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RE: Comments of Central SoMa Neighbors and SFBlu on Central SoMa Plan
DEIR SCH NO. 2013042070
SUPPORT FOR MID-RISE ALTERNATIVE (Reduced Height Alternative)

Dear President Hillis, Honorable Planning Commissioners, and Ms. Gibson:

I. INTRODUCTION

I am writing on behalf of the Central SoMa Neighbors (CSN) and SFBlu concerning the draft environmental impact report (DEIR) for the Central SoMa Plan. CSN and SFBlu (collectively, "Neighbors") urge the Planning Commission to adopt the Reduced Height Alternative, (known as the Mid-Rise Alternative in the Central Corridor Plan). The Mid-Rise Alternative would allow for a dramatic increase in residential and office development in the area, while still maintaining building heights of 130 feet or less (with some exceptions at transit hubs), thus retaining a pedestrian scale, livability, access to light, air and open space, and creating a family-friendly neighborhood. By contrast, the High-Rise alternative (identified simply as the "Plan" in the DEIR ("Plan" or "Project")), would create vastly higher building heights of up to 350 feet, which would be out-of-scale with a mixed-use residential neighborhood, casting shadows, blocking

views, creating wind tunnels and essentially transforming the neighborhood into a second financial district. As longtime residents of Central SoMa, the Neighbors urge the Planning Commission to adopt the Mid-Rise Alternative since it protects neighborhood character, while allowing for almost as much job growth and housing as the High-Rise Alternative.

Central SoMa Neighbors (CSN) is a community organization composed of residents of the Central SoMa neighborhood. CSN is dedicated to preserving and enhancing the unique character of Central SoMa. CSN seeks to: 1. Help preserve and enhance the character of Central SoMa with its diversity of buildings and architecture; 2. Work towards making Central SoMa a more livable, mixed-use and pedestrian-friendly neighborhood; 3. Advocate for livability - residents need access to light, air, parks, and public open spaces; 4. Ensure the area is affordable and accessible, with the right balance of housing, office space and retail.

SFBlu is a homeowners association whose residents live at 631 Folsom Street. As longtime residents of Central SoMa, the Neighbors are committed to ensuring a safe, livable, family-friendly neighborhood. We are very much in favor of development and planning for sustainable growth that preserves the character of what this neighborhood is becoming --- a mixed use residential neighborhood where businesses of varied sizes and types can thrive; where people have the opportunity to live in an environmentally sustainable manner; and where the unique existing historic architectural resources are retained and renewed. To accomplish its full potential the neighborhood requires more development, which if properly overseen is something we welcome. However, the type of development outlined in the current Plan is quite likely to retard the current transformation of this neighborhood. Rather than developing into high density residential and mixed use neighborhood stretching from Mission Bay to downtown, the current plan proposes to cut the Central SoMa neighborhood off from the neighborhoods to the south and essentially isolate it.

The Mid-Rise (Reduced Height) Alternative is superior to the High-Rise Alternative in almost every respect. It will create a family-friendly environment with access to light and air. It will create less traffic congestion, and therefore less air pollution and related health effects, and less traffic-related pedestrian injuries. It will allow tall buildings, but clustered near BART on the north side and CalTrain on the south side of the neighborhood, thereby encouraging use of public transportation. The Mid-Rise Alternative would also have reduced greenhouse gas (GHG) impacts since recent research shows that mid-rise buildings are generally more energy efficient than high-rise. By contrast, the High-Rise alternative includes extremely tall buildings (350 feet) on Harrison Street, between Second and Third Streets, which is not close to the CalTrain or BART stations, but is close to the Bay Bridge freeway ramps – thereby encouraging automobile commuting rather than public transit. This contradicts the Plan itself, which “would seek to retain the character of the mid-rise district, limiting the presence of high-rises to areas near transit stations.” (DEIR, p. IV.B-34).

The Mid-Rise Alternative allows for almost as much growth as the High-Rise Alternative. The Initial Study for the Central SoMa Plan (p. 81) shows that the Mid-Rise Alternative is projected to add 52,300 new jobs by 2040, while the High-Rise option is projected to add 56,400 new jobs. The difference in the additional population increments is even smaller, 22,700 versus 23,400 (a 3% difference). Although the DEIR presents slightly different projections, there is still only about a 12-14% difference between the Reduced Height Alternative and the Plan (population growth of 21,900 versus 25,500; job growth of 55,800 versus 63,600). (DEIR p. VI-2, VI-16, IV-6). Thus, the Mid-Rise Alternative would achieve about 90% of the jobs and housing growth, while maintaining the character of Central SoMa as a mid-rise community with access to light and air, avoiding wind-tunnels, and promoting a more family-friendly environment.

Indeed, in 2013 when the Plan was known as the Central Corridor Plan, City Planning staff articulated all of the right reasons for supporting the Mid-Rise Alternative. The Central Corridor Plan stated:

> Urban design experience shows that people feel most comfortable on urban streets where the height of buildings is between ¾ and 1 ¼ times the width of the street, creating an "urban room" that has a pleasing, but not overwhelming, sense of enclosure and intimacy. The Plan proposes that the base height limits along all major streets in the Plan area should be 85 feet, lowering to 65 feet toward the western edge of the Plan area and in historic areas, such as the South End and near South Park. While in some areas the Plan proposes to allow buildings to rise above the 85-foot base height (generally to 130 feet), these upper stories would be required to set back by at least 15 feet in order to maintain the perception of the lower streetwall…. This scale is also consistent with both the traditional form and character of SoMa's significant commercial and industrial buildings as well as aligning with the desire for larger floorplate, open floorplan, mid-rise buildings most desired by contemporary new economy companies.[1]
>
> PRINCIPLE 2: The predominant character of SoMa as a mid-rise district should be retained, and the presence of high-rises reduced by limiting their distribution and bulk.
>
> The South of Market sits at a critical location in the city's landscape. SoMa is a large expanse of flat land at the center of the east side of the City, sitting as an important balance and counterpoint to the dramatic hills that surround it, including the man-made "hill" of the downtown high-rise district, creating a dramatic amphitheater.

[1] Central Corridor Plan, p. 30.

> With relatively low buildings in comparison to the hills and high-rises around it, the South of Market allows expansive and cherished views to extend across it to and from the surrounding hills, districts and the major features of the region beyond. In order to preserve this essential characteristic and preserve views across the area, height limits taller than 130 feet are generally kept to the southern portion of the Plan Area (Brannan Street southward), limited in distribution and widely spaced. It is important to note that mid-rise buildings are not necessarily synchronous with low densities… Because the number of potential buildings taller than 130 feet is limited to strategic locations adjacent to transit stations and their locations generously spaced, these buildings will be prominent from all directions and serve as local landmarks.[2]

The Neighbors agree entirely with the opinions set forth by City Planning Staff in 2013 in the Central Corridor Plan. "**The predominant character of SoMa as a mid-rise district should be retained, and the presence of high-rises reduced by limiting their distribution and bulk**." The Mid-Rise Alternative creates an urban neighborhood "that has a pleasing, but not overwhelming sense of enclosure and intimacy." The Mid-Rise Alternative achieves almost all of the housing and job growth, while maintaining a family-friendly, livable neighborhood. We urge the Planning Commission to direct staff to revise the DEIR to select the Mid-Rise (Reduced Height Alternative) as the environmentally preferred alternative, consistent with the staff opinions set forth in the Central Corridor Plan only three short years ago.

In the alternative, the Neighbors request that the City consider an alternative that would modify the proposed Plan to eliminate the proposed changes that would allow extremely tall buildings in the block bounded by I-80 and Folsom and Second and Third Streets (including the tallest buildings on Harrison that go up to 350 feet). These buildings are inconsistent with the Plan's own goals to limit taller buildings to areas near BART and CalTrain. These properties are close to neither BART nor CalTrain, but are at the foot of the Bay Bridge access ramps. Development would therefore encourage automobile usage, not public transit, violating the fundamental Project goals. These properties should be limited to no more than 130 feet, which would still allow for substantial development on the properties, but maintain the mid-rise character of the neighborhood.

The City should also consider creating a park at 350 Second Street. This property is currently a parking lot, and provides a prime opportunity for the City to address the acknowledged need for more parks and open space in the area. In the alternative, development on this parcel should be limited to no more than 130 feet since it is close to neither BART nor CalTrain.

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[2] Id. p. 32.

After reviewing the DEIR, together with our team of expert consultants, it is evident that the document contains numerous errors and omissions that preclude accurate analysis of the Project. As a result of these inadequacies, the DEIR fails as an informational document and fails to impose feasible mitigation measures to reduce the Project's impacts. The Neighbors request the City address these shortcomings in a revised draft environmental impact report ("RDEIR") and recirculate the RDEIR prior to considering approval of the Project. The Neighbors have submitted expert comments from:

- Urban Planner Terrell Watt, AICP (Exhibit A);
- Environmental Scientists Matthew Hagemann, P.G., C. Hg., and Jessie Jaeger (Exhibit B);
- Traffic Engineer Daniel T. Smith, PE (Exhibit C), and
- Wildlife Biologist Shawn Smallwood, Ph.D. (Exhibit D).

All of these experts conclude that the Plan has numerous impacts that are not adequately analyzed or mitigated in the DIER. The expert comments are submitted herewith and incorporated by reference in their entirety. Each of the comments requires separate responses in the Final EIR. For these reasons, a revised DEIR should be prepared prior to Project approval to analyze all impacts and require implementation of all feasible mitigation measures.

II. BACKGROUND

The Central SoMa Plan (formerly, Central Corridor Plan) is a comprehensive plan for the area surrounding much of southern portion of the Central Subway transit line. The Plan Area includes roughly 230 acres that comprise 17 city blocks, as well as the streets and thoroughfares that connect SoMa to its adjacent neighborhoods: Downtown, Mission Bay, Rincon Hill, and the Mission District. The Plan Area is bounded by Second Street on the east, Sixth Street on the west, Townsend Street on the south, and by an irregular border that generally jogs along Folsom, Howard and Stevenson Streets to the north (see DEIR, Figure II-1, Central SoMa Plan Area Boundaries, in Chapter II, Project Description).

The Plan would fundamentally transform the Central SoMa area. It would ***triple*** the resident population of the area from a current population of 12,000 to 37,500[3] -- an increase of 25,500 additional residents. It would more than ***double*** employment in the area from a current level of 45,600 jobs to 109,200 -- an increase of 63,600 additional jobs. (DEIR, pp. IV-6, IV-5).

[3] Actual current population is closer to 10,000, so the Plan will almost quadruple resident population. This points out the importance of using an accurate baseline population number.

For at least three years, the City presented a plan to the public that extended from Market Street to Townsend and from Second Street to Sixth Street. The plan was called the Central Corridor plan. The plan proposed a Mid-Rise option, in which almost all buildings would be capped at no more than 130 feet or less. The plan also included a High-Rise option. Then, in late 2016, without explanation, the City drastically altered the plan, lopping off 11 blocks at the north from Folsom to Market (with a narrow exception from Fifth to Sixth Street). Critically, at the same time the City dropped the Mid-Rise option and included only the High-Rise option in the analysis. The Mid-Rise Option was relegated to a small section at the back of the alternatives analysis of the DEIR, and renamed the "Reduced-Height Alternative." The City released the DEIR for the completely new project just before the Christmas and New Year holidays, on December 14, 2016.

III. LEGAL STANDARD

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report ("EIR"). *See*, *e.g.*, Pub. Res. Code § 21100. The EIR is the very heart of CEQA. *Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652. "The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." *Comms. for a Better Env't v. Calif. Resources Agency* (2002) 103 Cal. App. 4th 98, 109.

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. 14 Cal. Code Regs. ("CEQA Guidelines") § 15002(a)(1). "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'" *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564. The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs*. (2001) 91 Cal. App. 4th 1344, 1354 ("*Berkeley Jets*"); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

Second, CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring "environmentally superior" alternatives and all feasible mitigation measures. CEQA Guidelines § 15002(a)(2) and (3); *see also Berkeley Jets*, 91 Cal. App. 4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564. The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to "identify ways that environmental damage can be avoided or significantly reduced." CEQA Guidelines §15002(a)(2). If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has "eliminated or

substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns." Pub.Res.Code ("PRC") § 21081; CEQA Guidelines § 15092(b)(2)(A) & (B).

While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A 'clearly inadequate or unsupported study is entitled to no judicial deference.'" *Berkeley Jets*, 91 Cal. App. 4th 1344, 1355 (emphasis added), quoting, *Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 391 409, fn. 12. A prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process." *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App. 4th 713, 722; *Galante Vineyards v. Monterey Peninsula Water Mgmt. Dist.* (1997) 60 Cal. App. 4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 946.

IV. THE DEIR INCLUDES AN INADEQUATE BASELINE.

The DEIR fails to adequately describe baseline conditions in the Plan area. In several areas there is no baseline analysis at all. In others, the baseline data is far out of date, from 2010. 2010 data is inherently unrepresentative since the City and nation was in the midst of the worst recession since the great depression. Therefore, using 2010 baseline data will inherently bias the entire DEIR analysis.

Every CEQA document must start from a "baseline" assumption. The CEQA "baseline" is the set of environmental conditions against which to compare a project's anticipated impacts. *Communities for a Better Environment v. So Coast Air Qual. Mgmnt. Dist*. (2010) 48 Cal. 4th 310, 321. Section 15125(a) of the CEQA Guidelines (14 C.C.R., § 15125(a)) states in pertinent part that a lead agency's environmental review under CEQA:

> "…must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time [environmental analysis] is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant."

(See, *Save Our Peninsula Committee v. County of Monterey* (2001) 87 Cal.App.4th 99, 124-125 ("*Save Our Peninsula*.") As the court of appeal has explained, "the impacts of the project must be measured against the 'real conditions on the ground.'" (*Save Our Peninsula*,87 Cal.App.4th 99, 121-123.) As the court has explained, using such a skewed baseline "mislead(s) the public" and "draws a red herring across the path of

public input." (*San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 656; *Woodward Park Homeowners v. City of Fresno* (2007) 150 Cal.App.4th 683, 708-711.)

SoMa is among the most ethnically and economically diverse neighborhoods in the City. The neighborhood is home to 15% of the City's minority and women owned businesses, and 8% of the City's green businesses, which is significant given that the area makes up only 1% of the City's land area.[4] The neighborhood has a slightly higher level of racial diversity than the City as a whole, with about 60% of the population being people of color.[5] Although the median household income is slightly higher than the City average, the neighborhood also has one of the highest levels poverty with 31% of the population living at or below 200% of the poverty threshold.[6]

The neighborhood faces extreme environmental challenges. As the San Francisco Department of Public Health (DPH) stated in a 2012 report:

> due to close proximity to freeways and high traffic roads, the area has some of the poorest air quality in the City, with 13% of households living in an area exposed to greater than 10ug/m3 of fine particulate matter (PM 2.5) and 16% living in areas with ambient air pollution cancer risks greater than 100 in a million.[7]

Asthma and chronic obstructive pulmonary disease hospitalizations are approximately twice as high in Central SoMa as in the rest of the City.[8]

The neighborhood has one of the highest incidences of pedestrian injuries in the City. As DPH stated, "The incidence of severe injuries and deaths related to collisions between vehicles and pedestrians, cyclists, and other vehicles is amongst the highest in the City. The situation for pedestrians is especially troubling, as the average annual number of pedestrian injuries and fatalities per 100 road miles is six times higher in the Plan area compared to the City as a whole (48 vs. 8)."[9] The neighborhood also faces "amongst the highest violent and property crime rates in the City. During that time period, the number of assaults per 1,000 residents was 210 in the plan area and 44 for the City as a whole. Likewise, the property crime rate was 900 in the Plan area and 177 for the whole City."[10]

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[4] San Francisco Department of Public Health, Environmental Health, Sustainable Communities Health Assessment: Central Corridor Plan, p. 6 (Nov. 30, 2012) (Exhibit F).
[5] Id. p. 21.
[6] Id. p. 3.
[7] Id. p. 3.
[8] Id. p. 22.
[9] Id. p. 3.
[10] Id. p. 4.

Finally, the neighborhood faces a severe lack of open space and parks. The same DPH report stated:

> Public infrastructure areas that the Plan area performs more poorly in include public health facilities and parks and open space. The Recreational Area Access Score assesses relative access to park acreage at any point in the City. Here again the Plan area was one of the lowest performers. Currently 67% of residents live within 1/2 mile of a public recreational facility compared to 91% for the City as a whole. Additionally, only 16% of residents are within 1/4 mile of a community garden compared to 26% across the City.[11]

Thus, while Central SoMa is a robust, ethnically and economically diverse community, it also faces serious challenges in terms of a lack of open space, high levels of pollution, pedestrian safety and extreme traffic congestion. Solving these problems is the key to making the neighborhood livable and family friendly. Very little of this critical baseline information is included in the DEIR, making the document inadequate as a public information document.

Urban Planner Terrell Watt, AICP, explains that the DEIR's baseline data is out of date in many respects, for population, jobs-housing balance, public services and other impacts. (Watt Comment pp. 7-8).

V. THE EIR AND INITIAL STUDY HAVE AN INCONSISTENT AND INADEQUATE PROJECT DESCRIPTION.

A. Initial Study is Inadequate Because it Describes an Entirely Different Project than in the DEIR.

The Initial Study is patently inadequate because it describes an entirely different project from the Plan set forth in the DEIR. The Initial Study must accurately describe the Project in order to identify impacts to be analyzed in the EIR. The Initial Study fails to perform this task because it does not describe the Plan at all. The Initial Study was prepared in 2014. It describes a rectangular project area that extends from Market Street to Townsend and from Second Street to Sixth Street. The Plan set forth in the DEIR is entirely different, with most of the three blocks from Market Street to Folsom excluded from the Plan area. Clearly the Plan will have entirely different impacts than the project described in the Initial Study in all respects, including, but not limited to, traffic, air quality, pedestrian safety, jobs-housing balance, etc. A new initial study is required to analyze the Project actually proposed by the City and to identify impacts requiring analysis in an EIR. The DEIR relies on the Initial Study to conclude that eleven environmental impacts are less than significant. This makes no sense. The City

[11] Id. p. 4.

may not rely on an Initial Study prepared for one project to conclude that a very different project has less than significant impacts. (See, Terrell Watt, AICP, Comments).

The purpose of an initial study is to briefly describe the proposed project and its impacts, and to identify significant impacts requiring analysis in an EIR. 14 CCR §15063. The initial study must contain an accurate description of the proposed project. 14 CCR §15063(d), 15071(a); *Christward Ministry v. Superior Court* (1986) 184 Cal.App.3d 180. For example, in *Taxpayers for Accountable School Bond Spending v. San Diego Unified School Dist*., 215 Cal. App. 4th 1013, 1049 (2013), the court found an initial study to be inadequate because it did not disclose the number of football games to be held at a proposed stadium and it was therefore impossible to calculate the amount of traffic that would be generated by the project. ("Without a reasonable determination of the expected attendance at Hoover evening football games on completion of the Project, District may be unable to adequately compare the baseline attendance to expected attendance in determining whether there is a fair argument the Project may have a significant impact on traffic and/or parking.n22 (Guidelines, §§ 15125, subd. (a), 15126.2, subd. (a); *Communities*, at p. 320 & fn. 5.)")

The project description must include a description of the environmental setting of the Project. A CEQA document "must include a description of the environment in the vicinity of the project, as it exists before the commencement of the project, from both a local and a regional perspective." 14 CCR § 15125; see *Environmental Planning and Info. Council v. County of El Dorado* (1982) 131 Cal.App.3d 350, 354. "An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient [CEQA document]." *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193; *Taxpayers for Accountable School Bond Spending v. San Diego Unified School Dist*., 215 Cal. App. 4th 1013, 1049 (initial study must describe baseline conditions).

"[T]he Guidelines contemplate that "only one initial study need be prepared for a project. If a project is modified after the study has been prepared, the [lead] agency need not prepare a second initial study." *Gentry v. City of Murrieta*, 36 Cal. App. 4th 1359, 1384 (1995), citing, 1 Kostka & Zischke, supra, § 6.15, at p. 263; see also *Uhler v. City of Encinitas* (1991) 227 Cal. App. 3d 795, 803, disapproved on other grounds in *Quail Botanical Gardens Foundation, Inc. v. City of Encinitas* (1994) 29 Cal. App. 4th 1597, 1603; Guidelines, § 15063, subd. (a), 15070. However, when changes are made to a project after the initial study, the agency must have substantial evidence to show that the changes are not significant. *Building Code Action v. Energy Resources Conservation & Dev. Com*., 102 Cal. App. 3d 577, 592 (1980). The City lacks substantial evidence to support its conclusion that a second initial study is not required.

1. **The DEIR Project Has a Vastly Different Geographic Scope, Populations and Jobs Projections, and Other Elements than the Initial Study.**

In this case, the 2014 Initial Study does not describe the Project at all. It describes an entirely different project with different project boundaries that is 11 square blocks larger than the Project set forth in the EIR. The project described in the Initial Study clearly has a different baseline than the Project set forth in the EIR, including population, traffic, existing office space, transit ridership, pedestrian safety history, etc. The project described in the Initial Study will also have different impacts in all respects from the Project set forth in the EIR. The Initial Study therefore fails to perform its basic function to describe the Project and its impacts and to identify issues requiring study in the EIR.

Urban Planner Terrell Watt, AICP, describes major differences between the various iterations of the project description. (Watt Comment, p. 5). Growth assumptions in the DEIR, Initial Study and Central SOMA Plan are vastly different:

> Table IV-1, Summary of Growth Projections, presents the population and employment growth assumed in the Plan Area between 2010 (the base year for the analysis) and 2040 ("buildout year" or "planning horizon"). This growth amounts to approximately 14,400 additional households, approximately 25,500 additional residents and about 63,600 additional jobs under the Plan. DEIR at page IV-5.
>
> Growth projected in the Initial Study includes up to 13,200 housing units (IS at page 85) and 56,400 new jobs (IS at page 81). In contrast, the Central SOMA Plan states: "With adoption of the Central SOMA Plan, there would be potential to build space for approximately to 45,000 jobs and 7,500 housing units. The Plan therefore represents an increase in development capacity of 450 percent for jobs and 300 percent for housing." Central SOMA Plan at page 7. The Financial Analysis of San Francisco's Central Soma Plan[12] (December 2016) is based on different growth assumptions than presented in DEIR, Initial Study and Plan: "The vision of the Central Soma Plan is to create a sustainable and vital neighborhood in the area immediately surrounding the Central Subway (expected to open in 2019) in San Francisco's South of Market District. The Plan is projected to bring 40,000 jobs and 7,500 housing units to the area over the next 25 years."

Clearly, the population, jobs and growth projections are entirely inconsistent throughout the environmental analysis. Will the Plan results in 7,500 housing units (Central SOMA Plan, p.7), or 14,400 (DEIR, p. IV-5), or 13,200 (IS, p. 85)? Will it create 40,000 new jobs (Financial Analysis), or 63,600 jobs (DEIR, p. IV-5), or 56,400 jobs (IS,

[12] The Financial Analysis is intended to implement the Plan's public benefits and as such it is of critical importance it be based on a stable and finite Project description that is consistent throughout the Plan, DEIR and other related documents. That is not the case and as such, a revised DEIR and revised policy papers and financial analyses must be completed based on a consistent, stable, complete and finite Project description.

p. 81)? Since these figures are fundamental to analysis of almost all other impacts (air pollution, traffic, public services, etc.), this wildly inconsistent project description renders the entire CEQA analysis inadequate. The City simply cannot rely on an Initial Study that assumed 56,400 new jobs, to conclude that a Plan that creates 63,600 new jobs has insignificant impacts.

2. The DEIR Project Has Entirely Different Goals than the Initial Study.

Also, the project described in the Initial Study has very different project goals. The Initial Study project has five project goals:

1. Support transit-oriented growth, particularly workplace growth, in the Central SoMa area.
2. Shape the Central SoMa's urban form recognizing both City and neighborhood contexts.
3. Maintain the Central SoMa's vibrant economic and physical diversity.
4. Support growth with improved streets, additional open space, and other elements of "complete communities."
5. Create a model of sustainable growth.

(Central SOMA Plan Initial Study, p.3, http://sfmea.sfplanning.org/2011.1356E_IS.pdf).

By contrast, the DEIR Project has eight very different goals:

1. Increase the capacity for jobs and housing;
2. Maintain the diversity of residents;
3. Facilitate an economically diversified and lively jobs center;
4. Provide safe and convenient transportation that prioritizes walking, bicycling, and transit;
5. Offer an abundance of parks and recreational opportunities;
6. Create an environmentally sustainable and resilient neighborhood;
7. Preserve and celebrate the neighborhood's cultural heritage; and
8. Ensure that new buildings enhance the character of the neighborhood and the city.

(Central SOMA DEIR, p. S-2, http://sfmea.sfplanning.org/CentralSoMaPlanDEIR_2016-12-14.pdf).

Nowhere does the DEIR explain why the Project goals were so dramatically changed. Nor does the DEIR explain why the Project boundaries were so drastically altered. Clearly, the two projects are entirely different given that the basic project goals differ. A new Initial Study is therefore required to properly describe the Project and its impacts and to identify issues for analysis in a recirculated draft EIR.

3. The DEIR Eliminates the Mid-Rise Option that was Favored by the Central Corridor Plan.

The DEIR also differs from the 2013 Draft Central Corridor Plan in that it "eliminate[s] the 'mid-rise' height limit option (Option A); this option is considered in this EIR as the Reduced Heights Alternative." (DEIR p. II-4). The Mid-Rise Option limited building heights to no more than 130 feet throughout most of the plan area. By contrast, the DEIR Project allows building heights of 350 feet or more at many areas that were formerly limited. This is a drastic change from the Initial Study and Central Corridor Plan since those prior documents strongly favored the Mid-Rise Option. Indeed, in 2013 when the Plan was known as the Central Corridor Plan, City Planning staff articulated all of the right reasons for supporting the Mid-Rise Alternative. The Central Corridor Plan stated:

> Urban design experience shows that people feel most comfortable on urban streets where the height of buildings is between ¾ and 1 ¼ times the width of the street, creating an "urban room" that has a pleasing, but not overwhelming, sense of enclosure and intimacy. The Plan proposes that the base height limits along all major streets in the Plan area should be 85 feet, lowering to 65 feet toward the western edge of the Plan area and in historic areas, such as the South End and near South Park. While in some areas the Plan proposes to allow buildings to rise above the 85-foot base height (generally to 130 feet), these upper stories would be required to set back by at least 15 feet in order to maintain the perception of the lower streetwall…. This scale is also consistent with both the traditional form and character of SoMa's significant commercial and industrial buildings as well as aligning with the desire for larger floorplate, open floorplan, mid-rise buildings most desired by contemporary new economy companies.[13]
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> PRINCIPLE 2: ***The predominant character of SoMa as a mid-rise district should be retained, and the presence of high-rises reduced by limiting their distribution and bulk***.
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> The South of Market sits at a critical location in the city's landscape. SoMa is a large expanse of flat land at the center of the east side of the City, sitting as an important balance and counterpoint to the dramatic hills that surround it, including the man-made "hill" of the downtown high-rise district, creating a dramatic amphitheater.
>
> With relatively low buildings in comparison to the hills and high-rises around it, the South of Market allows expansive and cherished views to extend across it to and from the surrounding hills, districts and the major features of the region

[13] Central Corridor Plan, p. 30.

