels throughout the nation. [[23]](#footnote-24)n22 In California, total capital requirements for 1999-2009 are $ 82.2 billion, with total infrastructure spending requirements of $ 150 billion when deferred maintenance is taken into consideration. [[24]](#footnote-25)n23 The California Infrastructure Plan identifies $ 54.2 billion in needs over five years for transportation, K-12 schools, higher education, water, administrative space, natural resources, environmental protection, public safety, and courts. [[25]](#footnote-26)n24 The California Transportation Commission reports found a ten-year total for unmet transportation needs of $ 117 billion for transportation infrastructure alone. [[26]](#footnote-27)n25

Expanding infrastructure into areas not presently served also diverts scarce resources from operation and maintenance. This expense is minimized by placing new growth inducing infrastructure in existing areas such as the Antelope Valley. The State EIR shows that the HST successfully reduces sprawl only if associated with related policies, including the following: [[27]](#footnote-28)n26- Exploring opportunities for joint and mixed-use development at stations

- Controlling growth around stations

- Promoting urban infill

- Implementing transit supportive land use policies

This theme is echoed by other regional policy studies: "State investments in public transportation equipment and operations cannot be cost-effective without supportive land use planning and design. Transit supportive land use is a process whereby communities plan and zone for intensive, mixed use development in close proximity to transit stations or along transit corridors where physical infrastructure is typically already in place." [[28]](#footnote-29)n27 Transit stations should be located in "destinations that support high transit ridership as well as in existing urban centers where high intensities exist or will be fostered. Where intensities that support transit ridership do not already exist, it is important that future stations abut lands that can be developed or redeveloped." [[29]](#footnote-30)n28 As is described in the discussion below, station location should conform to state, regional and local land use policies to promote this objective.

**VI. State, Regional and Local Land Use Policies**

The Antelope Valley alignment is consistent with state, regional and local growth management strategies. The Southern California Association of Governments (SCAG) has embarked on a regional growth management strategy that directs future growth to northern and eastern cities including Palmdale, Lancaster and San Bernardino in order to address the region's deficient air quality through reduction of transportation trips and congestion. This policy acknowledges current residential growth trends. It also provides for economic development opportunities in these areas to foster balanced growth in jobs and housing (minimizing the length and number of trips), minimize existing congestion of regional facilities (such as Los Angeles International Airport), and encouraging multimodal transportation facilities that provide a wider range of travel options for the region's outlying cities. Failing to provide a wide range of transportation infrastructure that includes high speed rail only serves to encourage and reinforce the air quality problems arising from existing automobile centric commuting patterns. By placing a high speed rail station in Palmdale, the state will reinforce the city's multimodal infrastructure support and regional land use and growth management strategies that call for balanced development in a regional two tier structure.

Palmdale plays an important role in curbing regional sprawl. Los Angeles County is part of a larger regional core that extends from Interstate 10 in downtown Los Angeles to San Bernardino and. Riverside Counties. [[30]](#footnote-31)n29 Containing growth inside existing urban boundaries is no longer a viable growth management alternative.

***A. State Policy***

**1. SB 375 Summary and Analysis**

**Creation of regional targets for greenhouse gas emissions reduction tied to the transportation and land use sector**.

- By September 30, 2010, the California Air Resources Board (CARE) must give each of California's 17 Metropolitan Planning Organizations (MPOs) transportation-related greenhouse gas (GHG) emissions reduction targets for 2020 and 2035. The Bay Area's MPO is the Metropolitan Transportation Commission (MTC).

- The targets will be based on input from a Regional Targets Advisory Committee of stakeholders. Each MPO can make recommendations about what their target should be.

**Requirement that regional planning agencies create a land use and transportation plan to meet those targets**.

- As part of the Regional Transportation Plan (RTP), each MPO must prepare a Sustainable Communities Strategy (SCS) that meets GHG targets "if there is a feasible way to do so" and meets both the Regional Housing Needs Allocation (RHNA) and projected total housing needs over the entire planning period.

- If MPO modeling shows that the SCS won't meet the GHG targets, the MPO must prepare an Alternative Planning Strategy (APS) that does meet the targets. The APS is a separate document from the RTP.

- The MPO must submit its SCS or APS to CARB. CARB will evaluate whether or not the SCS or APS meets the GHG targets.

- If CARB determines the submitted strategy will not meet targets, the MPO must revise the strategy or adopt an APS (if they haven't already) that meets the targets.

**Requirement that regional transportation funding decisions be consistent with this new land use and transportation plan**.

- Federal law requires that an RTP must be "internally consistent" which means that funding decisions therein must be consistent with the SCS. However, the APS can be a separate document from the RTP, which means funding decisions would not have to be consistent with an APS.

- There is also language stating that MPOs "shall also consider financial assistance" for local governments that contribute toward the GHG targets by implementing policies for city-centered growth.

**Reform of Housing Element law to match up with regional planning processes**.

- The Housing Element cycle will be extended from 5 years to 8 years to match up with RTP timing.

- The Regional Housing Needs Allocation will be based on SCS, which means cities near transit will likely have greater housing responsibilities.

- Housing Elements will be due 18 months after the SCS is adopted.

- Jurisdictions must re-zone Housing Element sites within 3 years of Housing Element adoption.

**New CEQA exemptions and streamlining for certain projects consistent with a regional plan that meets the targets**.

- A residential or mixed-use project (with at least 75% residential) does not have to study:

- Growth-inducing impacts

- A reduced residential density alternative to address traffic impacts

- Either project-specific or cumulative traffic impacts "on global warming or the regional transportation network."

- A "Transit Priority Project" is defined as a project that:

- Contain at least 50% residential use.

- Have a minimum net density of 20 units per acre

- Have a floor-area ratio for the commercial portion of the project at 0.75

- Are located within 1/2 mile of either a rail stop, a ferry terminal, or a bus line with 15-minute headways.

- Local governments can *choose* to designate a Transit Priority Project a "sustainable communities project," which qualifies for a full CEQA exemption, after one public hearing, if the project:

- Is no bigger than 8 acres or 200 units.

- Can be served by existing utilities

- Will not have a significant effect on historic resources

- Buildings exceed energy efficiency standards

- Provides any of the following:

- 5 acres of open space

- 20% moderate income housing

- 10% low income housing

- 5% very low income housing

- Alternatively, if a Transit Priority Project incorporates all feasible mitigation measures, performance standards, or criteria from prior applicable environmental impact reports, it is eligible for a sustainable community's environmental assessment (SCEA). Under this scenario:

- The SCEA shall contain measures to either avoid or mitigate to a level of insignificance all potentially significant or significant effects of the project

- Projects need not study growth-inducing impacts or either project-specific or cumulative traffic impacts "on global warming or the regional transportation network."

- Cumulative effects of the project that have been addressed and mitigated in prior environmental impacts need not be treated as cumulatively considerable.

- If a city adopts traffic mitigation measures to apply to Transit Priority Projects, then a transit priority project is not required to comply with any additional mitigation measures for the traffic impacts of that project.

**2. State Strategic Growth Plan**

In 1992, 1 assisted Governor Pete Wilson in the development of the State's Strategic Growth Plan commissioned pursuant to Executive Order W-2-91. The Strategic Growth Plan expressly recognizes, as part of its agricultural conservation recommendations, the appropriateness of separated urban areas such as "new towns" that provide for the efficient delivery of public services and prevent unreasonable congestion. [[31]](#footnote-32)n30 The report expressly "reject[s] the idea of arbitrary urban limit lines or urban growth boundaries," focusing instead on "local comprehensive plan guidelines that encourage growth and development through fill utilization of infrastructure." These suggested measures do not prohibit non-contiguous development or "new towns" if carefully planned to ensure efficient delivery of services and prevent unreasonable congestion. The Governor's original Executive Order notes the positive role that growth management can play in contributing to a sound economy, indicating that other studies have suggested that better planning, far from discouraging economic development may support it by encouraging businesses attracted by the quality of life. [[32]](#footnote-33)n31

The Strategic Growth Plan, which provided a foundation for the State's current planning priorities (discussed in paragraph 2, below), established a number of planning policies to address California's rapid growth demands. These include: [[33]](#footnote-34)n32

- Establishing regional congestion management planning (ES-8). The efforts of SCAG to coordinate regional transportation and land use patterns, discussed below, is representative of these efforts.

- Establishing efficient growth patterns that that link jobs growth and housing within regions or sub regions (ES-8, 11). This includes voluntary Statewide growth guidelines that encourage more sensible land-use patterns including orderly growth, provision of housing, protecting the environment and natural resources, cost effective provision and use of necessary infrastructure, and closely integrating transportation, housing, air quality, and energy. The growth guidelines suggest resource identification and conservation, removing barriers to housing, local permit streamlining, consultation with neighbors, infill/densification, efficient infrastructure (funding and capacity), jobs/housing balance, and transit/housing integration (19). This expressly includes encouraging development contiguous to existing urban areas by fully utilizing infrastructure (20). The plan also acknowledges the importance of establishing higher densities with compact development, as well as a balance between jobs and housing. (32).

- Preventing urban development patterns that unnecessarily compromise the agricultural industry by keeping development contiguous to existing urban areas, while building a new areas of development that promote the efficient delivery of public services (ES-9).

- Requiring state infrastructure investments to support cost efficient growth and development patterns that direct and encourage growth in areas where it is environmentally and economically desirable. The plan suggests that preferred development areas could be designed in areas that are served by new state funded infrastructure (17). This includes the coordination of state transportation investments with other infrastructure such as housing, water, sewer and similar facilities. The plan treats transportation investments as an integrated system, with linkages between different travel modes and transfers and congestion management plans that include bridges, ports, airports, and transit systems as well as roads, bus and rail services (30-31).

Designating preferred development areas in locations that are served by new state funded infrastructure implements the same principle as Maryland's pioneering "Smart Growth" program that channels state transportation investment to Priority Funding Areas designated in regional and local plans. [[34]](#footnote-35)n33 This includes the coordination of state transportation investments with other infrastructure such as housing, water, sewer and similar facilities. The Maryland plan treats transportation investments as an integrated system, with linkages between different travel modes and congestion management plans that include airports and transit systems as well as roads, bus and rail services.

The Strategic Growth Plan expressly recognizes, as part of its agricultural conservation recommendations, the appropriateness of distinct new concentrated urban areas such as Antelope Valley that provide for the efficient delivery of public services and prevent unreasonable congestion.

**3. State Planning Priorities**

The Strategic Growth Plan's policies are echoed in the AB 857 legislation adopted in 2002 and the high speed rail statute. AB 857's polices promote infill development and equity, improving existing infrastructure that supports infill development, steering development to areas that are presently served by transit, streets, water, sewer, and other essential services, protecting environmental and agricultural resources, and encouraging efficient development patterns by ensuring that any infrastructure associated with development, other than infill development, supports new development. The high-speed rail statute expressly provides that "the high-speed train system shall be planned and constructed in a manner that minimizes urban sprawl and impacts on the natural environment."

AB 857, adopted on September 28, 2002, establishes state planning priorities for growth and development. [[35]](#footnote-36)n34 These policies are used to select infrastructure and to guide state expenditures as set forth in the comprehensive State Environmental Goals and Policy Report. [[36]](#footnote-37)n35 There is no comprehensive state land use plan for private development decisions or local comprehensive plans. AB 857 establishes statewide policies for sound infrastructure planning (priorities and funding), promoting development with existing infrastructure, encouraging existing development areas with services that minimizes costs to taxpayers, and protect agricultural land. The State Planning Priorities of AB 857 (Gov't Code § 65041.1) are as follows:- Promote equity in urban, suburban, and rural communities (purpose)

- Strengthen the economy in urban, suburban, and rural communities (purpose)

- Protect the environment in urban, suburban, and rural communities (purpose)

- Promote public health and in urban, suburban, and rural communities (purpose)

- Promote infill development and equity by rehabilitating, maintaining, and improving existing infrastructure that supports infill development and appropriate reuse and redevelopment of previously developed, underutilized land that is presently served by transit, streets, water, sewer, and other essential services, particularly in underserved areas, and to preserving cultural and historic resources.

- Protect environmental and agricultural resources by protecting, preserving, and enhancing the state's most valuable natural resources, including working landscapes such as farm, range, and forest lands, natural lands such as wetlands, watersheds, wildlife habitats, and other wildlands, recreation lands such as parks, trails, greenbelts, and other open space, and landscapes with locally unique features and areas identified by the state as deserving special protection.

- Encourage efficient development patterns by ensuring that any infrastructure associated with development, other than infill development, supports new development.

- Use land efficiently

- Is built adjacent to existing developed areas to the extent consistent with the priorities specified pursuant to the environmental policies, above

- Is located in an area appropriately planned for growth.

- Is served by adequate transportation and other essential utilities and services.

- Minimizes ongoing costs to taxpayers.

