

## MEMORANDUM

To: City of Pleasanton  
From: Jason Moody and Michael Nimon  
Subject: EPSP Economic Feasibility Analysis; EPS #121090  
Date: August 7, 2014

*The Economics of Land Use*



This memorandum evaluates the economic feasibility of the East Pleasanton Specific Plan (EPSP) under several development scenarios. It builds on the previous iterations of the analysis conducted by Economic & Planning Systems (EPS) and is designed to inform the planning process and help ensure that the ultimate land use program can be economically feasible as a private real estate investment. The analysis is based on the August 7, 2014 East Pleasanton Specific Plan Land Use Scenarios designed by Gates and Associates.

Based on direction from City staff, four development scenarios are evaluated below. All units are assumed as single-family detached residential subject to an average affordable housing fee of \$20,000 per unit. This fee level exceeds the current affordable housing fee of \$10,713 for units over 1,500 square feet by 87 percent.<sup>1</sup>

- **Scenario 1: 500 Single-Family Units:** tests the feasibility of 500 units under two scenarios - the eliminated or reduced El Charro Road costs and other cost savings (e.g. less traffic signals). Specifically, this scenario is tested with a) no El Charro Road (Scenario 1a); and b) El Charro Road north of Busch Road only (Scenario 1b). It is assumed to consist of low density single family units subject to the school fee<sup>2</sup>. These scenarios also include significant public park

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<sup>1</sup> The City plans to conduct a comprehensive development impact fee update in 2015. A nexus study in 2013 on affordable housing fees identified a maximum fee ranging between \$23,400 and \$34,400 per unit but no new fee has been adopted by the City. A potential fee increase in other development impact fees is not included in this analysis, assuming that upon approval the Project would be exempted from potential fee increases.

<sup>2</sup> Average density is assumed at 4 dwelling units per acre.

*Economic & Planning Systems, Inc.  
One Kaiser Plaza, Suite 1410  
Oakland, CA 94612  
510 841 9190 tel  
510 740 2080 fax*

*Oakland  
Sacramento  
Denver  
Los Angeles*

**www.epsys.com**

acreage, as well as limited commercial floor area. Because of the relatively high park and open space acreage envisioned, there is likely to be an additional public sector cost (e.g. the City of Pleasanton) for land acquisition, estimated at approximately \$30 million based on the industrial acreage value east of El Charro Road. This is based on the typical raw land value of \$300,000 per acre as further described below.

- **Scenario 2: All Park/Open Space:** reflects utilization of the EPSP area as an open space/park. Specifically, this scenario would involve 404 acres of land acquisition but minimal on-site infrastructure and associated costs (no El Charro Road or Boulder Street, reduced Busch Road improvements and gateway costs, no traffic signals, reduced Arroyo bridges and gateway costs, no water and sewer improvements, lower recycled water costs, Transit Station relocation, or school)<sup>3</sup>. This scenario is not evaluated to the same extent as the other four scenarios tested because it is not expected to generate revenues that would offset costs.
- **Scenario 3: 1,000 Single-Family Units:** tests the feasibility of 1,000 units assuming the full El Charro Road and other infrastructure costs. EPS tested conservative and optimistic cost alternatives with the difference attributed to the potential for a new elementary school to be financed entirely by the EPSP development. The conservative alternative assumes that the developers will be responsible for \$33.5 million for a new school, whereas an optimistic alternative includes school cost associated with the school fee payments only (rather than school construction). For the purpose of estimating the improved land value, this scenario is assumed to comprise a mix of densities ranging between 4 and 8 dwelling units per acre<sup>4</sup>.
- **Scenario 4: 1,300 Single-Family Units:** tests the feasibility of 1,300 units assuming the full El Charro Road and other infrastructure costs. Similar to the 1,000 unit scenario, conservative and optimistic cost alternatives attributed to the potential new school are tested. The land value estimates in this scenario are based on unit types ranging between 4 and 11 dwelling units per acre<sup>5</sup>.

To conduct this analysis, EPS developed an annual "time-series" economic analysis that considers infrastructure cost and phasing (based on input from Kier & Wright and subsequently from the City Public Works and Engineering Department), development absorption (subject to the City's Growth Management Ordinance), achievable finished product prices, and corresponding land values, among other factors.

