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URBP 180

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**INITIAL ENVIRONMENTAL IMPACTS REPORT**

INTRODUCTION/PURPOSE

The following analysis is a California Environmental Quality Act (CEQA) style Environmental Impact Report (EIR) that examines the potential environmental effects – both natural and urban – of the proposed Sustainable Mobility System for Silicon Valley (SMSSV) project for a demo site in Sunnyvale, California. The four main purposes of CEQA are:

1. To inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;

2. To identify the ways that environmental damage can be avoided and significantly reduced;

3. To prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and

4. To disclose the public reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

(CEQA Title 14. California Code of Regulations. Chapter 3; section 15002, 2005)

The following document accomplishes all four of these requirements by analyzing six specific environmental resource areas while meticulously adhering to the step-by-step CEQA analysis process.

As aforementioned, this report focuses on six resource sections: Land Use, Aesthetics, Population and Housing, Transportation and Circulation, Noise, and Air Quality. For each of these sections, a project description is specified and then each is divided into subsections that analyze the impacts of the proposed project description. These subsections are then broken down into the traditional CEQA format where an environmental setting – or background – is given, thresholds are stated based on those established in CEQA Appendix G, the significance levels are determined for each of these thresholds, the impact explanation is given for why this significance level was chosen, mitigation measures are discussed if applicable, and monitoring plans are proposed.

IDENTIFYING INFORMATION/LOCATION AND CONTACTS

1. Project title: Sustainable Mobility System for Silicon Valley (SMSSV)
2. Lead agency name and address: San Jose State University: 1 Washington Square, San Jose, CA 95112
3. Contact person and phone number: Emma Reed; (650) 520-8186, esreed518@gmail.com
4. Project location: The section of Mathilda Avenue in Sunnyvale bounded by the Caltrain tracks and El Camino (Route 82)
5. Project sponsor’s name and address: San Jose State University: 1 Washington Square, San Jose, CA 95112
6. General plan designation: Current land use for the section includes: Central Business, Civic Center, Office, Low-Medium Density Residential, and High Density Residential
7. Zoning: No immediate rezoning will be required for the implementation of this project; some areas might require rezoning in the future if TODs are to be developed.
8. Description of project: The Sustainable Mobility System for Silicon Valley (SMSSV) is an interdisciplinary project for San Jose State University to design a Personal Rapid Transport (PRT) system using renewable resources.
9. Surrounding land uses and setting: Briefly describe the project’s surroundings: The land uses surrounding the proposed project site are mixed use ranging from high density residential to low-medium density residential to office to central business district to civic center designations.
10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.): City of Sunnyvale; Santa Clara County; State of California/CEQA; Pacific Gas & Electric; Sunnyvale Economic Development Committee; Environmental Services Department; California Department of Fish and Wildlife; BAAQMD; CalTrans; VTA; CARB.

PROJECT DESCRIPTION

Present mobility options, especially in dense urban areas are becoming more and more unsustainable. Major issues that plague present options include traffic congestion, loss of productivity from time spent commuting and/or parking, continued use of and dependence on hydrocarbon fuels, increased possibility of accidents that injure people and damage property, decrease in quality of life for residents (wasted time, increased stress, noise, smog, safety), high cost of ownership for private vehicles (especially new ‘green’ vehicles such as electric vehicles and hybrid electric vehicles), excessive consumption of raw materials in the production of automobiles, environmental degradation from greenhouse gas emissions and by-products from the wear-out of parts, and inadequate mass transportation options (slow, limited service area, and relatively high cost).

Fundamentally different approaches to personal mobility are needed to address the problems listed above and achieve sustainability. An automated transportation network (ATN) system utilizing ‘pod cars’ is one such approach to reducing the detrimental effects of these issues our society faces on a daily basis (see for example: Irving, et al (1978), Rydell (2000), and Shawber (2012).

We propose to develop and bring to market the elements of a solar powered ATN system that will be scalable, replicable, and that can be located within the existing rights of way in current urban locales. Our trial project site is located in the city of Sunnyvale, California along an area known as the ‘Mathilda Corridor’ along Mathilda Avenue. The hope is that the project – assuming success – will be replicated in cities throughout California, the nation, and even nationally as a means of reducing congestion and greenhouse gas emissions.

The six main resource sections that this environmental impact report initial study aims to focus on include land use, aesthetics, transportation and circulation, housing, noise, and air quality as they relate to potentially significant effects on the surrounding region.