> beyond. In order to preserve this essential characteristic and preserve views across the area, height limits taller than 130 feet are generally kept to the southern portion of the Plan Area (Brannan Street southward), limited in distribution and widely spaced. It is important to note that mid-rise buildings are not necessarily synchronous with low densities… Because the number of potential buildings taller than 130 feet is limited to strategic locations adjacent to transit stations and their locations generously spaced, these buildings will be prominent from all directions and serve as local landmarks.[14]

4. Initial Study and DEIR Use Out-of-Date Baseline Data.

Also, the 2014 Initial Study uses out-of-date baseline data. Population, housing, traffic and other data used for the baseline analysis in the Initial Study was taken in 2010. Of course, 2010 was the height of the last recession. As a result, much of this data does not represent actual current baseline conditions, in which traffic, population, air pollution, and other impacts are all much higher. CEQA requires that the baseline reflect actual current conditions on the ground, not an unrepresentative time period, such as the greatest recession since the great depression. *Communities for a Better Environment v. So Coast Air Qual. Mgmnt. Dist*. (2010) 48 Cal. 4th 310, 321; *Save Our Peninsula Committee v. County of Monterey* (2001) 87 Cal.App.4th 99, 124-125 ("Save Our Peninsula.") As the court of appeal has explained, "the impacts of the project must be measured against the 'real conditions on the ground.'" *Save Our Peninsula*, 87 Cal.App.4th 99, 121-123. As the court has explained, using such a skewed baseline "mislead(s) the public" and "draws a red herring across the path of public input." *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 656; *Woodward Park Homeowners v. City of Fresno* (2007) 150 Cal.App.4th 683, 708-711.

Urban Planner Terrell Watt, AICP, explains that baseline data for employment, housing, population, public services, jobs-housing balance, and many other factors are either absent or out of date.

5. City Staff Refused to Grant an Extension of the Comment Period Despite Massive Project Revisions and Two Federal Holidays.

Exacerbating this problem is the fact that for at least three years, City staff led the public to believe that the project was as described in the Initial Study. In particular, the 2013 Central Corridor plan document strongly favored the Mid-Rise Alternative over the High-Rise Alternative, and described a project extending all the way to Market Street. Then, just a week before the holidays, on December 14, 2016, the City released the DEIR for a short 60-day comment period, for the first time unveiling the very different Project in the DEIR. CEQA does not countenance such "bait-and-switch"

[14] Id. p. 32.

tactics which serve only to confuse and mislead the public and short-circuit the public process embodied in CEQA. "An accurate, stable and finite project description is the Sine qua non of an informative and legally sufficient EIR." *County of Inyo v. City of Los Angeles* (1977), 71 Cal.App.3d 185 (rejecting an EIR that changed the project description over the course of the CEQA review process). The City has done the opposite – radically changing the project description after years of processes and public meetings in which an entirely different project was presented to the public. Despite this sleight of hand, the City flatly refused any extension of the public comment period, despite admitting that the situation met all of the City's criteria for an extension, particularly given that the comment period fell over both the Christmas and New Year's holidays. The City's Environmental Review Officer responded to three separate requests for extension by stating:

> The Planning Department has identified a number of situations that may warrant longer public review' periods, such as those including projects affecting multiple sites in various locations, or an area larger than a single site; or in situations where multiple federally recognized holidays occur within a DEIR's 45-day the public review period. Both situations apply to the Central SoMa Plan DEIR.

(Letter from Lisa M. Gibson, San Francisco Environmental Review Officer (Feb. 3, 2017). Despite admitting that the criteria for an extension had been met, the City proceeded to reject the extension request.

The City makes a mockery of CEQA and the public process. "Public participation is an essential part of the CEQA process." (CEQA Guidelines §15201). "Environmental review derives its vitality from public participation." (*Ocean View Estates Homeowners Assn. v. Montecito Water Dist.* (2004) 116 Cal.App.4th 396, 400). By dramatically altering the Project after years of public review, on the eve of the holiday season, and then refusing to extend the public comment period, the City "mislead(s) the public" and "draws a red herring across the path of public input." *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 656; *Woodward Park Homeowners v. City of Fresno* (2007) 150 Cal.App.4th 683, 708-711.

VI. THE PROJECT IS FATALLY INCONSISTENT WITH THE GENERAL PLAN AND OTHER APPLICABLE PLANNING DOCUMENTS.

The DEIR incorrectly concludes that the Project is consistent with the General Plan and other applicable planning documents. In fact, the proposed Plan is plainly inconsistent with these planning documents, resulting in significant adverse environmental impacts.

The City must treat its analysis of conflicts with the General Plan seriously and land use decisions must be consistent with the plan. (CEQA Guidelines, App. G, Evaluation of Environmental Impacts, Item 6; Guidelines § 15125(d); Gov. Code §

65860(a)) The General Plan is intended to be the "constitution for all future developments," a "charter for future development," that embodies "fundamental land use decisions that guide the future growth and development of cities and counties." (*Families Unafraid to Uphold Rural El Dorado County v. Board of Supervisors of El Dorado County* (1998) 62 Cal.App.4th 1334, 1335; *Lesher Communications, Inc. v. City of Walnut Creek* (1990) 52 Cal.3d 531,54; *City of Santa Ana v. City of Garden Grove* (1979) 100 Cal.App.3d 521,532) The "propriety of virtually any local decision affecting land use and development depends upon consistency with applicable general plan and its elements." (*Citizens of Goleta Valley v. Board of Supervisors of County of Santa Barbara* (1990) 52 Cal.3d 553, 570) The consistency doctrine has been described as the "linchpin of California's land use and development laws; it is the principal which infuses the concept of planned growth with the force of law." *Corona-Norco Unified School District v. City of Corona* (1993) 17 Cal.App.4th 985, 994.

A project's impacts may be deemed significant if they are greater than those deemed acceptable in a general plan or other applicable planning documents. (*Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1416). A significant impact on land use and planning would occur if the project would "[c]onflict 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." (CEQA Guidelines Appendix G, § IX(b))

According to the CEQA Guidelines, "environmental effects" include direct and indirect impacts to land use and planning. Where the plan or policy was adopted to avoid negative environmental effects, conflicts with the plan or policy constitutes a significant negative impact. (*Oro Fino Gold Mining Corp. v. Co. of el Dorado* (1990) 225 Cal.App.3d 872, 881-882; *see also Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 783-4; *County of El Dorado v. Dept. of Transp*. (2005) 133 Cal.App.4th 1376; CEQA Guidelines, App. G., § IX(b)). Thus, under CEQA, a project results in a significant effect on the environment if the project is inconsistent with an applicable land use plan, policy or regulation adopted for the purpose of avoiding or mitigating one or more of these environmental effects.

The DEIR fails to conduct a complete and forthright consistency analysis with the General Plan and other applicable planning documents. The DEIR must be revised to analyze inconsistencies identify appropriate mitigations or set the foundation for a finding of overriding considerations.

The Plan is inconsistent with Policy 3.5 of the General Plan, which states, "Ensure that growth will not outpace improvements to transit of the circulation system." (DEIR P. III-9). The DEIR admits that the Plan would "result in substantial delays to a number of MUNI routes serving the area," (DEIR, p. IV.D-49), and "Development under the Plan … would result in a substantial increase in transit demand that would not be

accommodated by local transit capacity, and would cause a substantial increase in delays resulting in adverse impacts on local and regional transit routes." (DEIR, p. IV.D-43). This impact to transit is not only a significant impact under CEQA, it is prohibited by the General Plan. The DEIR's conclusion that the Plan does not conflict with this General Plan Policy is arbitrary and capricious.

The Plan is inconsistent with the Urban Design Element of the General Plan, which states:

> Policy 3.5: Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development; and
>
> Policy 3.6: Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction

(DEIR p. III-10). The Plan allows buildings of 350 feet or more in an area that the City admits is a mid-rise neighborhood. As noted in the Central Corridor Plan, such tall buildings are inconsistent with the mid-rise character of the neighborhood. The City stated in the Central Corridor Plan, at page 32, "The predominant character of SoMa as a mid-rise district should be retained, and the presence of high-rises reduced by limiting their distribution and bulk." Having made these statements in the Central Corridor Plan, the City cannot not simply ignore them. The court in the case *Stanislaus Audobon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144 rejected a county's argument that a revised initial study prepared by the county which contradicted the findings of the first initial study had not "relegated the first initial study to oblivion." *Id.* at 154. The court stated, "We analogize such an untenable position to the ***unringing of a bell.*** The first initial study is part of the record. The fact that a revised initial study was later prepared does not make the first initial study any less a record entry nor does it diminish its significance, particularly when the revised study does not conclude that the project would not be growth inducing but instead simply proceeds on the assumption that evaluation of future housing can be deferred until such housing is proposed." (*Id*. at 154 (emphasis added)). The City cannot conclude that a project may have significant impacts and then, when such admission is no longer convenient, simply change its conclusion to better suit its needs. The City conclusion of "no inconsistencies" with the General Plan (DEIR, p. III-10) are refuted by its own statements in the Central Corridor Plan.

The Plan is inconsistent with the Recreation and Open Space Element of the General Plan, Policy 1.9: Preserve sunlight in public open spaces. (DEIR, p. III-11). The DEIR admits that the Plan will create new shadow on several parks under the jurisdiction of the Recreation and Park Department, including South Park, Victoria Manalo Draves Park and Gene Friend Recreation Center, as well as several public open spaces. (DEIR, p. III-11). For example the DEIR admits that the Plan will create new shadows on the only Rec & Park property in the Plan area, South Park, and "could

increase shadow on portions of South Park during early morning and late afternoon hours from the spring equinox to the fall equinox (March through September). (DEIR, p. IV.H-35). In other words, the Plan will cast shadows on South Park for half of the year! Similarly, the DEIR admits that the Plan will cast shadows on the heavily used privately owned public open space (POPOS) located at 303 Second Street from noon "through much of the afternoon," and shading up to one-third of the POPOS. (DEIR p. IV.H-38).Given these admissions, the DEIR's finding that the Plan is somehow consistent with the General Plan Policy to "preserve sunlight in public open spaces" is arbitrary and capricious and lacks substantial evidence. Casting additional shadows for half of the year simply cannot be considered consistent with the policy of "preserving sunlight in public open spaces."

The Plan is also inconsistent with the General Plan Objective 9: Reduce transportation-related noise, and Policy 11.1, Discourage new uses in areas in which the noise level exceeds the noise compatibility guidelines for that use. (DEIR p. III-12). The DEIR admits that "Development under the Plan, including the proposed street network changes, would generate noise that would result in exposure of persons to noise in excess of standards in the San Francisco General Plan or Noise Ordinance (Article 29 of the Police Code), and would result in a substantial permanent increase in ambient noise above existing levels." (DEIR, p. S-71). Thus, the Plan will increase transportation-related noise and place new uses in areas that exceed noise guidelines, in direct violation of the General Plan. The DEIR's conclusion of General Plan consistency is therefore arbitrary and capricious.

The Plan is plainly inconsistent with the Western SoMa Plan, yet the DEIR inexplicably concludes that the Plan would "not be demonstrably inconsistent with the Western SoMa Plan." (DEIR, p. III-8). Most obviously, the Western SoMa Plan Policy 1.2.4 is to "Prohibit housing outside of designated Residential Enclave Districts (RED) south of Harrison Street." (DEIR, p. III-6). The Plan is flatly inconsistent with this Policy, thereby resulting in a significant environmental impact that is not addressed in the DEIR.

A revised DEIR is required to acknowledge, address and mitigate these plan inconsistencies.

VII. THE DEIR FAILS TO ADEQUATELY ANALYZE AND MITIGATE SIGNIFICANT IMPACTS OF THE PLAN.

At its core, CEQA requires the lead agency to identify all significant adverse impacts of a project and adopt all feasible mitigation measures or alternatives to reduce those impacts. 14 Cal. Code Regs. § 15002(a)(1). A prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process." (*San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App. 4th 713, 722]; *Galante Vineyards v. Monterey Peninsula Water Management*

Dist. (1997) 60 Cal. App. 4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 946). The DEIR fails to meet these basic requirements.

A. The Plan will have Significant Adverse Traffic Impacts that are not Disclosed or Analyzed in the DEIR.

1. The Plan will Increase Employee VMT, Resulting in a Significant Traffic Impact Under SB 743.

The Plan will place thousands of cars each day into an area that already has unacceptable levels of traffic congestion. At rush hour, traffic is at a standstill in the Plan area. The Plan will add over 63,000 new jobs and 25,000 new residents to the area – more than doubling the number of jobs and tripling the number of residents in the area. (DEIR, p. IV-6). While many of these workers and residents may take public transit, there can be no dispute that many will drive cars, thereby adding to already unacceptable levels of traffic. The DEIR glosses over this obvious fact and makes the preposterous conclusion that the Plan will have less than significant traffic impacts. This conclusion simply fails the straight-face test. Anyone who has spent any time on roadways in this area will recognize that tripling the population of the area will have significant traffic impacts.

The DEIR relies on the recently passed SB 743 (Pub.Res.Code § 21099(b)(1)) for its counterfactual conclusion of not traffic impacts. However, even under the vehicle miles travelled (VMT) approach set forth in SB 743, the Plan will have significant traffic impacts. The SB743 regulations, 14 Cal.Code Regs. §15064.3, specify that a land use plan may have a significant impact on transportation if it is not consistent with the relevant sustainable community strategy (SCS). To be consistent with the SCS, the development must lead to VMT equal to or less than the VMT per capita ***and*** VMT per employee specified in the SCS. Plan Bay Area is the SCS (DEIR, p. VI.D-36), and it sets VMT target per capita at 10% below the 2005 Bay Area average. However, it does not set any target for employee VMT. (DEIR, p. IV.D-21, IV.D-36) Therefore, the city cannot claim that the development meets employee VMT targets in the SCS -- there are none. Even worse, the DEIR concludes that the plan will ***increase*** employment VMT from 8.2 to 8.7 in 2012 and from 6.8 to 7.1 in 2040. (DEIR p. IV.D-38). "With Plan implementation, VMT per capita would … increase slightly in the office category." (DEIR, p. IV.D-38). This should be no surprise since the Plan creates 63,000 new jobs, but only 25,000 new residents, so about 40,000 of the new employees will have to commute long distances. Since the plan will ***increase*** employee VMT, it has a significant traffic impacts even under the new VMT methodology set forth in SB 743. As a result, the City' conclusion that the Plan has less than significant traffic impacts is arbitrary and capricious and the City has failed to proceed in a manner required by law. The City must acknowledge a significant traffic impact in a revised DEIR, analyze the

traffic impact, and implement all feasible mitigation measures and alternative to reduce this impact and consider all feasible alternatives.

Also, as discussed by Traffic Engineer Daniel T. Smith, PE, the Plan will drastically increase VMT in the Plan area. Mr. Smith explains:

> DEIR Table IV-1 indicates that in the baseline (2010) condition, the Central SoMA population was 12,000, that in 2040 without the Project it would be 28,200, and in 2040 with the Project it would be 37,500. The same table also indicates that in the baseline year employment in Central SoMa was 45,600, that in 2040 without the Project it would be 72,800 and that in 2040 with the Project employment would be 109,200 jobs. At the VMT per capita rates disclosed in DEIR Table IV.D-6, the following would be total VMT generated in Central SoMa:
>
> | | Baseline | 2040 No Project | 2040 With Project |
> |---|---|---|---|
> | Population | 25,200 | 50,760 | 60,000 |
> | Employment | 373,920 | 495,040 | 775,320 |
> | Total | 399,120 | 545,800 | 935,320 |
>
> As can be seen from the above compilations, the 2030 No Project scenario generates almost 37 percent more net VMT than the Baseline; **the 2040 With Project scenario generates over 134 percent more net VMT than the Baseline and over 71 percent more than the 2040 No Project Scenario.** Since the public knows from information presented in this DEIR and from other recent DEIR's for projects having transportation effects on the Central SoMa area that there are already problems impacting motor vehicle traffic, bicyclists, pedestrians, the safety of all of the aforementioned, and transit operations. In that situation adding development to the area that generates 134 percent more than existing uses and 71 percent more than development to 2040 under existing plans and zoning is significantly impactful on transportation

(Smith Comment, p. 2). Since the Plan will increase VMT, the City must conclude that it will have significant impacts even under SB 743.

2. The Plan will have Highly Significant Traffic Impacts.

Traffic Engineer Daniel T. Smith, P.E. shows that the Plan will have highly significant traffic impacts and will create massive delays and traffic congestion in the plan area. Mr. Smith concludes (Smith Comment pp. 3-4):

- With the Project traffic and the Howard/Folsom one-way street configuration option, in the AM peak, intersections experiencing delay levels at LOS E or worse (55 seconds or more average delay per vehicle) would increase from 3 of the 36 studied under the existing condition to 21 of 36. In the PM peak, with the

Project and the Howard/Folsom one-way street configuration, the number of intersections operating at LOS E or worse would increase from 19 of 80 in the existing condition to 39 of 80 with the Project traffic and subject street configuration

- With the Howard/Folsom two-way street configuration option, in the AM peak, the number of intersections operating at LOS E or worse would increase from 3 of 36 in the existing condition to 17 of 36 with the plan and the subject street configuration. In the pm peak the number of intersections operating at LOS E or worse would increase from 19 of 80 in the existing condition to 37 of 80 with Project traffic and the two way street configuration.
- As to the freeway ramp analysis, 8 of the 11 ramps analyzed operate at vehicle densities of 35 passenger cars per mile per lane (volumes reflecting breakdown conditions) in the AM and/or PM peak in the existing condition. With the addition of Project related traffic and the proposed street network changes, 10 of the 11 ramps would operate at vehicle densities of 35 passenger cars per mile per lane in the AM and/or Pm peak hour.

3. The Traffic Analysis Uses an Improper Baseline.

As discussed above, CEQA requires the agency to use a baseline that represents real conditions on the ground at the time of CEQA review. Mr. Smith concludes that the DEIR fails to use a representative traffic baseline. The DEIR relies on traffic baseline data from 2011 and earlier. This data reflects a recessionary period. It does not reflect much higher traffic currently found in the area.

4. The Plan Will Have Significant Adverse Impacts to Emergency Vehicle Access.

Mr. Smith concludes that the Plan will have significant adverse impacts to emergency vehicle access that are not disclosed or analyzed in the DEIR. (Smith Comment, p. 7). The DEIR asserts without foundation that although traffic congestion would occur, that the California Vehicle Code requires that other motor vehicles get out of the way of emergency vehicles and because emergency vehicles primarily use arterial streets where there is purportedly room to get out of the way of emergency vehicles, despite the fact that the DEIR admits there would be increased traffic congestion with the Project, it asserts without sound foundation that there would be no significant impact on emergency vehicle traffic. This assertion is inconsistent with the information in the DEIR's traffic impact analysis at DEIR pages IV.D-41 through 43 which indicate that:

- With the Project, 10 of 11 freeway ramps serving the Project area would be at "breakdown levels" during the AM and/or PM peak periods. Breakdown levels on the on ramps causes extensive queuing on City surface streets that would impair emergency vehicle traffic even on arterials because other drivers may not have

> the room to comply with the Vehicle Code and get out of the way quickly. "Breakdown levels" on the off ramps involves queues onto the freeway mainlines. The confined ramps provide motorists little opportunity to comply with the vehicle code and get out of the way and motorists at the critical ramp exit points will not even know that an emergency vehicle is coming until it has slowly worked its way toward the head of the exit queue.

- With the Project, up to 21 of the 36 study area intersections that were analyzed for the AM peak hour and up to 39 of the 80 study area intersections that were analyzed for the PM peak hour are reported to experience highly deficient delay conditions. At these traffic delay levels that imply significant queuing, even on arterial width roadways, traffic is likely to be too congested to comply with the Vehicle Code mandate to get out of the way of emergency vehicles.

The DEIR's unsubstantiated and conclusory statements about emergency vehicle access impacts of the Project must be revised and made consistent with findings made elsewhere in the DEIR.

5. The Plan will have Significant Parking Impacts that are Not Disclosed or Mitigated in the DEIR.

Parking impacts are significant under CEQA. In *Taxpayers for Accountable School Bond Spending v. San Diego Unified School Dist*., 215 Cal. App. 4th 1013, 1051 (2013), the court rejected the City of San Francisco's position that parking impacts are not significant impacts under CEQA, holding, "Therefore, as a general rule, we believe CEQA considers a project's impact on parking of vehicles to be a physical impact that could constitute a significant effect on the environment." "To the extent the lack of parking affects humans, that factor may be considered in determining whether the project's effect on parking is significant under CEQA." *Taxpayers for Accountable School Bond Spending v. San Diego Unified School Dist*., 215 Cal. App. 4th 1013, 1053.

The Plan will have significant parking impacts. The DEIR admits that the Plan will create a shortfall of parking of 15,500 parking spaces. (DEIR, p. IV.D-77). The DEIR states:

> there could be a shortfall in parking spaces provided relative to the projected demand (i.e., a shortfall of about 15,550 parking spaces). This shortfall could be greater if development projects provide less than the maximum permitted parking spaces. It is anticipated that a portion of the shortfall would be accommodated on-street, particularly the overnight residential parking demand, and a portion of the shortfall could potentially be accommodated off-street in public parking facilities serving the daytime non-residential parking demand (e.g., the SFMTA Fifth & Mission/Yerba Buena Garage). As a result of the parking shortfall, some

> drivers may circle around the neighborhood in search of parking, which would increase traffic congestion on the local street network.

Id. Despite these statement, the DEIR concludes that parking impacts would be less than significant. (DEIR, p. IV.D-78). This conclusion simply does not logically follow from the DEIR's own analysis. As such it is arbitrary and capricious.

6. The Traffic Analysis Fails to Analyze Cumulative Impacts.

Traffic Engineer Smith concludes that the traffic analysis fails to include many reasonably foreseeable future projects, such as Pier 70 in the nearby Dogpatch neighborhood, and many others. These projects will have cumulative traffic impacts together with the Project, which are not analyzed or mitigated in the DEIR.

B. The Plan will have Significant Adverse Air Quality Impacts that are not Disclosed or Analyzed in the DEIR.

As discussed by environmental consultants, Matthew Hagemann, C.Hg., and Jessie Jaeger, B.S., or Soil Water Air Protection Enterprise (SWAPE), the air quality analysis is woefully inadequate. SWAPE states:

> The DEIR concludes that the Plan would have a less than significant air quality impact (p. IV.F-33). This conclusion, however, is incorrect for several reasons. First, the air quality analysis conducted within the DEIR is based on outdated baseline data that do not accurately reflect current traffic, air quality, pedestrian safety, and population within the Plan area. Second, the DEIR fails to account for all major development projects currently being considered within the area. As a result, the Plan's net increase in criteria air pollutants within the area, as well as it's cumulative air quality impact, are misrepresented. Due to these reasons, we find the DEIR's air quality analysis and resultant significance determination to be inadequate, and require that an updated DEIR be prepared to adequately evaluate the Plan's air quality impact. (Exhibit B, p.1).

While the DEIR admits that individual projects built pursuant to the Plan may have significant impacts, (DEIR, p. IV.F-34), it fails to acknowledge that these individual projects are made possible only because of the Plan and it is therefore the Plan itself that has significant impacts, as well as the individual projects. In essence, the City acknowledges individual impacts of specific projects, while ignoring cumulative impacts of the Plan.

1. Air Quality Baseline Analysis is Inadequate.

First the air quality analysis cannot be adequate if it uses an erroneous baseline. *CBE v. SCAQMD, supra*. The DEIR fails to disclose that the San Francisco Department

of Public Health has determined Plan area has among the worst air quality in the City, due primarily to extreme traffic congestion. An SFDPH 2012 report states:

> due to close proximity to freeways and high traffic roads, the area has some of the poorest air quality in the City, with 13% of households living in an area exposed to greater than 10ug/m3 of fine particulate matter (PM 2.5) and 16% living in areas with ambient air pollution cancer risks greater than 100 in a million.[15]

Asthma and chronic obstructive pulmonary disease hospitalizations are approximately twice as high in Central SoMa as in the rest of the City.[16] Almost the entire Plan area is in an Air Pollution Exposure Zone (APEZ), meaning that airborne cancer risks exceed 100 per million. (DEIR, Figure IV.F-1). Without this critical baseline information, the DEIR analysis is meaningless. *Taxpayers for Accountable School Bond Spending v. San Diego Unified School Dist*., 215 Cal. App. 4th 1013, 1049 (Cal. App. 4th Dist. 2013) ("Without a reasonable determination of the expected attendance at Hoover evening football games on completion of the Project, District may be unable to adequately compare the baseline attendance to expected attendance in determining whether there is a fair argument the Project may have a significant impact on traffic and/or parking.n22 (Guidelines, §§ 15125, subd. (a), 15126.2, subd. (a); *Communities*, at p. 320 & fn. 5.)")

In *Kings County Farm Bureau v. City of Hanford*, 221 Cal.App.3d at 718, the court concluded that an EIR inadequately considered an air pollution (ozone) cumulative impact. The court said: "The [ ] EIR concludes the project's contributions to ozone levels in the area would be immeasurable and, therefore, insignificant because the [cogeneration] plant would emit relatively minor amounts of [ozone] precursors compared to the total volume of [ozone] precursors emitted in Kings County. The EIR's analysis uses the magnitude of the current ozone problem in the air basin in order to trivialize the project's impact." The court concluded: "The relevant question to be addressed in the EIR is not the relative amount of precursors emitted by the project when compared with preexisting emissions, but ***whether any additional amount of precursor emissions should be considered significant in light of the serious nature of the ozone problems in this air basin***." (Emphasis added). The *Kings County* case was reaffirmed in *Communities for a Better Environment v. Cal. Res. Agency*, 103 Cal.App.4th at 116, where the court rejected cases with a narrower construction of "cumulative impacts."

As in Kings County, given the already extreme air pollution problems facing the Plan area, the Project's air quality impacts are even more significant. The DEIR glosses over this issue by failing to acknowledge the air pollution baseline.

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[15] Id. p. 3.
[16] Id. p. 22.

2. Plan Exceeds Applicable CEQA Significance Thresholds.

The DEIR erroneously concludes that the Plan will have less than significant air quality impacts. (DEIR, p. IV.F-33). The DEIR bases this conclusion on the allegation that growth in VMT will be less than growth in population. Id. However, as discussed above, employee VMT will actually increase under the Plan. Therefore, this conclusion is contradicted by the facts and is arbitrary and capricious.

a. DEIR Violates SB 743 by Basing Air Quality Impacts on VMT.

SB 743, expressly states that even if VMT is reduced (which it is not), the agency must still analyze air quality impacts and pedestrian safety impacts, among others. Pub. Res. Code §21099(b) states:

> (3) This subdivision does not relieve a public agency of the requirement to analyze a project's potentially significant transportation impacts related to air quality, noise, safety, or any other impact associated with transportation. The methodology established by these guidelines shall not create a presumption that a project will not result in significant impacts related to air quality, noise, safety, or any other impact associated with transportation. Notwithstanding the foregoing, the adequacy of parking for a project shall not support a finding of significance pursuant to this section.[17]

The City has done precisely what is prohibited by SB 743. The City concludes (erroneously) that since the Plan reduces VMT, it does not have significant air pollution impacts. SB 743 prohibits this type of analysis and requires an independent analysis of air quality impacts. Therefore, the City has failed to proceed in a manner required by law and has thereby abused its discretion.

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[17] OPR Draft Regulations for SB 743, p. III:15 (Jan. 20, 2016) state:

> Models can work together. For example, agencies can use travel demand models or survey data to estimate existing trip lengths and input those into sketch models such as CalEEMod to achieve more accurate results. Whenever possible, agencies should input localized trip lengths into a sketch model to tailor the analysis to the project location. However, in doing so, agencies should be careful to avoid double counting if the sketch model includes other inputs or toggles that are proxies for trip length (e.g. distance to city center). Generally, if an agency changes any sketch model defaults, it should record and report those changes for transparency of analysis. Again, trip length data should come from the same source as data used to calculate thresholds, to be sure of an "apples-to-apples" comparison.

b. Plan Has Highly Significant Air Quality Impacts Related to Criteria Air Pollutants.

The DEIR acknowledges that the BAAQMD has established CEQA significance thresholds for air pollution, and that these thresholds apply to the Plan. (DEIR, p. IV.F.1; IV.F-7; IV.F-35).

- Under BAAQMD CEQA Guidelines, a CEQA project with more than 510 apartments are condominiums will have significant emissions of the zone precursor, reactive organic gases (ROGs). (DEIR, p. IV.F-35). The Plan will result in 14,400 new housing units in the Plan area – 28 times above the BAAQMD CEQA significance threshold!
- Under the BAAQMD CEQA Guidelines, a project with more than 346,000 square feet of office space will have significant emission of the ozone-precursor, nitrogen oxides (NOx). (DEIR, p. IV.F-35). The Plan will allow 10,430,000 square feet of office space – 30 times above the BAAQMD CEQA Threshold.