Infrastructure costs are based on several development phases with a detailed conceptual program developed by Kier & Wright and further discussed below. Infrastructure costs are assumed to be incurred over a seven-year period in the 1,300-unit development scenario, a five-

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<sup>3</sup> This scenario also reflects higher community amenity costs reflective of the potential level of improvement to convert industrial land into park/open space use. The cost is assumed at \$10 million.

<sup>4</sup> EPS assumes that about half of the units is 4 and another half is 8 dwelling units per acre. The mix of densities will vary.

<sup>5</sup> EPS assumes that roughly 15% of the units are 4, 60% of the units are 8, and 25% are 11 dwelling units per acre. The mix of densities will vary.

year period in the 1,000-unit development scenario, and a three to six-year period in the 500-unit development scenarios. The three year cost timing is reflective of the shorter absorption period and associated need for the expedited infrastructure improvements for Scenarios 1a and 1b. Under the school development sensitivities, the timing of the school is assumed during the last full year of absorption and varies by scenario.

Given the limitation of new development under the City's Growth Management Ordinance, EPS assumes annual absorption of 100 market-rate units as a cap for Scenarios 3 and 4. This has a substantial limitation on the absorption that could likely otherwise be achieved in the EPSP. Scenarios 1a and 1b are tested based on 50 to 75 market-rate unit annual absorption due to the low density and associated less diversified product types (with higher absorption rates tested as a sensitivity)<sup>6</sup>.

## Economic Sensitivity Analysis

The economic sensitivity analysis developed by EPS was used to account for the significant level of uncertainty associated with the key assumptions that have a substantial impact on the economic performance of various scenarios. Specifically, in addition to the land use program (number and type of units) which vary by scenario, the key feasibility factors assessed separately herein include (1) the potential for on-site affordable housing, (2) credit for future absorption under the City's Growth Management Ordinance, and (3) the use of a Mello-Roos Community Facilities District (CFD) bond to finance project-wide infrastructure. These factors are embodied in the following sensitivity runs:

- **Threshold:** Reflects a development outcome with the annual absorption of 50 to 75 units for Scenarios 1a and 1b and 100 market-rate units for Scenarios 3 and 4. While there remains a high level of uncertainty associated with this infrastructure costs phasing, it is recognized the developers will need to be able to optimize the cost of some infrastructure components to correspond with project absorption. The actual infrastructure investment timing will need to be further evaluated based on more detailed discussions with civil engineers and property owners/developers.
- **On-site Affordable Housing:** Assumes 50 affordable units are provided through a low density single family product type. The units are assumed to be a rental product at 80 percent of Area Median Income (AMI), or a sales price of \$250,000 per affordable unit.
- **Accelerated Absorption:** Reflects faster upfront absorption based on the more optimistic market and regulatory assumptions supported by the generally front-loaded infrastructure investment. Specifically, this investment is tested at various annual home sale rates reflective of the density range and associated ability to capture various segments of the single-family market. Scenarios with a wider product mix are assumed to absorb faster with annual absorption assumptions for each scenario shown in **Table 1**. It is understood that this absorption average is a proxy for a more sporadic absorption that will vary due to a range of external factors (e.g. business cycles) and will require upfront credits against future allocation under the Growth Management Ordinance.

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<sup>6</sup> Scenarios 1a and 1b reflect an initial absorption of 75 units over the first two years of development, followed by an annual absorption of 50 units.

**Table 1: Accelerated Absorption Assumptions by Scenario**

Scenario	Units	(years 1-2)	Absorption
1a	500	125	75
1b	500	125	75
2	1,000	175	125
3	1,300	250	200

- Accelerated Absorption with no CFD:** Given uncertainty about the use of the CFD as a funding source for the Project, this sensitivity tests the expedited absorption outcome with no CFD bond proceeds available to the Project. The availability and amount of CFD funding will depend on future policy and market conditions which cannot be predicted with certainty at this time.

## Key Findings

The economic performance of each scenario, given the sensitivities described above, is summarized in **Table 2** and described below.