(http://www.engr.sjsu.edu/smssv/project.html)

The proposed project could potentially affect any and all of the environmental factors listed. The following pages present a more detailed checklist and discussion of each of the six environmental factors checked below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Land Use |  | Air Quality |  | Biological Resources |
|  | Aesthetics |  | Greenhouse Gas Emissions |  | Geology and Soils |
|  | Population and Housing |  | Wind and Shadow |  | Hydrology and Water Quality |
|  | Cultural and Paleo. Resources |  | Recreation |  | Hazards/Hazardous Materials |
|  | Transportation and Circulation |  | Utilities and Service Systems |  | Mineral/Energy Resources |
|  | Noise |  | Public Services |  | Agricultural and Forest Resources |

LAND USE

PROPOSED PROJECT

| ***Topics:*** | ***Potentially Significant Impact*** | ***Less Than Significant with Mitigation Incorporated*** | ***Less Than Significant Impact*** | ***No Impact*** |
| --- | --- | --- | --- | --- |
| **1. LAND USE AND LAND USE PLANNING— Would the project:** |  |  |  |  |
| a) Physically divide an established community? |  |  |  |  |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? |  |  |  |  |
| c) Have a substantial impact upon the existing character of the vicinity? |  |  |  |  |

Environmental Setting:

Sunnyvale is a relatively young city, incorporated in 1912. Its mild climate and fertile soil, nonetheless, have provided a comfortable and productive location for human settlement for thousands of years. Early settlers actually were drawn to the region by the mild climate, plentiful sunshine, and the rich soil. Sunnyvale development began in earnest in 1864, at the same time the Central Railroad built a line connecting San Francisco to San Jose. After the 1906 earthquake, industry arrived in Sunnyvale – the first of which included the Hendy Ironworks and the Libby Cannery, which were placed in the center of town near the railroad. The city’s downtown continued to grow as a mix of uses in close proximity and walking distance of one another. Additionally, transportation routes played an important role in Sunnyvale’s development. The first transportation facilities included the railroad and El Camino Real. By the 1940s, Sunnyvale had shifted from an agricultural community to an industrial center, with an economy emphasizing the exploding defense and aerospace industries. Approximately 65 percent of the city’s current housing and 50 percent of its non-residential developments were constructed between 1950 and 1969. These new buildings covered large portions of the region and led to significant alterations to the character and form of the city. Unlike the mix of uses within the city center, new districts were built in large tracts of land designed exclusively for residential, commercial, or industrial uses. Over the last three decades, Sunnyvale’s economy has undergone yet another shift, as high technology companies have launched the Silicon Valley era (Sunnyvale General Plan, 2011, pp. 2-3 – 2-4).

Thresholds of Significance:

LAND-1: If the project would physically divide an established community, then its impact is considered potentially significant.

LAND-2: If the project would conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect, then its impact is considered potentially significant.

LAND-3: If the project would have a substantial impact upon the existing character of the vicinity, then its impact is considered potentially significant.

Significance Level:

LAND-1: No impact.

LAND-2: Less than significant with mitigation incorporated.

LAND-3: Potentially significant impact.

Impact Explanation:

LAND-1: The project plans will not physically divide the established Mathilda Avenue community, as ATN developers will be building the transportation well above the ground level. This will enable people to walk below it while only noticing the occasional foundational pillar.

LAND-2: As long as general zoning requirements and regulations are followed to ensure that Mathilda Avenue is zoned to allow public transit networks, then the potentially significant impacts of this aspect will be mitigated. This area currently is zoned as “central business (Sunnyvale General Plan, 2011, pp. 3-9).

LAND-3: The project will have a potentially significant impact on the preexisting character of the vicinity since it will be introducing a new type of transit system not commonly used in the Bay Area, California, or the United States overall. Although the effects of implementing the ATN along the Mathilda Corridor will be significant, the change in character should be a dramatic improvement for congestion and air pollution in the vicinity.

Mitigations:

LAND-2: A major policy goal set out in the Sunnyvale General plan is that of contributing to “efforts to minimize region-wide average trip length and single-occupant vehicle trips” (pp. 3-5). Because this project’s overall aim is to improve the character and efficiency of the vicinity, obtaining the appropriate zoning for the project should not be an issues as long as appropriate protocols are followed.