A central theme of these policies is the concept of regional infill, which utilizes designated urban centers such as the Antelope Valley cities of Palmdale and Lancaster to provide for the region's enormous anticipated growth in jobs and housing. This growth cannot be accommodated solely or even primarily in existing urban areas such as the city of Los Angeles. While the larger urban areas are important for infill or compact development, it is concentrated "new town" outlying centers that are the key to successfully implementing regional growth management policies. Smart Growth requires that they be supported by state and regional infrastructure improvements, including the high speed rail system.

***B. Regional Policy***

**1. COMPASS**

The Southern California Association of Governments (SCAG) has prepared a regional growth management "fifth tier" strategy that directs future growth to the Antelope Valley in order to address the region's deficient air quality through reduction of transportation trips and congestion. The *COMPASS Growth Vision Report*[[37]](#footnote-38)n36 is the comprehensive Growth Vision for the six-county SCAG region. It is the product of an extensive regional and multi jurisdictional public participation process, supported by a $ 2 million study over an 18-month period. [[38]](#footnote-39)n37 Compass replacing a 1989 plan, is based on 2001 computer models that demonstrate the dramatic effect of land use decisions on vehicle miles and congestion. [[39]](#footnote-40)n38

*Compass* acknowledges that future demands for jobs and housing in the region cannot be accommodated exclusively in traditional urban areas. Directing growth to the Antelope Valley balances the growth in jobs and housing, minimizes existing congestion at other regional facilities (such as Los Angeles International Airport), and encourages multimodal transportation facilities. In addition, SCAG's *Regional Transportation Plan* establishes the Planning for Integrated Land Use and Transportation (PILUT) "Fifth Ring" strategy that allocates growth to newly developed areas in the Antelope Valley. By placing a high speed rail station in the Antelope Valley, the state will reinforce the city's multimodal infrastructure and regional land use and growth management strategies that call for balanced development in the regional tier structure. In short, the Antelope Valley is the designated regional center that provides regional growth opportunities.

The Compass Report projects that the region will grow by an additional 6.3 million people by 2030 -- a 38% increase over its current population of 16.5 million and the equivalent of two Chicagos. The report identifies some benefits from this high population growth rate based on the preferred regional growth alternative. The preferred growth vision involves the following growth scenarios:

- Intensive infill in the region's traditional centers.

- Satellite cities for new urban density growth in the High Desert and Palmdale, Lancaster and San Bernardino County.

- Corridors and Centers that provide transit supportive density, walkable streets, and jobs-housing balance.

This growth alternative has the following benefits over policies that rely on infill alone to accommodate future growth:

- Better trip reduction and a more efficient use of transportation infrastructure.

- Larger reductions in vehicle miles traveled (VMT)

- Economic development opportunities, including the ability to balance the location of jobs and housing.

- Less sprawling growth on the region's periphery.

- Accommodation of Smart Growth alternatives, such a transit-supportive land use patterns.

The Compass alternative can reduce VMT by 18 million daily from its current level. [[40]](#footnote-41)n39 Two-thirds of this reduction will occur because of changes in land use patterns, with high density centers replacing sprawl. This is an important component of the region's transportation program, which will be supported by $ 211 billion in road and transit spending through 2030.

[SEE Figure 3 Compass Regional Growth Vision (Source: Compass Report, at 42) IN ORIGINAL]

|  | **Description** |
| --- | --- |
|  | Address future population and employment |
|  | growth and their effect on traffic |
|  | congestion, transportation investment |
|  | choices and air quality by using |
|  | alternatives to provice highways expansion. |
|  | The public expects more efficient |
|  | transportation investments that support |
|  | desired development patterns, achieve and |
|  | maintain economic growth and a sustainable |
|  | environment, and promote global |
|  | competitiveness. |
|  |  |
|  | Continue the renaissance of urban centers |
|  | to promote public and private investments |
|  | and decisions that will enable existing |
|  | urban centers to become centers of housing, |
|  | jobs, shopping, culture and entertainment. |
|  |  |
|  | Maintain existing neighborhoods. |
|  | Appropriate in-fill opportunities are |
|  | identified by community planning efforts. |
|  | Consider neighborhood preservation within |
|  | the framework of development in urban |
|  | centers policy to promote increased density |
|  | in certain corridors where services are |
|  | available, as well as the development of |
|  | residentially-oriented transportation and |
|  | other public services. |
|  |  |
| Principle 6: Create | Foster walkable communities and urban |
| Walkable Communities | centers where different kinds of homes, |
|  | shops and workplaces are integrated with |
|  | one another; ensure that housing of |
|  | different costs is integrated throughout |
|  | each community. Walkable communities put |
|  | urban environments back on a scale for |
|  | sustainability of resources (both natural |
|  | and economic) and lead to more social |
|  | interaction, physical fitness and |
|  | diminished crime. |

SCAG has also published a set of "Growth Principles for Sustaining a Livable Region," dated October 1, 2001. These principles are discussed below:

underscored by other local planning studies. A 2001 summit of regional leaders brought together by the U SC Lusk Center for Real Estate and the Urban Land Institute stated the following:

-… several new "satellite cities" will be needed to accommodate the population growth while maintaining a jobs-housing balance. While tables, on average, located 60-80% of the projected new population in the core area of the region, significant new concentrations of people and jobs were also located at more peripheral locations. *The average allocation of new growth in the Palmdale-Lancaster area was about 340,000 new people and 235,000 new jobs*, while Victorville and Apple Valley would gain about 250,000 new residents and 145,000 new jobs. Several other larger new cities were envisaged for the south I-15 corridor between Corona and the San Diego County border. (emphasis added) [[41]](#footnote-42)n40

The preferred approach for most participants was the "New Towns With Infill" model establishing large sized hubs distributed around the outer edges of the region, coupled with infill development in areas that are already densely populated. Under this approach approximately one million new residents are to be located in peripheral cities including Palmdale/Lancaster. A related alternative -- termed the "New Cities" model -- shifts 55% of future growth to large cities toward the edges of the region. This approach shifts 706,000 new residents to Santa Clarita/Palmdale/Lancaster.

***C. Air Quality***

Sprawl is a significant contributor to decreases in air quality. [[42]](#footnote-43)n41 Conversely, urban form can significantly contribute to reductions in emissions and VMT. [[43]](#footnote-44)n42 Studies in California and Oregon have estimated NOx and CO emissions reductions of 3-7% by the use of smart growth techniques including but not limited to mixed use and clustering. [[44]](#footnote-45)n43 While transit-supportive land use is the optimal development form for reducing air quality, it is unrealistic to expect all development to occur in transit influenced areas due to financial and market constraints. [[45]](#footnote-46)n44 Accordingly, California communities use a combination of techniques to address the relationship between land use and air quality.

State and federal agencies recognize land use control strategies as a mechanism to reduce emissions and to secure planning and funding approval. Land use mechanisms including parking management programs, area-wide ride-share incentives, improved public transit, bicycle and pedestrian measures, and park-and-ride programs are expressly recognized as transportation control measures in the Clean Air Act. [[46]](#footnote-47)n45The SCAG Regional Transportation Plan includes a number of measures that rely on increased Palmdale development. Palmdale's plans incorporate a variety of nonvehicular pedestrian improvements consistent with TCM-18, including bike paths, NEV paths and greenways. Densities in a significant portion of the community already support high capacity transit. In addition, the Technology Plan includes a telecommunications easement with broadband access which will facilitate telecommuting (TCM-1C), thereby reducing employment based trips.

The High Speed Rail Antelope Valley alignment will not only provide significant air quality benefits over other potential growth alternatives, but it will also improve the position of SCAG and the County in securing state and federal air quality approvals. EPA looks more favorably to Smart Growth alternatives that are approved, under construction, or built rather than speculative estimates, in approving State Implementation Plans. [[47]](#footnote-48)n46 The EPA has awarded from $ 8 to $ 335 million under its Economic Incentive Programs (EIP) policy, under which it considers land use control strategies. [[48]](#footnote-49)n47***D. Transportation***

The regional transportation plan emphasizes land-use and transportation policies that accommodate future growth while addressing transportation demand and air quality concerns. [[49]](#footnote-50)n48 Some of the "Smart Growth choices" embraced by the plan include mixed-use centers, non-motorized transportation facilities, and transit improvements. A summary of Regional Transportation Plan policies is as follows:- creating a mix of homes, shops, work places, parks, schools and civic institutions

- locating a significant share of new housing and jobs within walking distance (1/4 mile) of transit or major bus stations

- Link communities and neighborhoods with viable pedestrian and bicycle facilities

- Jobs/Housing Balance

- Develop needed affordable housing in high growth urban and suburban job centers

- Attract viable job centers to housing-rich communities

While households are projected to increase significantly, housing production has lagged. The recent drop in housing production has been particularly steep for multifamily housing, declining from over 150,000 in the mid-1980's to just over 50,000 in the late 1990's. [[50]](#footnote-51)n49 The Southern California Studies Center reports that Los Angeles and Orange County have consumed all the natural locations for growth that are not constrained by government policy. [[51]](#footnote-52)n50 For the first time in its history, the county is running out of developable land. [[52]](#footnote-53)n51 The Housing Element indicates that population growth is accelerating faster than the supply of housing, with 40,000 households residing illegally in garages. [[53]](#footnote-54)n52 The number of housing units is decreasing in the face of increasing household size and the number of households. [[54]](#footnote-55)n53

The shortage of housing has led to increases in rents and sales prices that are not met by corresponding increases in income. While the state Employment Development Department reports a mean hourly wage of $ 18.13 for the Los Angeles-Long Beach MSA in 2002, [[55]](#footnote-56)n54 a 1999 survey concluded that $ 21.90 per hour was needed simply to afford the average fair market rent for a two-bedroom apartment. [[56]](#footnote-57)n55 The median priced single family home is too expensive for 59% of all households in the County. [[57]](#footnote-58)n56

Table 2 Housing Data

|  | **1990** | **1997** | **2000** |
| --- | --- | --- | --- |
| Population (Countwide) | 8,863,052 |  | 9,884,255 (12%) |
|  |  |  |  |
| Population (unincorporated) | 970,194 | 993,900 | 1,036,277 (7%) |
|  |  |  |  |
| Households (countywide) | 2,989,552 |  | 3,133,774 (4.8%) |
| Households (unincorporated) |  | 274,100 |  |
| Households (North County) |  | 35,600 |  |

|  | **2005** | **2020** |
| --- | --- | --- |
| Population (Countwide) |  | 11,584,800 |
|  |  | (17.2%) |
| Population (unincorporated) | 1,145,800 |  |
|  | (11.5%) |  |
| Households (countywide) |  |  |
| Households (unincorporated) | 307,500 (12.2%) |  |
| Households (North County) | 53,200 (49.4%) |  |

Sources: County of Los Angeles, Housing Element (2001); U.S. Bureau of Census; State of California, Department of Finance, Interim County Population Projections -- Estimated July 1, 2000 and Projections for 2005, 2010, 2015 and 2020.

Palmdale accommodates regional housing needs by providing a healthy balance of housing types and costs. The City's lower density land use classifications accommodate the need for larger dwelling units to accommodate the County's increasing household size. [[58]](#footnote-59)n57 The higher density housing alternatives add needed diversity to a housing stock dominated by single-family construction. [[59]](#footnote-60)n58 National surveys indicate that "baby boomers" (age 55-64) and "echo boomers" (age 25-35) prefer higher density housing in walkable neighborhoods. [[60]](#footnote-61)n59 These demographic categories account for 2,277,942 persons or 24% of the County's population. [[61]](#footnote-62)n60

***F. Economic Development***

While the Los Angeles region contains one of the nation's largest economies, it lost 440,000 jobs or 7% of its job base between 1990-1994. [[62]](#footnote-63)n61 While 550,000 jobs were added from 1994-98, Los Angeles County did not return to its 1990 level. [[63]](#footnote-64)n62 North Los Angeles, in particular, suffers from an imbalance of jobs to housing that is expected to worsen by year 2025. The Antelope Valley alignment will attract new businesses to Palmdale, helping to remedy this imbalance.***G. Land Use forms***

Traditionally, planners have equated "leapfrog" or non-contiguous development with sprawl. Development at the fringe or outside of urbanized areas was often characterized as sprawl, with little analysis of the actual built form of development. As regions have struggled with the issue of sprawl over the past 40 years, definitions of sprawl have become more complex. Planners now realize that, depending on its built form, development in satellite communities can have the same benefits as those in "infill" locations or existing urbanized areas. [[64]](#footnote-65)n63

A recent study by several well-known researchers uses a variety of factors to assess the degree to which a community or region is sprawling. [[65]](#footnote-66)n64 This report measured indicators of sprawl for 83 metropolitan areas. The indicators include four factors:

- Residential density. Higher densities achieve higher (less sprawling) rankings. Los Angeles-Long Beach received a higher than average score on this factor, with an overall density of 1.26 dwelling units per acre. [[66]](#footnote-67)n65 Palmdale, which has an overall residential density of 1.96 dwelling units per acre, performs even better on this factor. The medium to high-density land use categories in Palmdale are outstanding, with transit-supportive densities ranging from 7 to 24 dwelling units per acre.