- Threshold:** As shown, all tested scenarios are unlikely to be economically feasible as a private real estate investment assuming the EPSP area is subject to the City's Growth Management Ordinance. While the 500-unit scenario is not likely to be limited by this Ordinance, the low unit count reached under this scenario does not allow for developers to adequately amortize the Project's infrastructure and land costs.
- On-site Affordable Housing:** Inclusion of 50 affordable units on site further reduces the Project's feasibility. All tested scenarios are likely to be infeasible under this sensitivity. This is because accommodation of the affordable requirement through the provision of single-family units is more costly than the tested affordable housing fee. This development alternative reduces the return by approximately 3 to 5 percent.
- Accelerated Absorption:** Residential absorption, whether limited by the market or City policy, represents the single most important determinant to project performance among the sensitivities evaluated. If the market performance for Scenario 1a could be improved to achieve sales of 100 units or more, the Project would likely become feasible (assuming no El Charro Road). Similarly, Scenario 3 becomes feasible if the Growth Management Ordinance would allow an allocation of 125 to 175 units per year for this Project because of the developers' expedited ability to recover their infrastructure investment with feasibility level determined by the school cost. Scenario 4 appears to reach the best economic performance given an assumed Growth Management Ordinance allocation of 200 to 250 units per year.
- Accelerated Absorption with no CFD:** Elimination of CFD proceeds has a negative effect on development feasibility. The 1,300-unit scenario and the 1,000-unit scenario with school fees remain feasible with no CFD proceeds, while Scenario 1b remains infeasible.

**Table 2**  
**Feasibility Analysis Performance Summary\***

Item	500 Single Family Units (1)		1,000 Single Family Units (2)		1,300 Single Family Units (2)	
	Scenario 1a - No El Charro	Scenario 1b - Partial El Charro	Scenario 3 - School Construction	Scenario 3 - School Fees	Scenario 4 - School Construction	Scenario 4 - School Fees
<u>Threshold</u>	Highly Infeasible	Highly Infeasible	Highly Infeasible	Highly Infeasible	Highly Infeasible	Highly Infeasible
<u>Inclusion of 50 BMRs on site</u>	Highly Infeasible	Highly Infeasible	Highly Infeasible	Highly Infeasible	Highly Infeasible	Highly Infeasible
<u>Faster Absorption (see Table 1)</u>	Marginally Feasible	Highly Infeasible	Marginally Feasible	Feasible	Feasible	Feasible
<u>Faster Absorption with no CFD</u>	Infeasible	Highly Infeasible	Infeasible	Marginally Feasible	Feasible	Feasible

\*Note: excludes Scenario 2, which consists of parks and open space, and is further described in the memorandum.

(1) Scenario 1a reflects no El Charro Road construction. Scenario 1b assumes construction of El Charro Road north only.

(2) Conservative cost scenario assumes construction of a new school; optimistic cost scenario reflects no school cost above that covered through school impact fees.

Scenarios 1a and 3 (with school construction) become infeasible if no CFD support would be available for the Project. The City may want to consider the merits of selecting a development scenario that requires a CFD to be financially feasible.

- **All Park Scenario:** As mentioned above, this scenario has not been subjected to the same level of feasibility analysis as other scenarios above because the cost of the site used solely for public parks and open space can be quite high and funding sources are scarce. Assuming a raw land value of \$300,000 per acre, the sale of the site would require approximately \$120 million prior to additional infrastructure costs (estimated at \$23.4 million) and potential site improvements to support a park and open space use (varying significantly depending on active and passive uses desired). Additionally, operating and maintenance costs associated with these types of facilities typically range from \$50 and \$1,000 annually per acre for passive open space to \$10,000 to \$15,000 per year for more intensive park improvements. This would equate to a total operating cost of between \$20,000 and \$6 million for the site, depending on improvements. In order for this scenario to succeed, additional funding sources would need to be identified and ultimately secured.

The existing land value estimate is based on the land take down assumption by the developer, as further described below, as well as on comparable raw land values in the Tri-Valley.<sup>7</sup> It is a high-level assumption used for illustrative purposes (note that current property owners might require more than this given that much of the site is currently designated for some form of urban development by the Pleasanton General Plan). Land acquisition cost varies based on a range of site and market conditions, location, appraised value, alternative land uses, and site conditions.