When an impact exceeds a duly adopted CEQA significance threshold, as here, the agency abuses its discretion if it refuses to acknowledge a significant impact. Indeed, in many instances, such air quality thresholds are the only criteria reviewed and treated as dispositive in evaluating the significance of a project's air quality impacts. *See, e.g. Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 960 (County applies BAAQMD's "published CEQA quantitative criteria" and "threshold level of cumulative significance"). *See also Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 110-111 ("A 'threshold of significance' for a given environmental effect is simply that level at which the lead agency finds the effects of the project to be significant"). The California Supreme Court recently made clear the substantial importance that a BAAQMD significance threshold plays in providing substantial evidence of a significant adverse impact. *Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 327 ("As the [South Coast Air Quality Management] District's established significance threshold for NOx is 55 pounds per day, these estimates [of NOx emissions of 201 to 456 pounds per day] constitute substantial evidence supporting a fair argument for a significant adverse impact"). The City has abused its discretion by failing to disclose the Plan's significant criteria air pollutant impacts. A recirculated DEIR is required to disclose this impact and propose all feasible mitigation measures.

c. Plan Has Highly Significant Air Quality Impacts Related to Toxic Air Contaminants.

Almost the entire Plan area is already listed as an Air Pollution Exposure Zone (APEZ), meaning air pollution-related cancer risk already exceeds 100 per million. (DEIR Figure VI.F-1). Under BAAQMD CEQA significance thresholds, any increase in cancer risk above 10 per million is considered significant. (DEIR, p. IV.F.23). The DEIR admits that "as a result of Plan-generated traffic … excess cancer risk within the Air Pollutant Exposure Zone would increase by as much as 226 in a million and PM-2.5 concentrations would increase by up to 4.54 ug/m3 at individual receptor points. These levesl substantially exceed the thresholds identified in the Approach and Analysis subsection." (DEIR p. IV.F.-48). In other words, the Plan will cause cancer risk to almost triple in the Plan area, from 100 per million to 326 per million. The increase of 226 per million exceeds the CEQA significance threshold by 22 times. Of particular concern to the Neighbors is the fact that the property at 631 Folsom, is currently not with the APEZ. (DEIR Figure VI.F-1). However, with Plan implementation, the property will exceed the cancer risk threshold and it will be re-designated as part of the APEZ. (DEIR, Figure IV.F-3). This is a particular concern to the Neighbors because the building is not equipped with high efficiency air filtration (MERV-13), and the DEIR includes no mitigation measure to require retrofitting of existing buildings with filtration.

d. The DEIR Contains Inadequate Air Pollution Mitigation and Alternatives.

While the DEIR acknowledges that the Plan has significant impacts related to toxic air contaminants (TACs), it does not impose all feasible mitigation measures to reduce such impacts. The DEIR contains only four weak mitigation measures to reduce air quality impacts: 1) electrical hook-ups for diesel trucks at refrigerated warehouses; 2) low-VOC paints; 3) best available control technology for diesel back-up generators; and 4) "other measures" to reduce air pollutant emissions.

i. DEIR Improperly Relies on Deferred Air Mitigation.

The fourth mitigation measure is a clear example of deferred mitigation that is prohibited by CEQA. CEQA requires mitigation measures to be clearly set forth in the EIR so that the public may analyze them and their adequacy. "Other" undefined measures provides not specificity. Feasible mitigation measures for significant environmental effects must be set forth in an EIR for consideration by the lead agency's decision makers and the public before certification of the EIR and approval of a project. The formulation of mitigation measures generally cannot be deferred until after certification of the EIR and approval of a project. Guidelines, section 15126.4(a)(1)(B) states: "Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way."

"A study conducted after approval of a project will inevitably have a diminished influence on decisionmaking. Even if the study is subject to administrative approval, it is analogous to the sort of post hoc rationalization of agency actions that has been repeatedly condemned in decisions construing CEQA." (*Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 307.) "[R]eliance on tentative plans for future mitigation after completion of the CEQA process significantly undermines CEQA's goals of full disclosure and informed decisionmaking; and[,] consequently, these mitigation plans have been overturned on judicial review as constituting improper deferral of environmental assessment." (*Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 92 (Communities).)

The fourth mitigation measure is a clear example of deferred mitigation prohibited by CEQA. A new DEIR is required to clearly identify specific mitigation measures that will be required to reduce air pollution impacts.

ii. DEIR Fails to Analyze or Require all Feasible Mitigation Measures.

There are numerous feasible mitigation measures that should be required to reduce the Plan's air quality impacts. The California Attorney General has published a list of feasible measures to reduce greenhouse gas emissions from projects and area plans. (Addressing Climate Change at the Project Level, California Attorney General's Office, Available at http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf, Exhibit E). These same measures would reduce the Plans emissions of NOx, ROGs and TACs. All of the measures in the Attorney General document should be analyzed in a revised DEIR and imposed a mandatory mitigation measures. These measures include, but are not limited to:

- Energy efficiency audits of existing buildings.
- Energy efficiency upgrades to existing buildings not otherwise required by law, including heating, ventilation, air conditioning, lighting, water heating equipment, insulation and weatherization (perhaps targeted to specific communities, such as low-income or senior residents).
- Programs to encourage the purchase and use of energy efficient vehicles, appliances, equipment and lighting.
- Programs that create incentives to replace or retire polluting vehicles and engines.
- Programs to expand the use of renewable energy and energy storage.
- Preservation and/or enhancement of existing natural areas (e.g., forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, and groundwater recharge areas) that provide carbon sequestration benefits.
- Improvement and expansion of public transit and low- and zero-carbon transportation alternatives.
- Requiring solar photo-voltaic panels on all new and existing buildings.

- Require Energy Star Appliances in all new buildings.
- Require energy efficient lighting in all new buildings, particularly LED.
- Require all new buildings to be LEED certified.
- Require solar hot water heaters.
- Require water-efficiency measures.
- Require energy storage facilities to store solar energy.
- Require electric vehicle charging stations to encourage use of the clean cars.

All of these measures are feasible and should be analyzed in a revised DEIR.

C. The Plan will have Significant Adverse Visual Impacts that are not Disclosed or Analyzed in the DEIR.

The Plan will have significant adverse visual impacts because it conflicts with height and bulk prevailing in the area. As discussed above, the Plan is inconsistent with the Urban Design Element of the General Plan, which states:

> Policy 3.5: Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development; and
>
> Policy 3.6: Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction

(DEIR p. III-10). The Plan allows buildings of 350 feet or more in an area that the City admits is a mid-rise neighborhood. This is not only inconsistent with the General Plan, but also with the Plan's own Goal 8.3: "Reinforce the character of Central SoMa as a mid-rise district with tangible 'urban rooms.'" (DEIR, p. II-23). The DEIR states, "some observers could be more keenly aware of any increase in building height or overall density, and these observers could find these changes substantially disruptive." (DEIR, p. IV-B.32). The DEIR states that the "Plan would seek to retain the character of the mid-rise district, limiting the presence of high-rises to areas near transit stations," (DEIR, p. IV.B-34), yet by allowing 350 buildings on Second and Harrison, the Plan violates this principle.

As noted in the Central Corridor Plan, such tall buildings are inconsistent with the mid-rise character of the neighborhood. The City stated in the Central Corridor Plan, at page 32, "The predominant character of SoMa as a mid-rise district should be retained, and the presence of high-rises reduced by limiting their distribution and bulk." The Central Corridor Plan also stated:

> Given the amount of high-rise space recently enabled through the Transit Center District Plan and goals to build on and complement the character of SoMa, this Plan does not envision high rise development as a major component of the Central Corridor Plan. Rather, it promotes the kind of mid-rise development that

> is more in line with SoMa's current character and can also enable the large floorplate work spaces that are in high demand, yet difficult to find and secure, in central City locations.
>
> In general, the mid-rise heights set by the plan provide for the same, and in some cases even more, density that would be provided with taller buildings. The large floor-plates possible on large development sites, combined with heights ranging from 8 to 12 stories, enables a significant amount of density. Conversely, the combination of necessary bulk limitations, tower separation requirements for high rise buildings and the realities of designing elegant tall buildings that maximize light, air and views to both tenants and the neighborhood, limits the amount of incremental additional development possible with a tower prototype. For instance, on a 100,000 square foot site, a mid-rise building at 130 feet in height would yield more development space than two 200-foot towers constructed above an 85-foot base on the same site.
>
> However, to enable the option for more high-rise buildings, the Plan does include a High Rise Alternative, which amplifies height limits in certain areas, expanding opportunities for buildings taller than 130 feet.

Central Corridor Plan, p. 116. Having made these statements in the Central Corridor Plan, the City cannot not simply "unring the bell." *Stanislaus Audobon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144. The DEIR's conclusion that the Plan has no significant visual impacts is arbitrary and capricious and ignore the conflicts with the General Plan. (DEIR, p. IV.B-33).

By allowing very tall buildings throughout the Plan area, the Plan conflicts with the Urban Design Element, and creates a significant aesthetic impact on the neighborhood. This impact must be disclosed and mitigated in a revised DEIR. The most obvious was to reduce this impact is for the City to adopt the Reduced Height (Mid-Rise) alternatives.

D. The Plan will have Significant Adverse Growth-Inducing Impacts that are Inadequately Analyzed in the DEIR.

CEQA requires that an EIR include a detailed statement setting forth the growth-inducing impacts of a proposed project. Pub. Res. Code Section 21100(b)(5). A proposed project is either directly or indirectly growth inducing if it: (1) fosters economic or population growth or requires additional housing; (2) removes obstacles to growth; (3) taxes community services or facilities to such an extent that new services or facilities would be necessary; or (4) encourages or facilitates other activities that cause significant environmental effects. CEQA Guidelines Section 15126.2(d). While growth inducing impacts of a project need not be labeled as adverse, the secondary impacts of growth (e.g., traffic, air pollution, etc.) may be significant and adverse. In such cases,

the secondary impacts of growth inducement must be disclosed as significant secondary or indirect impacts of the project. The analysis required is similar in some respects to the analysis required to analyze impacts associated with population and housing.

Urban Planner Terrell Watt, AICP, explains that the DEIR contains a discussion of Growth Inducement at Section V.D. The discussion acknowledges the proposed zoning changes under the Project would expand the Plan Area's capacity for growth through a planning horizon year of 2040, during which time up to an additional 14,500 residential units and up to an additional 63,600 jobs could be accommodated in the Plan Area. The discussion provides no analysis of the Project's potential to induce growth in accordance with CEQA, nor does the discussion reach any conclusions as to the significance of growth inducing impacts instead relying on the assertion that the growth allowed by the Project is simply an accommodation of growth projected for the region.

Watt states:

> There is no question the Project will allow substantial growth in the Central SOMA neighborhood; more than an increase of 450 percent for jobs and at least 300 percent for housing. Due to the Project's high employment to housing ratio regardless of which jobs growth assumption, the Project will result in additional demand for housing in the Project area or beyond. In addition, substantial new non-residential and residential growth will require additional public services, likely including expansion and therefore construction of facilities in the neighborhood or adjacent neighborhoods. Yet the DEIR neither discloses or analyzes these impacts. CEQA requires that if new construction of housing will occur to accommodate the Project's employees or services expanded, then the EIR must analyze the environmental impacts of that construction. The appropriate components for an adequate analysis include: (1) estimating the amount, location and time frame for growth that may result from the implementation of the Project (e.g., additional housing); (2) considering whether the new population would place additional demands on public services such as fire, police, recreation, emergency, health, childcare or schools; (3) applying impact assessment methodology to determine the significance of secondary or indirect impacts as a result of growth inducement; and (4) identifying mitigation measures or alternatives to address significant secondary or indirect impacts. CEQA Guidelines Appx. G Section XIII(a). The DEIR must be revised to provide this analysis.

E. The DEIR's Analysis of Population, Employment and Housing Impacts is Inadequate.

The DEIR concludes that population, employment and housing impacts of the Plan will be less than significant. (DEIR Appendix B, Initial Study at page 82, DEIR in

reliance on the Initial Study at page I-2). As discussed by Urban Planner Terrell Watt, AICP, this conclusion is untenable and not supported by substantial evidence. Watt explains:

> Instead of providing an adequate analysis of these impacts based on the current Project, the DEIR refers to the discussion of Population and Housing in the Initial Study in reaching its conclusion that impacts will be less than significant. There are many reasons this approach is flawed. First, accurate and consistent existing and projected population, housing and job growth are essential facts to support this conclusion. The Project addressed in the Initial Study and the DEIR are different and therefore the Initial Study cannot adequately analyze the Project as currently proposed. See e.g., Table 4, 5 and 6 in the Initial Study and Table IV-1 in the DEIR at page IV-6. Second, the conclusion that impacts associated with both direct and indirect population growth in the area will be less than significant is not supported by analysis, facts or evidence as required. The Project (Plan) clearly will add significantly to the population and employment of the Project area, changing the character of the area and increasing the jobs to housing imbalance. The Initial Study states that the Project (Plan) allows up to 56,400 new jobs by 2040 and an increase in population of 23,400. New housing units under the Project (Plan) total approximately 13,200 according to the Initial Study. DEIR Appendix B, Initial Study at page 85.[18] Despite this substantial increase in jobs, residents and housing, the Initial Study dismisses impacts as less than significant based on the assertion the growth in within projected growth for the City as a whole and that the Plan itself "would not result in direct physical changes to population or housing." DEIR Appendix B, Initial Study at page 80. This is simply wrong. The Project (Plan) by allowing substantial development in the area including development projects proposed in reliance on the Plan and "that would be allowed under the Plan" will result in changes to the physical environment; changes that must be analyzed in the DEIR. (DEIR at page IV-8 to IV-10). The argument that the Project will result in less than significant impacts because growth is within regional and/or City-wide growth projections is contrary to CEQA's requirement to analyze the significant impacts of a Project against existing conditions (setting) and for the project area. By any measure, the increase in growth as a result of the adoption of the Project is substantial and the numerous impacts associated with substantial new growth of jobs and housing significant as well.
>
> ***
>
> The additional of 25,000 new residents and 63,000 jobs will certainly increase need for a full range of services including schools, day care, police, fire, medical

[18] It is noteworthy these growth assumptions are vastly different than presented in the Central SOMA Plan, DEIR, Financial Analysis and policy papers. See discussion of Growth Inducement in this letter for examples of the vastly different descriptions of growth under the Project.

and more. This increased demand would also further induce businesses to expand and new businesses would crop up to serve the larger population. This would require new employees and draw new residents to the area, who in addition to the direct employment generated by the Project, would also need housing. Neither DEIR nor Initial Study analyze these impacts. In addition, the Project includes Plan objectives implemented through zone changes to favor non-residential development over other kinds of growth and favoring office space and hotels. DEIR at II-13. The result of favoring non-residential over residential development is likely to be an even greater than disclosed jobs housing imbalance. The direct and indirect impacts of this growth must be disclosed and analyzed in a revised and recirculated DEIR.

F. The Plan will have Significant Adverse Open Space Impacts that are not Disclosed or Analyzed in the DEIR.

The DEIR admits that the Plan area suffers from an extreme lack of open space. South Park is the only Rec and Park property in the Plan area. (DEIR, p. II-31). However, the Plan creates almost no new open space area. Worse, it degrades existing open space areas by casting shadows on existing parks and POPOS throughout the Plan area, in violation of the General Plan. (See discussion above). Therefore the DEIR's conclusion that the Plan has no adverse open space impacts is arbitrary and capricious.

The DEIR should be revised to propose specific new open space areas. One prime opportunity for a new open space area is the parking lot located at 350 Second Street. The DEIR should consider other potential open space areas and parks, and also new POPOS throughout the area. This would support the Plan's own Objective, 5.2, "Create new public parks." (DEIR, p. II-31).

The DEIR should also require implantation of the Reduced Height Alternative as a way to reduce shadow impacts on South Park and other public open spaces in the Plan area.

G. The Plan will have Significant Adverse Shadow Impacts that are not Disclosed or Analyzed in the DEIR.

The DEIR erroneously concludes that the Plan does not have significant shadow impacts. (DEIR, p. IV.H-21). This finding ignores the Plan's inconsistency with the General Plan. As discussed above, The Plan is inconsistent with the Recreation and Open Space Element of the General Plan, Policy 1.9: Preserve sunlight in public open spaces. (DEIR, p. III-11). The DEIR admits that the Plan will create new shadow on several parks under the jurisdiction of the Recreation and Park Department, including South Park, Victoria Manalo Draves Park and Gene Friend Recreation Center, as well as several public open spaces. (DEIR, p. III-11). For example the DEIR admits that the

Plan will create new shadows on the only Rec & Park property in the Plan area, South Park, and "could increase shadow on portions of South Park during early morning and late afternoon hours from the spring equinox to the fall equinox (March through September). (DEIR, p. IV.H-35). In other words, the Plan will cast shadows on South Park for half of the year! Similarly, the DEIR admits that the Plan will cast shadows on the heavily used privately owned public open space (POPOS) located at 303 Second Street from noon "through much of the afternoon," and shading up to one-third of the POPOS. (DEIR p. IV.H-38).

Given these conflicts with the General Plan, the DEIR's finding that the Plan has no significant shadow impacts is arbitrary and capricious. The Reduced Height Alternative would reduce this impact and is feasible and would achieve all project goals.

H. The Plan will have Significant Adverse Pedestrian Safety Impacts that are not Disclosed or Analyzed in the DEIR.

The DEIR erroneously concludes that the Plan would have less than significant impacts related to pedestrian safety. (DEIR, p. IV.D-57). This conclusion is arbitrary and capricious and lacks substantial evidence. The Plan would triple the population and number of jobs in the Plan area, adding 25,000 new residents and 63,000 new jobs. This increase alone will increase the number of vehicles and pedestrians in the area, directly increasing the number of conflicts leading to pedestrian safety issues (accidents).

As a threshold matter, the DEIR fails to analyze the already severe pedestrian safety problem in the area that forms the CEQA baseline. The neighborhood has one of the highest incidences of pedestrian injuries in the City. As DPH stated, "The incidence of severe injuries and deaths related to collisions between vehicles and pedestrians, cyclists, and other vehicles is amongst the highest in the City. The situation for pedestrians is especially troubling, as the average annual number of pedestrian injuries and fatalities per 100 road miles is six times higher in the Plan area compared to the City as a whole (48 vs. 8)."[19] Tripling the number of pedestrians and increasing the number of vehicles will clearly increase pedestrian injuries.

The table on pages IV.D-58-59 of the DEIR clearly shows that the number of pedestrian at certain intersections in the Plan area will increase by as much as 6 times – 600%. For example the number of pedestrians at Fourth and King Streets will increase from a current level of 246 at peak hour to 1680. (DEIR, p. IV.D-58). Several other intersections will see increases in pedestrian traffic ranging from 2 to 7 times. At the same time, the Plan will drastically increase traffic congestion. The DEIR states, "The average delay per vehicle at the study intersections would increase with the addition of vehicle trips associated with development under the Plan… more vehicles

[19] Id. p. 3.

would use Mission, Harrison, Fifth, and Sixth Streets, thereby increasing congestion on these streets." (DEIR, p. IV.D-42). Increasing both pedestrian traffic and vehicle congestion is a recipe for increased pedestrian injuries. The DEIR conclusion to the contrary defies logic and is arbitrary and capricious. (See, SWAPE comment, p. 4-5). As pointed out by SWAPE, pedestrian safety impacts will be much worse than set forth in the DEIR because the document fails to consider all reasonably foreseeable projects, such as Pier 70, and 72 other specific project, all of which will add traffic to the area. Id.

Traffic Engineer Daniel T. Smith, PE, concludes that the Plan will have significant impacts on pedestrian and bicycle safety that are not disclosed or analyzed in the DEIR. Mr. Smith concludes that the Plan will drastically increase vehicle, bicycle and pedestrian traffic in the Plan area. As a direct result, it will increase risks to pedestrian safety. The EIR's conclusion to the contrary is untenable. Mr. Smith states:

> All these hazards clearly increase with the increase of incidence of conflicts, a product of motor vehicle, bike, and pedestrian volumes. These are ultimately a function of the intensity of resident and employment population in the Project area. The DEIR is flat wrong in concluding that increased potential for conflict does not represent a hazard in the study area, especially when the areas of conflict are also areas of undisclosed increases in traffic congestion that intensify the failure to perceive the conflict or induce behavior that results in crashes.
>
> The DEIR is further unreasonable and unsupported in its assertion on page IV.D-41 that street network changes would reduce the potential for conflicts to the extent that it would reduce the incidence of conflict to levels such that would make the traffic hazards of implementation of the plan less than significant. It has conducted no analysis of conflict incidence with and without the Plan Project and with and without the Project's purported roadway improvements. In fact, it has not relied in any way on the statistical records of accidents by location, type, movement pattern, and participant actions and impairments that are readily available to the City[20]. The entire analysis on this topic is inadequate and must be revised and recirculated in draft status. (Smith Comment, pp. 6-7).

I. The Plan will have Significant Adverse Displacement Impacts that are not Disclosed or Analyzed in the DEIR.

The DEIR erroneously concludes that displacement is not an environmental impact under CEQA. (DEIR, p. V-10). As a result, the DEIR does not analyze this impact. As discussed by Urban Planner Terrell Watt, AICP, the Plan is likely to result in

[20] We refer to the Statewide Integrated Traffic Records System (SWITRS) in which the California Highway Patrol receives all traffic reports from all jurisdictions in the state and produces summaries by jurisdiction, by road segment and intersection location, by types of vehicle involved, movements, and causal factors including operator impairments or road deficiencies.

the displacement of large numbers of low and moderate income residents of the Plan area. These residents will be forced to move elsewhere, perhaps replacing short current commutes with long commutes to distant suburbs. This is an environmental impact that must be analyzed under CEQA.

CEQA requires the lead agency to determine whether the "environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly," (PRC § 21083(b)(3), (d)), and to "take immediate steps to identify any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds being reached." See PRC §21000 et seq.

CEQA Guidelines Appendix G, Section XII provides that a project will have significant impacts where it will:

- Induce substantial population growth or concentration of population in an area, either directly (for example, by proposing new housing or businesses), or indirectly (for example, through extension of roads or other infrastructure);
- ***Displace substantial numbers of existing housing*** necessitating the construction of replacement housing elsewhere; or
- ***Displace substantial numbers of people***, necessitating the construction of replacement housing elsewhere. See CEQA Guidelines Appendix G, Section XII.

Therefore, contrary to the DEIR's position, displacement is an environmental impact that must be analyzed under CEQA. See also, See Kalama D. Harris, Attorney General, "Environmental Justice at the Local and Regional Level," May 8, 2012, http://oag.ca.gov/sites/all/files/pdfs/environment/ej_fact_sheet_final_050712.pdf. (Exhibit E).

Here, the Plan is likely to displace numerous residents and commuters who currently live, work, commute, and recreate in the area. These residents will move to other areas, resulting in longer commutes and suburban sprawl. This impact must be analyzed in a revised DEIR. Mitigation measures should be considered, such as requiring additional low income housing.

Urban Planner Terrell Watt, AICP, concludes that the Plan will displace low-income current residents. Watt states:

> The Project will inevitably lead to the displacement of low and moderate income residents because of the incentives provided through zoning and other mechanisms for new non-residential development in the Project area. Currently over 10,000 people live in the Central SOMA neighborhood or Project area in approximately 7800 housing units. These residents are among the most ethically

and economically diverse in the City with about 60% of residents people of color.[21] Although the median household income is slightly higher than the City average, the neighborhood has one of the highest levels of poverty with 31% of the population living at or below 200% of the poverty threshold.[22] Yet, the DEIR concludes that the Project (Plan) would not displace a large number of housing units or necessitate construction of replacement housing outside the Plan area finding this impact less than significant. DEIR Appendix B, Initial Study at page 86. The DEIR reaches this conclusion despite acknowledgement that the Project (Plan) could require the demolition of existing housing units within the Plan Area. The basis of the DEIR's conclusion is in short:

> "From the perspective of the City's housing stock, the loss of housing units as a result of development under the Plan would be offset by the production of up to approximately 13,200 net new housing units (Initial Study page 86) within the Plan area in addition to residential development elsewhere in San Francisco as has been occurring and is expected to occur in the future, in addition to the fees paid for the jobs/housing linkage program and Inclusionary Affordable Housing." DEIR Appendix B, Initial Study at pages 86-87.

The Initial Study contradicts this statement at page 85, noting that the project demand for housing created by the Project would be about 19,900 units, far surpassing the potential addition of about 11,700 units projected to be created in the Plan area by 2040. The current Project is projected to produce fewer housing units – approximately 7,500 -- resulting in an even larger gap between new employees in the Project area and new housing units. There is no question the Project will generate a demand for housing beyond that proposed by the Project. A revised DEIR must acknowledge this impact and provide further evidence housing need will be met and where.

For these reasons the approach the DEIR takes to analysis of this potential impact falls short of CEQA's requirements for analysis, facts and evidence to support conclusions concerning impact significance.

J. The Plan will have Significant Adverse Public Service Impacts that are not Disclosed or Analyzed in the DEIR.

The DEIR concludes that the Plan will not have significant public service impacts on police, fire protection, and other public services. (DEIR, p. S-46). The DEIR states:

[21] SF Dept of Public Health, Environmental Health, Sustainable Communities Health Assessment: Central Corridor Plan, page 6 (11-30-12).
[22] Id. p. 21

> Development under the Plan and proposed street network changes would not increase the demand for police service or fire protection service such that new or physically altered facilities, the construction of which could cause significant environmental impacts, would be required in order to maintain acceptable levels of service. (DEIR, p. S-46).

The DEIR relies on the Initial Study for this conclusion. However, as discussed above, the project described in the Initial Study was entirely different from the Plan. It therefore provides no basis for the DEIR's conclusion.

This conclusion defies reason and is arbitrary and capricious. The Plan will triple the resident population if the area, and more than double the number of workers – adding 25,000 permanent residents and 63,000 workers. This is essentially like adding a population the size of a medium suburb to the City. It is preposterous to conclude that these 90,000 new workers and residents will not require any police, fire or other social services.

Urban Planner Terrell Watt explains, that the Plan will have highly significant public service impacts. The Initial Study acknowledges that specific development projects allowed under the Plan and associated increases in population and land use intensity would result in an increased demand for public services noting that the Southern Station (in 2013) receives approximately 25 % of the City's call for service. (Initial Study at page 120). The Central SOMA Neighborhood (Project area) faces "amongst the highest violent and property crime rates in the City[23]. There is no question the addition of over 63,000 new jobs and 23,400 residents will result in significant demand for additional police and fire personnel and likely facilities and equipment. In addition, increased congestion on the Project area roads will likely result in reduced response times unless additional resources are provided in the area (e.g., sub-stations, other). A revised analysis of these impacts must be prepared and recirculated in a new DEIR.

K. The DEIR Fails to Adequately Mitigate Significant Adverse Impacts to Public Transit.

The DEIR admits that:

> Transportation and Circulation, growth pursuant to the Plan would result in Muni ridership that would exceed Muni's capacity utilization standard on one corridor crossing the southeast screenline, as well as on two corridors crossing Plan-specific cordon lines. As described in Chapter II, Project Description, the Plan would also result in transit delay on a number of Muni lines, due to increased congestion. (DEIR, p. III-9).

[23] SF Department of Public Health, Environmental Health, Sustainable Communities Health Assessment: Central Corridor Plan, p. 4.

The DEIR admits that the Plan would have significant and unavoidable impacts to public transit, and that "substantial increase in transit demand that would not be accommodated by local transit capacity." (DEIR, p. IV.D-43).

Despite admitting this impact, the DEIR improperly defers mitigation. The DEIR states that "during the design phase, the SFMTA shall review each street network project ... and incorporate feasible street network design modifications." (DEIR, p. IV.D-53). The DEIR also states that the City will "establish fee-based sources of revenue such as parking benefit district," and shall "establish a congestion-charge scheme for downtown San Francisco." (Id.) None of these mitigation measures are defined in the least. There is no way for the public to review the adequacy of these measures. They are classic deferred mitigation that is prohibited under CEQA. (See section above on deferred mitigation).