- Neighborhood mix of homes, jobs, and services. Palmdale's scores are above average on this factor by reason of its mix of employment, retail and civic uses. Since Palmdale brings jobs and shopping opportunities to a high growth area of the county, it also improves the county's overall ranking.

- Strength of activity centers and downtowns. Los Angeles-Long Beach scored a low 72.4 (100 is the average score in this area). By contrast, Palmdale features a variety of village, community and mixed use centers providing a strong sense of identity for the community and scores much higher than average.

- Accessibility of the street network. An interconnected street network scores highly under this factor. Los Angeles-Long Beach scores high (123.3) on this factor. Palmdale has an interconnected major street system that is coordinated with the Los Angeles Master Plan of Highways and scores equivalently.

As is discussed below, Palmdale is a satellite new town community. While many of the region's planning policies in the 80's and 90's focused on development contiguous to or within existing urban centers as an element of smart growth, new analysis has shown the inability of existing infill sites and centers to accommodate future growth. The lack of available land in infill sites has led to the new regional efforts to activively encourage new communities that provide the balance of jobs and housing reflected in Palmdale.

A similar example is the Albuquerque/Bernalillo County, New Mexico's Planned Growth Strategy (PGS). The PGS concludes that only a portion of the regional demand for new housing can be accommodated in infill locations. Accordingly, the plan calls for encouraging new communities with adequate infrastructure and walkable designs to complement regional policies that support development in existing areas. [[67]](#footnote-68)n66 Other states, such as Florida, activity admonish local governments to consider satellite communities as one solution to urban sprawl. [[68]](#footnote-69)n67

***H. Demographic/Social***

The Los Angeles metropolitan area is one of the most demographically diverse regions in the nation. It experiences a high rate of immigration and domestic migration, [[69]](#footnote-70)n68 The Los Angeles metropolitan area captured the highest Hispanic and second highest Asian population increases in the nation from 1990-1998. [[70]](#footnote-71)n69 Consistent with national trends, the region is also expected to experience a dramatic increase in the number of retiring baby boomers and "echo boomers" starting new families over the next decade. [[71]](#footnote-72)n70 These trends will create regional needs for a variety of housing types, ranging from low density living to mixed use apartments. Palmdale's diverse land use categories provide an assortment of housing types to meet these needs.***I. Quality of Life***

Palmdale's built form will improve the quality of life for both new and existing residents. The City's generous pedestrian infrastructure and open space system provide a range of recreational opportunities. The transit plan provides alternatives to work related trips on congested roads. Further, its mixed use character, coupled with new urbanist design elements, build on a proven concept in similar communities that experience a high rate of resident satisfaction. [[72]](#footnote-73)n71

**VII. Non-Sprawl Alternatives Accomplished by Palmdale**

***A. New Towns***

Palmdale and other "smart growth" new town communities promote smart growth concepts by providing denser, more diverse residential areas, with a mix of local retail shops and public facilities without low-density sprawl.

***1. Garden Cities (1900-1914)***

The concept of the new town dates back to Ebenezer Howard (the originator of the "new town" movement) at the end of the 19th century. Few know, however, that Howard's new town concept was based upon a community concept of six interlinked neighborhoods (or "wards") of about 5,000 people each, focused on an elementary school, bounded by major streets, and containing a variety of residential accommodations. The new town was called a "garden city" because it was to be separated from contiguous urban growth by a "greenbelt" or "garden". Unfortunately, Howard's neighborhood concept was divorced from his garden city concepts and eventually became independently accepted in England and later the United States. In the American adaptation, neighborhoods were typically based on quarter sections (160 acres) with major streets bounding neighborhoods one-half mile apart with no through traffic. Americans adapting his garden city concept did not consider his vision to be one of "sprawl and scatter." [[73]](#footnote-74)n72 A key element of Howard's vision involved the "planned dispersal" of employment and population to self-contained towns that provide a mix of industry, services and residential dwelling types. [[74]](#footnote-75)n73

[SEE FIGURE IN ORIGINAL]

As early as the 1920s, emphasis on lower density single-family detached housing in the emerging suburbs. This required an increase in the size of the neighborhood to assure sufficient population to support the walk-in school. By the late 1940s, advocates of the "neighborhood unit" were promoting neighborhoods one-mile square (equal to 640 acres), with a half-mile walk to school, and major streets one mile apart on section lines. Eventually, the neighborhood concept gave way to suburban residential sprawl characterized by dependency on the automobile. The demise of the original neighborhood concept continues today with the increase in auto dependent suburban sprawl. The other part of Howard's concepts (the New Town) has had a far greater impact on planning for today's 21st Century California.

**2. New Towns in America (1925-1929)**

Clarence Stein and Henry Wright imported Howard's "garden city" concept to the United States. In Radburn (Fair Lawn, New Jersey), the designers incorporated a series of individual subdivisions known as superblocks in order to address America's "automobile-based suburban market." [[75]](#footnote-76)n74 The superblock involved long cul-de-sacs to the front of homes, with sidewalks connecting the homes at the rear. The sidewalks framed an internalized open space system and the entire community was separated by a greenbelt from adjacent development.

**3. New Deal New Towns (1934-1941)**

Stein's ideals were incorporated into three new towns built during the New Deal: Greenbelt, Maryland; Greenhills, Ohio; and Greendale, Wisconsin. [[76]](#footnote-77)n75 These towns were built simultaneously by the New Deal's Resettlement Administration, but were never fully implemented and were eventually sold to private entities. [[77]](#footnote-78)n76**4. World War II New Towns (1941-1945)**

New Towns during the World War II era were prompted by government initiative. These include the small towns of the Tennessee Valley Authority (TVA) and the "atomic cities" energy of Los Alamos, Richland, Oak Ridge and Hanford. [[78]](#footnote-79)n77 These communities were established by the Atomic Energy Commission in 1947 to provide employee housing. [[79]](#footnote-80)n78 The hydroelectric plants and atomic energy facilities of these towns provided a local economic base. [[80]](#footnote-81)n79 These were essentially government "company towns, but were eventually sold to the private sector as the result of the complexities of government ownership. [[81]](#footnote-82)n80**5. Private New Towns (1960-1968)**

Private new towns emerged during 1960-1968 with the development of Reston, Virginia; Columbia, Maryland; Irvine, California. [[82]](#footnote-83)n81 These are large-scale, mixed use communities with neighborhoods organized around villages and town centers. These developments emerged as a response to market demands and developers' visions, and are continuing their buildout today. These communities have achieved many of their objectives. For example, Reston has excellent jobs-housing balance with 40,000 jobs and 63,000 residents. [[83]](#footnote-84)n82**6. Public-Private Towns (1967 - 1972)**

Public-private new towns from 1967-1972 were developed under the New Communities Act of 1968 (formerly 42 U.S.C. §§ 3901-14). [[84]](#footnote-85)n83 The concepts of the New Communities Act were carried forward by the Urban Growth and New Community Development Act of 1970 (formerly 42 U.S.C. § 4511), which increased federal incentives for new community development. [[85]](#footnote-86)n84 Communities developed under the new communities legislation included Jonathan, Minnesota; The Woodlands; Texas; St. Charles Communities, Maryland; and Park Forest South, Illinois. [[86]](#footnote-87)n85

Patterns of growth have been dramatically impacted over the past decade by a consortium of ideas developing more compact, walkable, mixed use energy/environmentally sustainable communities designed to combat urban sprawl and promote revitalization of cities and older suburbs. The "New Urbanism" movement has an array of architects, economists, designers, planners, transit proponents, housing specialists, ecologist, builders, engineers and lawyers working on hundreds of new urbnaist projects from "conservation subdivisions in rural areas; new urban "walkable communities" and "town centers", city center "town squares" and "grayfield conversions of older malls, industrial buildings and warehouses. [[87]](#footnote-88)n86**[I am not sure what purpose this historical section serves. Perhaps it can be summarized in a couple of paragraphs.]*C. The Palmdale New Town***

The concept of new towns separated from existing urban areas is an accepted planning technique that has been successfully utilized in Palmdale. Palmdale constitutes a distinct new town community separate from Los Angeles by the Angles National Forest. Its density, mixed use neighborhoods and extensive infrastructure features are based upon and reflect the new town characteristics. The characteristics of Palmdale as a satellite new town are well exemplified by the Florida experience.

Florida, which has the nation's most rigorous system of statewide planning, requires local plans to consider "new towns" and "satellite communities" as a method to encourage greater land use efficiencies. [[88]](#footnote-89)n87 Research shows that better interconnectivity of streets in lieu of cul-de-sacs, smaller blocks, proximity to light rail, new traditional design including porches and rear garages and pedestrian accessibility to shops and other commercial users has created a class of buyers willing to pay more to live in a new urban unity. [[89]](#footnote-90)n88 The Florida Department of Community Affairs, which administers the growth management statutes, defines a "new town" as follows: [[90]](#footnote-91)n89

"(79) "New town" means a new urban activity center and community designated on the future land use map and located within a rural area or at the rural-urban fringe, clearly functionally distinct or geographically separated from existing urban areas and other new towns. A new town shall be of sufficient size, population and land use composition to support a variety of economic and social activities consistent with an urban area designation. New towns shall include basic economic activities; all major land use categories, with the possible exception of agricultural and industrial; and a centrally provided full range of public facilities and services. A new town shall be based on a master development plan, and shall be bordered by land use designations which provide a clear distinction between the new town and surrounding land uses."

The FDCA requires local governments to evaluate new towns, rural villages or rural activity centers to determine how they discourage urban sprawl. [[91]](#footnote-92)n90 New towns that allow the conversion of rural and agricultural lands to other uses while protecting environmentally sensitive areas, maintaining the economic viability of agricultural and other predominantly rural land uses, and providing for the cost-efficient delivery of public facilities and services, are recognized as a methods to discourage urban sprawl. [[92]](#footnote-93)n91 As an incentive, developments that meet development of regional impact (DRI) [[93]](#footnote-94)n92 thresholds are assigned points under the Florida Quality Development (FQD) program [[94]](#footnote-95)n93 for "New Town or New Community" principles that incorporate features of Traditional Neighborhoods.

***B. New Urbanism***

Palmdale combines new town principles with many features of the emerging concept of "New Urbanism." New Urbanist projects include the following elements: [[95]](#footnote-96)n94

- Mixing of Land Uses: While suburban dwellers must drive from one single use to the next, i.e. from residential to commercial areas, neotraditionalists make it possible live, work, walk and shop in the same vicinity.

- Increased Density: Increased density is another attribute common to neotraditional communities. By increasing the density of a community, it is likely that people will begin to walk, car pool or rely on public transit to meet their transportation needs.

- Walkability: Neotraditionalists are known for striving to make the communities they develop walkable by linking the community with a network of sidewalks. Additionally, efforts are made to ensure that one-quarter of a mile is the furthest distance between uses.

- Distinct Architectural Design Features: Neotraditional communities are sometimes easy to spot due to defining design features. Such places often re-invent their cities by modeling architectural design standards on historical and regional tastes.

In order to encourage walkability and to replicate the traditional urbanism of new town and older cities, most "greenfield" [[96]](#footnote-97)n95 new urbanism projects feature short blocks with few cul-de-sacs. Few developments include all of the design features desired by new urbanist practitioners. In many of the new "hybrid" projects, such as Otay Ranch in Chula Vista, non-urban features such as gates, six-lane arterial roads and cul-de-sacs coexist with mixed uses and generous pedestrian infrastructure. [[97]](#footnote-98)n96 The most successful and reknowned greenfield new urbanist projects have been satellite communities similar to new towns, rather than infill projects. Examples include Seaside, Florida; Celebration (Orlando, Florida); Laguna West (Sacramento, California); The Kentlands (Gaithersburg, Maryland); Carpenter Village (Cary, North Carolina); and Southern Village (Chapel Hill, North Carolina). These experiences demonstrate that satellite locations can promote Smart Growth and good urbanism while providing housing, jobs and walkable streets.

In determining whether a project is representative of sprawl or Smart Growth it is important to answer the following questions:

1. Is it located in an already developed area?

2. Is there a mix of housing, office space, schools, retail shopping, outdoor recreation and civic open spaces?

3. Does the housing include multiple types, from single family detached to multifamily condos, and does it have a range of prices from luxury to affordable?

4. Does the project convert prime agricultural land or environmentally sensitive land, or odes its density consume less agricultural and environmental land than the average spraw development?

5. Does the project use compact energy-efficient and green building methods?

6. Is there access to public transit?

7. Does the design and layout of buildings and streets promote real neighborhood interaction and compatible style?

8. Has the local government adopted zoning codes that give as much support for mixed use communities as it does for segregated single use Euclidean zoning? \*\*insert footnote 44A

[SEE Street-facing garages and cul-de-sac in Carpenter Village, a New Urbanist community in Cary, North Carolina. IN ORIGINAL]

***C. National Examples***

A number of notable systems demonstrate the importance of development of transportation corridor cities as the spine of an effective transit and rail system. Many of these systems were designed by Freilich, Leitner & Carlisle.