## Key Assumptions

The key findings described above incorporate the following assumptions:

- The infrastructure cost and timing estimates for all development scenarios are based on the preliminary and conceptual program developed by Kier & Wright with input from the City Public Works and Engineering Department and from the EPSP property owners/developers<sup>8</sup>. The costs, summarized in **Table 3**, are assumed to be incurred over a three to seven-year period, depending on the number of units in each scenario, and are generally front-loaded.<sup>9</sup> While this is designed to reflect the general optimized nature of the infrastructure phasing, the actual ability to phase infrastructure will depend on many factors that have not been evaluated in this analysis. ***Given the importance of infrastructure phasing to overall***

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<sup>7</sup> Land takedown is a raw land value measure reflective of the upfront horizontal developer land acquisition cost prior to making infrastructure improvements and selling improved land pads to vertical builders.

<sup>8</sup> Property owners/developers have communicated that additional infrastructure costs may be required beyond those included in this analysis. These costs may include up to \$11 million for Busch Road fill, environmental clean up, and geotechnical stabilization.

<sup>9</sup> Table 3 costs include the potential school contribution amount; the timing and level of these costs varies by scenario.

**Table 3**  
**Infrastructure Cost Summary by Scenario**

Item	500 Units		All Park	1,000 Units	1,300 Units
	Scenario 1a - No El Charro (1)	Scenario 1b - Partial El Charro	Scenario 2 (1)	Scenario 3	Scenario 4
<b>TRANSPORTATION</b>					
El Charro Rd South/Stanley Bl. Undercrossing	-	-	-	\$19,408,540	\$19,408,540
Boulder St Improvements	\$2,910,200	\$2,910,200	-	\$2,425,137	\$2,425,137
Busch Road Improvements	\$5,605,700	\$6,726,800	\$2,242,300	\$4,484,524	\$4,484,524
Traffic Signals (1)	\$1,725,000	\$1,725,000	-	\$2,625,000	\$2,625,000
Arroyo Mocho Bridges	\$1,000,000	\$3,726,000	\$500,000	\$3,726,000	\$3,726,000
El Charro Rd. Improvements- North of Busch	-	\$8,189,600	-	\$8,189,578	\$8,189,578
El Charro Rd. Improvements- South of Busch	-	-	-	\$2,262,157	\$2,262,157
Gateways	\$200,000	\$300,000	\$100,000	\$300,000	\$300,000
<b>SEWER</b>					
Sewer Improvements	\$3,117,900	\$3,261,500	-	\$2,871,000	\$2,871,000
<b>RECYCLED WATER</b>					
Recycled Water Lines	\$1,271,900	\$1,330,400	\$920,000	\$1,171,200	\$1,171,200
<b>WATER</b>					
Water improvements	\$1,742,200	\$1,822,400	-	\$1,604,200	\$1,604,200
Joint Trench Improvements	<u>\$1,412,000</u>	<u>\$1,477,200</u>	-	<u>\$1,300,000</u>	<u>\$1,300,000</u>
<b>SUBTOTAL</b>	\$18,984,900	\$31,469,100	\$3,762,300	\$50,367,336	\$50,367,336
25% Contingency	\$4,746,225	\$7,867,275	\$940,575	\$12,591,834	\$12,591,834
20% Soft Costs	<u>\$3,796,980</u>	<u>\$6,293,820</u>	<u>\$752,460</u>	<u>\$10,073,467</u>	<u>\$10,073,467</u>
<b>TOTAL</b>	\$27,528,105	\$45,630,195	\$5,455,335	\$73,032,637	\$73,032,637
<b>MISCELLANEOUS</b>					
County's Stanley Blvd Frontage	\$2,430,000	\$2,430,000	\$2,430,000	\$2,430,000	\$2,430,000
Remedial Grading for El Charro	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Costs for Community Amenity	\$6,000,000	\$6,000,000	\$10,000,000	\$6,000,000	\$6,000,000
Off-Site Utility Improvements	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000
Potential Relocation of TS	\$2,500,000	\$2,500,000	-	\$2,500,000	\$2,500,000
School Development Cost (above fees)	-	-	-	<u>\$15,800,000</u>	<u>\$10,500,000</u>
<b>SUBTOTAL</b>	\$16,430,000	\$16,430,000	\$17,930,000	\$32,230,000	\$26,930,000
<b>GRAND TOTAL</b>	<b>\$43,958,105</b>	<b>\$62,060,195</b>	<b>\$23,385,335</b>	<b>\$105,262,637</b>	<b>\$99,962,637</b>

(1) Assume \$500,000 in utility cost across Arroyo bridges for scenario 2 and \$1 million in Scenario 1A.