In addition, the "fee-based" mitigation has been held inadequate under CEQA, unless the specific source of the fee is identified and the specific measures to be funded are set forth in the EIR. The DEIR fails both of these tests. Mitigation fees are not adequate mitigation unless the lead agency can show that the fees will fund a specific mitigation plan that will actually be implemented in its entirety. *Napa Citizens for Honest Gov. v. Bd. Of Supervisors* (2001) 91 CallApp.4th 342 (no evidence that impacts will be mitigated simply by paying a fee); *Anderson First Coal. v. City of Anderson* (2005) 130 Ca.App.4th 1173 (traffic mitigation fee is inadequate because it does not ensure that mitigation measure will actually be implemented); *Kings Co. Farm Bureau v. Hanford* (1990) 221 Cal.App.3d 692. But see, *Save Our Peninsula Comm v. Monterey Co.* (2001) 87 Cal.App.4th 99 (mitigation fee allowed when evidence in the record demonstrates that the fee will fund a specific mitigation plan that will actually be implemented in its entirety). *California Native Plant Society v. County of El Dorado et al.* (2009) 170 Cal. App. 4th 1026, held that the fee program had to have gone through CEQA review for an agency to say that the payment of the fee alone is adequate CEQA mitigation.

The DEIR fails to describe any specific mitigation measures to reduce the acknowledged impact to public transit, and fails to specify what measures will be funded. A revised DEIR is required to provide specific mitigation measures to reduce the Plan's transit impacts.

L. The Plan will have Significant Biological Impacts Related to Bird Strikes that are Inadequately Analyzed in the DEIR.

The DEIR concludes that the Plan will not have significant biological impacts. Wildlife biologist, Dr. Shawn Smallwood, Ph.D. concludes that the DEIR's conclusion ignores substantial evidence and that the Plan will have significant impacts on several species. (Smallwood Comment). In particular, placing large number of buildings,

particularly tall buildings, in the Plan area will result in thousands of bird deaths due to building collisions.

First, Dr. Smallwood concludes that the DEIR uses an improper baseline. The Initial Study an DEIR conclude that there will be insignificant impacts because the area is already urbanized. Dr. Smallwood points out that many protected species live in urbanized areas, and will have conflicts with the tall buildings proposed by the Plan. The DEIR ignores these impacts. The Initial Study relies on the California Natural Diversity Database to conclude that many species are not present in the area. Dr. Smallwood points out that the database is only used to confirm the presence of species, not the absence. Dr. Smallwood points out that the eBird database confirms the presence in the area of several protected bird species, including yellow warbler, brown pelican, and California gull, as well as multiple other species protected by the International Migratory Bird Treaty Act. A review of eBird also reveals the use of the area by many species of bird, including additional special-status species such as double-crested cormorant, tricolored blackbird, Peregrine falcon and Cooper's hawk. The eBird records reveal what any biologist should expect of San Francisco, and that is the use of the peninsula as a migration route by many species of bird. Building glazed or glass-facaded high-rises in the middle of this migration route will obviously destroy many migrating birds, and those birds not colliding with the buildings will have to exert extra energy during migration to fly around the buildings. Dr. Smallwood concludes that thousands of birds will be killed by collisions with buildings proposed to be built under the Plan, as well as by house cats owned by residents. These impacts are neither analyzed nor mitigated in the DEIR.

Dr. Smallwood concludes that while the San Francisco bird ordinance is laudatory, it is not sufficient to mitigate the bird-strike impact to less than significant. This impact should be analyzed in a revised DEIR to determine feasible mitigation measures and alternatives. A plainly feasible alternative would be to limit the number of very tall buildings, or to adopt the Reduced Height alternative.

M. DEIR Fails to Adequately Analyze Cumulative Impacts.

The DEIR has a patently inadequate cumulative impact section because it fails to consider the Plan's impacts together with almost 72 other projects that are reasonably foreseeable in the area. Clearly, the Plan's impacts will be much more significant when viewed together with these 72 other projects. SWAPE identifies 72 projects that are not accounted for in the DEIR, including the massive Pier 70 project, which will be in very close proximity to the Plan area (Dogpatch). Failure to analyze these cumulative projects renders the DEIR inadequate. (SWAPE Comment, p. 6-8).

An EIR must discuss significant cumulative impacts. CEQA Guidelines section 15130(a). This requirement flows from CEQA section 21083, which requires a finding that a project may have a significant effect on the environment if "the possible effects of

a project are individually limited but cumulatively considerable. . . . 'Cumulatively considerable' means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." **"**Cumulative impacts" are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." CEQA Guidelines section 15355(a). "[I]ndividual effects may be changes resulting from a single project or a number of separate projects." CEQA Guidelines section 15355(a).

"The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." *Communities for a Better Environment v. Cal. Resources Agency ("CBE v. CRA")*, (2002) 103 Cal.App.4th 98, 117. A legally adequate cumulative impacts analysis views a particular project over time and in conjunction with other related past, present, and reasonably foreseeable probable future projects whose impacts might compound or interrelate with those of the project at hand. "Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." CEQA Guidelines § 15355(b).

As the court stated in *CBE v. CRA,* 103 Cal. App. 4th at 114:

> Cumulative impact analysis is necessary because the full environmental impact of a proposed project cannot be gauged in a vacuum. One of the most important environmental lessons that has been learned is that environmental damage often occurs incrementally from a variety of small sources. These sources appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact.

(Citations omitted).

In *Friends of Eel River v. Sonoma County Water Agency,* (2003) 108 Cal. App. 4th 859, the court recently held that the EIR for a project that would divert water from the Eel River had to consider the cumulative impacts of the project together with other past, present and reasonably foreseeable future projects that also divert water from the same river system. The court held that the EIR even had to disclose and analyze projects that were merely proposed, but not yet approved. The court stated, CEQA requires "the Agency to consider 'past, present, and probable future projects producing related or cumulative impacts . . . .' (Guidelines, § 15130, subd. (b)(1)(A).) The Agency must interpret this requirement in such a way as to 'afford the fullest possible protection of the environment.'" *Id.*, at 867, 869. The court held that the failure of the EIR to analyze the impacts of the project together with other proposed projects rendered the

document invalid. "The absence of this analysis makes the EIR an inadequate informational document." *Id.,* at 872.

A revised DEIR is required to consider the impacts of the Plan together with other reasonably foreseeable projects, including Pier 70.

VIII. THE DEIR ALTERNATIVES ANALYSIS IS LEGALLY DEFICIENT.

The DEIR's alternatives analysis is legally deficient because it fails to acknowledge that the Reduced Height Alternative is the environmentally superior alternative. The Reduced Height Alternative would reduce almost all of the Plan's significant impacts, while still achieving all of the Plan's objectives. It is therefore the environmentally superior alternative.

An EIR must describe a range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. "An EIR's discussion of alternatives must contain analysis sufficient to allow informed decision making." (*Laurel Heights I*, 47 Cal.3d at 404.) An EIR must also include "detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project." (*Id*. at 405.)

One of CEQA's fundamental requirements is that the DEIR must identify the "environmentally superior alternative," and require implementation of that alternative unless it is infeasible. (14 Cal.Code Regs. §1526.6(e)(2); Kostka & Zischke, *Practice Under the California Environmental Quality Act* §15.37 (Cont. Educ. Of the Bar, 2008).) Typically, a DEIR identifies the environmentally superior alternative, which is analyzed in detail, while other project alternatives receive more cursory review.

The analysis of project alternatives must contain an accurate quantitative assessment of the impacts of the alternatives. In *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 733-735, the court found the EIR's discussion of a natural gas alternative to a coal-fired power plant project to be inadequate because it lacked necessary "quantitative, comparative analysis" of air emissions and water use.

A "feasible" alternative is one that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. (Pub. Res. Code § 21061.1; 14 Cal. Code Regs. § 15364.) California courts provide guidance on how to apply these factors in determining whether an alternative or mitigation measure is economically feasible.

The lead agency is required to select the environmentally preferable alternative unless it is infeasible. As explained by the Supreme Court, an environmentally superior alternative may not be rejected simply because it is more expensive or less profitable:

> The fact that an alternative may be more expensive or less profitable is not sufficient to show that the alternative is financially infeasible. What is required is evidence that the additional costs or lost profitability are sufficiently severe as to render it impractical to proceed with the project.

(*Citizens of Goleta Valley v. Bd. of Supervisors* (1988) 197 Cal.App.3d 1167, 1180-81; *see also*, *Burger v. County of Mendocino* (1975) 45 Cal.App.3d 322 (county's approval of 80 unit hotel over smaller 64 unit alternative was not supported by substantial evidence).)

The expert consultants at SWAPE conclude that the Reduced Heights Alternative is environmentally superior in that it reduces almost all of the Plan's significant impacts while still achieving all project goals. (SWAPE Comment, pp. 9-10). SWAPE includes a chart of impacts:

A summary of the impacts and percent reduction (if applicable) the Alternative would result in are provided in the table below.

Reduced Heights Alternative Impact Reductions	
Impact	**Percent Reduction from Proposed Plan**
Transit Ridership	*(8%)*
Pedestrian and Bicycle Operations	*(8%)*
Pedestrian Crowding in Crosswalks	*Significantly Reduced*
Bicycle Travel	*Significantly Reduced*
Demand for Off-Street Freight Loading Spaces	*Significantly Reduced*
On-Street Commercial Loading Spaces	*Significantly Reduced*
Curb Space for Passenger Loading/Unloading Zones	*Significantly Reduced*
Parking Demand	*(10%)*
Construction Activities	*Significantly Reduced*
Emissions of Criteria Air Pollutants, Greenhouse Gases (GHGs), and Traffic-Generated Toxic Air Contaminants (TACs)	*Significantly Reduced*

We have prepared the analysis below showing that the Reduced Heights Alternative is environmentally superior to all other alternatives. The chart relies on the DEIR's own conclusions for each impact.

DEIR: S-55		CENTRAL SOMA	NO PROJECT ALT by 2040	REDUCED HEIGHT	MODIFIED TODCO	LANDUSE VAR Excludes Residential Uses	LANDUSE ONLY Excludes street network

							changes
JOBS + HOUSING	HOUSEHOLDS	14,400	9,200	12,400	12,700	12,900	14,400
	RESIDENTS	25,500	16,300				25,500
	JOBS	63,600	27,200	55,800	56,700	66,200	63,600
	TOTAL FLOOR AREA	31.7M SqFt	17.7M SqFt	27.6M SqFt	28.2M SqFt	30.5M SqFt	31.7M SqFt
GOALS	ABILITY TO MEET OBJECTIVES	ALL	SOME	MOST	MOST	MOST	MOST
LAND USE	PHYSICAL DIV OF COMMUNITY	LTS	=	=	=	=	=
	LAND USE CONFLICT	SUM	<	=	=	=	<
	CUM. LAND USE CONFLICT	SUM	<	=	=	=	<
AESTHETICS	VISUAL CHARACTER	LTS	<	=	=	=	=
	VIEWS / VISTAS	LTS	<	=	=	=	=
	LIGHT / GLARE	LTS	<	=	=	=	=
	CUM. AESTHETICS	LTS	<	=	=	=	=
CULTURAL	HISTORICAL RESOURCES	SUM	<	=	<	=	=
	HISTORICAL RESOURCES	LTS	NI	=	<	=	<
	HISTORICAL RESOURCES	LTSM	<	=	=	=	=
	ARCHEOLOGICAL RESOURCES	LTSM	<	=	=	=	=
	TRIBAL CULTURAL RESOURCES	LTSM	<	=	=	=	=
	PALEONTOLOGICAL RESOURCES	LTS	<	=	=	=	=
	HUMAN REMAINS	LTS	<	=	=	=	=
	CUM. HISTORICAL RESOURCES	SUM	<	=	=	=	=
	CUM. HISTORICAL RESOURCES	LTS	NI	=	<	=	<
	CUM. ARCH. RESOURCES	LTSM	<	=	=	=	=
	CUM. PALEONTOLOGICAL RES	LTS	<	=	=	=	=

TRANSPORTATION + CIRCULATION	VMT	LTS	<	<	<	=	>
	TRAFFIC HAZZARDS	LTS	<	<	<	=	>
	TRANSIT	SUM	<	<	<	=	=
	PEDESTRIANS	SUM	<	<	<	=	=
	BICYCLISTS	LTS	>	=	=	=	>
	LOADING	SUM	<	<	=	=	=
	PARKING	LTS	<	<	<	=	=
	EVERGENCY VEHICLE ACCESS	LTSM	<	<	<	=	<
	CONSTRUCTION	SUM	<	<	<	=	<
	CUM. VMT	LTS	<	<	<	=	>
	CUM. TRAFFIC HAZZARD	LTS	<	<	<	=	>
	CUM. TRANSIT	SUM	<	<	<	=	=
	CUM. PEDESTRIANS	SUM	<	<	<	=	=
	CUM. BICYCLISTS	LTS	>	=	=	=	>
	CUM. LOADING	SUM	<	<	<	=	=
	CUM. PARKING	LTS	<	<	<	=	=
	CUM. EMERGENCY VEH. ACCESS	LTSM	<	<	<	=	<
	CUM. CONSTRUCTION	LTS	<	<	<	=	<
NOISE + VIBRATION	TRAFFIC NOISE	SUM	<	<	<	=	<
	CONSTRUCTION NOISE	SUM	<	<	<	<	=
	CONSTRUCTION VIBRATION	LTSM	<	<	<	<	=
	CUM TRAFFIC NOISE	SUM	<	<	<	<	<
AIR QUALITY	CONFLICT WITH CLEAN AIR PLAN	LTS	<	<	<	<	=
	CRITERIA AIR POLLUTANTS (PLAN)	LTS	<	<	<	<	=
	CRITERIA AIR POLLUTANTS (DEV)	SUM	<	<	<	<	=
	CRITERIA AIR POLLUTANTS (CONSTR)	LTSM	<	<	<	<	=
	PM2.5 + TACS (OPERATIONA	SUM	<	<	<	<	=

	L)						
	PM2.5 + TACS (CONSTRUCTION)	LTSM	<	<	<	<	=
	ODORS	LTS	<	=	=	=	=
	CUM. CRITERIA AIR POLLUTANTS	SUM	<	<	<	<	=
	CUM. PM2.5 + TACS	SUM	<	<	<	<	=
WIND	WIND	SUM	<	<	<	=	=
	CUM. WIND	LTS	<	<	<	=	=
SHADOW	SHADOW	LTS	<	<	=	=	=
	CUM. SHADOW	LTS	<	<	<	=	=
HYDROLOGY + WATER QUALITY	FLOODING	LTS	=	=	=	=	=
	CUM. WASTEWATER	LTS	=	=	=	=	=
	CUM. FLOODING	LTS	=	=	=	=	=

Since the Reduced Heights Alternative reduces most Project impacts, while achieving almost all Project goals, the DEIR is arbitrary and capricious for failing to identify the Reduced Heights Alternative as environmentally superior.

IX. A REVISED DRAFT EIR MUST BE PREPARED AND RECIRCULATED FOR PUBLIC COMMENT.

Recirculation of an EIR prior to certification is required "when the new information added to an EIR discloses: (1) a new substantial environmental impact resulting from the project or from a new mitigation measure proposed to be implemented (cf. Guidelines, § 15162, subd. (a)(1), (3)(B)(1)); (2) a substantial increase in the severity of an environmental impact unless mitigation measures are adopted that reduce the impact to a level of insignificance (cf. Guidelines, § 15162, subd. (a)(3)(B)(2)); (3) a feasible project alternative or mitigation measure that clearly would lessen the environmental impacts of the project, but which the project's proponents decline to adopt (cf. Guidelines, § 15162, subd. (a)(3)(B)(3), (4)); or (4) ***that the draft EIR was so fundamentally and basically inadequate and conclusory in nature that public comment on the draft was in effect meaningless***." *Laurel Heights Improvement Assn. v. Regents of University of California* (1993) 6 Cal. 4th 1112, 1130, citing *Mountain Lion Coalition v. Fish & Game Comm'n* (1989) 214 Cal.App.3d 1043.

The DEIR is so fundamentally and basically inadequate, that recirculation of a new draft EIR will be required to allow the public to meaningfully review and comment on the proposed project.

X. CONCLUSION.

The DEIR is woefully inadequate. A revised and recirculated draft EIR will be required to remedy the myriad defects in the document. The revised draft EIR should identify the Reduced Height (Mid-Rise) Alternative as the environmentally superior alternative, and consider it on equal footing to the Plan, as was done in the Central Corridor Plan. The City should also consider an alternative that limits building height to no more than 130 feet in the block bounded by I-80 and Folsom, and Second and Third Streets, and places a park at the current parking lot located at 350 Second Street. This modification will make the Plan much more consistent with the goals to limit tall buildings to the area near CalTrain and BART, while maintaining the mid-rise character of the rest of the neighborhood, and increasing much needed open space.

Sincerely,

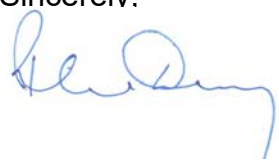

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EXHIBIT A

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February 13, 2017

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RE: Comments on Draft Environmental Impact Report for Proposed Central SOMA Plan, State Clearinghouse No. 2013042070

Dear Mr. Drury,

At your request, I have reviewed the Draft Environmental Impact Report ("DEIR") for the Proposed Central SOMA Plan ("Project" or "Plan").[1] My review focused on the DEIR's treatment of:

- Population, Employment and Housing
- Growth Inducement
- Shadows
- Open Space, Parks and Recreation
- Public Services
- Plan/Policy Consistency

In preparing these comments, I have reviewed the following information:

1. Draft Environmental Impact Report for the Central Soma Plan
2. Draft Environmental Impact Report Appendices
3. Draft Central SOMA Plan and Policy Papers
4. Financial Analysis of San Francisco's Central SOMA Plan

After carefully reviewing the DEIR for the Project including its Appendices, proposed Central SOMA Plan, and relevant policy papers, and Financial Analysis, I have concluded the DEIR fails in numerous respects to comply with CEQA and to fulfill CEQA's fundamental mandate. As

[1] See Appendix A for Watt Qualifications

described below, the DEIR violates this law because it fails to analyze adequately the significant environmental impacts of the Project or propose sufficient mitigation measures in the form of Plan policies, provisions and land use designations to address those impacts. Where, as here, the EIR fails to fully and accurately inform decision-makers and the public of the environmental consequences of proposed actions, it does not satisfy the basic goals of the statute. Because of the DEIR's numerous and serious inadequacies, the City of San Francisco must revise and recirculate the document to permit an adequate understanding of the environmental issues and potential solutions (mitigation and alternatives). Consideration should also be given to preparing a revised NOP and Initial Study prior to a revised DEIR because the 2014 Initial Study is patently inadequate and describes a completely different project from the Plan set forth in the DEIR.

I. Context and Introduction

The Project (Plan) is described in many different documents and in each differently. Thus, it is difficult to fully understand the Project and impossible for the DEIR to adequately analyze the Project. Making it even more challenging to get a clear understanding of the Project are the numerous plan provisions that provide flexibility for future development of the Project Area such as transfer of development rights and state density bonus law as well as other considerations that could allow more development in the Area than reflected in the Project description or impact discussions. For these and other reasons below, there is no complete, stable and finite description of the Project (Plan) to guide the DEIR's analysis of impacts.

What is clear, despite the vastly different and changing Project descriptions throughout the Project record, is that the Project is expected to bring up to 63,600 jobs and up to 7,500 housing units to the Central SOMA Neighborhood over the next 25 years, doubling the employment population and tripling the resident population.[2] What is clear, is the Project will seriously exacerbate the Project area's and City's severe jobs-housing imbalance; an imbalance made worse by the fact that San Francisco now serves as a "bedroom community" for the Peninsula cities and San Jose.[3] What is clear is the Project's myriad community benefits are not certain and even if certain, will not offset the impacts of the Project. What is also clear is that the Project calls for extending the Financial District type High Rise development to the neighborhood -- not limited just to the sites adjacent to transit centers and hubs – resulting in significant impacts including traffic congestion, shadows, declining air quality and displacement,

[2] Assuming population figures provided in the DEIR, the Project would triple the resident population of 12,000 to 37,500; possibly quadruple as resident population may be closer to 10,000. The Project would more than double the employment in the area from a current level of approximately 45,600 jobs to 109,200 jobs. DEIR at page IV-6 and IV-5.

[3] Between 2000 and 20016, San Francisco reportedly added 88,000 new jobs and only 37,000 new housing units, many of which were not suited for families or accessible to the local workforce due to high prices and rents. Mayor's Office of Housing. During the same period, San Francisco has experienced an increase in high wage residents who commute daily to the Peninsula cities and Silicon Valley, furthering increasing the gap in San Francisco housing available to the local workforce.

among other impacts. Many of Project's stated goals[4] and anticipated results[5] are laudatory. However, the Project lacks the necessary policies, provisions and land use and designations to ensure those goals and results are in fact the outcome of adoption of the Project.[6]

At stake is one of the most diverse and vital neighborhoods in San Francisco. It is at the Area Plan stage that CEQA requirements fulfilled correctly can have the best result. Deferring further analysis and mitigation to project by project evaluation simply does not work for issues such as Plan Consistency, Population and Housing and Public Services, where it is at the planning stage appropriate and feasible mitigation must be made certain.

The DEIR's flaws are described in detail below. It is important to note here that the Project (Area Plan) is also flawed. As described the Plan as proposed departs from clear City policy, and although this Plan will guide development for 25 years until 2040, it fails to recognize rapidly changing times or present policy direction to deal with changes.[7] Examples of omissions in the Plan include but are not limited to the rapid increase in UBER, LYFT and other ride sharing services that have swamped our roads and provided an alternative to transit, the loss of families due to spiraling costs of housing and competition from high wage sectors, rapid increase in high wage jobs displacing existing jobs but also creating demand for services including a dramatic rise in delivery services and related fulfillment centers. In addition, the Plan does not take into consideration leading edge substantive policy solutions emerging from City Hall such as a required mix of housing units with a fixed minimum percent family "sized." Within the plans 25-year horizon, the City will also see self-driving cars and other vehicles. Some of these changes – including the advent of self-driving cars – could accelerate the reduction in land needed for vehicles and parking. These are but a few of the changes that have been occurring and are accelerating that must be addressed in the Area Plan. The City should pause both to revise the DEIR and to re-engage the public and experts and get this plan right.

II. The Project Violates the California Environmental Quality Act

[4] increase capacity for jobs and housing, maintain diversity of residents, prioritize walking, biking and transit, offer abundance of parks and recreational opportunities, preserve the neighborhoods cultural heritage, ensure new buildings enhance the character of the neighborhood. Central SOMA Plan at page 6.

[5] 33 percent of total units produced after the Plan adoption are affordable, no net loss of PDR, space for services, cultural preservation, etc. Central SOMA Plan at page 7.

[6] Such as reducing heights except adjacent to major transit hubs, certainty for production of affordable housing in the neighborhood prior to, or concurrent with job growth (policy link for certain number of housing units before jobs), certainty for more than one significant new park, emergency access improvements in place rather than deferred to a future street design, and the like.

[7] For example, substantive policy changes by the Board of Supervisors are taking aim at ensuring the City is for all families – "Family Friendly SF." Between 2005 and 2015, 61 percent of the 23,200 new units of market rate housing were studios and one bedrooms. SF Planning Department. The proposed Central SOMA Plan does not include policies with a required unit mix. A revised Plan that will purportedly guide growth until 2040 should start out being leading edge and a family friendly goal and implementing policies would be an essential component of that revised Plan.

A. The DEIR Provides an Incomplete and Inconsistent Description of the Project and the Project Setting (Baseline)

A fundamental requirement of CEQA is that an EIR contain an accurate and complete project description. Without a complete project description, an agency and the public cannot be assured that all the project's environmental impacts have been revealed and mitigated. Further, CEQA and the CEQA Guidelines mandate that an EIR include a description of the "physical environmental conditions . . . from both a local and a regional perspective. . . Knowledge of the regional setting is critical to the assessment of environmental impacts." CEQA Guidelines Section 15125(a) and (c). This requirement derives from the principle that without an adequate description of the project's local and regional context, the EIR – and thus the decision-makers, agencies and public who rely on the EIR – cannot accurately assess the potentially significant impacts of the proposed Project.

The Project in this case is the Central SOMA Plan (formerly the Central Corridor Plan), which purports to be a comprehensive plan for the area including important local and regional transit lines and hubs connecting Central SOMA to adjacent neighborhoods including Downtown, Mission Bay, Rincon Hill, Mission District as well as the broader region via freeways and the light rail that will link to the Caltrain Depot. The Plan's goals are laudatory including Central SOMA becoming a sustainable neighborhood, accommodating anticipated population and job growth, providing public benefits including parks and recreation, respecting and enhancing neighborhood character, preserving the neighborhoods cultural heritage, and maintaining the diversity of residents. DEIR at page S-1 and Goals S-2. Unfortunately, the Projects approach to achieving these goals -- including but not limited to emphasizing office uses, increasing heights throughout the neighborhood, and removing restrictions in the current Central Corridor Plan, accepting in-lieu and community benefits fees instead of requiring new parks, affordable housing and essential services and infrastructure be provided in the Plan Area concurrent with or prior to non-residential and market rate development -- will result in significant impacts to the Central SOMA Neighborhood and take the community farther from these goals.

1. Incomplete and Inconsistent Project Description

CEQA requires an EIR to be based on an accurate, stable and finite project description: "An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR." *County of Inyo v. City of Los Angeles* (1977), 71 Cal.App.3d 185. The DEIR lacks a complete and consistent description of the Project in numerous respects.

First, the DEIR relies on the Initial Study for the analysis of 11 environmental topics even though the DEIR and Initial Study contain two distinctly different descriptions of the Project. The Initial Study was published on February 12, 2014 (Appendix B to the DEIR). According to the DEIR, based on the Initial Study, the Project (Plan) could not result in significant environmental impacts for the following topics:

- Population and Housing
- Greenhouse Gas Emissions
- Recreation
- Utilities and Service Systems (except for wastewater treatment and storm drainage addressed in the DEIR)
- Public Services
- Biological Resources
- Geology and Soils
- Hydrology and Water Quality (except for sewer system operations and sea level rise addressed in the DEIR)
- Hazardous Materials
- Mineral and Energy Resources
- Agricultural Resources

See DEIR at page I-2. Based on the Initial Study, the DEIR provides no further substantive analysis of these impacts despite significant changes to the Project (Plan) summarized below.

The DEIR explains:

> "Because the Initial Study analysis was based on a previous draft of the Plan circulated for review in 2013, the current 2016 draft of the Plan has been reviewed to ensure the Initial Study's conclusions reached on the 2013 draft remain valid. No new information related to the draft 2016 Plan has come to light that would necessitate changing any of the Initial Study's significance conclusions reached for the 11 topics that would be less than significant or less than significant with mitigation measures, which are included in the topical sections of Chapter IV, Environmental Setting, Impacts and Mitigation Measures, of this EIR. **As such, no further environmental analysis of these Initial Study topics is required in this EIR." [emphasis added].**

This approach is fatally flawed since the 2014 Initial Study does not describe the current proposed Project (Plan) that is the subject of the DEIR. In addition to completely different project boundaries,[8] the Initial Study describes an entirely different project with respect to baseline (setting) than the current Project (Plan), and Project in terms of growth, employment and housing. Baseline data in the Initial Study is woefully out of date with respect to population and housing, traffic, air pollution as well as regional conditions. Also, the project described in the Initial Study has very different project goals. The Initial Study project has five goals:

1. Support transit-oriented growth, particularly workplace growth, in the Central Soma area.

[8] The Initial Study describes a rectangular project area that extends from Market Street to Townsend and from Second Street to Sixth Street. The Central SOMA Plan and DEIR exclude about 11 square blocks and therefore completely different assumptions concerning growth and development, among other fundamental differences in Project description.