**1. Seattle (Transit corridors) (establishing major "activity centers" on transit or a transportation corridors)**

The Central Puget Sound Regional Council's 1985 *Vision* 2020 Plan, provides an excellent example of utilization of outlying centers for urban containment. *Vision* 2020 established a hierarchy of "outlying central places" to guide growth to 15 mixed use centers that are served by a more efficient transportation system. The central places concept is a growth management technique used to achieve compact development with a reordering of transportation investment priorities. By reason of vision 2020 -- the $ 11 billion transit system was enabled because the ridership had been built up in the mixed use centers. [[98]](#footnote-99)n97

[SEE Figure 4 Puget Sound Vision 2020 Plan IN ORIGINAL]

**2. San Diego (New Town Corridor Centers)**

The 1979 Growth Management Element of the General Plan developed by Freilich, Leitner & Carlisle with a brilliant City Planner, Michael Stepner, established a major tier system, delineating the existing urbanized areas of the city (Tier I), from the Planned Urbanizing Area (Tier II) and areas not to be developed until the 21st Century (Tier III, "Future Urbanizing Area"). [[99]](#footnote-100)n98 The key to the system were the high density mixed use "new towns" to be developed on the Interstates -- I-5 and I-15 -- North University City and North City West. [[100]](#footnote-101)n99 The Tier II strategy made the entire transit system for San Diego possible by developing the ridership at key corridor centers. Prior to 1979, 90% of new growth was occurring in Tiers II and III, which was reversed by 1983 with 50% of the growth returning to Tier I-also at transit oriented zoning centers. [[101]](#footnote-102)n100

[SEE Figure 5 San Diego Tier System IN ORIGINAL]

**3. Howard County, Maryland (Columbia New Town) (1965 to 2000)**

The Washington, DC experience is instructive because they have successfully integrated transit with land use policies. The Washington-Baltimore region adopted a Year 2000 Radial Corridor Plan in 1969 to channel growth into transportation corridors and corridor centers. Jurisdictions in the region have developed plans using the regional infill concept to support rail transit. In Baltimore and Montgomery Counties Freilich, Leitner & Carlisle developed a tier system with New Development Area Centers recommended for staged accelerated growth. In Howard County, Freilich, Leitner & Carlisle developed a plan that combined transit-supportive corridor and center growth in the Columbia "new town" with agricultural protection measures such as transfers of development rights. The plan won the 1991 American Planning Association award for Outstanding Comprehensive Planning. The State of Maryland has followed suit with statewide smart growth legislation that directs infrastructure to be provided in existing developed areas or in new towns. [[102]](#footnote-103)n101

[SEE Figure 6 Howard County General Plan 2000 IN ORIGINAL]

**VII. Benefits Arising From Palmdale Development As Mixed Use Transportation Center**

The State EIR Summary (at S-24) states: "To the degree they are concentrated (growth) impacts are likely to be focused on property surrounding freeway interchanges and airports." The Antelope Valley has an existing, multi-modal transportation network that accommodates this growth in an efficient manner. The City of Palmdale has supported high speed rail infrastructure with its own dollars. The Palmdale Transportation Center currently under construction provides supporting infrastructure for a variety of transportation alternatives. This is acknowledged in the State EIR Evaluation Matrix ( § 6.4.3, page 6-57): "The Palmdale Transportation Center would potentially serve the Antelope Valley population. This station option maximizes opportunities for intermodal connectivity. It is close to Palmdale Airport, with the opportunity for convenient shuttle or people-mover service, and it is the Metrolink station for Palmdale and a hub for local bus services. The Palmdale Transportation Center would reduce travel times and access costs for the Antelope Valley population."

This will not only facilitate ridership on the high speed rail network, but will also encourage the more efficient utilization of other transportation infrastructure investments such as the Palmdale Regional Airport, the Metro commuter rail system, and the Antelope Valley regional bus system. Complementing this with the Antelope Valley high speed rail alignment is a wise use of the state's transportation dollars, and further reinforces growth patterns favored by state and regional land use policies.

***A. Transportation Costs***

**1. Travel Characteristics**[[103]](#footnote-104)n102

The design and form of new development has a significant influence on travel modes and the impacts of new development on roadway capacity. These include:

- reductions in the number of trips per person or household ("trip generation")

- reductions in trip length, typically measured in vehicle miles of travel ("VMT")

- encouraging multiple modes of travel, rather than an exclusive reliance on the automobile.

Some of these studies are summarized below.

The compact development pattern of Palmdale will significantly reduce VMT. While population growth in metropolitan Los Angeles increased by only 44% over the past 20 years, VMT nearly doubled. [[104]](#footnote-105)n103 VMT increased at three times the rate of population growth from 1980-1990, but the rate of growth slowed to a pace equal to population growth during the 1990s. [[105]](#footnote-106)n104 A recent study by Reid Ewing of Rutgers University and Rolf Pendall of Cornell University developed a spawl index based on density, mix of uses, strength of centers, and street accessibility. A 25-unit decline or one standard deviation in the sprawl index was associated with an increase of two miles in daily VMT. [[106]](#footnote-107)n105 A difference of 10 miles of VMT per vehicle per day was identified between some sprawling (e.g. Atlanta) and non-sprawling (e.g. Portland) regions. The United States Department of Transportation documented that during a recent period, only 36% of the growth in VMT nationally is attributable to demographic changes. The balance is attributable to land use changes. These changes led to a 38% increase in trip length and a 25% increase in trip generation. [[107]](#footnote-108)n106

A comparative analysis of 12 metropolitan areas by Robert Cervero showed that walking and cycling consistently declined throughout each area, but that more than 15% of all journeys to work were by nonvehicular modes (R. Cervero, *Suburban Gridlock* (Rutgers, 1986), at 37). Cervero recommends that sidewalks, trails and pathways be coordinated with a larger system and not end abruptly (id. at 64-65). While less than 1% of all trips in the nation are by walking and cycling, office parks with integrated pedestrian systems and on-site amenities such as showers can increase bike travel to 3-5% (id. at 116). He suggests that the impact is more meaningful where employees are concentrated within 1-3 miles of the employment center (id.). He reports that 20% of the workers at the Xerox research facility in Silicon Valley commute by bicycle (id. at 206).

Cervero has further documented how lack of design amenities often discourages pedestrian and bike travel in suburban employment centers (SECs) (R. Cervero, *America's Suburban Centers: The Land-Use Transportation Link* (1989), at 64). Most walk trips in SECs are for non-work purposes, but walking comprises only 21.5% of non-work trips (id.) Foot travel is discouraged by long blocks, disconnected sidewalks, and limited mid-block crosswalk opportunities (id.) Consumers are more likely to walk avenues with shops, parks and other interesting destinations where a number of trip purposes can be accomplished (id. at 64-65). [[108]](#footnote-109)n107

In an extensive summary of research on the issue, Reid Ewing has compiled a listing of pedestrian and transit-friendly features (see Reid Ewing, *Pedestrian & Transit-Friendly Design* (Public Transit Office, Florida Department of Transportation, March 1996):

| **ESSENTIAL** | **HIGHLY DESIREABLE** |
| --- | --- |
| Medium-high density (7-50 | Supportive Commercial Uses |
| du/ac) |  |
|  |  |
| Mixed land uses | Grid Streets |
|  |  |
| Short-to-Medium Length | Traffic calming of access |
| Blocks (300-500') | routes |
|  |  |
| Transit Routes every 1/2 mile | Closely Spaced Shade Trees |
|  | on Access Routes |
|  |  |
| 2-4 Lane Streets | Lack of Dead Space (or |
|  | Visible Parking) |
|  |  |
| Continuous sidewalks 4-8' | Nearby Parks/Public Spaces |
| wide |  |
|  |  |
| Safe Street Crossings (5-10' | Small-Scale or Articulated |
| radii) | Large Buildings |
|  |  |
| Buffering from Traffic (e.g. | Attractive Transit Facilities |
| street parking) |  |
|  |  |
| Street-Oriented Buildings |  |
|  |  |
| Comfortable/Safe Places to |  |
| Wait |  |

| **ESSENTIAL** | **NICE ADDITIONS** |
| --- | --- |
| Medium-high density (7-50 | Street walls |
| du/ac) |  |
|  |  |
| Mixed land uses | Functional Street Furniture |
|  |  |
| Short-to-Medium Length | Coherent, Small-Scale |
| Blocks (300-500') | Signage |
|  |  |
| Transit Routes every 1/2 mile | Special Pavement |
|  |  |
|  |  |
| 2-4 Lane Streets | Public Art |
|  |  |
|  |  |
| Continuous sidewalks 4-8' |  |
| wide |  |
|  |  |
| Safe Street Crossings (5-10' |  |
| radii) |  |
|  |  |
| Buffering from Traffic (e.g. |  |
| street parking) |  |
|  |  |
| Street-Oriented Buildings |  |
|  |  |
| Comfortable/Safe Places to |  |
| Wait |  |

**B. *Transit Station Siting Principles***

The Palmdale Transportation Center is consistent with best practices for transit station siting, which include the siting of stations in satellite or suburban locations. The Federal Transit Agency recommends the following station siting principles: [[109]](#footnote-110)n108

"1. Each city should have a station located in or near the central business district. This is mandatory for larger Metropolitan Statistical Areas (MSAs), with metropolitan populations of 150,000 or more, since to do otherwise would undermine the inherent advantages of rail passenger systems. … This center city station should have direct access to local transit systems (bus, rail, taxi, etc.) as well as appropriate amounts of parking for private cars.

2. One or more suburban stations need to be provided in the larger metropolitan areas with easy access to the local primary road system in order to accommodate potential riders living outside the city centers. Classic successful examples of suburban or beltway stations are Route 128 outside of Boston, MA and New Carrollton, MD outside of Washington, D.C. These "beltway"-type stations cater to automobile-oriented riders and thus need to have many hundreds, if not several thousand, parking spaces to fulfill their role in corridor transportation.

3. Every effort should be made to have each corridor station serve as a regional intermodal passenger terminal for all forms of regional and local transportation systems. …

The literature also provides support for the trip reduction potential of walkable communities such as traditional neighborhood developments (TND). There are few empirical studies due to the lack of well-established new communities with a "new urbanist" design emphasis. A study of traditional and modern conventional subdivisions in Austin, Texas found that persons walked to the store six times more in traditional subdivisions than in the modern conventional subdivisions, and the walk trips were a substitute for driving trips (Susan Handy, *Urban Form and Pedestrian Choices: A Study of Austin Neighborhoods* (Community and Regional Planning Program, School of Architecture, University of Texas at Austin, April 1996)). A study by 1000 Friends of Oregon demonstrated substantial reductions in VMT and trips based on four "Pedestrian Environmental Factors" (PEF): (1) Ease of street crossings; (2) sidewalk continuity; (3) local street characteristics (grid vs. cul de sac); and (4) topography. The study demonstrates that vehicle trips per household decline as much as 30% with increases in PEF (see "Figure 9"). 1000 Friends of Oregon, *Making Land Use Transportation Air Quality Connections, The Pedestrian Environment*, Vol. 4A (Dec. 1993)(at www.bts.gov/ntl/docs/tped.html). A study by Susan Handy related that residents in an older community in the San Francisco area walked to the supermarket more than sprawling subdivisions, and the pedestrian mode share was at 8% (Handy, "Understanding the Link Between Urban Form and Nonwork Travel Behavior," *J. Planning Education & Research* 15:183-198 (1996)).

[SEE FIGURE IN ORIGINAL]

Other studies demonstrate trip reductions for mixed use/transit-oriented/new urbanist development (see Crane, "Cars and Drivers in the New Suburbs: Linking Access to Travel in Neotraditional Planning," 62 *APA Journal* 51 (Winter 1996)(summarizing studies). Some studies have shown that mixed use development can reduce trip generation rates by as much as 25%. Cervero, "Land-Use Mixing and Suburban Mobility," *Transportation Quarterly* (citing Colorado/Wyoming Section Technical Committee, "Trip Generation for Mixed Use Developments," *ITE Journal* 57, 2 (1987): 27-32). An American Society of Civil Engineers simulation study estimated that Traditional Neighborhood Development (TND) produces 57% of the Vehicle Miles Traveled (VMT) of a conventional suburban development, with a 9.78% reduction in the Volume to Capacity ratio (V/C) for arterials (0.83 v. 0.92), a 7.45% reduction for collectors (0.87 v. 0.94), and 4.55% reduction for local streets (0.22 v. 0.21) (American Society of Civil Engineers, *Traditional Neighborhood Development-Will the Traffic Work*? (ASCE 1990)(summarized in Bookout, "Neo-traditional Town Planning: Cars, Pedestrians & Transit," *Urban Land* (Feb. 1992), at 10, 1.5)). Further, conventional suburban neighborhoods were found to have trip rates 60% higher than traditional neighborhoods in San Francisco Bay area (Crane, *supra*). A study by Handy in San Francisco was inconclusive about substitution, but her later studies in Austin confirmed that many walk trips do substitute for car trips.