Monitoring Plans:

LAND-2: The project developer must submit a General Plan amendment report with re-zoning designations or zoning amendments to the City of Sunnyvale’s Department of Development – Planning division, in order to demonstrate the official alteration of the land parcels within the Mathilda Corridor vicinity as well as to demonstrate the project’s approval by the city council.

AESTHETICS

PROPOSED PROJECT

| ***Topics:*** | ***Potentially Significant Impact*** | ***Less Than Significant with Mitigation Incorporated*** | ***Less Than Significant Impact*** | ***No Impact*** |
| --- | --- | --- | --- | --- |
| **2. AESTHETICS—Would the project:** |  |  |  |  |
| a) Have a substantial adverse effect on a scenic vista? |  |  |  |  |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment which contribute to a scenic public setting? |  |  |  |  |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? |  |  |  |  |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or which would substantially impact other people or properties? |  |  |  |  |

Environmental Setting:

Sunnyvale is a relatively young city, incorporated in 1912. Its mild climate and fertile soil, nonetheless, have provided a comfortable and productive location for human settlement for thousands of years. Early settlers actually were drawn to the region by the mild climate, plentiful sunshine, and the rich soil. Sunnyvale development began in earnest in 1864, at the same time the Central Railroad built a line connecting San Francisco to San Jose. After the 1906 earthquake, industry arrived in Sunnyvale – the first of which included the Hendy Ironworks and the Libby Cannery, which were placed in the center of town near the railroad. The city’s downtown continued to grow as a mix of uses in close proximity and walking distance of one another. Additionally, transportation routes played an important role in Sunnyvale’s development. The first transportation facilities included the railroad and El Camino Real. By the 1940s, Sunnyvale had shifted from an agricultural community to an industrial center, with an economy emphasizing the exploding defense and aerospace industries. Approximately 65 percent of the city’s current housing and 50 percent of its non-residential developments were constructed between 1950 and 1969. These new buildings covered large portions of the region and led to significant alterations to the character and form of the city. Unlike the mix of uses within the city center, new districts were built in large tracts of land designed exclusively for residential, commercial, or industrial uses. Over the last three decades, Sunnyvale’s economy has undergone yet another shift, as high technology companies have launched the Silicon Valley era (Sunnyvale General Plan, 2011, pp. 2-3 – 2-4).

Thresholds of Significance:

AES-1: If the project would have a substantial adverse effect on a scenic vista, then its impact is considered potentially significant.

AES-2: If the project would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment which contribute to a scenic public setting, then its impact is considered potentially significant.

AES-3: If the project would substantially degrade the existing visual character or quality of the site and its surroundings, then its impact is considered potentially significant.

AES-4: If the project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or which would substantially impact other people or properties, then its impact is considered potentially significant.

Significance Level:

AES-1: Less than significant impact.  
AES-2: Potentially significant impact.

AES-3: Less than significant impact.

AES-4: Potentially significant with mitigation incorporated.

Impact Explanation:

AES-1: The project’s impact on the scenic vista will be minimal since it will be running parallel to Mathilda Avenue. The only possible impact of the project on the view from the Mathilda Corridor is in locations where the ATN crosses the road. Since it is located high up, there is the potential that it could block some of the view looking at the hills east of the area.   
AES-2: In order to install the ATN in along Mathilda Avenue, many trees likely will have to be removed to place foundations and to ensure that cars can run smoothly along the rails without running into tree branches. Thus, the damage to scenic resources is potentially significant for this project.

AES-3: Other than tree removal, there are not any other expected significant impacts of the ATN project on the visual character of the site and its surroundings – especially since the tracks and rails will be located far above eye level.

AES-4: It is highly possible that lighting for this project will add to light pollution in this area – especially during nighttime hours. Assuming that the ATN runs late into night – or even 24 hours per day – a significant amount of lighting will be required for safety and security purposes. It will also light the street considerably since all this lighting will be located up high.

Mitigations:

AES-4: The Sunnyvale City Council should request that motion sensors are used and connected to the lights in every area to avoid the use of unnecessary lighting throughout the path of the ATN.

Monitoring Plans:

AES-4: Light glare and excessive lighting are significant concerns with this project. These effects can quite easily be avoided from every section of the ATN by implementing motion sensors linked to lighting; however, there may be legal concerns with respect to lighting in public areas.