2. Shape the Central SoMa's urban form recognizing both City and neighborhood contexts.
3. Maintain the Central SoMa's vibrant economic and physical diversity.
4. Support growth with improved streets, additional open space, and other elements of "complete communities."
5. Create a model of sustainable growth.

By contrast, the DEIR Project has eight goals:

1. Increase the Capacity for Jobs and Housing
2. Maintain the Diversity of Residents
3. Facilitate an Economically Diversified and Lively Jobs Center
4. Provide Safe and Convenient Transportation that Prioritizes Walking, Bicycling and Transit
5. Offer an Abundance of Parks and Recreational Opportunities
6. Create an Environmentally Sustainable and Resilient Neighborhood
7. Preserve and Celebrate the Neighborhood's Cultural Heritage
8. Ensure that New Buildings Enhance the Character of the Neighborhood and the City

The Project's described respectively in the Initial Study and DEIR are entirely different given that the basic project goals are plainly different in respects that implicate substantively different physical and policy objectives.

Second and compounding the situation is that almost no two descriptions of the Project are the same in the documents in the Project record (e.g., Central SOMA Plan, DEIR, Initial Study, Policy Papers, Financial Analysis). Topical sections of the DEIR thus are based on inconsistent descriptions of the Project. Examples include, but are not limited to, the growth assumptions that are essential to accurately analyzing Project impacts across all environmental topics. Growth assumptions in the DEIR, Initial Study, Central SOMA Plan and Financial Analysis are vastly different:

> Table IV-1 [DEIR], Summary of Growth Projections, presents the population and employment growth assumed in the Plan Area between 2010 (the base year for the analysis) and 2040 ("buildout year" or "planning horizon"). This growth amounts to approximately 14,400 additional households, approximately 25,500 additional residents and about 63,600 additional jobs under the Plan. DEIR at page IV-5.
>
> Growth projected in the Initial Study includes up to 13,200 housing units (IS at page 85) and 56,400 new jobs (IS at page 81). In contrast, the Central SOMA Plan states: "With adoption of the Central SOMA Plan, there would be potential to build space for approximately to 45,000 jobs and 7,500 housing units. The Plan therefore represents an increase in development capacity of 450 percent for jobs and 300 percent for housing."

> Central SOMA Plan at page 7. The Financial Analysis of San Francisco's Central Soma Plan[9] (December 2016) is based on different growth assumptions than presented in DEIR, Initial Study and Plan: "The vision of the Central Soma Plan is to create a sustainable and vital neighborhood in the area immediately surrounding the Central Subway (expected to open in 2019) in San Francisco's South of Market District. The Plan is projected to bring 40,000 jobs and 7,500 housing units to the area over the next 25 years."

Different growth assumptions are but one example of vastly different Project description information throughout the DEIR record. A revised DEIR must be completed with topical discussions based on a complete, finite and stable description of the Project. Ideally, the revised DEIR would be preceded by a revised NOP and Initial Study so that all descriptions of the Project in the record are the same.

Finally, the Project Description section of the DEIR is incomplete and lacks details critical to supporting adequate impact analyses including but not limited to information about the type of housing and jobs the Project will allow. To compensate for the lack of detail, some topical discussions essentially create Project description details to support analysis. Examples include the spatial representation of growth in the Shadow analysis, TAZ detail in the Transportation section and the prototypical development projects invented in the Financial Analysis. These more detailed topical representations of the Project also vary from one another. A revised DEIR with a complete description of the Project is essential to support revised topical analyses. The revised Project description should also describe in detail the policy and financial (community benefits) proposals in the Plan that the DEIR and Initial Study rely on to reach conclusions concerning impact significance. For example, the DEIR and Initial Study conclude that impacts associated with displacement of units and households will be less than significant based on a suite of affordable housing programs that purportedly will offset what otherwise would be a significant impact. (e.g., Project Area tailored fees, offset requirements, among others included in the proposed community benefits program for the Project and in the Plan). These are not described in the Project description, nor is there any analysis to demonstrate exactly how these programs and fees will result in mitigating Project impacts associated with growth inducement and jobs-housing imbalance, among other significant impacts of the Project.

2. The DEIR Includes an Inadequate Baseline

The DEIR fails to adequately describe baseline conditions in the Plan Area, including information about the Project area and regional setting. Setting or environmental baseline information is as essential to adequately disclosing and analyzing project-related and cumulative impacts as a complete and consistent Project description. Without adequate and complete information

[9] The Financial Analysis is intended to implement the Plan's public benefits and as such it is of critical importance it be based on a stable and finite Project description that is consistent throughout the Plan, DEIR and other related documents. That is not the case and as such, a revised DEIR and revised policy papers and financial analyses must be completed based on a consistent, stable, complete and finite Project description.

about the setting, it is not possible to determine whether the Project improves or makes worse existing environmental conditions.

Examples of regional baseline setting information that is missing from the DEIR includes but is not limited to the following.

a. Affordable, Workforce and Family Friendly Housing

The DEIR must analyze the potential for the Project to displace existing housing, create demand for additional housing and displace people requiring construction of replacement housing elsewhere. To perform this analysis, it is essential the DEIR include in the description of the Project baseline (setting) details concerning existing affordable units, including deed restricted housing, family housing, senior housing and housing affordable to the workforce[10] in the Project area. Information concerning affordable housing in the Project area is incomplete, consisting only of the following:

> "The Plan area contains approximately 7,800 residential units, approximately 6,800 households, and a population of approximately 12,000 people, according to Planning Department data. This accounts for just two percent of the City's total number of households. According to the Plan, South of Market and the Plan area in particular, are home to a large amount of deed restricted affordable housing; about 15 percent of the housing is deed-restricted for low income residents, compared to 4.5 percent citywide." DEIR Appendix B, Initial Study at page 78.

Without current and complete information about the existing housing stock in the Project Area, the DEIR cannot adequately analyze the Project's impact on affordable, workforce, senior and family friendly housing and households and conclusions concerning the significance of Project-related and cumulative impacts cannot be supported by facts and evidence. The DEIR must be revised to include this and other baseline information.

b. Existing Jobs-Housing Balance and Fit with the Project Area, City and Region

The DEIR must analyze the potential for the Project to make worse the existing imbalance of jobs and housing in the Project area as well as the City and region. Finding the right jobs-housing balance has long been an important concern for urban planners and an important policy consideration for general and area plans. More recently, attention has turned to jobs-housing fit – the extent to which housing price and rent is well matched to local job salary and quality. Both the Initial Study and DEIR are silent on the matter of jobs housing fit and fail to adequately address the issue of jobs housing balance. The DEIR should be revised to describe the existing job-housing balance and fit for the Project area, adjacent planning areas, the City

[10] Workforce housing is housing at the lower end of market rate serving households with up to 200% of median income and often referred to as the "missing middle" or gap in affordable housing in San Francisco. Voters recently approved funding to build more housing, including for the SF workforce.

and region. Updated baseline information must include a description of changes in demand for housing in San Francisco due to the choice by Peninsula and Silicon Valley employees to reside in San Francisco and relevant to the DEIR's analysis, how this change is increasing housing costs, increasing competitive for scarce housing stock and displacing existing residents. This information is not only necessary to adequately analyze environmental topics such as displacement and Project demand for new housing, but it is also essential to determining the extent to which the Project will increase commuting, traffic and vehicle miles traveled. Therefore, without this information, the full impacts associated with air quality and greenhouse gas emissions, among other impacts cannot be adequately analyzed and conclusions concerning the significance of Project-relation and cumulative impacts cannot be supported by facts and evidence. The DEIR must be revised to include this and other baseline information.

c. Public Services

The DEIR must analyze the Project's impacts on a wide array of essential public services, including but not limited to fire, police, emergency, health-care, child-care as well as schools. Neither the DEIR nor the Initial Study contain the information needed to support an adequate analysis of the Project's impacts to public services. Information about public services is out of date and incomplete. For example, the scant information on police and fire services dates back to 2012 and 2013, and lacks any information about the City's service standards, existing capacity and unmet needs. See DEIR Appendix B, Initial Study at pages 118 and 119. A great deal has changed in a very few years since the incomplete baseline information on services was presented in the Initial Study due to rapid growth in the City post-recession that has not been accounted for in the Initial Study setting information concerning services. The DEIR must be revised to include this and other baseline information. Without this information, adequate analysis of the Project's impacts is impossible and conclusions concerning impact significance cannot be supported by facts and evidence.

B. The DEIR's Analysis of, and Mitigation for, the Impacts of the Project Are Inadequate

The discussion of a project's environmental impacts is at the core of an EIR. See CEQA Guidelines Section 15126(a). As explained below, the DEIR's analysis of the Project's environmental impacts are deficient under CEQA because the DEIR fails to provide the necessary facts and analysis to allow the City and the public to make informed decisions about the Project, mitigation measures and alternatives. An EIR must contain facts and analysis, not just bare conclusions. A conclusion regarding the significance of an environmental impact that is not based on analysis of the relevant facts fails to fulfill CEQA's information mandate.

Additionally, an EIR must identify feasible mitigation measures to mitigate significant environmental impacts. CEQA Guidelines Section 15126.4. Under CEQA, "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation

measures available which would substantially lessen the significant environmental effects of such projects. . . ." Pub. Res. Code Section 21002.

As explained below, the DEIR fails to provide decision-makers and the public with detailed, accurate information about the full breadth of the Project's potentially significant impacts with respect to growth inducement, population and housing, shadows, parks and recreation, public services and plan consistency. The DEIR's cumulative analysis of these impacts is also deficient. Where the DEIR fails to adequately analyze the Project-related impacts, the cumulative analysis cannot be adequate. Further, the DEIR does not identify and analyze feasible mitigation measures that would reduce or avoid such impacts.

1. The DEIR's Analysis of the Project's Growth-Inducing Impacts is Flawed

CEQA requires that an EIR include a detailed statement setting forth the growth-inducing impacts of a proposed project. Pub. Res. Code Section 21100(b)(5). A proposed project is either directly or indirectly growth inducing if it: (1) fosters economic or population growth or requires additional housing; (2) removes obstacles to growth; (3) taxes community services or facilities to such an extent that new services or facilities would be necessary; or (4) encourages or facilitates other activities that cause significant environmental effects. CEQA Guidelines Section 15126.2(d). While growth inducing impacts of a project need not be labeled as adverse, the secondary impacts of growth (e.g., displacement of households, demand for additional housing and services, traffic, air pollution, etc.) may be significant and adverse. In such cases, the secondary impacts of growth inducement must be disclosed as significant secondary or indirect impacts of the project. The analysis required is similar in some respects to the analysis required to analyze impacts associated with population and housing.

The DEIR contains a discussion of Growth Inducement at Section V.D. The discussion acknowledges the proposed zoning changes under the Project would expand the Plan Area's capacity for growth through a planning horizon year of 2040, during which time up to an additional 14,500 residential units and up to an additional 63,600 jobs could be accommodated in the Plan Area.[11] The discussion provides no analysis of the Project's potential to induce growth in accordance with CEQA, nor does the discussion reach any conclusions as to the significance of growth inducing impacts instead relying on the assertion that the growth allowed by the Project is simply an accommodation of growth projected for the region.[12]

The DEIR presents growth assumptions at page IV-5 as follows:

[11] Growth directly allowed by the Project is equivalent in scale to a new town, small suburb or city. Under no reasonable interpretation could the growth proposed by the Project be considered insignificant and therefore, by extension, the impacts of that growth – on services, housing demand, air quality, etc. -- are also significant.
[12] It goes without saying that even if the growth reflects projected growth for the region, that growth had the potential to significantly impact the Project area; impacts not adequately considered or analyzed in the regional plans and accompanying environmental documents.

"Citywide growth forecasts prepared by the Planning Department are part of the basis of the analysis in this EIR. The Department regularly updates citywide growth forecasts that are based on Association of Bay Area Governments' (ABAG) regional projections of housing and employment growth. The Department allocates the regional growth forecasts to 981 Traffic Analysis Zones (TAZs) in San Francisco by first accounting for in-city growth that is already anticipated (both individual projects and planning efforts) in the so-called development pipeline, subtracting pipeline growth from the City's share of the regionally forecast growth, and allocating the residual amount of ABAG-forecast growth on the basis of weighting factors developed from analysis of both development capacity and existing development. **To establish baseline numbers for the Plan, the Planning Department relied on a 2010 Dun & Bradstreet database for employment numbers and the 2010 Census and the Department's Land Use Database for existing housing units. It is noted that the growth forecasts for the No Project condition (2040 Baseline) and for the Plan differ somewhat from those shown in the Initial Study due to modifications to the Plan since the Initial Study was published.** Footnote 60**.**

Table IV-1, Summary of Growth Projections, presents the population and employment growth assumed in the Plan Area between 2010 (the base year for the analysis) and 2040 ("buildout year" or "planning horizon"). This growth amounts to approximately 14,400 additional households, approximately 25,500 additional residents and about 63,600 additional jobs under the Plan. It is noted that a certain amount of development and growth in the Plan Area would be expected to occur even without implementation of the Plan. In many cases, existing development does not reach its full potential under current building height limits, and those parcels could be developed regardless of future changes in land use policies and zoning controls. Development that could occur without project implementation is shown in the table below under the No Project scenario." DEIR at page IV-5.

Footnote 60 explains: "Since publication of the Initial Study, Plan development assumptions have been modified to add development capacity to a portion of the block bounded by Bryant, Fifth, Brannan, and Sixth Streets (location of the San Francisco Flower Mart) and allow for approximately 430 units of affordable housing at Fifth and Howard Streets. In addition, development forecasts were adjusted to move the approved 5M Project and the under-construction Moscone Center Expansion from Plan-induced growth to cumulative growth. These modifications to the growth assumptions would not result in substantial or more severe physical impacts for topics evaluated in the Initial Study."
[DEIR at page IV-5]

Vastly different growth assumptions are presented elsewhere in the Central SOMA Plan, DEIR, Appendices and Policy Papers. For example, the Central SOMA Plan states: "With adoption of the Central SOMA Plan, there would be potential to build space for approximately to 45,000 jobs and 7,500 housing units. The Plan therefore represents an increase in development capacity of 450 percent for jobs and 300 percent for housing." Central SOMA Plan at page 7.

The Financial Analysis of San Francisco's Central Soma Plan[13] (December 2016) is based on different growth assumptions than presented in DEIR, Initial Study and Plan: "The vision of the Central Soma Plan is to create a sustainable and vital neighborhood in the area immediately surrounding the Central Subway (expected to open in 2019) in San Francisco's South of Market District. The Plan is projected to bring 40,000 jobs and 7,500 housing units to the area over the next 25 years."

The is no question the Project will generate substantial growth in the Central SOMA neighborhood; more than an increase of 450 percent for jobs and at least 300 percent for housing. Due to the Project's high employment to housing ratio, regardless of which jobs growth assumption is used, the Project will result in additional demand for housing in the Project area or beyond. In addition, substantial new non-residential and residential growth will require additional public services, likely including expansion and therefore construction of facilities in the neighborhood or adjacent neighborhoods of a myriad of services. Yet the DEIR neither discloses or analyzes these impacts. CEQA requires that if new construction of housing will occur to accommodate the Project's employees or services expanded, then the EIR must analyze the environmental impacts of that construction. The appropriate components for an adequate analysis include: (1) estimating the amount, location and time frame for growth that may result from the implementation of the Project (e.g., additional housing); (2) considering whether the new population would place additional demands on public services such as fire, police, recreation, emergency, health, childcare or schools; (3) applying impact assessment methodology to determine the significance of secondary or indirect impacts as a result of growth inducement; and (4) identifying mitigation measures or alternatives to address significant secondary or indirect impacts. CEQA Guidelines Appx. G Section XIII(a). The DEIR must be revised to provide this analysis and based on this analysis, to revise other environmental analyses including but not limited to population and housing, transportation, air quality, among other topics where impacts are derived in part from direct and indirect growth assumptions.

2. The DEIR's Analysis of and Mitigation for the Project's Population, Employment and Housing Impacts is Inadequate

The DEIR's approach to analysis of population and housing does not adequately analyze Project-related impacts associated with changes that would occur with Project (Plan) implementation to the population, including employment and residential growth. Instead of actually analyzing the Project's impacts related to population and housing, the DEIR, in reliance on the Initial Study, asserts that all impacts both direct and indirect will be less than significant. Neither the DEIR or the Initial Study contain facts or evidence to support this conclusion. The result is a lack

[13] The Financial Analysis is intended to implement the Plan's public benefits and as such it is of critical importance it be based on a stable and finite Project description that is consistent throughout the Plan, DEIR and other related documents. That is not the case and as such, a revised DEIR and revised policy papers and financial analyses must be completed based on a consistent, stable, complete and finite Project description.

of information about the actual severity and extent of impacts associated with significant growth in population, jobs and housing. For a Project (Plan) that will guide development of the Area for 25 years (until 2040) and likely be the basis of streamlined permitting for development projects (see e.g., DEIR at page 1-7), it is especially important that the DEIR comprehensively identify and analyze its impacts on growth, population, housing and employment.

In reaching the conclusion that impacts related to population and housing are less than significant, the DEIR points to the following documents: Initial Study (DEIR Appendix B at pages 77 to 88); DEIR Chapter II, Project Description; and Section IV.A Land Use and Land Use Planning. DEIR at page I-3. The Initial Study notes that the population growth accommodated in the Plan could result in physical changes related to transportation, air quality, noise and public services and utilities, as well as other environmental resource areas and suggests these impacts are addressed in the respective environmental topic sections, but finds impacts to be less than significant.

In determining impact significance associated with growth in population, employment and housing, CEQA requires analysis of the following topics (see Appendix B, Initial Study at page 77):

- Would the project induce substantial population growth in the area, either directly (for example by proposing new homes and businesses) or indirectly (for example, through extension of roads and other infrastructure)?
- Would the project displace substantial number of existing housing units or create demand for additional housing, necessitating the construction of replacement housing?
- Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

In addition to these questions, the DEIR must also answer the question would the project result in a greater imbalance between jobs and housing, including jobs housing fit,[14] to address potentially significant impacts associated with increased vehicle miles traveled (greenhouse gas, air quality, traffic, etc.), as well as to analyze the potential for the Project to generate increased demand for housing, services and infrastructure.

The DEIR's analysis of these potential impacts associated with population, employment and housing is inadequate for all of the following reasons.

[14] Jobs-Housing fit means the extent to which housing prices or rents are matched to the local job salary ranges. Jobs-Housing balance provides a general sense of how in or out of balance housing to fit the local workforce may be. Jobs-Housing fit provides an essential and more granular sense of whether – even if in balance – local employees are able to reside locally or must commute long distances for housing affordable to them and their families. Without jobs-housing fit information, readily available using Census and other data, it is not possible for the DEIR to adequately analyze many Project-related and cumulative impacts including demand for new housing and vehicle miles traveled, among others.

First, as described above, there is no consistent, stable and finite Project description as to the growth allowed by the Project. For this topic, the DEIR relies on the Initial Study for analysis. Here, as noted above, the Initial Study is based on a different Project in terms of Project Area boundary, allowed growth and other project details. Discussions in the Initial Study are based on out date, inconsistent and incomplete setting (environmental baseline) information including but not limited to information about the number of existing housing units and affordable housing units, the number and type of jobs in the Project area, as well as other information necessary for an adequate analysis of impacts associated with population and housing. For these reasons alone, a revised DEIR must evaluate the impacts of the Project with respect to population and housing and identify mitigation for impacts as they are likely significant.

Second, the DEIR errs in relying on the Initial Study's discussion of impacts related to population and housing as the required analysis of these impacts. The Initial Study fails to adequately consider the direct and indirect environmental impacts from the Project's increased housing and job creation. The Initial Study's discussion of impacts related to population and housing is incomplete and conclusory in specific respects as described by impact topic below.

- Would the project induce substantial population growth in the area, either directly (for example by proposing new homes and businesses) or indirectly (for example, through extension of roads and other infrastructure)?

The DEIR concludes that development under the Project would not induce substantial population growth, either directly or indirectly and therefore this impact is Less than Significant. DEIR Appendix B, Initial Study at page 82, DEIR in reliance on the Initial Study at page I-2.

The basis for this conclusion is that although development under the Project (Plan) would result in greater development density within the Plan area compared to existing zoning, the development projects that could be proposed and approved pursuant to the proposed zoning controls would accommodate population and job growth already identified for San Francisco, and projected to occur within City boundaries, and thus would not induce substantial population growth, either directly or indirectly. DEIR Appendix B, Initial Study at page 82. According to the Initial Study:

> "Regardless of the scenario and associated population projections, none of the Plan options or variants would stimulate new population or job growth within San Francisco that is not already projected to occur by regional growth forecasts and regional air quality planning efforts. For San Francisco, this includes a projected increase of approximately 101,000 households and 191,000 jobs during the period from 2010 to 2040 (see Growth Anticipated in Local and Regional Plans, above). The Plan policies would not trigger the need for roadway expansions or result in the extension of infrastructure into previously unserved areas. Rather by allowing for more density

> within the Plan area, and accommodating growth that is projected to occur within San Francisco, development under the plan would have the effect of alleviating development pressure elsewhere in the City and promoting density in the already urbanized and transit-rich Plan area. Therefore, the Plan would not induce substantial population growth beyond that anticipated by regional forecasts, either directly or indirectly, and this impact would be less than significant." DEIR Appendix B, Initial Study at page 84.

Instead of providing an adequate analysis of these impacts based on the current Project, the DEIR refers to the discussion of population and housing in the Initial Study in reaching its conclusion that impacts will be less than significant. There are many reasons this approach is flawed. First, accurate and consistent existing and projected population and housing and job growth are essential facts to support this conclusion. The Project addressed in the Initial Study and the DEIR are different and therefore the Initial Study cannot adequately analyze the Project as currently proposed. See e.g., Table 4, 5 and 6 in the Initial Study and Table IV-1 in the DEIR at page IV-6. Second, the conclusion that impacts associated with both direct and indirect population growth in the area will be less than significant is not supported by analysis, facts or evidence as required. The Project (Plan) clearly will add significantly to the population and employment of the Project area, changing the character of the area and increasing the jobs to housing imbalance. The Initial Study states that the Project (Plan) allows up to 56,400 new jobs by 2040 and an increase in population of 23,400. New housing units under the Project (Plan) total approximately 13,200 according to the Initial Study. DEIR Appendix B, Initial Study at page 85.[15] Despite this substantial increase in jobs, residents and housing, the Initial Study dismisses impacts as less than significant based on the assertion the growth in within projected growth for the City as a whole and that the Plan itself "would not result in direct physical changes to population or housing." DEIR Appendix B, Initial Study at page 80. This is simply wrong. The Project (Plan) by allowing substantial development in the area including development projects proposed in reliance on the Plan and "that would be allowed under the Plan" will result in changes to the Project Area's physical environment; changes that must be analyzed in the DEIR and were not analyzed in City-wide or regional plans or related environmental documents. (DEIR at page IV-8 to IV-10). The argument that the Project will result in less than significant impacts because growth is within regional and/or City-wide growth projections is contrary to CEQA's requirement to analyze the significant impacts of a Project against existing conditions (setting) and for the project area. By any measure, the increase in growth as a result of the adoption of the Project is substantial and the numerous impacts associated with substantial new growth of jobs and housing significant as well.

A revised analysis must be completed and recirculated with the following elements:

[15] It is noteworthy these growth assumptions are vastly different than presented in the Central SOMA Plan, DEIR, Financial Analysis and policy papers. See discussion of Growth Inducement in this letter for examples of the vastly different descriptions of growth under the Project.

- A complete, stable and consistent description of the Project in terms of growth allowed and broken out by potential new housing units, housing affordability, potential new households, population and employment (employment by general category of job and employees by general salary range), among other information necessary to undertake the analysis. To resolve the inconsistencies and confusion between the Initial Study and DEIR, a revised NOP/IS should be recirculated in advance of a new Draft EIR.
- Complete, consistent and up to date baseline (setting information) including but not limited to existing population and demographical information, housing, housing affordability, deed restricted units, type of units (e.g., senior, family, other) households, population and employment (by general category of jobs; e.g., service, tech, and general salary ranges).[16]
- Analysis of the impacts associated with growth of housing, population and employment within the Project Area in terms of both direct (new homes or businesses) and indirect impacts (demand for infrastructure or services). The California Courts have established a framework for considering population-related impacts. When analyzing these impacts, and EIR should identify the number and type of housing units that persons working in the project area can be anticipated to require, and identify the probable location of those units. The EIR also should consider whether the Project includes sufficient services and public facilities to accommodate the anticipated increase in population. If it is concluded that the Project area lack sufficient units and/or services, the EIR should identify that fact and explain that action will need to be taken and what that action entails so that indirect impacts can be disclosed and analyzed. Once the EIR determines the action needed to provide sufficient housing, services and public facilities, CEQA then requires an examination of the environmental consequences of such action.

A complete analysis of population growth thus requires two distinct and logical steps. First, an EIR must accurately and completely estimate the population growth that a project would cause, both directly and indirectly. Specifically, in this case, the DEIR must estimate the population growth accommodated by the new housing and the number of employees the Project will require as compared with existing baseline conditions, including whether those employees are likely to be new to the area and region and generally what the types of employment and commensurate salary ranges may be.[17] Guidelines Appx. G Section XII(a) directing analysis of whether project would induce substantial population growth. The DEIR also must consider the

[16] All available by census and other readily accessible data sources.

[17] The Central SOMA Plan provides parameters for new development that provide a clear sense of the type of new growth in employment that will result from Plan adoption. That is how the Financial Analysis prepared by Seifel Consulting, Inc., was able to derive detailed prototypical developments for the Plan Area based on the Central SOMA Plan. This same approach needs to be taken to developing a complete Project description.

growth that a project would indirectly cause, whether through stimulating the local economy so that new employment opportunities draw new population or by providing infrastructure that allows new residential construction. Guidelines Section 15126.2(d) ("Discuss the ways in which the proposed project could foster economic or population growth. . . . ").

Step two in analyzing the impacts of population growth is to consider the environmental impacts of serving that estimated new direct and indirect population. Thus, the EIR must not only evaluate whether a project would induce substantial growth, but also whether such growth would require construction of new housing, infrastructure or services, including roadway improvements for emergency vehicle passage,[18] child care and schools. Guidelines Appx. G Section XII(a). (c). If new construction will occur, then the EIR must analyze the environmental impacts of that construction. The EIR must also consider whether the new population would place demands on public services, including schools and roads. Guidelines Appx. G Section XIII(a). The EIR than must consider the environmental impacts of providing such facilities if they are necessary.

Here the Initial Study relied on by the DEIR for the analysis failed to consistently and accurately estimate and analyze direct and indirect population growth caused by the Project. The DEIR does not disclose that the Project would also indirectly induce additional people to move to the area, which could result in additional potentially significant environmental impacts. In fact, as described in detail above, the Project description fails to provide consistent and complete information about the Project's population, employment and housing. Nonetheless, the Initial Study and DEIR conclude that Project impacts associated with population and housing will be less than significant.

This is too simplistic a conclusion, as no single factor determines whether a project will indirectly trigger population growth. For example, in this case, the population increase would almost certainly require new and expanded services and would inject new money into the local economy inducing additional growth and development. A larger population in this neighborhood, would surely increase demand on schools and generate increased demand for restaurants, grocery stores, medical care and the like that do not currently exist to serve the planned growth. The additional of 25,000 new residents and over 63,000 jobs will certainly increase need for a full range of services including schools, day care, police, fire, medical and more. This increased demand would also further induce businesses to expand and new businesses would crop up to serve the larger population and businesses. This would require new employees and draw new residents to the area, who in addition to the direct employment generated by the Project, would also need housing. Neither DEIR nor Initial Study analyze these

[18] The DEIR defers the plan for emergency vehicle access to a future design of roadway projects and review by SFFD and SFPD. A Project Area-wide and complete design of roadway projects necessary to serve the development allowed by the Plan must be completed and analyzed in a revised DEIR. Deferring this essential element of the Project until later renders unlikely the City's ability to create the necessary emergency vehicle access to overcome the increased traffic congestion the Project will create.

impacts. In addition, the Project includes Plan objectives implemented through zone changes to favor non-residential development over other kinds of growth and favoring office space and hotels[19]. DEIR at II-13. The result of favoring non-residential over residential development is likely to be an even greater than disclosed jobs-housing imbalance and jobs-housing fit. The direct and indirect impacts of this growth must be disclosed and analyzed in a revised and recirculated DEIR.