Some studies have documented that residents of older neighborhoods travel less in terms of mileage and number of trips (Handy (1996), supra; Friedman, Gordon & Peers, "Effect of Neo-traditional Neighborhood Design on Travel Characteristics," *Transportation Research Record* 1466: 63-70 (1993); Holtzclaw, *Explaining Density and Transit Impacts on Land Use* (Presented by the Natural Resources Defense Council and the Sierra Club to the State of California Energy Resources Conservation and Development Commission, April 19, 1990); Kitamura, Ryuichi, Mokhtarian & Laidet, *A Micro-Analysis of Land Use and Travel in Five Neighborhoods in the San Francisco Bay Area* (Institute of Transportation Studies, University of California at Davis, Nov. 1994)).

| **Publication/Article** | **Description** |
| --- | --- |
|  |  |
| 1000 Friends of Oregon, Making | Utilized Western |
| Land Use Transportation Air Quality | Bypass around |
| Connections, The Pedestrian | Portland Oregon; |
| Environment, Vol. 4A (Dec. | identified alternate land |
| 1993)(at | use development |
| www.bts.gov/ntl/docs/tped.html) | patterns that reduce |
|  | travel demand & |
|  | increase use of alt. |
|  | travel modes; |
|  | developed reliable |
|  | transportation |
|  | modeling that forecast |
|  | travel behavior assoc. |
|  | with the alternate land |
|  | use patterns |
| Kulash, "Traditional Neighborhood | Addresses traditional |
| Development-Will the Traffic | neighborhood design in |
| Work?" American Society of Civil | relationship to |
| Engineers, (ASCE 1990); | traditional traffic |
|  | planning criteria: |
|  | vehicular capacity, |
|  | travel speed, and |
|  | safety. |
| Bookout, "Neotraditional Town | Notes a 1990 ASCE |
| Planning: Cars, Pedestrians & | hypo found that a 700 |
| Transit," Urban Land (Feb. 1992), at | acre TND had 57% |
| 10, 15. | VMT of conventional |
|  | development |
|  | applicable only to trips |
|  | internal to the |
|  | development |
| Cervero & Kockelman, "Travel | Expectation: density, |
| Demand and the 3Ds: Density, | diversity, and |
| Diversity, and Design, | pedestrian orientated |
| Transportation Resource-D, Vol. 2, | design should lower |
| No. 3 (1997) | personal vehicle trip |
|  | rates. Studied 50 San |
|  | Francisco |
|  | neighborhoods. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Cervero, "Land-Use Mixing and | Utilizes Institute of |
| Suburban Mobility," Transportation | Transportation |
| Quarterly (1988) | Engineers Trip |
|  | Generation Manual to |
|  | look at effects of a |
|  | hypothetical 1,000 sf |
|  | mixed-use |
|  | development compared |
|  | to same square footage |
|  | of general office space. |
| Colorado/Wyoming Section | Study purpose to |
| Technical Committee, "Trip | determine whether trip |
| Generation for Mixed Use | generation rates for |
| Developments," ITE Journal 57, 2 | mixed-use |
| (1987): 27-32) | development are lower |
|  | than those predicted by |
|  | strict application of |
|  | ITE rates. |
|  |  |
|  |  |
|  |  |
|  |  |
| Crane, "Cars and Drivers in the New | Crane is skeptical |
| Suburbs: Linking Access to Travel | about the benefits of a |
| in Neo-traditional Planning," 62 | grid-like subdivision |
| APA Journal 51 (Winter 1996); | form. He thinks |
|  | shorter trips will be |
|  | offset by more trips |
|  | and traffic benefits are |
|  | more likely the result |
|  | of "traffic calming" |
|  | and cluster |
|  | destinations. He notes |
|  | a lack of empirical |
|  | studies. |
| Friedman, Gordon & Peers, "Effect | Comparison of trip |
| of Neo-traditional Neighborhood | generation reported by |
| Design on Travel Characteristics," | residents of pre-World |
| Transportation Research Record | War II and post-war |
| 1466: 63-70 (1993) | residential |
|  | developments. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Holtzclaw, "Using Residential | 28 communities in CA |
| Patterns and Transit to Decrease | were analyzed |
| Auto Dependence and Costs" (1994) | regarding 4 factors; I) |
|  | residential density, 2) |
|  | transit access, 3) |
|  | neighborhood |
|  | shopping, 4) pedestrian |
|  | access. Goal: to allow |
|  | at least one method of |
|  | calculating annual |
|  | transportation cost |
|  | savings for an |
|  | individual house or |
|  | neighborhood |
|  | compared to a base |
|  | case of a typical low |
|  | density suburb. |
| JHK & Associates. Transportation- | Analysis of trip |
| Related Land Use. Strategies to | generation and VMT |
| Minimize Motor Vehicle Emissions: | for various |
| An Indirect Source Research Study, | communities in San |
| Final Report. Sacramento: | Francisco Bay region. |
| California Air Resources Board, |  |
| June 1995. |  |
| Kulash, Anglin, & Marks, | Simulation of |
| Traditional Neighborhood | conventional versus |
| Development: Will the Traffic | traditional |
| Work?, Development 21 | neighborhood forms |
| (July/Aug.), 21-24 |  |
| Moudon & Hess, et al., Effects Of | Effect of site design |
| Site Design On Pedestrian Travel In | characteristics and safe |
| Mixed-Use, Medium-Density | pedestrian systems on |
| Environments (May 1997, Report | incidence of pedestrian |
| No. WA-RD 432.1); | travel in mixed-use, |
|  | medium density |
|  | environments. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Kitamura, Mokhtarian, Laidet, | Premise: attitudes and |
| "Micro Analysis of Land Use and | lifestyle choices are |
| Travel in Five Neighborhoods in San | relevant to the |
| Francisco" (Institute of | selection of a |
| Transportation Studies, University | neighborhood and to |
| of California at Davis, Nov. 1994). | travel behavior. |
|  | Concludes that trip |
|  | generation is largely |
|  | determined by |
|  | demographic and |
|  | socio-economic |
|  | factors, not land use. |
| Parsons, Brinckkerhoff Quade and | Setback and building |
| Douglas Inc., "Building Orientation" | orientation of |
| -- supplement to Pedestrian | commercial structures, |
| Environment Vol.4B, 1994. | as they influence |
|  | household vehicle |
|  | miles of travel (VMT). |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Pushkarev & Jeffrey Zupan, Public | Study addresses |
| Transportation and Land Use Policy | relationships between |
| (1977) | urban densities, transit |
|  | demand, and public |
|  | transportation supply. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Frank & Pivo, Relationships | Greater employment |
| between Land Use and Travel | density, population |
| Behavior in the Puget Sound | density, land-use mix |
| Region, WA St Trans Center, | and job-housing |
| Seattle, 1994. | balance are associated |
|  | with less auto use. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| U.S. Department of Transportation, | National survey of |
| Federal Highway Administration, " | travel characteristics |
| 1990 Nationwide Personal |  |
| Transportation Survey".) |  |

| **Publication/Article** | **Findings** |
| --- | --- |
|  | **Trip Generation** |
| 1000 Friends of Oregon, Making | Model suggests that a |
| Land Use Transportation Air Quality | 10% reduction in the |
| Connections, The Pedestrian | VMT can be achieved |
| Environment, Vol. 4A (Dec. | with a region-wide |
| 1993)(at | increase in the quality of |
| www.bts.gov/ntl/docs/tped.html) | pedestrian environments |
|  | to a level comparable to |
|  | Portland's most pedestrian |
|  | oriented zones. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Kulash, "Traditional Neighborhood | TND has a superior traffic |
| Development-Will the Traffic | capacity unrelated to |
| Work?" American Society of Civil | travel demand reduction. |
| Engineers, (ASCE 1990); |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Bookout, "Neotraditional Town | ASCE does not estimate # |
| Planning: Cars, Pedestrians & | of trips generated by a |
| Transit," Urban Land (Feb. 1992), at | TND design. |
| 10, 15. |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Cervero & Kockelman, "Travel | Compact, mixed-use, |
| Demand and the 3Ds: Density, | pedestrian friendly |
| Diversity, and Design, | designs can "degenerate" |
| Transportation Resource-D, Vol. 2, | vehicle trips. It was 56% |
| No. 3 (1997) | more likely a person |
|  | would drive alone to a |
|  | neighborhood shop if all |
|  | buildings are surrounded |
|  | by front and side lot |
|  | parking versus if all |
|  | buildings have rear lot |
|  | parking. Vehicle usage |
|  | generally increases with |
|  | non-work trip distance. |
|  | Paid parking within |
|  | neighborhoods can |
|  | encourage people to walk |
|  | to shops and other |
|  | non-work destinations. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Cervero, "Land-Use Mixing and | A mix of 25,000 sf of |
| Suburban Mobility," Transportation | office, 25,000 sf of R&D, |
| Quarterly (1988) | 40,000 sf of multi-family |
|  | residential and 10,000 sf |
|  | of specialty retail would |
|  | drop trip generation by |
|  | 18.7 percent and spread |
|  | trips more evenly across |
|  | the day. |
|  |  |
| Colorado/Wyoming Section | Total daily trips generated |
| Technical Committee, "Trip | by a mixed-use site can be |
| Generation for Mixed Use | accurately estimated using |
| Developments," ITE Journal 57, 2 | ITE rates. An 8% |
| (1987): 27-32) | differential found in the |
|  | study determined not to be |
|  | statistically significant. |
|  | Peak hour trip generation |
|  | for mixed-use based on |
|  | ITE rates may be |
|  | overestimated by average |
|  | of 2.5%. |
| Crane, "Cars and Drivers in the New |  |
| Suburbs: Linking Access to Travel |  |
| in Neo-traditional Planning," 62 |  |
| APA Journal 51 (Winter 1996); |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Friedman, Gordon & Peers, "Effect | Traditional households |
| of Neo-traditional Neighborhood | generate 25% fewer daily |
| Design on Travel Characteristics," | trips by all modes than |
| Transportation Research Record | suburban households, and |
| 1466: 63-70 (1993) | 32% fewer auto-driver |
|  | trips. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Holtzclaw, "Using Residential | Findings: communities |
| Patterns and Transit to Decrease | with double the density |
| Auto Dependence and Costs" (1994) | will have 25-30% less |
|  | driving per family when |
|  | the impacts of all |
|  | conditions generally |
|  | accompanying higher |
|  | density are included. |
|  | (better transit more local |
|  | shopping, and pedestrian |
|  | friendly environment. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| JHK & Associates. Transportation- | Trips ranged from 210 per |
| Related Land Use. Strategies to | person per year in |
| Minimize Motor Vehicle Emissions: | downtown San Francisco |
| An Indirect Source Research Study, | to 900 in suburban Walnut |
| Final Report. Sacramento: | Creek (328% difference) |
| California Air Resources Board, |  |
| June 1995. |  |
| Kulash, Anglin, & Marks, |  |
| Traditional Neighborhood |  |
| Development: Will the Traffic |  |
| Work?, Development 21 |  |
| (July/Aug.), 21-24 |  |
| Moudon & Hess, et al., Effects Of |  |
| Site Design On Pedestrian Travel In |  |
| Mixed-Use, Medium-Density |  |
| Environments (May 1997, Report |  |
| No. WA-RD 432.1); |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Kitamura, Mokhtarian, Laidet, |  |
| "Micro Analysis of Land Use and |  |
| Travel in Five Neighborhoods in San |  |
| Francisco" (Institute of |  |
| Transportation Studies, University |  |
| of California at Davis, Nov. 1994). |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Parsons, Brinckkerhoff Quade and | Number of trips by transit |
| Douglas Inc., "Building Orientation" | increase as proportion of |
| -- supplement to Pedestrian | buildings oriented toward |
| Environment Vol.4B, 1994. | street, i.e. pre-1951, |
|  | increases. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Pushkarev & Jeffrey Zupan, Public | Density of 7 to 30 |
| Transportation and Land Use Policy | dwellings/acre is needed |
| (1977) | to sustain significant |
|  | transit use in range of |
|  | 5-40% of all trips. Density |
|  | exceeding 60 |
|  | dwellings/acre results in |
|  | 50% of trips are made by |
|  | public transportation. The |
|  | higher the density of the |
|  | non-residential destination |
|  | the greater the likelihood |
|  | that auto owners will use |
|  | transit. |
| Frank & Pivo, Relationships | Significant movement |
| between Land Use and Travel | from single occupant |
| Behavior in the Puget Sound | vehicles (SOV) to other |
| Region, WA St Trans Center, | modes does not occur to |
| Seattle, 1994. | thresholds are met. |
|  |  |
|  | Work trips: 50-75 |
|  | employees/gross acre or |
|  | 12 dwellings units per |
|  | acre. |
|  |  |
|  | Shopping trips: 75 |
|  | employees/gross acre or |
|  | 20 dwelling units per acre. |
| U.S. Department of Transportation, | Sprawling development |
| Federal Highway Administration, " | patterns increased trip |
| 1990 Nationwide Personal | generation by 25% |
| Transportation Survey".) | nationally |