TRANSPORTATION AND CIRCULATION

PROPOSED PROJECT

| ***Topics:*** | ***Potentially Significant Impact*** | ***Less Than Significant with Mitigation Incorporated*** | ***Less Than Significant Impact*** | ***No Impact*** |
| --- | --- | --- | --- | --- |
| **5. TRANSPORTATION AND CIRCULATION— Would the project:** |  |  |  |  |
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? |  |  |  |  |
| b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? |  |  |  |  |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks? |  |  |  |  |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses? |  |  |  |  |
| e) Result in inadequate emergency access? |  |  |  |  |
| f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? |  |  |  |  |

Environmental Setting:

Sunnyvale is a relatively young city, incorporated in 1912. Its mild climate and fertile soil, nonetheless, have provided a comfortable and productive location for human settlement for thousands of years. Early settlers actually were drawn to the region by the mild climate, plentiful sunshine, and the rich soil. Sunnyvale development began in earnest in 1864, at the same time the Central Railroad built a line connecting San Francisco to San Jose. After the 1906 earthquake, industry arrived in Sunnyvale – the first of which included the Hendy Ironworks and the Libby Cannery, which were placed in the center of town near the railroad. The city’s downtown continued to grow as a mix of uses in close proximity and walking distance of one another. Additionally, transportation routes played an important role in Sunnyvale’s development. The first transportation facilities included the railroad and El Camino Real. By the 1940s, Sunnyvale had shifted from an agricultural community to an industrial center, with an economy emphasizing the exploding defense and aerospace industries. Approximately 65 percent of the city’s current housing and 50 percent of its non-residential developments were constructed between 1950 and 1969. These new buildings covered large portions of the region and led to significant alterations to the character and form of the city. Unlike the mix of uses within the city center, new districts were built in large tracts of land designed exclusively for residential, commercial, or industrial uses. Over the last three decades, Sunnyvale’s economy has undergone yet another shift, as high technology companies have launched the Silicon Valley era (Sunnyvale General Plan, 2011, pp. 2-3 – 2-4).

Thresholds of Significance:

TRANS-1: If the project would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit, then its impact is considered potentially significant.

TRANS-2: If the project would conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways, then its impact is considered potentially significant.

TRANS-3: If the project would result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks, then its impact is considered potentially significant.

TRANS-4: If the project would substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses, then its impact is considered potentially significant.

TRANS-5: If the project would result in inadequate emergency access, then its impact is considered potentially significant.

TRANS-6: If the project would conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities, then its impact is considered potentially significant.

Significance Level:

TRANS-1: Less than significant impact.

TRANS-2: No impact.

TRANS-3: No impact.

TRANS-4: Less than significant with mitigation incorporated

TRANS-5: No impact.

TRANS-6: Less than significant impact.

Impact Explanation:

TRANS-1: There does not appear to exist a specific policy or regulation in the city of Sunnyvale’s General Plan text with which this transit project will conflict. To the contrary, it seems to be in line with several of the city’s goals laid out within the General Plan documentation.

TRANS-2: This project will not conflict with a preexisting congestion management program. In fact, it will do quite the opposite. The aim of this transit project is to significantly reduce traffic congestion within the Mathilda corridor, so the chance of any negative congestion-related impacts is small.

TRANS-3: The project will have no impact on air traffic patterns in the Sunnyvale region.

TRANS-4: As long as proper safety precautions, which have been highlighted in the project plan, are followed, then there should be no significant impacts to safety of citizens in the area.

TRANS-5: The pod cars will travel significantly elevated above ground level; thus, they should not have any impact on private cars or emergency vehicles/emergency access in the region.

TRANS-6: The project should not conflict with any policies, plans, or programs regarding public transit laid out by the city of Sunnyvale. Policy LT-5.2 actually states that plans should “integrate the use of land and the transportation system” Sunnyvale General Plan, 2011, pp. 3-19). This project is well in line with this policy.

Mitigations:

TRANS-4: Safety precautions are a huge priority of the transit project design for this personal rapid transit ATN. There will also be precautions laid out by several different regulatory agencies that must be adhered to before this form of transportation can be made an option to the public.

Monitoring Plans:

TRANS-4: The Santa Clara Valley Transportation Authority (VTA) will be in charge of checking to make sure the appropriate safety precautions are implemented for this project and then monitoring to ensure proper maintenance is conducted periodically. This will prevent accidents and unnecessary equipment failures.