Sources: City of Pleasanton Public Works and Engineering, Kier & Wright, and EPS.

***project feasibility, it will be important to continue to refine the accuracy from both policy and engineering perspectives.***

It is recognized that further analysis will need to optimize the cost timing assumptions based on relationships between project phasing, development absorption, and infrastructure capacity and costs. The Transfer Station relocation cost is assumed at \$2.5 million and the County's Stanley Boulevard frontage cost is assumed at \$2.4 million for all scenarios. In addition, the cost of between \$6 and \$10 million is assumed for community amenities, such as park facilities, landscaping, trails, and fences.

- Land value estimates are based on the previously established product types. The distribution of residential densities serves as a proxy for the revenue-maximizing product mix that will ultimately be determined by property owners/developers. Tested product type densities are assumed to be on a net (rather than gross) basis.
- The project-wide infrastructure costs include 20 percent for soft costs plus a 25 percent contingency factor. It is assumed that a soft cost of 6 percent of direct infrastructure costs would be incurred upfront, with the remaining 14 percent proportionate to the timing of direct infrastructure costs.
- On the commercial development side, this analysis reflects development of 91,000 square feet of retail in the middle of Phase 2 (in Scenarios 3 and 4) and 65,000 square feet in Scenarios 1a and 1b, but no other nonresidential uses. This is because retail is the only commercial use with positive land value, whereas office and industrial uses are less certain given their estimated negative land values under the current market conditions.
- The feasibility assessments assume no land costs associated with office or industrial uses. While office and or industrial may eventually generate value, this could be offset by the fact that less than the maximum allowable retail program may be developed due to a range of market, location, and site-specific constraints of the Project as a retail location.
- All development scenarios assume that Mello-Roos Community Facilities District (CFD) proceeds are used to fund project-wide infrastructure. Specifically, this special tax is assumed to generate monthly revenue of \$150 per unit; while revenues could be higher, additional charges would likely have an adverse effect on price. This analysis assumes that bonds are available for the Project with a 10 percent coverage and a 6 percent interest rate on 30-year bonds. If Mello-Roos debt is not available in small increments, as assumed herein, project feasibility will be negatively affected due to increased debt carrying costs.
- The analysis assumes that the City's in-lieu park dedication fees are credited to the Project based on its dedication of park land at the 5 acres per 1,000 residents ratio. Pursuant to the City's Park Ordinance, the development is assumed to receive a park fee credit of between \$4.9 million and \$13.6 million, depending on the development scenario, as compensation for dedicating all of the public park land within the EPSP area. The transportation fee is also assumed to be credited to the Project bases on its improvement of El Charro Road. As a result, no transportation fee credits are assumed for the 500-unit scenarios with the credit for Scenarios 3 and 4 estimated at \$5.5 million and \$6.3 million, respectively. The credit timing is based on the absorption schedule.

- A predevelopment cost of \$3 million is assumed. This is a ballpark estimate that reflects the developer's carrying cost on the land and entitlement investment made through the Specific Plan approval. This analysis assumes a land take down payment of \$300,000 per acre, as further described above. The gross land acreage is assumed to be taken down in even increments per year prior to development and excludes office and industrial acreage.
- This analysis assumes that an unleveraged internal rate of return of about 20 percent is reasonable to justify the investment reflective of the risk and complexity associated with the Project. A reasonable unleveraged rate of return range could vary from 16 percent to above 20 percent based on a number of factors described above.
- EPS revised its improved residual land value estimates based on the continued pro forma review and recent market activity. Improved residential market rate land values are estimated to range between \$145,000 and \$337,000 per unit, as shown in **Table 4**. These estimates are consistent with the Tri-Valley land sales. Given the importance of the residual land value calculations to the Project feasibility, additional analysis may be warranted to refine these estimates.

**Table 4 Improved Residential Residual Land Value Estimates**

Item	Land Value	
	Per Unit	Per Acre
4 du/acre	\$337,000	\$1,346,000
8 du/acre	\$162,000	\$1,293,000
11 du/acre	\$145,000	\$1,597,000