| **Publication/Article** | **Findings** |
| --- | --- |
|  | **Trip Length** |
| 1000 Friends of Oregon, Making |  |
| Land Use Transportation Air Quality |  |
| Connections, The Pedestrian |  |
| Environment, Vol. 4A (Dec. |  |
| 1993)(at |  |
| www.bts.gov/ntl/docs/tped.html) |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Kulash, "Traditional Neighborhood | Superior capacity is |
| Development-Will the Traffic | unrelated to reduction of |
| Work?" American Society of Civil | travel distances. TND |
| Engineers, (ASCE 1990); | has shorter trip lengths. |
|  | TND has lower trip |
|  | speed, but comparable |
|  | trip time to conventional |
|  | suburban development. |
| Bookout, "Neotraditional Town | Nationwide VMT |
| Planning: Cars, Pedestrians & | increased 41% b/t 1983 |
| Transit," Urban Land (Feb. 1992), at | and 1990, pop. Increased |
| 10, 15. | by 6%. |
|  |  |
|  |  |
|  |  |
|  |  |
| Cervero & Kockelman, "Travel | Compact, mixed-use, |
| Demand and the 3Ds: Density, | pedestrian friendly |
| Diversity, and Design, | designs can "degenerate" |
| Transportation Resource-D, Vol. 2, | vehicle trips. |
| No. 3 (1997) | Neighborhood retail |
|  | stores that were vertically |
|  | mixed verses |
|  | neighborhoods with retail |
|  | with no vertical mix |
|  | averages 11.1 fewer |
|  | vehicle-miles-traveled |
|  | (VMT) per household per |
|  | day. Neighborhoods with |
|  | all four-way stop |
|  | intersections verses all |
|  | three-way stop |
|  | intersections averages 32 |
|  | fewer VMT per |
|  | household each day. |
|  | Four-way intersections |
|  | encourage walking and |
|  | non-motorized trips by |
|  | providing controlled |
|  | street crossings and more |
|  | access points. |
| Cervero, "Land-Use Mixing and |  |
| Suburban Mobility," Transportation |  |
| Quarterly (1988) |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Colorado/Wyoming Section |  |
| Technical Committee, "Trip |  |
| Generation for Mixed Use |  |
| Developments," ITE Journal 57, 2 |  |
| (1987): 27-32) |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Crane, "Cars and Drivers in the New |  |
| Suburbs: Linking Access to Travel |  |
| in Neo-traditional Planning," 62 |  |
| APA Journal 51 (Winter 1996); |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Friedman, Gordon & Peers, "Effect |  |
| of Neo-traditional Neighborhood |  |
| Design on Travel Characteristics," |  |
| Transportation Research Record |  |
| 1466: 63-70 (1993) |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Holtzclaw, "Using Residential |  |
| Patterns and Transit to Decrease |  |
| Auto Dependence and Costs" (1994) |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| JHK & Associates. Transportation- | VMT ranged from 1,560 |
| Related Land Use. Strategies to | in downtown to 6,940 in |
| Minimize Motor Vehicle Emissions: | suburban area (344% |
| An Indirect Source Research Study, | difference) |
| Final Report. Sacramento: |  |
| California Air Resources Board, |  |
| June 1995. |  |
| Kulash, Anglin, & Marks, | 57% reduction in VMT |
| Traditional Neighborhood |  |
| Development: Will the Traffic |  |
| Work?, Development 21 |  |
| (July/Aug.), 21-24 |  |
| Moudon & Hess, et al., Effects Of |  |
| Site Design On Pedestrian Travel In |  |
| Mixed-Use, Medium-Density |  |
| Environments (May 1997, Report |  |
| No. WA-RD 432.1); |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Kitamura, Mokhtarian, Laidet, |  |
| "Micro Analysis of Land Use and |  |
| Travel in Five Neighborhoods in San |  |
| Francisco" (Institute of |  |
| Transportation Studies, University |  |
| of California at Davis, Nov. 1994). |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Parsons, Brinckkerhoff Quade and | An increase in residential |
| Douglas Inc., "Building Orientation" | density from 3 to 4 |
| -- supplement to Pedestrian | households per zonal acre |
| Environment Vol.4B, 1994. | corresponds to decrease |
|  | of .8 miles in household |
|  | vehicle travel. |
|  |  |
|  | An increase of 30% in |
|  | the proportion of |
|  | commercial bldgs. in the |
|  | zone built pre 1950 |
|  | corresponded to a |
|  | decrease of 1.3 miles |
|  | (5%) in daily household |
|  | VMT. |
| Pushkarev & Jeffrey Zupan, Public |  |
| Transportation and Land Use Policy |  |
| (1977) |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Frank & Pivo, Relationships | Population density, |
| between Land Use and Travel | employment density and |
| Behavior in the Puget Sound | land-use mix at trip |
| Region, WA St Trans Center, | origins were all |
| Seattle, 1994. | negatively correlated |
|  | with trip distance. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| U.S. Department of Transportation, | Sprawl increased average |
| Federal Highway Administration, " | trip distance by 38% |
| 1990 Nationwide Personal |  |
| Transportation Survey".) |  |

| **Publication/Article** | **Findings** |
| --- | --- |
|  | **Other** |
| 1000 Friends of Oregon, Making | Unlike other |
| Land Use Transportation Air Quality | determinants of |
| Connections, The Pedestrian | travel behavior, |
| Environment, Vol. 4A (Dec. | the built |
| 1993)(at | environment can |
| www.bts.gov/ntl/docs/tped.html) | be modified by |
|  | public policy and |
|  | investments. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Kulash, "Traditional Neighborhood | TDN offers |
| Development-Will the Traffic | greater route |
| Work?" American Society of Civil | alternatives. |
| Engineers, (ASCE 1990); | There are no |
|  | criteria that |
|  | measure livability. |
|  |  |
|  |  |
| Bookout, "Neotraditional Town |  |
| Planning: Cars, Pedestrians & |  |
| Transit," Urban Land (Feb. 1992), at |  |
| 10, 15. |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Cervero & Kockelman, "Travel | Model suggests |
| Demand and the 3Ds: Density, | that plentiful |
| Diversity, and Design, | neighborhood |
| Transportation Resource-D, Vol. 2, | retail shops and |
| No. 3 (1997) | pedestrian oriented |
|  | designs, not |
|  | residential |
|  | densities, are |
|  | significant factors |
|  | in encouraging |
|  | people to |
|  | commute by |
|  | transit & non-motorized |
|  | means. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Cervero, "Land-Use Mixing and | Trips are more |
| Suburban Mobility," Transportation | evenly spread |
| Quarterly (1988) | across the day in |
|  | the mixed-use |
|  | project reducing |
|  | peak-hour |
|  | volumes. |
|  |  |
|  |  |
|  |  |
| Colorado/Wyoming Section |  |
| Technical Committee, "Trip |  |
| Generation for Mixed Use |  |
| Developments," ITE Journal 57, 2 |  |
| (1987): 27-32) |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Crane, "Cars and Drivers in the New |  |
| Suburbs: Linking Access to Travel |  |
| in Neo-traditional Planning," 62 |  |
| APA Journal 51 (Winter 1996); |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Friedman, Gordon & Peers, "Effect | Variable factors: |
| of Neo-traditional Neighborhood | proximity and |
| Design on Travel Characteristics," | access to large |
| Transportation Research Record | employment |
| 1466: 63-70 (1993) | concentrations; |
|  | internal |
|  | jobs-housing balance; |
|  | individual |
|  | neo-traditional design |
|  | characteristics; |
|  | amount of free |
|  | parking; transit |
|  | quality |
| Holtzclaw, "Using Residential | Variations in |
| Patterns and Transit to Decrease | automobile usage |
| Auto Dependence and Costs" (1994) | per household and |
|  | in personal |
|  | transportation |
|  | costs between |
|  | communities can |
|  | be quantified |
|  | fairly accurately |
|  | through two |
|  | equations defined. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| JHK & Associates. Transportation- | Automobile mode |
| Related Land Use. Strategies to | share ranged from |
| Minimize Motor Vehicle Emissions: | 40% in San |
| An Indirect Source Research Study, | Francisco to 66% |
| Final Report. Sacramento: | in suburban area |
| California Air Resources Board, |  |
| June 1995. |  |
| Kulash, Anglin, & Marks, |  |
| Traditional Neighborhood |  |
| Development: Will the Traffic |  |
| Work?, Development 21 |  |
| (July/Aug.), 21-24 |  |
| Moudon & Hess, et al., Effects Of | Holding other |
| Site Design On Pedestrian Travel In | variables constant, |
| Mixed-Use, Medium-Density | urban versus |
| Environments (May 1997, Report | suburban |
| No. WA-RD 432.1); | difference in route |
|  | directness and |
|  | completeness of |
|  | pedestrian |
|  | facilities (block |
|  | size, sidewalk |
|  | length, etc.) |
|  | affects pedestrian |
|  | volume. Avg. |
|  | urban pedestrian |
|  | volume: 37.7 |
|  | pedestrians/hr. |
|  | Avg. suburban |
|  | volume: 12.5 |
|  | pedestrians/hr. |
| Kitamura, Mokhtarian, Laidet, | Eight attitude |
| "Micro Analysis of Land Use and | factors: |
| Travel in Five Neighborhoods in San | Pro-environment, |
| Francisco" (Institute of | pro-transit, |
| Transportation Studies, University | suburbanite, |
| of California at Davis, Nov. 1994). | automotive |
|  | mobility, time |
|  | pressure, urban |
|  | villager, |
|  | transportation |
|  | control measures, |
|  | workaholic. |
| Parsons, Brinckkerhoff Quade and | Variation in |
| Douglas Inc., "Building Orientation" | Portland building |
| -- supplement to Pedestrian | orientation at |
| Environment Vol.4B, 1994. | zonal level can |
|  | account for |
|  | changes of 10% or |
|  | more in VMT per |
|  | household. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Pushkarev & Jeffrey Zupan, Public |  |
| Transportation and Land Use Policy |  |
| (1977) |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Frank & Pivo, Relationships |  |
| between Land Use and Travel |  |
| Behavior in the Puget Sound |  |
| Region, WA St Trans Center, |  |
| Seattle, 1994. |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| U.S. Department of Transportation, |  |
| Federal Highway Administration, " |  |
| 1990 Nationwide Personal |  |
| Transportation Survey".) |  |

**2. Capital Costs**

**a. Urban Highways**

The reduced trip lengths for compact development, documented above, leads to a direct saving to the community for roads and highways. These cost savings are manifested in several different ways. First, compact development requires fewer lane-miles of roadways than more efficient, compact development patterns. By reducing road lengths, fiscal impacts for capital costs are reduced. Further, environmental impacts are reduced because compact development patterns require significantly less impervious surface.

Second, the reduced impervious surface coverage produces savings in roadway maintenance. As cars and trucks travel longer distances, increased demands are placed on pavement, drainage and other maintenance needs. These increased demands occur over increasingly longer distances. Federal Highway Administration data indicate that over 70% of the nation's roads are in poor, mediocre or fair condition. [[110]](#footnote-111)n109 The diversion of road monies to capital costs diverts monies available for maintenance. These include costs not only to expand and widen roads, but also to add turn lanes to service uncontrolled growth along collector and arterial roads. [[111]](#footnote-112)n110 The reduced road mileage and impervious surface coverage of the Palmdale development avoids this spiraling effect of capital expansion coupled with deferred roadway maintenance.

Third, compact development patterns minimize the growth inducing impacts of new development. These include minimizing new highways to other locations, and the phenomenon of "induced travel." Induced travel refers to increase in vehicular travel produced by an increase in highway expansion. A 1997 study identified a 0.6 - 0.7% increase in vehicle miles traveled on state highways for each 1 percent increase in highway miles. [[112]](#footnote-113)n111 This increase can offset the capacity of the incremental highway expansion. Compact development patterns more effectively utilize increases in roadway capacity by providing realistic access to alternative travel modes.

Finally, the environmental impacts of roadway expansions are well documented. These include: degradation of air quality, impairment of water quality associated with deposition of air pollutants, greenhouse gas emissions, traffic noise, and water quality impacts from activities associated with vehicle use such as ***oil*** spills. [[113]](#footnote-114)n112 Impervious surfaces collect pollution from the atmosphere, pollution and other sources, contribute to stream warming and impair stream biodiversity. [[114]](#footnote-115)n113 Smart growth patterns that minimize road construction not only avoid these impacts, but also free up land for green infrastructure, such as greenways.