NOISE

PROPOSED PROJECT

| ***Topics:*** | ***Potentially Significant Impact*** | ***Less Than Significant with Mitigation Incorporated*** | ***Less Than Significant Impact*** | ***No Impact*** |
| --- | --- | --- | --- | --- |
| **6. NOISE—Would the project:** |  |  |  |  |
| a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? |  |  |  |  |
| b) Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? |  |  |  |  |
| c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? |  |  |  |  |
| d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? |  |  |  |  |
| e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels? |  |  |  |  |
| f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? |  |  |  |  |
| g) Be substantially affected by existing noise levels? |  |  |  |  |

Environmental Setting:

Sunnyvale is a relatively young city, incorporated in 1912. Its mild climate and fertile soil, nonetheless, have provided a comfortable and productive location for human settlement for thousands of years. Early settlers actually were drawn to the region by the mild climate, plentiful sunshine, and the rich soil. Sunnyvale development began in earnest in 1864, at the same time the Central Railroad built a line connecting San Francisco to San Jose. After the 1906 earthquake, industry arrived in Sunnyvale – the first of which included the Hendy Ironworks and the Libby Cannery, which were placed in the center of town near the railroad. The city’s downtown continued to grow as a mix of uses in close proximity and walking distance of one another. Additionally, transportation routes played an important role in Sunnyvale’s development. The first transportation facilities included the railroad and El Camino Real. By the 1940s, Sunnyvale had shifted from an agricultural community to an industrial center, with an economy emphasizing the exploding defense and aerospace industries. Approximately 65 percent of the city’s current housing and 50 percent of its non-residential developments were constructed between 1950 and 1969. These new buildings covered large portions of the region and led to significant alterations to the character and form of the city. Unlike the mix of uses within the city center, new districts were built in large tracts of land designed exclusively for residential, commercial, or industrial uses. Over the last three decades, Sunnyvale’s economy has undergone yet another shift, as high technology companies have launched the Silicon Valley era (Sunnyvale General Plan, 2011, pp. 2-3 – 2-4).

Thresholds of Significance:

NOISE-1: If the project would result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, then its impact is considered potentially significant.

NOISE-2: If the project would result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels, then its impact is considered potentially significant.

NOISE-3: If the project would result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, then its impact is considered potentially significant.

NOISE-4: If the project would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, then its impact is considered potentially significant.

NOISE-5: If the project would, for a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, expose people residing or working in the area to excessive noise levels, its impact is considered potentially significant.

NOISE-6: If the project would, for a project located in the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels, then its impact is considered potentially significant.

NOISE-7: If the project would be substantially affected by existing noise levels, then its impact is considered potentially significant.

Significance Level:

NOISE-1: Less than significant impact.

NOISE-2: Less than significant impact.

NOISE-3: Less than significant impact.

NOISE-4: Less than significant with mitigation incorporated.

NOISE-5: No impact.

NOISE-6: No impact.

NOISE-7: No impact.

Impact Explanation:

NOISE-1: The city of Sunnyvale tolerates a limit of 70 dBA for areas affected by train noise. The ATN is expected to be significantly quieter than a train and is located within the same neighborhood as the Caltrain runs; thus, the noise produced by the project should be less than significant to those in the region.   
NOISE-2: Once again, since this project will be located within the same neighborhood as the Caltrain runs, the vibrations and groundborne noise it produces should be minimal compared to the train.

NOISE-3: Although the ATN will undoubtedly add noise to the area, the amount of noise it offsets through reducing private car trips likely will offset this additional noise, making it less than significant.

NOISE-4: It is probable that noise during construction could be more significant than the aforementioned impacts. Dirt will need to be excavated in order to implement foundations for the ATN, and there will inevitably be substantial noise as a result. Similarly, loud noise and vibration also can be expected from concrete delivery and pumping.

NOISE-5: There is no impact to the environment because the project is not located within an airport land use area.

NOISE-6: There is no impact to the environment because the project is not located within the vicinity of a private airstrip.

NOISE-7: It is not likely that the project will be affected in any way by existing noise levels in the vicinity.

Mitigations:

NOISE-4: Barrier walls or add-on noise reducing devices should be designed and implemented to attain a noise level during operation of below the maximum set by the city of Sunnyvale when measured in outdoor areas of bordering residential parcels.

Monitoring Plans:

NOISE-4: The goal is that the city and/or county will check the noise levels emitted by the ATN once the project has been completed to ensure they do not exceed the maximum standard set out by the city of Sunnyvale.