The DEIR's failure to adequately evaluate the Project's impacts on population, employment and housing constitutes a serious flaw. The DEIR should be revised to include a comprehensive analysis of these impacts and identify effective and enforceable mitigation for those impacts that are determined to be significant. In addition, a revised DEIR must identify feasible mitigation measures to address the likely significant impacts associated with the demand for new housing affordable to the new workforce and with the provision of new services. Examples of the kinds of mitigation that should be considered include, but are not limited to, the following:

- In combination with strict policies prohibiting displacement of senior, deed restricted and affordable housing, and lowering the total allowable amount of new non-residential uses (e.g., cap on non-residential uses), addition of policies and programs requiring affordable housing to be built concurrent with or prior to new non-residential development in the Project Area (examples include provisions in the Treasure Island and Shipyard projects, among other local and regional policy and regulatory examples).
- Approval and implementation of the Project Area street network plan to serve the Project and review and approval by SFFD and SFPD prior to new development allowed under the Plan proceeding. This should be completed and included in a revised DEIR.
- SFFD and SFPD service reviews and plans to accommodate the proposed growth completed and approved prior to new non-residential development allowed by the Plan occurring.
- Policy, program and regulation(s) in place for a required housing mix in all new residential projects to provide family housing prior to new development allowed by the Plan. The policy and program should be completed and included in a revised DEIR.

[19] Hotels notorious for lower paying hospitality jobs; jobs that currently are difficult to fill in San Francisco due to the astronomically high housing costs and lack of sufficient housing. The revised DEIR must analyze the Project-related and cumulative impacts associated with the projected increase in San Francisco of hospitality and service jobs since it is the workforce associated with these lower paying jobs that likely will be traveling the farthest from work and home. There is currently no analysis of this in the DEIR.

- Up to three new sites identified and acquired for new parks prior to new development and fees assured for development of those parks. At least one new park under construction concurrent with or prior to new development allowed under the Plan.
- Reduction of the amount of new employment under the Plan through among other revisions, adoption of the reduced height alternative and prohibition of high rises except where immediately adjacent to transit hubs. A cap should also be placed on total new employment until plan expiration in 2040.

These and other feasible mitigation measures must be identified in a revised DEIR to address the significant population, employment and housing impacts of the Project and cumulative development on the Project area. A revised Financial Analysis should accompany the revised Plan and DEIR setting forth costs associated with housing, services and other community benefits of the Project and laying out a revised approach to funding implementation of these Project elements.

- Would the project create demand for additional housing, necessitating the construction of housing?

The DEIR concludes that development under the Project (Plan) would not generate housing demand beyond projected housing forecasts. DEIR Appendix B, Initial Study at page 84. In reaching this conclusion, the DEIR changes the question to include "beyond projected housing forecasts" and therefore fails to respond to the key question – would the project create demand for additional housing – thereby avoiding the required analysis.

The basis for the Initial Study's (and DEIR's) conclusion that demand for new housing is less than significant is twofold: First the plan would not result in physical effects directly and second, the plan merely accommodates planned growth. According to the Initial Study:

> "As a regulatory program, the Plan would not result in direct physical effects but rather would result in new planning policies and controls to accommodate additional jobs and housing." DEIR Appendix B, Initial Study at page 84. "The goal of the Plan is to accommodate regional growth projections for San Francisco and to shape and accommodate regional growth to projections for San Francisco and to shape and direct that growth toward appropriate locations. Because San Francisco is a regional job center, and because the Plan area is near regional transit lines, the Plan area represents one of the locations appropriate for new office development. As described below, the potential housing demand generated by expected office development would be offset by new housing development forecast both within the Plan area and for the City as a whole, as well as through the City's affordable housing programs." DEIR Appendix B, Initial Study at pages 84-85.

> "Overall, the conservatively estimated housing demand resulting from Plan-generated employment would be accommodated by increases in housing supply, primarily within the Plan area and elsewhere in San Francisco, and the impact would be less-than-significant." DEIR Appendix B, Initial Study at page 86.

Instead of providing an adequate analysis of these impacts based on the current Project (Plan), the DEIR simply defers to the discussion of population and housing in the Initial Study.

There are many reasons the DEIR's approach to the analysis of housing demand generated by the Project (Plan) is flawed. First, accurate and consistent existing and projected population, housing and job growth figures are essential facts to support this conclusion. Yet, the Initial Study and DEIR contain vastly different figures as discussed in this letter. See e.g., Table 4, 5 and 6 in the Initial Study and Table IV-1 in the DEIR at page IV-6. Second, the conclusion that impacts associated with employment growth and associated demand for housing in the Project area will be less than significant is not supported by analysis, facts or evidence as required. To the contrary, the Project (Plan) will add significantly to the population and employment of the Project area, changing the character of the area and increasing the jobs to housing imbalance. Specifically, the Project (Plan) allows over 56,400[20] new jobs by 2040 and an increase in population of 23,400. Source Initial Study. New housing units under the Project (Plan) total approximately 13,200 according to the Initial Study (page 85) and 7,500 housing units according to the DEIR. Thus, there is no question the Project (Plan) will result in much more job growth than housing, exacerbating an already extreme jobs-housing imbalance in both the Project area and the City and Region, causing workers to commute farther and in turn increasing vehicle miles traveled above that described in the DEIR. Increased vehicle miles in turn will result in greater demand for transit, increased traffic congestion, air pollution and greenhouse gas emissions. A revised DEIR must analyze these impacts.

A revised analysis in a dedicated DEIR section called must be completed and recirculated with the following elements:

- A complete, stable and consistent description of the Project in terms of growth in housing, housing affordability, deed restricted units, households, population and employment (by general category of job), among other information necessary to undertake the analysis. To resolve the inconsistencies and confusion between the Initial Study and DEIR, a revised NOP/IS should be recirculated in advance of a new Draft EIR.
- Complete, consistent and up to date baseline or setting information including but not limited to existing population and demographical information, housing, housing affordability, deed restricted units, households, population and employment (by general category of jobs; e.g., service, tech, salary ranges, etc.).

[20] The Central SOMA Plan allows even more jobs – 63,600 – rendering the jobs-housing imbalance even greater than described in the Initial Study.

- Description of existing job-housing fit and projected jobs-housing fit under the Project (Plan) based on a breakdown of new jobs (employment) in terms of general type and salary ranges and existing and projected housing rents and prices.
- Analysis of the impacts associated with new employment generated demand for housing within the Project area. This analysis must be based on facts and evidence.

The DEIR's failure to adequately evaluate the Project's impacts on population, employment and housing constitutes a serious flaw. In this case, it is clear the Project will generate significant demand for housing beyond that allowed by the Project in the Plan Area. The revised DEIR must address how much new housing will be needed to accommodate new employees and their families? Where will that housing need be met either in existing housing or new housing? If new housing is needed, which it likely is, where will that new housing be constructed – in the Project Area or beyond? What are the physical environmental impacts associated with construction of the new housing? Will indirect or induced growth from the Project result in a demand for additional housing, beyond that required to house new Project employees? If so, where will that housing be located? And so on. The DEIR should be revised to include a comprehensive analysis of these impacts and identify effective and enforceable mitigation for those impacts that are determined to be significant. In addition, a revised DEIR must identify feasible mitigation measures to address the likely significant impacts associated with the demand for new housing affordable to the new workforce and with the provision of new services. See above discussion of feasible mitigation measures that should be considered in a revised DEIR.

- Would the project displace substantial number of existing housing units or create demand for additional housing, necessitating the construction of replacement housing?

The Project will inevitably lead to the displacement of low and moderate income residents because of the incentives provided through zoning and other mechanisms for new non-residential development in the Project area. Currently over 10,000 people live in the Central SOMA neighborhood or Project area in approximately 7800 housing units. These residents are among the most ethnically and economically diverse in the City with about 60% of residents people of color.[21] Although the median household income is slightly higher than the City average, the neighborhood has one of the highest levels of poverty with 31% of the population living at or below 200% of the poverty threshold.[22] Yet, the DEIR concludes that the Project (Plan) would not displace a large number of housing units or necessitate construction of replacement housing outside the Plan area finding this impact less than significant. DEIR Appendix B, Initial Study at page 86. The DEIR reaches this conclusion despite

[21] SF Dept of Public Health, Environmental Health, Sustainable Communities Health Assessment: Central Corridor Plan, page 6 (11-30-12).
[22] Id. p. 21

acknowledgement that the Project (Plan) could require the demolition of existing housing units within the Plan Area. The basis of the DEIR's conclusion is in short:

> "From the perspective of the City's housing stock, the loss of housing units as a result of development under the Plan would be offset by the production of up to approximately 13,200 net new housing units (Initial Study page 86) within the Plan area in addition to residential development elsewhere in San Francisco as has been occurring and is expected to occur in the future, in addition to the fees paid for the jobs/housing linkage program and Inclusionary Affordable Housing." DEIR Appendix B, Initial Study at pages 86-87.

The Initial Study contradicts this statement at page 85, noting that the project demand for housing created by the Project would be about 19,900 units, far surpassing the potential addition of about 11,700[23] units projected to be created in the Plan area by 2040. The current Project is projected to produce fewer housing units – approximately 7,500 -- resulting in an even larger gap between new employees in the Project area and new housing units. There is no question the Project will generate a demand for housing beyond that proposed by the Project. A revised DEIR must acknowledge this impact and provide further evidence housing need will be met and where and depending on where, the impact associated with the development of that new housing.

The Initial Study also argues that the potential number of units that could be displaced by the Project (Plan) **as too speculative** and not necessary to concluding impacts would be less than significant, reasoning that the Plan is intended to promote additional density along with Planning Code requirements for replacement and conservation would offset displaced units, a. DEIR Appendix B, Initial Study at page 87. The number of units or range of units potentially displaced by the Project is not speculative. In fact, the information exists to determine the possible range of housing units in the Project area that could be displaced as demonstrated by detailed modeling supporting the shadow discussion in the DEIR and the equally detailed development scenarios presented in the Financial Analysis. Subsequent development projects that "would occur under the Plan" listed at pages IV-8 to IV-10 plus cumulative projects listed at IV-11 to IV-12 also provide a basis for determining the potential range of units displaced by the adoption and implementation of the Project.

For these reasons the approach the DEIR takes to analysis of this potential impact falls short of CEQA's requirements for analysis, facts and evidence to support conclusions concerning impact significance. A revised analysis in a dedicated DEIR section must be completed and recirculated with the following elements:

- A map and text displaying the location, number and affordability (e.g., affordable, deed restricted and senior) housing units in the Project area. This information should disclose the number of affordable units that could revert to

[23] The Central SOMA Plan would create only 7,500 housing units.

market rate due to limited duration of the affordability of those units under agreement or other terms.

- An overlay of proposed zoning indicating potential incentive new development overlap or conflict with existing housing units.
- An analysis of potential (worst case) displacement of units broken down by market rate, affordable and deed restricted based on the two inputs above. In addition, estimate of the total number of residents potentially displaced.
- Description of how specifically City planning policies and code provisions would result in avoidance (conservation) or replacement of units displaced by new development and neighborhood gentrification due to a likely rise in the number of high income wage earners occupying the new jobs.

The DEIR's failure to adequately evaluate the Project's impacts on population, employment and housing constitutes a serious flaw. In this case, it is clear the Project will displace housing in the Project area. The revised DEIR must address how much, where and whether housing displaced is affordable or serving special needs. The revised DEIR must also describe specifically how these units will be replaced if displaced and where. The DEIR should be revised to include a comprehensive analysis of these impacts and identify effective and enforceable mitigation for those impacts that are determined to be significant. In addition, a revised DEIR must identify feasible mitigation measures to address the likely significant impacts associated with the demand for new housing affordable to the new workforce and with the provision of new services. See above discussion of feasible mitigation measures that should be considered in a revised DEIR.

3. The DEIR's Analysis of and Mitigation for Public Services Impacts is Inadequate

Instead of actually analyzing the Project's impacts on public services, in reliance on the Initial Study, the DEIR concludes that the Project (Plan) impacts to public services including police, fire and schools will be less than significant. DEIR Appendix B, Initial Study at pages 118 to 124, DEIR at page I-2. As stated above, the DEIR errs in relying on the Initial Study for the analysis of public service impacts since the Project described in the Initial Study is materially different than that described in the DEIR. Nonetheless, neither the Initial Study or the DEIR contain facts or analysis to support the conclusion that across the board, impacts to public services will be less than significant. The result is a lack of information about the severity and extent of the Project's impacts on public services including police, fire, emergency services, child care and health services, among others.

The Initial Study acknowledges that specific development projects allowed under the Plan and associated increases in population and land use intensity would result in an increased demand for public services noting that the Southern Station (in 2013) receives approximately 25 % of the City's call for service. Initial Study at page 120. This level of calls for service has likely gone up since 2013 due to growth in and around the Project area.

The Initial Study's conclusion that impacts to police, fire and emergency services is circular, incomplete and unsupported by analysis and facts. Without any analysis of the need for additional fire, police or emergency services, the Initial Study concludes:

> "…development under the Plan would not result in the need for new or physically altered police protection facilities, and this impact would be less than significant. The potential significant effects of any new or physically altered fire facilities are analyzed in other sections of this Initial Study or will be further analyzed and included in the EIR." DEIR Appendix B, Initial Study at page 121.

The Initial Study notes that the SFFD conducts ongoing assessments of its service capacity and response times and would continue to do so in response to projected growth over the lifetime of the Plan; as another excuse for excluding meaningful analysis. The limited discussion in the Initial Study also ignores the likely significant impacts to these services associated with increased traffic congestion noting that facilities are in the district and presumably unaffected by traffic gridlock.

This approach falls short of CEQA's requirements for analysis, facts and evidence to support conclusions concerning impact significance. A revised analysis in a new DEIR section must be completed and recirculated with the following elements:

- Setting (baseline) information including up to date calls and response times for police, fire and emergency services as well as the SFFD and SFPD's standards for personal per capita, equipment and facilities. This description should include a current assessment of the capacity of these services and assessment of unmet demands for services, facilities and funding.
- Accurate project description information including but not limited to the growth in population by residents and employment allowed by the Project and a breakdown of the types of development projected as service needs vary by development type.
- A clear articulation of the City's adopted standards for all public services impacted by the Project (e.g., acceptable response times, personnel per population, etc.).
- Based on projections for new development under the Project, projected increases in calls, types of call based on proposed development and associated need for additional personnel and facilities based on adopted and recognized standards.

The Central SOMA Neighborhood (Project area) faces "amongst the highest violent and property crime rates in the City[24]. – characterize the crime. There is no question the addition of over 63,000 new jobs and 23,400 residents will result in significant demand for additional police and fire personnel and likely facilities and equipment. In addition, increased congestion on the Project area roads will likely result in reduced response times unless additional

[24] SF Department of Public Health, Environmental Health, Sustainable Communities Health Assessment: Central Corridor Plan, p. 4.

resources are provided in the area (e.g., sub-stations, additional personnel, equipment and equipment storage, emergency lanes and pull outs, etc.).[25] A revised analysis of these impacts must be prepared and recirculated in a new DEIR and feasibility mitigation measures identified.

4. The DEIR Errs in Concluding Project Potential Shadow Effects Will Be Less than Significant

The Central SOMA Neighborhood (Project area) is currently characterized by mid-rise buildings affording the neighborhood good natural sunlight and light as compared with the Financial District. The changes proposed by the Project (Plan) allow for approximately eight towers between 200 and 400 feet in height, five buildings of 160-feet in height and six of 130 feet in height as well as others ranging from 200 to 350 feet in height. Developments of 100% affordable housing could achieve greater heights by right using the State's affordable housing density bonus. DEIR at 11-22. According to the Central Soma Plan and DEIR: "The proposed height limits are intended to minimize shadow impacts on South Park, Yerba Buena Gardens, and the Bessie Carmichael School schoolyard." DEIR at page II-23.

Unlike many other topics where the DEIR relies on the Initial Study, in this case, the DEIR addresses the Project's potential shadow effects on publicly accessible areas, including public parks, publicly accessible private open spaces, and sidewalks using computer modeling and detailed graphics displaying shading in DEIR Section IV.H..[26] The conclusion reached concerning shadow impacts is as follows:

> "…development pursuant to the Plan would not create new shadow in a manner that substantially affects the use of existing outdoor recreation facilities or other public areas. Additionally, the specific massing and design of a subsequent development project would be reviewed to determine whether the project could have shadow impacts not identified

[25] The DEIR's discussion of Cumulative Emergency Vehicle Access Impacts is instructive. DEIR at page IV.D-108. The discussion acknowledges the traffic congestion in the Project Area and that the Project and cumulative development will make it worse: "Development under the Plan and the proposed street network changes would contribute considerably to these significant impacts on emergency vehicle access." DEIR at IV.D-108. The DEIR errs in concluding an Emergency Vehicle Access Consultation would mitigate these impacts. The consultation is deferred to the future and requires review of each street network project to be sure that private vehicles would not be precluded from yielding right of way to emergency vehicles. That plan must be completed now, reviewed and approved as part of a revised DEIR and not deferred until there is no longer flexibility to improve the road system to allow for emergency vehicle access and movement as needed. Such improvements may require additional physical space, pull-outs and other modifications to address an already dire situation due to existing congestion, the DEIR admits will be made worse by the Project plus cumulative projects.

[26] It is instructive that the analysis is qualitative. Specifically, according to the DEIR, the analysis is qualitative and not quantitative since quantitative analysis is typically required for analysis of individual buildings under section 295 or as part of a project specific review. DEIR at page IV.H-11. A revised DEIR should provide quantitative analysis of the Project as well since numerous specific development projects listed in the DEIR will proceed with Plan adoption.

at this programmatic level of analysis. Therefore, the impact would be less than significant." DEIR at page IV.H-38.

The DEIR's own analysis supports a different conclusion. Specifically, the DEIR's modeling clearly indicates that the Project will result in significant shading of South Park, Victoria Manalo Draves Park and Gene Friend Recreation Center, as well as several other public open spaces and neighborhood sidewalks. See for example, Figures IV.H-13 and 14 showing shadow on South Park during most of the day during seasons of shorter day length [when sunlight in the limited open spaces in this neighborhood is even more important]. The DEIR states in this regard:

> "During the seasons of shorter day length and longer mid-day shadows, the Plan could result in an increase in shadow on South Park during most of the day. At the winter solstice, small bits of new shadow could be added to shadow from existing buildings over various parts of the park throughout the day, as shown in Figure IV.H-13 and Figure IV.H-14."

Contrary to the model results and description of the impact above, the DEIR finds the new shadows, despite coverage of one of the few public open spaces, of limited extent and therefore less than significant. This conclusion is laughable given the clear proof in the DEIR that the Project will cast shadows on South Park for nearly half the year. These impacts are compounded by the fact that the neighborhood is so underserved by public parks and recreation spaces.

Similarly, the extent and duration of shadows cast on public sidewalks will increase as taller buildings are developed, as shown in DEIR Figures IV.H-2 through Figure IV.H-10. Casting shadows for nearly half the year clearly requires a conclusion of significant impact warranting consideration of mitigation and alternatives. Mitigation and alternatives that must be considered to reduce these impacts include but are not limited to:

- Adoption of the reduced height alternative and prohibition of high rises except where immediately adjacent to transit hubs.
- Lower height limits on sites where shadow impacts are shown by the DEIR's analysis to extend into existing open space, park and recreation areas.

5. The DEIR Errs in Concluding Impacts to Open Space and Recreation Will Be Less Than Significant

The Central SOMA Plan area has very limited public open spaces and facilities. While a robust, ethnically and economically diverse community, Central SOMA faces serious challenges in terms of lack of open space and recreational opportunities. Currently 67% of residents live within ½ miles of a public recreational facility compared to 91% for the City as a whole[27]. South Park is

[27] SF Department of Public Health, Environmental Health, Sustainable Communities Health Assessment: Central Corridor Plan, p. 4.

the only large-scale open space in the Plan Area and the only Recreation and Park Department property. While there are open spaces adjacent to the Area including Yerba Buena Gardens, the uneven distribution of open spaces and lack of them leaves the area underserved. The General Plan Recreation and Open Space Element (ROSE), adopted in 2014, identifies portions of the Plan Area as in need of new open space. DEIR at page II-31.

The DEIR relies on the Initial Study for the required analysis of impacts to open space and recreation. DEIR at page I-2. According to the Initial Study, development under the Plan would have an adverse environmental impact if it were to cause the deterioration of existing recreational resources through increased use or require the construction or expansion of recreational facilities that may have an adverse effect on the environment. DEIR Appendix B, Initial Study at page 104. The Initial Study notes that any existing unmet demand for parks and recreational resources that currently exist in the Plan area is not in and of itself considered to be a significant impact on the environment noting that the Plan area is deficient in these resources. Id.

Based on the Project's proposed network of new open spaces, including POPOS, and a potential new park,[28] the Initial Study concludes that impacts to open space and recreational resources will be less than significant. This conclusion is unsupported by facts, analysis and evidence. The Initial Study briefly alludes to the City's minimum standards for open space and recreational resources per capita, but nowhere in the Initial Study or DEIR is there a quantitative analysis of the need for new open space and recreational resources based on the substantial growth in employee, resident and tourist populations in the area. Given the current lack of adequate resources, growth not accompanied by adequate new development of parks and recreational resources is clearly a significant impact of the Project. Moreover, the Project's proposed new open spaces is far from sufficient to accommodate the new growth based on the City's own standards. A revised DEIR must analyze the Projects quantitative impacts on parks, open space and recreational resources. Feasible mitigation measures should also be identified including the addition of more than one substantial new park in the Central SOMA area. If such facilities are not identified now at the Area Plan stage, it will be too late to identify potential sites and determine how costs of implementation can be shared by new development. The revised DEIR must also include an adequate analysis of the physical environmental impacts associated with construction of new facilities and cannot defer this analysis to a later project specific environmental analysis.

6. The Project is Inconsistent with the General Plan and Other Applicable Planning Documents

The DEIR must include a complete and forthright analysis of the Projects consistency with the General Plan and other applicable planning documents, ordinances and regulations.

[28] It is far from clear that the proposed new park will ever be a reality. New development should be conditioned on certainty for all essential services to accommodate growth, not limited to new parks and recreational resources.

Inconsistencies between the Project and the General Plan or other applicable planning documents that were enacted to protect the environment may constitute significant impacts in themselves and can also be evidence of other significant impacts that must be analyzed in the DEIR. In addition, where a Project is inconsistent with the General Plan it may not be lawfully adopted or approved.

In this case, after discussing only some of the applicable plans, the DEIR incorrectly concludes across the board that the Project will not substantially conflict with any of the plans, policies or other provisions discussed, noting that the Planning Commission and Board of Supervisors would review the Plan for consistency with the General Plan and consider possible amendments to achieve conformity. See DEIR Chapter III and page III-1.

Some examples of the Project's glaring inconsistency with the General Plan include, but are not limited to, the following:

Plan Provision	Inconsistency
Urban Design Element, General Plan: Policy 3.5: Relate the height of building to important attributes of the city pattern and to the height and character of existing development; and Policy 3.6: Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction. DEIR at page III-10	The DEIR incorrectly concludes the Project would not conflict with the objectives and policies of the Urban Design Element. There is a clear inconsistency between the Project and the Urban Design Element. The Project (Plan) allows building of 350 feet or more in a neighborhood that is currently mid-rise and planned to remain mid-rise in the Central Corridor Plan. According to the Central Corridor Plan, "[t]he predominant character of Soma as a mid-rise district should be retained, and the presence of high-rises reduced by limiting their distribution and bulk." Central Soma Plan at page 32. Holding up this policy direction in the Central Soma Plan are numerous reasons mid-rises rather than high rises are a better fit for the neighborhood and would result in fewer significant impacts. The DEIR's assertion the Project would not be inconsistent with the General Plan (DEIR at page III-10) is undermined by the statements and facts in the Central Corridor Plan and its supporting documents.
Recreation and Open Space Element Policy 1.9: Preserve sunlight in pubic open	The DEIR incorrectly concludes the project will not conflict with this policy.

spaces. DEIR at page III-II.	There is a clear inconsistency between the Project and this Policy as documented by the DEIR section on Shadows. Specifically, the DEIR states that the Project will create new shadow on several parks in the area. DEIR at page III-II; see also discussion of Shadow section in this letter). In addition, the DEIR Figures show significant new shadows on public streets and POPOS. DEIR pages IV.H-35, IV.H-38, Figures in Section IV.H of the DEIR. Based on evidence in the DEIR, the DEIR incorrectly concludes the Project will no conflict with this Policy.
Western SOMA Plan Policy 1.2.4: Prohibit housing outside of designated Residential Enclave Districts (RED) south of Harrison Street." DEIR at page III-6 As well as other provisions of the Western SOMA Plan	The DEIR incorrectly concludes that the Project would not be demonstrably inconsistent with the Western Soma Plan. DEIR at page III-8. The Project is clearly inconsistent with this policy and therefore clearly inconsistent.
Eastern SOMA Plan	The DEIR incorrectly states that the Project would not be demonstrably inconsistent with the East Soma Plan in part because the applicable parcels in the Plan would be incorporated into the Central Soma Plan. The Project's preference for employment (non-residential) uses is in stark contrast to the objectives (1.2 and 1.2) of the Eastern Soma Plan. Moreover, the Project's proposed substantial growth in employment without a commensurate plan for housing will put significant pressure on the East Soma Plan for additional housing growth not anticipated by the Plan.

A revised DEIR must include expanded and forthright analysis of the Projects potential inconsistencies with all applicable plans including voter approved propositions, San Francisco's Urban Design Guidelines and the newly adopted TDM Ordinance. Where an inconsistency with a Plan or policy would result in an environmental impact (e.g., shadows, public services,

housing demand), those impacts must be analyzed in the appropriate sections of the revised DEIR in a manner consistent with the policy analysis.

C. The DEIR Must be Recirculated

Decision makers and the public cannot possibly assess the Project's impacts through the present DEIR which is riddled with omissions, errors and inconsistencies. Among other fundamental deficiencies, the DEIR repeatedly understates the Project's significant environmental impacts and therefore fails to formulate feasible mitigation to reduce these impacts. To resolve these issues, the City must prepare a revised DEIR that would necessarily include substantial new information.

Sincerely,

Terry Watt, ACIP

Appendix A: Terry Watt Qualifications

Appendix A

Terry Watt Qualifications

Terry Watt, AICP

Terry Watt Planning Consultants

1937 Filbert Street - San Francisco, CA 94123

terrywatt@att.net Cell: 415-377-6280

Terry Watt, AICP, owns Terry Watt Planning Consultants. Ms. Watt's firm specializes in planning and implementation projects with a focus on regionally-significant land use and conservation work that advances sustainable development patterns and practices. Prior to forming her own consulting group, she was the staff planning expert with the environmental and land use law firm Shute, Mihaly & Weinberger. She is an expert in general and specific planning and zoning, open space and agricultural land conservation strategies and approaches and environmental compliance, including CEQA and NEPA. Her skills also include facilitation and negotiation, public outreach and project management. Terry is a frequent presenter at regional, national and statewide workshops and symposiums. She holds a Master's Degree in City and Regional Planning from the University of Southern California and a multi-disciplinary Bachelor's Degree in Urban Studies from Stanford University.