The fiscal benefits of compact development and the costs of sprawl are well documented. [[115]](#footnote-116)n114 Compact development patterns reduce response times for public safety and services such as police, fire, and emergency management. In turn, this allows service providers more time to respond effectively to other events. More effective use of infrastructure also translates into cost savings for the service providers.

**b. Emergency Services, Police and Fire Protection**

Sprawling development patterns create inefficiencies in providing emergency services and police and fire protection. This is attributable in part to inefficient roadway patterns and increased distances from existing stations to low density development areas. This has the effect of increasing response times. Due to sprawling development patterns, some states have had to hire more police officers despite a declining crime rate. [[116]](#footnote-117)n115 A 1999 study by Northern Illinois University found that response times for sprawling development were longer than in compact jurisdictions by the following amounts:

| **Service** | **Percent increase in response time over compact development** |
| --- | --- |
| Police | 600% |
| Ambulance | 50% |
| Fire | 33% |
| Source: A. Ann Sorensen & J. Dixon Esseks, Living | |
| on the Edge: The Costs and Risks of Scatter | |
| Development (DeKalb, Illinois: Northern Illinois | |
| University. Center for Agriculture in the | |
| Environment; American Farmland Trust, Jan. 1999). | |

ALI-ABA COURSE OF STUDY MATERIALS

**End of Document**

1. \* Member of California, Florida, Missouri and New York Bars; A.B. University of Chicago; LL.B Yale Law School; Master Int'l Planning, Columbia University School of Public Administration; LL.M and JSD; Columbia University School of Law; Professor of Law, University of Missouri School of Law (Kansas City); Visiting Professor of Law -- Harvard University; London School of Economics; University of Miami; UCLA School Of Law; Editor, The Urban Lawyer, the national journal on state and local governmental law, American Bar Association; Member AICP; Past Chair, Planning and Law Division, American Planning Association; National Advisory Board -- Rocky Mountain Land Use Institute; Member of the Board, Municipal Legal Studies Center; American and International Law Center; American Bar Association, Section of State and Local Government; International Municipal Law Association, Federalism Committee; Author "From Sprawl to Sustainable Growth: Successful Legal, Planning and Environmental Systems (American Bar Association December 2009)"; Cases and Materials on Land Use 5th Edition West Publishing Company (2008); State & Local Government Finance (Callaghan, 2003) (with Gelfand); Model Subdivision Regulations: Planning and Law (1995); Transportation Congestion and Growth Management (Loyola University L.J. 915 (1991); Economic Development and Public Transit: Making The Most of the Washington Growth Management Act, 16 Univ. of Puget Sound L. Rev. 949 (1993); The Interaction of Land Use Planning and Transportation Management, 1 Transport Policy (United Kingdom) (No. 2, 199I. [↑](#footnote-ref-2)
2. n1 California High Speed Rail Authority and United States Department of Transportation, Federal Rail Administration, *Draft Program Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Proposed California High-Speed Train System* (January 2004)(hereinafter "State EIR"). [↑](#footnote-ref-3)
3. n2 The regional EIR/EIS is a series of reports including: P&D Consultants, Inc., Bakersfield to Los Angeles Sections 4(f) and 6(f) Technical Evaluation (January 2004); P&D Consultants, Inc., *Bakersfield to Los Angeles Region Land Use And Planning, Communities And Neighborhoods, Property, & Environmental Justice Technical Evaluation* (January 2004); and P&D Consultants, Inc., *Bakersfield-To-Los Angeles Traffic, Transit, Circulation & Parking Technical Evaluation* (January 2004). [↑](#footnote-ref-4)
4. n3 Kaveh V. Vessali, Land Use Impacts of Rapid Transit, ii BERKELEY PLAN. J. 71, 72-73 (1996)(decreasing commute costs provide incentives for workers to move, both farther out and along lower-cost corridors). [↑](#footnote-ref-5)
5. n4 Vessali, supra, at 88-92. The impacts on land use and property value are greater in suburban locations, where there is a greater improvement in accessibility and travel cost by the creation of the railway. Id. at 92. [↑](#footnote-ref-6)
6. n5 Moore & Thorsnes, The Transportation/Land Use Connection (American Planning Association, Planning Advisory Service Report No. 448/449, 1994), at 17 (citing M.S. Foster, From Streetcar to Superhighway: American City Planners and Urban Transportation (1981), Wachs, "Autos, Transit, and the Sprawl of Los Angeles: the 1920's," 50 J. Am. Planning Assn. No. 3, at 297-310 (1984), and S.B. Warner, Streetcar Suburbs: The Process of Growth in Boston (1870-1900) (1978)). [↑](#footnote-ref-7)
7. n6 Moore & Thorsnes, at 17. [↑](#footnote-ref-8)
8. n7 Moore & Thorsnes, at 22. [↑](#footnote-ref-9)
9. n8 Parsons Brinkerhoff Quade & Douglas, Inc., Transit and Urban Form, Vol. 1, Report 16 (National Research Council, Transportation Research Board, Transit Cooperative Research Program, 1996), at 29. [↑](#footnote-ref-10)
10. n9 State EIS, Summary, at S-12. [↑](#footnote-ref-11)
11. n10 California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, California Farmland Conversion Report 1998 -- 2000 (Dec. 2002), at 10. [↑](#footnote-ref-12)
12. n11 American Farmland Trust, *AFT Around The Country: California Region* at http://www.farmland.org.california/index.htm. [↑](#footnote-ref-13)
13. n12 Umbach, Ph.D, Kenneth W. A Statistical Tour of California's Great Central Valley (California Research Bureau CRB-97-009, August 1997)(online at http://www.library.ca.gov/CRB/97/09/index.html). The San Joaquin counties include San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and ***Kern***. Fresno, ***Kern***, Kings, and Tulare County are included in the "Southern Central Valley" for purposes of the EIR/EIS analysis of economic impacts. See EIR/EIS Document, § 5.2.2. [↑](#footnote-ref-14)
14. n13 American Farmland Trust. *California region: Southern San Joaquin Valley*, at http://www.farmland.org/california/south\_san\_joaquin.htm. [↑](#footnote-ref-15)
15. n14 *California region: Southern San Joaquin Valley, supra*. [↑](#footnote-ref-16)
16. n15 *AFT Around the country: California region, supra*. [↑](#footnote-ref-17)
17. n16 *AFT Around the country: California region, supra* (citing University of California study indicating that the state lost approximately 5130,000 acres of farmland to urban development between 1988-1998). [↑](#footnote-ref-18)
18. n17 American Farmland Trust. *Alternatives for Future Urban Growth in California's Central Valley: The Bottom Line for Agriculture and Taxpayers* (1995). [↑](#footnote-ref-19)
19. n18 *AFT Around the country: California region, supra*. [↑](#footnote-ref-20)
20. n19 Webber, Melvin, "The BART Experience -- What Have We Learned?" The Public Interest Vol. 12, No. 3, pp.79-110 (Fall 1976), at 90 (by heavily subsidizing and charging fares under its actual costs, BART reduced commuting expenses for outlying suburbanites and therefore encourage, rather than discouraged sprawl). [↑](#footnote-ref-21)
21. n20 State EIS, Summary, at S-12. [↑](#footnote-ref-22)
22. n21 Southern California Studies Center and Brookings Institution Center on Urban and Metropolitan Policy, Sprawl Hits the Wall: Confronting the Realities of Metropolitan Los Angeles (2001), at 2. [↑](#footnote-ref-23)
23. n22 ASCE, Report Card for America's Infrastructure, (2003). [↑](#footnote-ref-24)
24. n23 David E. Dowall & Jan Whittington, *Making Room for the Future: Rebuilding California's Infrastructure* (Public Policy Institute of California, 2003), at 153. [↑](#footnote-ref-25)
25. n24 California Office of Governor, *California Five Year Infrastructure Plan 2003* (March 2003). [↑](#footnote-ref-26)
26. n25 California Business Roundtable, *Infrastructure*, at http://www.cbrt.org/infrastructure.html. [↑](#footnote-ref-27)
27. n26 State EIS, Summary, at S-11. [↑](#footnote-ref-28)
28. n27 Office of Policy and Management, Conservation and Development: Policies Plan for Connecticut 2004-2009, at 44. [↑](#footnote-ref-29)
29. n28 Dane County Commuter Rail Feasibility Study, ch.3, at 2 (2004). [↑](#footnote-ref-30)
30. n29 Southern California Studies Center and Brookings Institution Center on Urban and Metropolitan Policy, Sprawl Hits the Wall: Confronting the Realities of Metropolitan Los Angeles (2001), at 10. [↑](#footnote-ref-31)
31. n30 Strategic Growth Plan, at 38. [↑](#footnote-ref-32)
32. n31 Id. at 9. [↑](#footnote-ref-33)
33. n32 Governor's Office of Planning and Research, Strategic Growth: Taking Charge of the Future, Report of the Growth Management Council to Governor Wilson (January 1993). [↑](#footnote-ref-34)
34. n33 Md. Code Ann. Title 5, Subtitle 7B (Priority Funding Areas). [↑](#footnote-ref-35)
35. n34 Cal. Gov't Code § 65041.1. [↑](#footnote-ref-36)
36. n35 Cal. Gov't Code § 65049. [↑](#footnote-ref-37)
37. n36 Southern California Association of Governments, Southern California Compass Growth Vision Report (June 2004)(hereinafter "Compass Report"). [↑](#footnote-ref-38)
38. n37 Southland counties seek unity on growth, Los Angeles Daily News (January 28, 2003). [↑](#footnote-ref-39)
39. n38 Steuteville, "To live and drive in LA," 9 NEW URBAN NEWS, no. 2 (March 2004), at 1. VMT per capita will fall from 21.9 to 20.8 (Compass Report, at 91). This article cites similar regional efforts by the Association of Bay Area Governments (ABAG) and the Atlanta Regional Commission's Livable Centers Initiative to link land use and transportation. [↑](#footnote-ref-40)
40. n39 Steuteville, supra, at 2. [↑](#footnote-ref-41)
41. n40 USC Lusk Center for Real Estate and Urban Land Institute, Reality Check on Growth (2002). [↑](#footnote-ref-42)
42. n41 R. Ewing, R. Pendall, & D Chen, *Measuring Sprawl and its Impact* (Smart Growth America, 2002), at 5. [↑](#footnote-ref-43)
43. n42 U.S. Environmental Protection Agency. EPA Guidance: Improving Air Quality Through Land Use Activities (EPA420-R-01-001, January 2001), at 15. [↑](#footnote-ref-44)
44. n43 U.S. Environmental Protection Agency, at 18 (citing Cambridge Systematics, Inc. and Parsons, Brinckerhoff, Quade & Douglas. 1996a. Making the Land Use Transportation Air Quality Connection: Analysis of Alternatives. Vol. 5. Prepared for Thousand Friends of Oregon; Johnston, R.A., Rodier, C. J., Choy, M., and Abraham, J.E. 2000. Air Quality Impacts of Regional Land Use Policies. Prepared for U.S. Environmental Protection Agency, Urban and Economic Development Division, Washington, DC.; Cambridge Systematics. 1994. The Effects of Land Use and Travel Demand Strategies on Commuting Behavior. Prepared for the U.S. Department of Transportation, Federal Highway Administration, Washington, DC.; DeCorla-Souza, P. 1992. "The Impacts of Alternative Urban Development Patterns of Highway System Performance." Presented at ITE conference on Transportation Engineering in a New Era.) [↑](#footnote-ref-45)
45. n44 The Planning Center, Land Use, Transportation and Air Quality: A Manual for Planning Practitioners, San Bernardino Air Quality Plan (1993). [↑](#footnote-ref-46)
46. n45 U.S. Environmental Protection Agency, at 52. [↑](#footnote-ref-47)
47. n46 U.S. Environmental Protection Agency, at 41-42. [↑](#footnote-ref-48)
48. n47 U.S. Environmental Protection Agency, at 47-48. [↑](#footnote-ref-49)
49. n48 Southern California Association of Governments, 2001 Regional Transportation Plan/Community link 21, Executive Summary (approved April 12, 2001), at 25; Southern California Association of Governments, 2001 Regional Transportation Plan/Community link 21 (approved April 12, 2001), at 107. [↑](#footnote-ref-50)
50. n49 Sprawl Hits the Wall, at 22-23. [↑](#footnote-ref-51)
51. n50 Southern California Studies Center and Brookings Institution Center on Urban and Metropolitan Policy, Sprawl Hits the Wall: Confronting the Realities of Metropolitan Los Angeles (2001), at 2. [↑](#footnote-ref-52)