POPULATION AND HOUSING

PROPOSED PROJECT

| ***Topics:*** | ***Potentially Significant Impact*** | ***Less Than Significant with Mitigation Incorporated*** | ***Less Than Significant Impact*** | ***No Impact*** |
| --- | --- | --- | --- | --- |
| **3. POPULATION AND HOUSING— Would the project:** |  |  |  |  |
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? |  |  |  |  |
| b) Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing? |  |  |  |  |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? |  |  |  |  |

Environmental Setting:

Sunnyvale is a relatively young city, incorporated in 1912. Its mild climate and fertile soil, nonetheless, have provided a comfortable and productive location for human settlement for thousands of years. Early settlers actually were drawn to the region by the mild climate, plentiful sunshine, and the rich soil. Sunnyvale development began in earnest in 1864, at the same time the Central Railroad built a line connecting San Francisco to San Jose. After the 1906 earthquake, industry arrived in Sunnyvale – the first of which included the Hendy Ironworks and the Libby Cannery, which were placed in the center of town near the railroad. The city’s downtown continued to grow as a mix of uses in close proximity and walking distance of one another. Additionally, transportation routes played an important role in Sunnyvale’s development. The first transportation facilities included the railroad and El Camino Real. By the 1940s, Sunnyvale had shifted from an agricultural community to an industrial center, with an economy emphasizing the exploding defense and aerospace industries. Approximately 65 percent of the city’s current housing and 50 percent of its non-residential developments were constructed between 1950 and 1969. These new buildings covered large portions of the region and led to significant alterations to the character and form of the city. Unlike the mix of uses within the city center, new districts were built in large tracts of land designed exclusively for residential, commercial, or industrial uses. Over the last three decades, Sunnyvale’s economy has undergone yet another shift, as high technology companies have launched the Silicon Valley era (Sunnyvale General Plan, 2011, pp. 2-3 – 2-4).

Thresholds of Significance:

HOUSE-1: If the project would induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure), then its impact is considered potentially significant.

HOUSE-2: If the project would displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing, then its impact is considered potentially significant.

HOUSE-3: If the project would displace substantial numbers of people, necessitating the construction of replacement housing elsewhere, then its impact is considered potentially significant.

Significance Level:

HOUSE-1: Less than significant with mitigation incorporated.

HOUSE-2: Less than significant impact.

HOUSE-3: No impact.

Impact Explanation:

HOUSE-1: It is likely that if the ATN project is successful, more people will want to move closer to it, thus, significantly increasing population density in the area. As long as zoning and population growth are managed appropriately, however, the impact to the city should not be detrimental. It is also likely that as the ATN becomes more popular, more routes and rail lines will be constructed throughout the region.

HOUSE-2: It is possible that the ATN project will attract more people to the area requiring higher-density housing in the long-term.

HOUSE-3: The ATN will run along the side of Mathilda Avenue and, therefore, should not require the displacement of housing units.

Mitigations:

HOUSE-1: The City of Sunnyvale’s Department of Development – Planning division must ensure that the region does not become significantly impacted by too many people being drawn to the Mathilda Corridor as it transforms into a transit-oriented development (TOD). This can be accomplished by enforcing preexisting and implementing new, effective housing-related zoning ordinances.

Monitoring Plans:

HOUSE-1: The project developer must submit a General Plan amendment report with re-zoning designations or zoning amendments to the City of Sunnyvale’s Department of Development – Planning division in order for higher-density housing to be constructed or for entirely new housing developments to take place. The Planning division will be responsible for monitoring the housing impacts through the amendments to the General Plan that take place.

AIR QUALITY

PROPOSED PROJECT

| ***Topics:*** | ***Potentially Significant Impact*** | ***Less Than Significant with Mitigation Incorporated*** | ***Less Than Significant Impact*** | ***No Impact*** |
| --- | --- | --- | --- | --- |
| **7. AIR QUALITY—Would the project:** |  |  |  |  |
| a) Conflict with or obstruct implementation of the applicable air quality plan? |  |  |  |  |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? |  |  |  |  |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? |  |  |  |  |
| d) Expose sensitive receptors to substantial pollutant concentrations? |  |  |  |  |
| e) Create objectionable odors affecting a substantial number of people? |  |  |  |  |

Environmental Setting:

Sunnyvale is a relatively young city, incorporated in 1912. Its mild climate and fertile soil, nonetheless, have provided a comfortable and productive location for human settlement for thousands of years. Early settlers actually were drawn to the region by the mild climate, plentiful sunshine, and the rich soil. Sunnyvale development began in earnest in 1864, at the same time the Central Railroad built a line connecting San Francisco to San Jose. After the 1906 earthquake, industry arrived in Sunnyvale – the first of which included the Hendy Ironworks and the Libby Cannery, which were placed in the center of town near the railroad. The city’s downtown continued to grow as a mix of uses in close proximity and walking distance of one another. Additionally, transportation routes played an important role in Sunnyvale’s development. The first transportation facilities included the railroad and El Camino Real. By the 1940s, Sunnyvale had shifted from an agricultural community to an industrial center, with an economy emphasizing the exploding defense and aerospace industries. Approximately 65 percent of the city’s current housing and 50 percent of its non-residential developments were constructed between 1950 and 1969. These new buildings covered large portions of the region and led to significant alterations to the character and form of the city. Unlike the mix of uses within the city center, new districts were built in large tracts of land designed exclusively for residential, commercial, or industrial uses. Over the last three decades, Sunnyvale’s economy has undergone yet another shift, as high technology companies have launched the Silicon Valley era (Sunnyvale General Plan, 2011, pp. 2-3 – 2-4).

Thresholds of Significance:

AIR-1: If the project would conflict with or obstruct implementation of the applicable air quality plan, then its impact is considered potentially significant.

AIR-2: If the project would violate any air quality standard or contribute substantially to an existing or projected air quality violation, then its impact is considered potentially significant.

AIR-3: If the project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors), then its impact is considered potentially significant.

AIR-4: If the project would expose sensitive receptors to substantial pollutant concentrations, then its impact is considered potentially significant.

AIR-5: If the project would create objectionable odors affecting a substantial number of people, then its impact is considered potentially significant.

Significance Level:

AIR-1: Less than significant with mitigation incorporated.

AIR-2: No impact.

AIR-3: No impact.

AIR-4: No impact.

AIR-5: Less than significant impact.

Impact Explanation:

AIR-1: It is possible that this project could result in temporarily decreased air quality levels due to dust and other side effects during the construction phase. Once the ATN is completed, however, it will be powered by solar energy and will result in decreased air pollution levels in the area.

AIR-2: The project will not violate any air quality standard nor will it contribute significantly to an existing or projected air quality violation. In fact, the project is completely in line with Goal EM-11 set out in the City of Sunnyvale General Plan, which states that a major aim is to “improve Sunnyvale’s air quality and reduce the exposure of its citizens to air pollutants” (Sunnyvale General Plan, 2011, pp. 7-28 – 7-29).

AIR-3: The project will not result in a cumulatively considerable net increase of any criteria pollutant.

AIR-4: The project will not expose sensitive receptors to substantial pollutant concentrations.

AIR-5: There is a distinct possibility that the project may create objectionable odors affecting a substantial number of people during the construction phase, but this is unlikely and would only be temporary.

Mitigations:

AIR-1: Those in charge of bringing the project to fruition must monitor the potentially significant effects of construction extremely carefully to ensure that negative and irreversible impacts do not occur in this region.

Monitoring Plans:

AIR-1: Developers will be responsible for monitoring impacts caused by the construction process and reporting periodically to the City of Sunnyvale’s Department of Development – Planning division regarding these effects.

RECOMMENDATION

FOR COMPLETE EIR

Since multiple resource area sections of this Initial Study have proven to hold potentially significant environmental impacts (proposed projects for both Land Use and Aesthetics) that cannot be mitigated to less-than-significant levels at this time, a complete Environmental Impact Report (EIR) analyzing the potential impacts of every resource section must be required for this project site location in order to continue with development and construction processes.

OPPORTUNITY FOR FURTHER RESEARCH

EIR SECTIONS REQUIRING ADDITIONAL STUDY

Besides the six resource sections examined above, it appears that Utilities and Service Systems and Biological Resources might be areas that require a fair amount of study. Utilities and Service Systems is important because the construction of this PRT project along Mathilda Avenue may result in power lines, gas lines, lamp posts, and other utilities needing to be relocated. Biological Resources also is a significant section to research since the building of this project might interfere with the habits of certain animals (especially birds’ flight paths because it is elevated), and trees since they might be in the way of the planned transit route.