Terry works with a wide variety of clients throughout California including non-profit organizations, government agencies and foundations. She volunteers up to half her professional time on select projects. Recent projects and roles include:

- Project Manager and Governor's Office Liaison for San Joaquin Valley: Least Conflict Lands for Solar PV project. Project funding came from the Hewlett and Energy Foundation's, matched by environmental organizations, the California Energy Commission and other private parties. The objective of the project was to identify areas in the Valley that had very low resource values for renewable energy to serve as an incentive for development of least conflict lands rather than valuable resource lands. Watt was responsible for overall project management and day to day coordination, multi-stakeholder (150 stakeholders) and agency (57 federal, local and agency advisors) outreach and participation, facilitation of meetings, Governor's Office convening's, all project logistics and project report. Link to Collaboration Platform – Data Basin San Joaquin Valley: http://sjvp.databasin.org/
- Governor's Office Liaison and Outreach Coordinator for the State's portion of the Desert Renewable Energy Conservation Plan (DRECP). As outreach coordinator, worked closely with local governments on DRECP related consistency issues with local general plans.
- Planning Consultant to California Attorney General's Office - Environment Section focusing on climate change, CEQA and general plans. (2007- 2010). While working with the Environment Section, assisted with settlements (Stockton General Plan, Pleasanton Housing Element and CEQA litigation); identified locally based best practices for local government planning to address climate change issues; and managed government outreach and consultation on general plans and climate action plans/energy elements/sustainability planning efforts. Post 2010 continue to provide periodic consulting services to the Environment Section related to select cases.
- Strategic Advisor and Planning Consultant to the Santa Clara Valley Open Space Authority, Greenbelt Alliance and Committee for Green Foothills for the Coyote Valley Project focused on developing a conservation and development plan for the Valley. Watt was responsible for preparing the group's early CEQA comment letter on the negative declaration for a proposed Warehouse Project and assisting with scoping comments for the EIR.
- Measure M-2 Sales Tax and Environmental Mitigation Measure. (2009-). Terry was the Co-project

manager/facilitator of a 30+-member environmental coalition that through a unique partnership with the Orange County Transportation Authority (OCTA) and state and federal wildlife agencies generated nearly $500 million in funding for programmatic environmental mitigation (conservation land acquisition and stewardship) in Measure M2, Orange County Transportation Sales Tax.

- State Office of Planning and Research Special Projects (2011 – ongoing). Advisor to OPR on General Plan Guidelines, Infill and Renewable Energy Templates as part of the required update of the General Plan Guidelines. Expert panelist for workshops on SB 743.
- Marin Countywide General Plan and Environmental Impact Report (2004 to 2007). Project Manager for the award-winning Marin Countywide Plan Update and its Environmental Impact Report. The General Plan was among the first to incorporate leading edge climate change, greenhouse gas emissions reduction and sustainability policies as well as monitoring, tracking and implementation measures to measure success.
- Staff to the Martis Fund, a joint project of five environmental groups and a Business Group (Highlands Group and DMB Inc.). (2008 – ongoing). The Fund was created as a result of litigation settlement. The Fund has distributed over $15 million dollars since its inception to a range of conservation (acquisition of over 5,000 acres of open space), stewardship and restoration projects and workforce housing projects (emergency rental housing support, down payment assistance and low income apartments). Funding comes from a permanent transfer fee on all real estate sales at Martis Camp. http://www.martisfund.org/PDFs/Martis-Fund-Brochure.pdf
- Tejon Ranch Land Use and Conservation Agreement. (2006 – ongoing). Project coordinator for a dialogue process between environmental groups (Natural Resources Defense Council, Sierra Club, Endangered Habitats League, Planning and Conservation League, Audubon California) and The Tejon Ranch Company that resulted in a major Land Use and Conservation Agreement for the permanent protection of 240,000+ acres (90%) of the 270,000 acre Tejon Ranch. Secretary John Laird refers to the Agreement as a "miracle" agreement. In return for permanent conservation of 240,000+ acres, environmental groups agreed not to oppose projects within the development footprints; but can comment on regional planning efforts and the projects. Terry has an ongoing role overseeing implementation of the Agreement, including early role forming and managing the Conservancy formed by the Agreement. The Agreement provided the cornerstone of the Habitat Conservation Plan for a major portion of the Ranch; the Tejon Multi-Species Habitat Conservation Plan, TUMSHP, approved in April 2013. She recently joined the Board of the Tejon Ranch Conservancy created and funded by the Agreement.
- Orange County Wildlife Corridor. Project coordinator and architect for dialogue process between environmental and conservation organizations, City of Irvine and Lennar/Five Points development team that resulted in an 8 party Agreement, related general plan amendment and full funding to build an urban wildlife corridor to the specifications of the science team (6-member team jointly selected by all groups) connecting two high value conservation areas in central Orange County (Coastal and Eastern NCCP/HCP lands). Watt provides some ongoing implementation support. Recently (2017) coordinated DEIR comments letters on two Orange County County Project proposals that could adversely impact the 5 Point/Irvine Wildlife Corridor.
- Ongoing assistance and authorship of expert comments on projects with recent letters on the proposed draft Amador County General Plan on behalf of the Foothill Conservancy and the proposed Squaw Valley Resort on behalf of a coalition of environmental and labor organizations.
- Facilitator to the Bolsa Chica Land Trust for recent agreement with Landowners to purchase remaining private acres of the Bolsa Chica uplands. Currently assisting with fundraising for the property.
- Advisor to the Nature Conservancy, the American Farmland Trust, Center for Law, Energy and Environment on numerous publications concerning urban infill and conservation.

PROFESSIONAL MEMBERSHIPS AND BOARDS

- Lambda Alpha International - Golden Gate Chapter
- American Institute of Certified Planners (AICP)
- American Planning Association (APA)
- Tahoe Fund Founding Board Member
- Tejon Ranch Conservancy Board Member
- Santa Lucia Conservancy Board Member
- Founder Council of Infill Builders
- Board Member, Planning and Conservation League

AWARDS

- State and National APA Awards for Marin County General Plan
- APA Awards for South Livermore Valley Plans
- Carla Bard Award for Individual Achievement, PCL

PUBLICATIONS

Contributor to the Award Winning Textbook:

Ecosystems of California, 2016, Chapter 40:

Land Use Regulation for Resource Conservation

EXHIBIT B

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

2656 29th Street, Suite 201
Santa Monica, CA 90405

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February 8, 2017

Richard Drury
Lozeau | Drury LLP
410 12th Street, Suite 250
Oakland, CA 94607

Subject: Comments on the Central SoMa (South of Market) Plan

Dear Mr. Drury,

We have reviewed the Draft Environmental Impact Report (DEIR) for the Central SoMa (South of Market) Plan ("Plan") located in the City of San Francisco. The Central SoMa Plan (formerly, Central Corridor Plan) is a comprehensive plan for the area surrounding much of southern portion of the Central Subway transit line, a 1.7-mile extension of the Third Street light rail line that will link the Caltrain Depot at Fourth and King Streets to Chinatown and provide service within the South of Market (SoMa) area. The Plan Area includes roughly 230 acres that comprise 17 city blocks, as well as the streets and thoroughfares that connect SoMa to its adjacent neighborhoods: Downtown, Mission Bay, Rincon Hill, and the Mission District. The Plan seeks to encourage and accommodate housing and employment growth by (1) removing land use restrictions to support a greater mix of uses while also emphasizing office uses in portions of the Plan Area; (2) amending height and bulk districts to allow for taller buildings; (3) modifying the system of streets and circulation within and adjacent to the Plan Area to meet the needs and goals of a dense, transit-oriented, mix-use district; and (4) creating new, and improving existing, open spaces.

Our review concludes that the DEIR fails to adequately evaluate the Plan's impact on local and regional air quality, pedestrian safety, and traffic. As a result, air emissions and health impacts associated with construction and operation of the proposed Plan are underestimated and inadequately addressed. An updated DEIR should be prepared to adequately assess and mitigate these potential impacts.

Air Quality

Failure to Adequately Assess the Plan's Air Quality Impact

The DEIR concludes that the Plan would have a less than significant air quality impact (p. IV.F-33). This conclusion, however, is incorrect for several reasons. First, the air quality analysis conducted within the DEIR is based on outdated baseline data that do not accurately reflect current traffic, air quality, pedestrian safety, and population within the Plan area. Second, the DEIR fails to account for all major development projects currently being considered within the area. As a result, the Plan's net increase in criteria air pollutants within the area, as well as it's cumulative air quality impact, are misrepresented. Due to these reasons, we find the DEIR's air quality analysis and resultant significance determination to be inadequate, and require that an updated DEIR be prepared to adequately evaluate the Plan's air quality impact.

Use of Outdated Baseline Data

According to the Bay Area Air Quality Management District's (BAAQMD) CEQA Air Quality Guidelines,[1] and as stated in the DEIR,

> "The significance thresholds for assessment of a planning document, such as the proposed Plan, involve an evaluation of whether:
>
> - The plan would be consistent with the control measures contained in the current regional air quality plan (the 2010 Clean Air Plan), would support the primary objectives of that plan and would not hinder implementation of that plan; the plan's growth in vehicle miles traveled (VMT) do not exceed the plan's population growth; and the plan would not cause localized CO impacts.
>
> If the foregoing questions can be answered in the affirmative, the proposed Plan would not:
>
> - Conflict with or obstruct implementation of the applicable air quality plan;
> - Violate any air quality standard or contribute substantially to an existing or projected air quality violation; nor
> - Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)" (p. IV.F-21, IV.F-22).

Using these thresholds, the DEIR concludes that because "the Plan would be consistent with the control measures contained in the current regional air quality plan (the 2010 Clean Air Plan), would support the

[1] Air Quality Guidelines, BAAQMD, June 2010, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/draft_baaqmd_ceqa_guidelines_may_2010_final.pdf?la=en, p. 9-2

primary objectives of the 2010 Clean Air Plan and would not hinder implementation of the 2010 Clean Air Plan," and because "the rate of growth in VMT with implementation of the Plan would not exceed the Plan's rate of population growth and the Plan would not cause localized CO impacts," "the Plan would not violate an air quality standard or contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase of any non-attainment criteria pollutant" (p. IV.F-34).

This conclusion, however, is incorrect, as the DEIR's air quality analysis is based on outdated baseline data that do not accurately reflect current traffic, air quality, pedestrian safety, and population within the Plan area. For example, the DEIR conducts an analysis to determine whether or not the rate of growth in vehicle miles traveled (VMT) with implementation of the Plan would exceed the Plan's rate of population growth. This analysis, however, relies upon outdated 2010 baseline data, which is more than five years old. The DEIR states,

> "Growth projections prepared by the San Francisco Planning Department (and discussed under Analysis Assumptions in the Overview subsection of Chapter IV, Environmental Setting, Impacts, and Mitigation Measures) indicate that with implementation of the Plan, Plan Area residential population would increase from approximately 12,000 in 2010 to 37,500, by 2040, the analysis horizon year. This represents an increase of 213 percent. Additionally, employment is projected to grow from about 45,600 under existing conditions to approximately 109,200 by 2040, an increase of 139 percent. The combined population-employment ("service population") increase with implementation of the Plan, would therefore be approximately 154 percent ([37,500 + 109,200] ÷ [12,000 + 45,600] = 2.54, or an increase of 154 percent from existing). Based on output from the County Transportation Authority travel demand model, daily VMT to and from the Plan Area would increase by approximately 77 percent by 2040, from approximately 987,000 to about 1.751 million" (p. IV.F-33).

The use of 2010 population and traffic projections to determine the Plan's incremental net increase in criteria air pollutants is inadequate, as it does not accurately represent the current baseline conditions within the Plan area. As stated by the BAAQMD in their 2009 Justification Report, the use of outdated population growth estimates can result in inconsistencies within a Plan's air quality analysis.[2] Therefore, by relying upon baseline data that is more than five years old, the Plan's air quality impact is inadequately evaluated.

Not only does the DEIR rely upon outdated traffic and population projections to determine the Plan's air quality impact, but it also fails to consider recent changes in the Plan area's air quality and pedestrian safety. According to the Sustainable Communities Health Assessment conducted for the proposed Plan, "due to close proximity to freeways and high traffic roads, the area has some of the poorest air quality

[2] Revised Draft Options and Justification Report California Environmental Quality Act Thresholds of Significance, BAAQMD, 2009, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/revised-draft-ceqa-thresholds-justification-report-oct-2009.pdf?la=en

in the City, with 13% of households living in an area exposed to greater than 10 µg/m^3 of fine particulate matter (PM 2.5) and 16% living in areas with ambient air pollution cancer risks greater than 100 in a million" (p. 2). The report continues on to state that while "residents in the Plan area own fewer cars, drive less, and spend more time walking and cycling," the area still has "among the highest densities of traffic in the city" (p. 3). The report also indicates that the Plan area's current pedestrian injuries and traffic congestion are among the highest in the city, stating,

> "The incidence of severe injuries and deaths related to collisions between vehicles and pedestrians, cyclists, and other vehicles is amongst the highest in the City. The situation for pedestrians is especially troubling, as the average annual number of pedestrian injuries and fatalities per 100 road miles is six times higher in the Plan area compared to the City as a whole (48 vs. 8). Compared to other neighborhoods, the Plan area also has a higher proportion of drivers who are driving over the speed limit. While more residents who live in the Plan area may not be driving themselves, the traffic density, a general proxy for adverse environmental exposures and health hazards from traffic, is among the highest in the City due to the large arterials that carry traffic to and from freeways. Additionally, 100% of the current population in the plan area lives within 150 meters of a designated truck route (research suggests that the concentration of emitted motor vehicle pollutants may be highest within 150 meters of roadways)" (p. 3).

As you can see in the excerpt above, the Plan area's current air quality, traffic conditions, and pedestrian safety are among the worst in the city – something that the DEIR fails to address or even consider when evaluating the Plan's air quality impact. Once implemented, the Central SoMa Plan, which proposes to develop 17,280,000 square feet of residential uses, 10,430,000 square feet of office uses, and 4,007,000 square feet of retail and other uses, will only exacerbate these already significant health and environmental issues (Table VI-1, p. VI-3, pp. 627). Therefore, we find the DEIR's conclusion of a less than significant air quality impact to be incorrect, and maintain that the Plan would have a significant air quality impact, as our analysis provides substantial evidence to support this significance determination.

Failure to Consider Impacts from Other Projects Within the Area

Not only does the DEIR rely upon outdated baseline data to determine the Plan's air quality impacts, but it also fails to account for impacts from other development projects within the area. As a result, the Plan's net increase in criteria air pollutants within the area, as well as it's cumulative air quality impact, are misrepresented.

The proposed Pier 70 Mixed-Use District Project, which is adjacent to the Central SoMa Plan area, comprises a project site of an approximately 35-acre area bounded by Illinois Street to the west, 20th Street to the north, San Francisco Bay to the east, and 22nd Street to the south.[3] The project site

[3] Pier 70 Mixed-Use District Project DEIR, p. 2.1-2.2, *available at:* http://sf-planning.org/environmental-impact-reports-negative-declarations

contains two development areas: the 28-Acre Site and the Illinois Parcels. Development of the 28-Acre Site would include up to a maximum of approximately 3,422,265 gross square feet (gsf) of construction in new buildings and improvements to existing structures (excluding square footage allocated to accessory parking). Development of the Illinois Parcels would include up to a maximum of approximately 801,400 gsf in new buildings; these new buildings would not exceed a height of 65 feet, which is the existing height limit along Illinois Street on both the Port-owned and the western portion of the Hoedown Yard.

According to the Pier 70 Mixed-Use District Project's DEIR, the Pier 70 Project would result in ten significant and unavoidable impacts. "It would:

- Cause one individual Muni route (48 Quintara/24th Street bus routes) to exceed 85 percent capacity utilization in the a.m. and p.m. peak hours in both the inbound and outbound directions;
- Cause loading demand during the peak loading hour to not be adequately accommodated by proposed on-site/off-street loading supply or in proposed on-street loading zones, which may create hazardous conditions or significant delays for transit, bicycles, or pedestrians;
- Contribute considerably to significant cumulative transit impacts on the 48 Quintara/24th Street and 22 Fillmore bus routes;
- Cause a substantial temporary or periodic increase in ambient noise levels during construction in the project vicinity above levels existing without the project;
- Cause substantial permanent increases in ambient noise levels in the project vicinity (22nd Street [east of Tennessee Street to east of Illinois Street]; and Illinois Street [20th Street to south of 22nd Street]);
- Combine with cumulative development to cause a substantial permanent increase in ambient noise levels in the project vicinity (22nd Street [east of Tennessee Street to east of Illinois Street] and Illinois Street [20th Street to south of 22nd Street]);
- Generate fugitive dust and criteria air pollutants during construction, which would violate an air quality standard, contribute substantially to an existing or projected air quality violation, and result in a cumulatively considerable net increase in criteria air pollutants;
- Result in operational emissions of criteria air pollutants at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, and result in a cumulatively considerable net increase in criteria air pollutants; and
- Combine with past, present, and reasonably foreseeable future development in the project area to contribute to cumulative regional air quality impacts."[4]

As you can see in the excerpt above, the Pier 70 Project would result in significant and unavoidable impacts to air quality, pedestrian safety, and traffic. These significant and unavoidable impacts, combined with the proposed Plan's significant air quality, pedestrian safety, and traffic impacts, would

[4] Pier 70 Mixed-Use District Project DEIR, p. S.5-S.6, *available at:* http://sf-planning.org/environmental-impact-reports-negative-declarations

result in significant and unavoidable cumulative air quality, pedestrian safety, and traffic impacts, something that the DEIR fails to adequately address. In addition to the Pier 70 Project, there are approximately 72 additional development projects in San Francisco that are currently being considered by the Planning Commission, some of which would also contribute to the Plan's already significant impacts (see table below).[5]

List of Major Development Projects in San Francisco	
Project	**Address**
1629 Market Street Mixed-Use Project	1629 Market Street
1027 Market Street Project	1028 Market Street
950-974 Market Street Project	950-974 Market Street
One Oak Street Project	1500-1540 Market Street
1499 Mission Street Project	1500 Mission Street
299 Grant Avenue Project	300 Grant Avenue
1000 Van Ness Avenue Project	1001 Van Ness Avenue
1269 Mission Street Project	1270 Mission Street
India Basin Mixed-use Project	700-900 Innes Avenue
1979 Mission Street Mixed-Use Project	1979 Mission Street
901 16th Street & 1200 17th Street Project	901 16th Street & 1200 17th Street
1828 Egbert Avenue Project	1828 Egbert Avenue
Better Market Street Project	Market Street & Octavia Boulevard
Candlestick Point-Hunters Point Shipyard Phase II Development Plan Project	East of US-101
1065 Market Street Project	1066 Market Street
240-290 Pacific Avenue / 720 Battery Street Project	240-290 Pacific Avenue / 720 Battery Street
837 Pacific Avenue Project	838 Pacific Avenue
2293-2299 Powell Street/309-311 Bay Street Project	2293-2299 Powell Street/309-311 Bay Street
Golden State Warriors Event Center and Mixed-Use Development	Mission Bay Blocks 29-32
1601 Mariposa Street Mixed Use Project	1602 Mariposa Street
400 Bay Street Hotel Project	401 Bay Street
1074 Market Street Project	1075 Market Street
5M Project	925-967 Mission Street
Jewish Home of San Francisco	302 Silver Avenue
525 Harrison Street (Case No. 2000.1081E; State Clearinghouse No. 1984061912)	525 Harrison Street
West Wing Project	501 Tunnel Avenue
75 Howard Street Project	75 Howard Street
949 Gough Street Project	950 Gough Street
1546-1564 Market Street Project	1546-1564 Market Street

[5] http://sf-planning.org/environmental-impact-reports-negative-declarations

100 Hyde Street Project	101 Hyde Street
1499 Mission Street Project	1500 Mission Street
Mason and Turk Residential Mixed-Use Project	19-25 Mason Street
2501 California Street Project	2501 California Street
800 Indiana Street Project	800 Indiana Street
689 Market Street Project	690 Market Street
109 The Embarcadero/115 Steuart Street Project	110 The Embarcadero/115 Steuart Street
1480 Post Street/ 1333 Gough Street Project	1481 Post Street/ 1333 Gough Street
1527-1545 Pine Street Mixed-Use Project	1527-1545 Pine Street
1634-1690 Pine Street Project	1634-1690 Pine Street
Seawall Lot 337 and Pier 48 Mixed-Use Project	Pier 48 & Seawall Lot 37
465 Tehama/468 Clementina Street Project	465 Tehama/468 Clementina Street
651-655 Dolores Street Project	651-655 Dolores Street
199 Paul Avenue Project	200 Paul Avenue
74 Howard Street Project	75 Howard Street
200-214 6th Street Project	200-214 6th Street
1784 15th Street Project	1785 15th Street
927 Toland Street Project	928 Toland Street
The Mexican Museum and Residential Tower Project	706 Mission Street
100 Polk Street Project	101 Polk Street
344 Brannan Street Project	345 Brannan Street
248-252 9th Street Project	248-252 9th Street
Seawall Lot 351 Project	8 Washington Street
801 Brannan and One Henry Adams Streets Project	801 Brannan & 1 Henry Adams Streets
1320 Mission Street Project	1321 Mission Street
2550-2558 Mission Street Project	2550-2558 Mission Street
1510-1540 Market Street Project	1510-1540 Market Street
Strand Theater	1127 Market Street
479 Potrero Avenue Project	480 Potrero Avenue
2894 San Bruno Avenue Project	2895 San Bruno Avenue
751 Carolina Street Project	752 Carolina Street
1000-1020 Broadway & 1629 Taylor Street Project	1000-1020 Broadway & 1629 Taylor Street
Chinese Hospital Replacement Project	835–845 Jackson Street
3151-3155 Scott Street Project	3151-3155 Scott Street
Booker T. Washington Community Center Mixed Use Project	800 Presidio Avenue
Restaurant Depot	2121 and 2045 Evans Street
2001 Market Street Mixed-Use Development	2001 Market Street
748 Wisconsin Street Project	749 Wisconsin Street
221 Second Street Project	222 Second Street

49 First Street Project	50 First Street
739 Washington Street Project	740 Washington Street
690 Stanyan Street (Mixed Residential/Retail Project)	690 Stanyan Street
255 Seventh Street Project	255 Seventh Street

Our analysis demonstrates that the proposed Plan, in combination with the various development projects currently being considered by the City, would result in a cumulatively considerable significant air quality, pedestrian safety, and traffic impact. As a result, we find the DEIR's conclusion of a less than significant air quality impact to be incorrect, and maintain that the proposed Plan, in combination with other development projects within the area, would have a significant impact on local and regional air quality.

Reduced Heights Alternative Would Reduce Plan's Significant Impacts

As discussed in the sections above, our analysis demonstrates that the Plan would have a significant impact on air quality, pedestrian safety, and traffic. Therefore, in an effort to reduce these impacts to a potentially less than significant level, alternatives to the Plan should be considered.

The Reduced Heights Alternative, for example, would permit fewer tall buildings south of the elevated Interstate 80 freeway than would be allowable under the Plan (p. VI-16). The Reduced Heights Alternative would include the same street network changes and open spaces improvements that are proposed under the Plan. This alternative assumes the same sites would be developed as under the Plan, although at a lower intensity, resulting in marginally less development than that assumed under the Plan. Growth projections for the Reduced Heights Alternative estimate an increase of 12,400 households and approximately 55,800 jobs, reflecting 14 percent fewer households and 12 percent fewer jobs than the Plan. Total floor area developed under the Reduced Heights Alternative would be about 13 percent less than with implementation of the Plan (see table below) (p. VI-3, VI-16).

TABLE VI-1 DEVELOPMENT ASSUMPTIONS FOR ALTERNATIVES TO THE CENTRAL SOMA PLAN

	Central SoMa Plan[a]	No Project Alternative	Reduced Heights Alternative	Modified TODCO Plan	Land Use Variant
Household Growth (Increase from Baseline)[b]	14,400	9,200	12,400	12,700	12,900
Difference from Plan	–	(5,200)	(2,000)	(1,700)	(1,500)
Population Growth (Increase from Baseline)[c]	25,500	16,300	21,900	22,500	22,800
Difference from Plan	–	(9,200)	(3,600)	(3,000)	(2,700)
Residential Square Feet (Increase from Baseline)	17,280,000	10,800,000	14,880,000	15,240,000	15,480,000
Difference from Plan	–	(6,480,000)	(2,400,000)	(2,040,000)	(1,800,000)
Employment Growth (Jobs) (Increase from Baseline)	63,600	27,200	55,800	56,700[d]	66,200
Difference from Plan	–	(36,400)	(7,800)	(6,900)	2,600
Office Square Feet (Increase from Baseline)	10,430,000	5,000,000	9,151,000	9,299,000[e]	10,857,000
Difference from Plan	–	(5,430,000)	(1,279,000)	(1,131,000)	427,000
Non-Office Square Feet (Increase from Baseline)	4,007,000	1,900,000	3,515,000	3,572,000[d]	4,171,000
Difference from Plan	–	(2,107,000)	(492,000)	(435,000)	164,000

SOURCES: San Francisco Planning Department, 2013, 2016; TODCO, 2013; ESA, 2016.

NOTES:

Values rounded to nearest 100; some columns and rows do not add due to rounding.

Values in parentheses represent a reduction from the Plan.

The Land Use Plan Only Alternative would have the same growth and building development characteristics as that presented for the Plan in this table. See text for additional discussion.

a. The 2016 Central SoMa Plan is contained entirely within the boundaries of the 2013 draft Plan Area. The Department analyzed projected growth in employment and residential uses for the 2013 draft Plan and determined that 95 to 97 percent of this projected growth is anticipated to occur in the 2016 draft Plan Area. Thus, the numbers presented in this table, are conservative (i.e., higher) and would not substantively alter the conclusions reached in this EIR. These modifications to the growth assumptions would not result in substantial or more severe physical impacts for topics evaluated in the Initial Study.

b. Assumes 95 percent occupancy of housing units.

c. Assumes 1.77 persons per household.

d. Based on same factors as in Planning Department projections.

e. From TODCO Plan, p. 9, with addition of Planning Department projected growth north of Folsom Street (primarily in C-3 use districts).

As you can see in the excerpt above, the Reduced Heights Alternative would have 14 percent fewer households, 12 percent fewer jobs, and would have a total floor area of about 13 percent less than the proposed Plan. This slight decrease in development would reduce the Project's traffic, air quality, and pedestrian safety impacts, and in some cases, this Alternative would reduce the Plan's significant impacts to a less than significant level. For example, as stated in the DEIR, the Reduced Heights Alternative would reduce the Plan's transit ridership by about eight percent (p. VI-24). This relative reduction in ridership would avoid the Plan's significant impact on Muni capacity utilization on some screenlines and corridors under existing plus Plan and 2040 cumulative conditions (p. VI-24). Similarly, in terms of pedestrian and bicycle operations, the Reduced Heights Alternative would result in about eight percent less travel by these modes in 2040, compared to the Plan, and would implement the same proposed street network changes, including new bicycle lanes and cycle tracks, widened sidewalks, and new mid-block crosswalks (p. VI-25). With incrementally less development in the Plan Area by 2040, the Reduced Heights Alternative would significantly reduce the Plan's significant impacts with respect to pedestrian crowding in crosswalks under existing plus Plan and 2040 cumulative conditions. Bicycle travel would also be incrementally less frequent under the Reduced Heights Alternative, compared to conditions with the Plan, and the facilities that would be provided would be similar (p. VI-25).

The Reduced Heights Alternative would result in less growth in demand for off-street freight loading spaces, on-street commercial loading spaces, and curb space for passenger loading/unloading zones, and would reduce the Plan's parking demand by 10 percent (p. VI-25, VI-26). Furthermore, the construction activities for this Alternative would be less intensive than the proposed Plan, due to the fewer tall buildings that would be constructed (p. VI-26). This reduction in construction activities would significantly reduce the air quality and traffic impacts when compared to the proposed Plan. Finally, as stated in the DEIR, "emissions of criteria air pollutants, GHGs, and traffic-generated TACs would be incrementally reduced within the Plan Area, compared to those with the Plan, because the Reduced Heights Alternative would result in about 14 percent less residential growth and about 12 percent less employment growth in the Plan Area by 2040 than is assumed under the Plan" (p. VI-27, VI-28). A summary of the impacts and percent reduction (if applicable) the Alternative would result in are provided in the table below.