52. n51 Sprawl Hits the Wall, at 30. [↑](#footnote-ref-53)
53. n52 Housing Element, Cho. 3, pg. 24. [↑](#footnote-ref-54)
54. n53 Housing Element, Cho. 3, pg. 24. [↑](#footnote-ref-55)
55. n54 California Employment Development Department, Occupational Employment (2001) & Wage (2002) Data, Occupational Employment Statistics (OES) Survey Results, (Revised January 2003), at http://www.calmis.ca.gov/file/occup$/oes$.htm. [↑](#footnote-ref-56)
56. n55 Housing Element, Ch. 3, p. 23. [↑](#footnote-ref-57)
57. n56 Housing Element, Ch. 3, pg. 29. [↑](#footnote-ref-58)
58. n57 Housing Element, Ch. 3, pg. 7 ("An area with an increasing average household size indicates an increasing proportion of large family households and a need for larger dwelling units."). [↑](#footnote-ref-59)
59. n58 Housing Element, Ch. 3, pg. 25. While only 24% of dwelling units in the unincorporated county are multi-family, the countywide estimate is 45%. [↑](#footnote-ref-60)
60. n59 Congress for the New Urbanism, The Coming Demand (2001)(based on research by D. Myers, E. Gearin, T. Banerjee, & A. Garde of the University of Southern California School of Policy, Planning, and Development for Funder's Network for Smart Growth and Livable Communities). [↑](#footnote-ref-61)
61. n60 Census 2000, Summary File 1 for Los Angeles County. [↑](#footnote-ref-62)
62. n61 Sprawl Hits the Wall, at 15. [↑](#footnote-ref-63)
63. n62 Sprawl Hits the Wall, at 15. [↑](#footnote-ref-64)
64. n63 USC Lusk Center for Real Estate and Urban Land Institute, Reality Check on Growth (2002)(assembly of regional leaders "opted for new 'satellite cities' to accommodate a significant share of the population growth -- these were complete new communities with employment centers and downtowns, not just tracts of new housing.") [↑](#footnote-ref-65)
65. n64 R. Ewing, R. Pendall, & D Chen, *Measuring Sprawl and its Impact* (Smart Growth America, 2002). [↑](#footnote-ref-66)
66. n65 U.S. Census Bureau, Table GCT-PH, Population, Housing Units, Area, and Density, at factfinder.census.gov. reports that the Los Angeles-Long Beach PMSA has 805.5 housing units per square mile, or 1.26/acre. [↑](#footnote-ref-67)
67. n66 See Robert H. Freilich, Smart Growth In Western Metro Areas, 43 Nat. Res. J. 687 (Summer 2003) (comparing Albuquerque with Kansas City, Missouri) [↑](#footnote-ref-68)
68. n67 Florida Statutes § 163.3177(11)(b) (encouraging use of "innovative," "flexible" and "creative" planning strategies such as "new towns" and "satellite communities"). [↑](#footnote-ref-69)
69. n68 W. Frey and R. DeVol, America's Demography in the New Century: Aging Baby Boomers and New Immigrants as Major Players (Milken Institute, March 8, 2000), at 19. [↑](#footnote-ref-70)
70. n69 Frey and DeVol, at 22. [↑](#footnote-ref-71)
71. n70 Congress for the New Urbanism, The Coming Demand (2001)(based on research by D. Myers, E. Gearin, T. Banerjee, & A. Garde of the University of Southern California School of Policy, Planning, and Development for Funder's Network for Smart Growth and Livable Communities). [↑](#footnote-ref-72)
72. n71 Frantz, Celebration, U.S.A.: Living In Disney's Brave New Town (1999); Ross, The Celebration Chronicles: Life, Liberty, and the Pursuit of Property Value in Disney's New Town (1999); Eppi & Tu, Valuing the new urbanism (Urban Land Institute, 2000). [↑](#footnote-ref-73)
73. n72 F. Osborn, Green-Belt Cities, at 29 (2nd ed., 1971). [↑](#footnote-ref-74)
74. n73 Osborne, supra, at 32. [↑](#footnote-ref-75)
75. n74 Gause, J.A., Great Planned Communities, at 21 (Urban Land Institute, 2002). [↑](#footnote-ref-76)
76. n75 G. Breckenfeld, Columbia and the New Cities (1971), at 115. [↑](#footnote-ref-77)
77. n76 Breckenfeld, at 116-19. [↑](#footnote-ref-78)
78. n77 F. Osborn & A. Whittick, The New Towns: The Answer to Megalopolis (Rev. 1969), at 151. [↑](#footnote-ref-79)
79. n78 D. Hagman & J. Juergensmeyer, Urban Planning and Land Development Control Law § 16.3 (2nd ed. 1986). [↑](#footnote-ref-80)
80. n79 Osborn & Whittick, supra. [↑](#footnote-ref-81)
81. n80 Hagman & Juergensmeyer, supra, § 16.3. [↑](#footnote-ref-82)
82. n81 Forsyth, Planning Lessons from Three U.S. New Towns of the 1960s and 1970s, 68 APA J. 387 (2002). [↑](#footnote-ref-83)
83. n82 Gause, supra, at 812. [↑](#footnote-ref-84)
84. n83 Hagman & Juergensmeyer, supra, § 16.4. [↑](#footnote-ref-85)
85. n84 Hagman & Juergensmeyer, supra, § 16.4. [↑](#footnote-ref-86)
86. n85 Hagman & Juergensmeyer, supra, § 16.4. [↑](#footnote-ref-87)
87. n86 See Francesca Ortiz, Smart Growth and Innovative Design: An Analysis of the New Community, 34 Envt.L.Rptr.10003 (2004); Calthorp, The Next American Metropolis (Princeton, 1993); New Urbanism Comprehensive Report and Best Practices Guide (New Urban News, 2001); Watson, An Introduction to Urban Design, 43 Planning Commissioners Journal 6 (Summer 2001); and Duany-Plater-Zyberk & Company "Smart Code", Municipal Code Publishers, 2003) (an inclusive new urban code for community thoroughfares, civil places, urban zones, site plans, terms and definitions). [↑](#footnote-ref-88)
88. n87 Florida Statutes § 163.3177(11)(b). [↑](#footnote-ref-89)
89. n88 See New Urbanism and House Values, National Center for Smart Growth Research and Education, University of Maryland (2003). [↑](#footnote-ref-90)
90. n89 Florida Administrative Code § 9J-5.003. [↑](#footnote-ref-91)
91. n90 Florida Administrative Code § 9J-5.006(4)6)16. [↑](#footnote-ref-92)
92. n91 Florida Administrative Code § 9J-5.006(4)(1). [↑](#footnote-ref-93)
93. n92 A DRI is defined as "any development, which, because of its character, magnitude, or location, would have a substantial effect upon the health, safety, or welfare of citizens of more than one county." Florida Statutes § 380.06(1). The Florida Statutes establish a regional review process for developments that meet designated size and acreage thresholds under this statute. [↑](#footnote-ref-94)
94. n93 The FQD program is designed to "encourage development which has been thoughtfully planned to take into consideration protection of Florida's natural amenities, the cost to local government of providing services to a growing community, and the high quality of life Floridians desire. It is further intended that the developer be provided, through a cooperative and coordinated effort, an expeditious and timely review by all agencies with jurisdiction over the project of his or her proposed development." Florida Statutes § 380.061(1). [↑](#footnote-ref-95)
95. n94 White & Jourdan, The New Urbanism and Neotraditional Development: A Legal Analysis, Land Use L. & Zoning Dig., at 3 (Aug. 1997). [↑](#footnote-ref-96)
96. n95 A "Greenfield" project refers to a new subdivision in an undeveloped area, as opposed to an infill project in an existing neighborhood. [↑](#footnote-ref-97)
97. n96 Egan, "A Development Fuels a Debate on Urbanism," New York Times (June 14, 2002), at A20. [↑](#footnote-ref-98)
98. n97 R. FREILICH, FROM SPRAWL TO SMART GROWTH: SUCCESSFUL LEGAL, PLANNING, AND ENVIRONMENTAL SYSTEMS (American Bar Association, 1999), at 137-43. [↑](#footnote-ref-99)
99. n98 See Robert H. Freilich, From Sprawl to Smart Growth: Successful Legal, Planning and Environmental Systems (American Bar Association, 1999) at to . [↑](#footnote-ref-100)
100. n99 North City West was an entirely "new town" designed to accommodate 40,000 people in a high density mixed use new urbanist community and to promote transit along the I-5 corridor of Tier II. The high densities of the new town were opposed by the City of DelMar as being inconsistent with the "regional general welfare" of the sprawling suburban low density. For an excellent history of the plan, the "new towns" and a complete rejection of Del Mar's claims. See City of Del Mar v. City of San Diego, 183 Cal.Rptr. 898 (4th Dist.App. 1983). [↑](#footnote-ref-101)
101. n100 The innovative concept that made infill work was the use of "facility benefit assessments" in Tier II areas to cover the full cost of infrastructure the need for which is created by new development. Tier I existing urbanized areas were exempt because they already had roads, schools and other facilities. The FBA concept was upheld in J.W. Jones Companies v. City of San Diego, 203 Cal. Rptr. 580 (4th Dist. App. 1984). [↑](#footnote-ref-102)
102. n101 See Callies, Freilich & Roberts, Cases and Materials On Land Use (West, 4th Ed. 2004) at 718-719; David L. Winstead, Smart Growth, Smart Transportation: A New Program To Manage Growth In Maryland, 30 Urban Lawyer 537 (1998) [↑](#footnote-ref-103)
103. n102 Stating analysis showing satisfaction of the general development conformity procedures. THE SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS, GUIDANCE FOR IMPLEMENTATION OF CONFORMITY PROCEDURES (1990) at G.2. [↑](#footnote-ref-104)
104. n103 Sprawl Hits the Wall, at 17. [↑](#footnote-ref-105)
105. n104 SCAG, The State of the Region 2002 (Dec. 2002), at 43-44. [↑](#footnote-ref-106)
106. n105 Measuring Sprawl, at 18. [↑](#footnote-ref-107)
107. n106 United States Environmental Protection Agency, Our Built and Natural Environments: A Technical Review of the Interactions between Land Use, Transportation, and Environmental Quality (EPA 231-R-01-002, January 2001), at 21 (citing U.S. Department of Transportation, Federal Highway Administration, "1990 Nationwide Personal Transportation Survey".) [↑](#footnote-ref-108)
108. n107 For a detailed discussion of design amenities, see Moudon & Hess, et al., *Effects Of Site Design On Pedestrian Travel In Mixed-Use, Medium-Density Environments* (May 1997, Report No. WA-RD 432.1); *Pedestrian Facilities Guidebook: Incorporating Pedestrians Into Washington's Transportation System* (September 1997). The seminal works on pedestrian site design are Untermann, Accommodating the Pedestrian: Adapting *Towns and Neighborhoods for Walking and Bicycling* (1984) and D. Appleyard, Livable Streets (1981); see also S. Breines & W. Dean, *The Pedestrian Revolution: Streets without Cars* (1974); A. Moudon, *Public Streets for Public Use* (1987); B. Rudofsky, *Streets for People: A Primer for Americans* (1969). [↑](#footnote-ref-109)
109. n108 U.S. Department Of Transportation, Federal Railroad Administration, *Railroad Corridor Transportation Plans A Guidance Manual* (Rev. December 16, 2002). [↑](#footnote-ref-110)
110. n109 Surface Transportation Policy Project, Decoding Transportation Policy & Practice # 9, "The State of Our Nation's Roads: Half of All Major Roads Are in Less Than Good Condition" (January 30, 2003), citing Federal Highway Administration. Highway Statistics Series 1997 and 2001. Table HM-64. [↑](#footnote-ref-111)
111. n110 Maine State Planning Office, at 9. [↑](#footnote-ref-112)
112. n111 U.S. EPA, supra, at 22; Mark Hansen and Yuanlin Huang, "Road Supply and Traffic in California Urban Areas," Transportation Research-A, 31:3 (1997), pp. 205-218; Transportation Research Board, Expanding Metropolitan Highways: Implications for Air Quality and Energy Use, TRB Special Report 245, Washington, DC: National Academy Press, 1995,. [↑](#footnote-ref-113)
113. n112 U.S. EPA, supra, at 25 (citing U.S. Environmental Protection Agency, Office of Policy. Indicators of the Environmental Impacts of Transportation: Highway, Rail, Aviation, and Maritime Transport. October, 1999, EPA 230-R-99-001.) [↑](#footnote-ref-114)
114. n113 Schueler, "The Importance of Imperviousness.", in Watershed Protection Techniques Vol. 1, No. 3 (Center for Watershed Protection, Fall 1994). [↑](#footnote-ref-115)
115. n114 Burchell, et al. *The Costs of Sprawl--Revisited*. Transportation Research Board, National Research Council, TCRP Report 39, 1998 (summarizing studies); Real Estate Research Corporation (RERC). 1974. The Costs of Sprawl: Environmental and Economic Costs of Alternative Residential Development Patterns at the Urban Fringe: (Volume I: Detailed Cost Analysis; Volume II: Literature Review and Bibliography). Washington, DC: U.S. Government Printing Office. [↑](#footnote-ref-116)
116. n115 Maine State Planning Office, at 9. [↑](#footnote-ref-117)