Reduced Heights Alternative Impact Reductions	
Impact	**Percent Reduction from Proposed Plan**
Transit Ridership	*(8%)*
Pedestrian and Bicycle Operations	*(8%)*
Pedestrian Crowding in Crosswalks	*Significantly Reduced*
Bicycle Travel	*Significantly Reduced*
Demand for Off-Street Freight Loading Spaces	*Significantly Reduced*
On-Street Commercial Loading Spaces	*Significantly Reduced*
Curb Space for Passenger Loading/Unloading Zones	*Significantly Reduced*
Parking Demand	*(10%)*
Construction Activities	*Significantly Reduced*
Emissions of Criteria Air Pollutants, Greenhouse Gases (GHGs), and Traffic-Generated Toxic Air Contaminants (TACs)	*Significantly Reduced*

Our analysis demonstrates that the Reduced Heights Alternative would significantly reduce many of the Plan's air quality, traffic, and pedestrian safety impacts. While this Alternative proposes less development, it would still satisfy all of the Plan's eight goals. In fact, due to the Reduced Heights Alternative's reductions in air quality, traffic, and pedestrian safety impacts, it can be reasonably assumed that this alternative would better satisfy these eight goals when compared to the proposed Plan. This Alternative would still "increase the capacity for jobs and housing," but would better "provide safe and convenient transportation that prioritizes walking, bicycling, and transit," and would create a more "environmentally sustainable and resilient neighborhood" when compared to the proposed Plan (p. II-5, II-6). Due to these reasons, we find that implementation of the Reduced Heights Alternative would significantly reduce the Plan's air quality, traffic, and pedestrian safety impacts, and would better satisfy the Plan's goals and objectives. Therefore, this Alternative should be considered in an updated DEIR in order to reduce the severity of the Plan's significant and unavoidable impacts.

Sincerely,

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Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certification:

California Professional Geologist
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Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – present;
- Senior Environmental Analyst, Komex H2O Science, Inc (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of numerous environmental impact reports under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions and geologic hazards.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Stormwater analysis, sampling and best management practice evaluation at industrial facilities.
- Manager of a project to provide technical assistance to a comunity adjacent to a former Naval shipyard under a grant from the U.S. EPA.
- Technical assistance and litigation support for vapor intrusion concerns.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
- Expert witness on two cases involving MTBE litigation.
- Expert witness and litigation support on the impact of air toxins and hazards at a school.
- Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.
- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.

- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the dischrge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt currently teaches Physical Geology (lecture and lab) to students at Golden West College in Huntington Beach, California.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F**. 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examination, 2009-2011.

JESSIE MARIE JAEGER

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Los Angeles CA, 90049

530-867-6202
jaegerjessie600@gmail.com

SUMMARY

Innovative, energetic, driven, and a results oriented leader, with proven success producing quality results in research, student government, and academia. A recipient of the UCLA Bruin Advantage Scholarship, Dean's List honoree, and a leader amongst peers, who uses ambition and passion to effectively develop the skills needed to assess and solve major environmental and conservation issues.

Skills include:

- Execution of Laboratory Techniques (DNA extraction, Tissue Cataloging etc.)
- Understanding of Statistical Models used in Ecology and Conservation Biology
- Experience with programs such as Excel, Microsoft Access, QuickBooks, ArcGIS, AERMOD, CalEEMod, AERSCREEN, and ENVI
- Knowledge of California policies and municipal codes
- Experience in Field Work, including capture of Amphibian species and water sampling within Ballona Watershed
- Steering Committee Coordination and Working Group Management
- Organizational Skills
- Effective Communication Abilities
- Customer Service Experience

PROFESSIONAL EXPERIENCE

SOIL WATER AIR PROTECTION ENTERPRISE, SANTA MONICA, CA **2014 – Present**
SWAPE Technical Consultation, Data Analysis, and Litigation Support

Project Analyst
http://www.swape.com/staff/jessie-jaeger/
Maintain and update national public water system database through use of Microsoft Excel and Access. Other responsibilities include cancer risk assessment calculations, in depth research of environmental issues such as fracking, Leaking Underground Storage Tanks (LUST) and their associated funding programs, groundwater contamination, Proposition 65 formaldehyde test methods, polychlorinated biphenyl (PCB) contamination within schools, and environmental modeling using AERMOD, CalEEMod, AERSCREEN, and ArcGIS.

- Expert understanding of Microsoft Excel and Access, with the ability to manipulate, analyze, and manage large sets of data. Expertise include the creation of queries via Access, utilization of Pivot Tables and statistical functions within Excel, and proficiency in formatting large datasets for use in final reports.
- Mastery of modeling programs such as CalEEMod, AERSCREEN, ArcGIS, as well as the ability to prepare datasets for use within these programs. For example, the conversion of addresses into geographical coordinates through the utilization of Geocode programs.
- Experience in the composition and compilation of final analytical reports and presentations, with proficiency in technical writing, organization of data, and creation of compelling graphics.
- Knowledge of federal and California EPA policies, such as CEQA, accepted methods, and reporting limits, as well as experience with city and county personnel and municipal codes.

UCLA H. BRADLEY SHAFFER LAB, LOS ANGELES, CA **2012 – 2014**

Undergraduate Research Assistant
Responsible for phylogenetic prioritization within the Turtles of the World project (TOTW). Methods include obtaining 2-3 tissue samples of every species of turtle on earth, and sequencing them for ~20 independent genes. The results of the TOTW project are being used to create a phylogenetic tree of as many currently existing turtle species as possible. This will allow evolutionary biologists and herpetologists to better understand how turtle taxa are interrelated, and will aid in efforts to conserve threatened turtle species.

- Expert understanding of laboratory techniques, including the amplification of DNA through the method of polymerase chain reactions (PCR), extraction of DNA from tissue, cataloging of tissue samples etc.
- Proficiency in programs such as Excel, Google Earth, and Specify.
- Mastery of laboratory equipment usage, including but not limited to, Thermocyclers, Centrifuges, Nanodrop Machines, Autoclave Devices, and Vortexes.
- Experience in fieldwork, including capture of salamander, turtle, and newt specimens to add to the Shaffer Lab tissue database.

LOS ANGELES REGIONAL COLLABORATIVE, LOS ANGELES, CA **2011-2012**
Climate Action and Sustainability, Institute of the Environment, UCLA

Work Group and Event Manager
Responsibility for organization of steering committee meetings, as well as for the organization of the working groups within the collaborative. Maintaining and updating the website, as well as sending out weekly newsletters on behalf of the Collaborative to its members.

- Organized the first Solar Planning working group within the steering committee, which consisted of representatives from universities, government agencies, and private sectors within LA County.
- Coordinated monthly steering committee meetings as well as assisted in the organization of Quarterly Meetings and Sustainability Forums.
- Managed membership, weekly newsletters, website updates, general assistance, and clerical duties.

UNDERGRADUATE STUDENTS ASSOCIATION COUNCIL, UCLA **2012-2013**

Academic Wellness Director, Academic Affairs Commissioner (2013)
Student Groups Support Committee Member, Internal Vice President (2012)
USAC's programs offer an invaluable service to the campus and surrounding communities by providing an opportunity for thousands of students to participate in and benefit from these services. Two to three thousand undergraduates participate annually in the more than 20 outreach programs.

- Directed the organization of academic campus programs that provide tools and resources to manage the academic rigors experienced by university students.
- Oversight control of and responsibility for the Academic Wellness committee and all its members.
- Created a Universal Funding application for student groups that facilitates the process of requesting funds to support philanthropic activities.

EDUCATION

Bachelor of Science, Environmental Science
Minor in Conservation Biology
Senior Project, Ballona Watershed Phytoplankton and Water Quality Assessment
University of California Los Angeles, Los Angeles, CA

High School Diploma
Valedictorian, June 2010
Pioneer High School, Woodland, CA

ACCOMPLISHMENTS

Recipient, Bruins Advantage Scholarship, 2010-2014
Academic Honoree, Dean's List, 2013-2014
Life Member, National Honor Society & California Scholarship Federation, 2006-2010
Valedictorian, Pioneer High School, 2010

EXHIBIT C

SMITH ENGINEERING & MANAGEMENT

February 13, 2017

Mr. Richard Drury
Lozeau Drury
410 12th Street, Suite 250
Oakland, CA 94607

Subject: Central SoMa Plan Project DEIR (SCN 2013042070 P17003

Dear Mr. Drury:

At your request, I have reviewed the Draft Environmental Impact Report (the "DEIR") for the Central SoMa Plan Project ("the Project") in the City and County of San Francisco (the "City"). My review is specific to the traffic and transportation section of the DEIR and its supporting documentation.

My qualifications to perform this review include registration as a Civil and Traffic Engineer in California and over 48 years professional consulting engineering practice in the traffic and transportation industry. I have both prepared and performed adequacy reviews of numerous transportation and circulation sections of environmental impact reports prepared under the California Environmental Quality Act (CEQA). I am very familiar with the Project area. My professional resume is attached.

Findings of my review are summarized below.

The Project May Not Be Eligible To Analyze Traffic Impacts Solely Under the VMT per Capita Metric

The DEIR has attempted to evaluate Project traffic impacts solely under the Vehicle Miles Traveled (VMT) per Capita metric provision of SB 743, eschewing

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the conventional delay/Level of Service (LOS) analysis. The SB 743 regulations embodied in CEQA § 15064.3 specify that a land use plan may have a significant impact on transportation if it is not consistent with the relevant sustainable community strategy (SCS). To be consistent with the SCS, the development must lead to VMT equal to or less than the VMT per capita and VMT per employee specified in the SCS. *Plan Bay Area* is the relevant SCS (per DEIR page IV.D-36), and it sets the VMT per capita target at 10 percent below the 2005 Bay Area average. However, it does not set any target for VMT per employee (DEIR pages IV.D-21 and IV.D-36). Therefore, the City cannot claim that the development meets VMT targets per employee since there are none. Worse yet, the DEIR concludes that the Project will *increase* VMT per employee in the Project area from 8.2 to 8.7 in 2012 and from6.8 to 7.1 in 2040 (DEIR page IV.D-38) stating, *"With Plan implementation, VMT per capita would...increase slightly in the office category"*. Since the Project will increase VMT per employee in the study area, it does not comply with the terms of SB 743.

VMT Per Capita Generated in the Project Area Is an Incomplete Metric for Measuring Traffic Impacts in the Subject Plan Area

The VMT (vehicle miles traveled) per Capita (referring hereinafter to both VMT per unit population and VMT per employee as a single phrase while still recognizing that each has a separate rate) metric is a useful indicator when planning for a broad area or region, such as where generally identifying areas where development should be encouraged or discouraged, particularly when concentrating on considerations such as Air Quality pollutant and Greenhouse Gas emissions since these have a rather direct correlation to VMT. However, when planning for a discrete area, VMT per Capita as the sole traffic metric gives absolutely no indication when a plan has packed so much development into an area as to make the streets unlivable for bicyclists, pedestrians, motorists and their passengers and transit patrons alike - the VMT per Capita values will just stay the same or perhaps even improve (become lower) somewhat. To draw any some inference about how much development is sustainable based on VMT, Total VMT generated by the plan and total VMT experienced within the subject area must be considered.

DEIR Table IV-1 indicates that in the baseline (2010) condition, the Central SoMA population was 12,000, that in 2040 without the Project it would be 28,200, and in 2040 with the Project it would be 37,500. The same table also indicates that in the baseline year employment in Central SoMa was 45,600, that in 2040 without the Project it would be 72,800 and that in 2040 with the Project employment would be 109,200 jobs. At the VMT per capita rates disclosed in DEIR Table IV.D-6, the population and employment totals disclosed in DEIR Table 1V-1 would generate the following VMT totals in Central SoMa:

VMT Gen By	Baseline	2040 No Project	2040 With Project
Population	25,200	50,760	60,000
Employment	373,920	495,040	775,320
Total	399,120	545,800	835,320

As can be seen from the above compilations, the 2040 No Project scenario generates almost 37 percent more net VMT than the Baseline; the 2040 With Project scenario generates over 109 percent more net VMT than the Baseline and over 53 percent more than the 2040 No Project Scenario. Since the public knows from information presented in this DEIR and from other recent DEIR's for projects having transportation effects on the Central SoMa area that there are already problems impacting motor vehicle traffic, bicyclists, pedestrians, the safety of all of the aforementioned, and transit operations. In that situation adding development to the area that generates 109 percent more VMT than existing uses and 53 percent more VMT than development to 2040 under existing plans and zoning is significantly impactful on transportation

But even this is just the tip of the iceberg. As noted in the DEIR, the streets of the Central SoMa serve as a gateway between elements of the regional highway system and greater downtown San Francisco, Mission Bay, and the greater SoMa and nearby areas as well as thoroughfares for movements between these areas. To make judgments about the functionality of and livability around the streets of the Central SoMa, that burden of VMT must be quantified and assessed. The DEIR has considered neither the total VMT that would be generated in Central SoMa nor the other VMT that traverses it and therefore is inadequate.

The DEIR Has Actually Performed a Traffic LOS Analysis. But It Conceals the Detailed Findings From the Public

Ironically, the DEIR did perform a typical traffic LOS analysis of intersections and freeway ramps in the SoMa study area. It did so to calculate differences in *transit delay* under the various plan land use development alternatives and the alternative street configuration scenarios considered in the DEIR. However, other than a very generalized and non-location-specific summary of the LOS/delay study findings regarding what ordinarily would be considered traffic impacts that is presented at DEIR pages IV.D-41 through IV.D-43, it withholds from the public the location-specific measures of the severity of traffic impacts. We understand that elements of the San Francisco planning and political establishment (and others elsewhere) like eliminating traffic delay as a CEQA impact criteria because it eliminates the need to make findings of overriding significance about traffic impacts they have no intention of mitigating and avoids having to put up with the members of the public who actually care about traffic congestion and delay. However, CEQA requires that the Lead Agency make available all analyses that have been relied upon in the DEIR available for public

review. It must do so with the details of the Highway Capacity Manual based LOS/delay analysis it performed to estimate transit delay.

What the generalized summary of the DEIR's studies of traffic delay under *Highway Capacity Manual* procedures shows is that:

- Within the Central SoMa transportation study area, 36 intersections were evaluated for the AM peak hour and 80 intersections for the PM peak hour.
- Five freeway off ramps and six freeway on-ramps from/to I-80 and I-280 were evaluated.
- With the Project traffic and the Howard/Folsom one-way street configuration option, in the AM peak, intersections experiencing delay levels at LOS E or worse (55 seconds or more average delay per vehicle) would increase from 3 of the 36 studied under the existing condition to 21 of 36. In the PM peak, with the Project and the Howard/Folsom one-way street configuration, the number of intersections operating at LOS E or worse would increase from 19 of 80 in the existing condition to 39 of 80 with the Project traffic and subject street configuration
- With the Howard/Folsom two-way street configuration option, in the AM peak, the number of intersections operating at LOS E or worse would increase from 3 of 36 in the existing condition to 17 of 36 with the plan and the subject street configuration. In the pm peak the number of intersections operating at LOS E or worse would increase from 19 of 80 in the existing condition to 37 of 80 with Project traffic and the two way street configuration.
- As to the freeway ramp analysis, 8 of the 11 ramps analyzed operate at vehicle densities of 35 passenger cars per mile per lane (volumes reflecting breakdown conditions) in the AM and/or PM peak in the existing condition. With the addition of Project related traffic and the proposed street network changes, 10 of the 11 ramps would operate at vehicle densities of 35 passenger cars per mile per lane in the AM and/or Pm peak hour.

The results of this analysis as generally summarized in the DEIR reflect a deterioration of operations on the study area street and freeway ramp system in the AM and PM peak hours that would ordinarily be considered significantly impactful. But the results as presented do not distinguish how much of the deterioration is due to traffic generated by the Project land uses, that due to the street configuration changes, and that due to land use and traffic growth in nearby areas.

The Transit Analysis is Based on Data Not Representative of Current Conditions

The DEIR's transit impact analysis relative to the capacity of the transit operations serving the area are reported on DEIR Tables IV.D-8, IV.D-9, IV.D-10, IV.D-18, IV.D-19 and IV.D-20, respectively on DEIR pages IV.D-45, IV.D-46, IV.D-48, IV.D-90, IV.D92- IV.D-94. By footnotes, the Tables are said to be based on the San Francisco Planning Department's Memorandum, *Transit Data for Transportation Impact Studies*, dated May 2015. However, if the referenced DEIR tables are compared to the ones in the subject SF Planning Department memo (actually dated May 15, 2015), the following things become evident:

- The tables are reformated to facilitate comparison of the existing ridership and capacity utilization condition to that when the added ridership of the Project is combined with the existing ridership - an entirely legitimate act.
- The existing ridership numbers are modified to correct very small addition errors in the transference of individual SF MUNI line counts to the screen line totals on the tables or addition errors on the tables themselves - again entirely legitimate.
- In tables IV.D-9 and IV.D-19, the SF MUNI data is reconfigured into screen lines that make more sense with respect to the Project area - again a legitimate action.
- The 2040 cumulative ridership data (the 2040 No Project data) in the DEIR is apparently compiled from a later run of San Francisco's travel model than that in the cited Planning Department memo - a legitimate act but one that should have been mentioned in the DEIR.
- The DEIR consultants actually updated the existing conditions ridership data for one regional transit service provider, BART, in 2016 -a legitimate and commendable action.
- The DEIR tables fail to reproduce footnotes on the original existing conditions tables from the cited SF Planning Department memo that indicate the actual collection date of the data and fail to enter footnotes that convey data dates indicated in the text of the cited memo - a misleading act that conceals the outdated nature of some of the existing conditions data.

In fact, the cited San Francisco Planning Department memo makes clear that the SF MUNI data was collected in the Fall of 2013. Data on the ridership on the regional transit service providers is sourced by footnote to a secondary source document produced by the San Francisco Municipal Transportation Agency (SFMTA) in 2012. Ridership collected by the actual regional transit service providers obviously predates that document and is most likely collected in 2011 or earlier. Given the extent of changes affecting transit ridership demand that have taken place in San Francisco and the region since 2011 and 2013, no reasonable person can argue that the data employed in the transit ridership versus capacity impact analysis is representative of existing conditions.

The Regional Transit Analysis Is Also Flawed Because It Fails To Disclose System Deficiencies In San Francisco That San Francisco Development Should Take a Major Role In Mitigating

Over capacity deficiencies on BART are not limited to the Transbay Corridor line capacity which the DEIR does disclose. Platform capacity deficiencies also exist on BART at the Embarcadero and Montgomery stations - too many people attempting to board and alight on the platforms at the same time. This affects both the movements to and from the San Francisco Southwest corridor and Peninsula Corridor as well as the Transbay Corridor. The platform capacity deficiencies are fundamentally the result of development in San Francisco. This DEIR and other prior DEIRs in San Francisco are deficient in failing to disclose this impact and failing to propose effective measures to mitigate it.

It Is Unclear What Recent and Concurrent Projects Are Included In the Transportation Analysis of the Existing and 2040 Project and No Project Analysis Scenarios

The DEIR fails to identify how or whether large recent and concurrent projects are included in the 2040 analyses. Examples concern such projects as the massive *Pier 70 Project*, the *Salesforce Tower*, the *Warriors Arena Project* and the *Project, additional development in Mission Bay* and many other projects near the Central SoMa. The DEIR must clarify how each project that is approved and recently occupied or approved but still under construction or still under review but at a stage of reasonable certainty is (or is not and why not) treated in the analysis

The DEIR's Traffic Hazards Analysis (Impact TR-2) Is Contrary To Fundamental Engineering Principles

The DEIR Traffic Analysis runs contrary to fundamental engineering principles. It narrowly defines traffic hazard as "*a structure, object, or vegetation that obstructs, hinders, or impairs reasonable and safe view by drivers of other vehicles, pedestrians or bicyclists traveling on the same street and restricts the ability of the driver to stop the motor vehicle without danger of an ensuing collision.*" It acknowledges that "*new development under the plan would bring more people into the area, which would result in an increase in the potential for conflicts between vehicles, bicyclists and pedestrians,"* while explaining that "*conflicts are located where pedestrians, bicyclists, and/or drivers cross, merge, or diverge"*. However, it unreasonably claims that increases in the rate of potential for conflicts by itself does not represent a traffic hazard (as so narrowly defined by the DEIR).

In fact, exposure to conflict is fundamental to defining accident hazard in engineering practice. Intersection accident rates and expected rates for the

intersection type are defined in crashes per million annual vehicle crossings (theoretically including, as defined in the California Vehicle Code, bicycles as a vehicle). Road segment accident rates are defined as crashes per million vehicle-miles. The reasons why incidence of conflict is directly related to incidence of conflict are many. Urban roads are normally designed to meet the various design standards cited in the DEIR at page IV.D-41 or, when they don't and result in high accident occurrence or particularly severe accidents are subjected to remedial measures. The principal reason for urban motor vehicle-motor vehicle, motor vehicle - bicycle, motor vehicle - pedestrian or bicycle - pedestrian collisions is actions or omissions on the part of the driver, bicyclist or pedestrian (the principals) or both parties. Increases in the incidence of conflicts such as the Project would cause increase the hazard that actions or omissions of the principals would occur at a conflict point, hence increasing crashes. For example, in traffic congested situations, all of the principals may take actions where the potential for crashes is increased. For instance, where there is heavy queuing and blockages, pedestrians and bicyclists may be induced to cross against the indications of the traffic signal. Drivers may be motivated to make sudden movements without considering all the possible conflicts (for example but not limited to, the driver attempting to make a right-turn-on-red that perceives a limited gap in oncoming traffic to their left that attempts to make the move without checking for the pedestrian entering the crosswalk on their right or the bicyclist overtaking them on their right). Other types of crash hazards that increase with conflict incidence are, but are not limited to ones involving the bicyclist or pedestrian oblivious to traffic conflicts because of music playing on their head phones or the pedestrian or driver focused on reading (or sending) text messages or e-mails on their smart phone. All these hazards clearly increase with the increase of incidence of conflicts, a product of motor vehicle, bike, and pedestrian volumes. These are ultimately a function of the intensity of resident and employment population in the Project area. The DEIR is flat wrong in concluding that increased potential for conflict does not represent a hazard in the study area, especially when the areas of conflict are also areas of undisclosed increases in traffic congestion that intensify the failure to perceive the conflict or induce behavior that results in crashes.

The DEIR is further unreasonable and unsupported in its assertion on page IV.D-41 that street network changes would reduce the potential for conflicts to the extent that it would reduce the incidence of conflict to levels such that would make the traffic hazards of implementation of the plan less than significant. It has conducted no analysis of conflict incidence with and without the Plan Project and with and without the Project's purported roadway improvements. In fact, it has not relied in any way on the statistical records of accidents by location, type, movement pattern, and participant actions and impairments that are readily

available to the City[1]. The entire analysis on this topic is inadequate and must be revised and recirculated in draft status.

The DEIR's Emergency Vehicle Impact Analysis Is Unreasonable In the Face of Facts Disclosed Elsewhere in the DEIR

The DEIR asserts without foundation that although traffic congestion would occur, that the California Vehicle Code requires that other motor vehicles get out of the way of emergency vehicles and because emergency vehicles primarily use arterial streets where there is purportedly room to get out of the way of emergency vehicles, despite the fact that the DEIR admits there would be increased traffic congestion with the Project, it asserts without sound foundation that there would be no significant impact on emergency vehicle traffic. This assertion is inconsistent with the information in the DEIR's traffic impact analysis at DEIR pages IV.D-41 through 43 which indicate that:

- With the Project, 10 of 11 freeway ramps serving the Project area would be at "breakdown levels" during the AM and/or PM peak periods. Breakdown levels on the on ramps causes extensive queuing on City surface streets that would impair emergency vehicle traffic even on arterials because other drivers may not have the room to comply with the Vehicle Code and get out of the way quickly. "Breakdown levels" on the off ramps involves queues onto the freeway mainlines. The confined ramps provide motorists little opportunity to comply with the vehicle code and get out of the way and motorists at the critical ramp exit points will not even know that an emergency vehicle is coming until it has slowly worked its way toward the head of the exit queue.
- With the Project, up to 21 of the 36 study area intersections that were analyzed for the AM peak hour and up to 39 of the 80 study area intersections that were analyzed for the PM peak hour are reported to experience highly deficient delay conditions. At these traffic delay levels that imply significant queuing, even on arterial width roadways, traffic is likely to be too congested to comply with the Vehicle Code mandate to get out of the way of emergency vehicles.

The DEIR's unsubstantiated and conclusory statements about emergency vehicle access impacts of the Project must be revised and made consistent with findings made elsewhere in the DEIR.

[1] We refer to the Statewide Integrated Traffic Records System (SWITRS) in which the California Highway Patrol receives all traffic reports from all jurisdictions in the state and produces summaries by jurisdiction, by road segment and intersection location, by types of vehicle involved, movements, and causal factors including operator impairments or road deficiencies.

Conclusion

This concludes my current comments on the Central SoMa Plan Project DEIR. For the reasons stated above, the traffic analysis is inadequate and revised transportation analyses should be performed. Results should be recirculated in draft status for a full 45 day review period.

Sincerely,

Smith Engineering & Management
A California Corporation

Daniel T. Smith Jr., P.E.
President

Attachment 1
Resume of Daniel T. Smith Jr., P.E.

SMITH ENGINEERING & MANAGEMENT

DANIEL T. SMITH, Jr.
President

EDUCATION

Bachelor of Science, Engineering and Applied Science, Yale University, 1967
Master of Science, Transportation Planning, University of California, Berkeley, 1968

PROFESSIONAL REGISTRATION

California No. 21913 (Civil) Nevada No. 7969 (Civil) Washington No. 29337 (Civil)
California No. 938 (Traffic) Arizona No. 22131 (Civil)

PROFESSIONAL EXPERIENCE

Smith Engineering & Management, 1993 to present. President.
DKS Associates, 1979 to 1993. Founder, Vice President, Principal Transportation Engineer.
De Leuw, Cather & Company, 1968 to 1979. Senior Transportation Planner.
Personal specialties and project experience include:

Litigation Consulting. Provides consultation, investigations and expert witness testimony in highway design, transit design and traffic engineering matters including condemnations involving transportation access issues; traffic accidents involving highway design or traffic engineering factors; land use and development matters involving access and transportation impacts; parking and other traffic and transportation matters.

Urban Corridor Studies/Alternatives Analysis. Principal-in-charge for State Route (SR) 102 Feasibility Study, a 35-mile freeway alignment study north of Sacramento. Consultant on I-280 Interstate Transfer Concept Program, San Francisco, an AA/EIS for completion of I-280, demolition of Embarcadero freeway, substitute light rail and commuter rail projects. Principal-in-charge, SR 238 corridor freeway/expressway design/environmental study, Hayward (Calif.) Project manager, Sacramento Northeast Area multi-modal transportation corridor study. Transportation planner for I-80N West Terminal Study, and Harbor Drive Traffic Study, Portland, Oregon. Project manager for design of surface segment of Woodward Corridor LRT, Detroit, Michigan. Directed staff on I-80 National Strategic Corridor Study (Sacramento-San Francisco), US 101-Sonoma freeway operations study, SR 92 freeway operations study, I-880 freeway operations study, SR 152 alignment studies, Sacramento RTD light rail systems study, Tasman Corridor LRT AA/EIS, Fremont-Warm Springs BART extension plan/EIR, SRs 70/99 freeway alternatives study, and Richmond Parkway (SR 93) design study.

Area Transportation Plans. Principal-in charge for transportation element of City of Los Angeles General Plan Framework, shaping nations largest city two decades into 21'st century. Project manager for the transportation element of 300-acre Mission Bay development in downtown San Francisco. Mission Bay involves 7 million gsf office/commercial space, 8,500 dwelling units, and community facilities. Transportation features include relocation of commuter rail station; extension of MUNI-Metro LRT; a multi-modal terminal for LRT, commuter rail and local bus; removal of a quarter mile elevated freeway; replacement by new ramps and a boulevard; an internal roadway network overcoming constraints imposed by an internal tidal basin; freeway structures and rail facilities; and concept plans for 20,000 structured parking spaces. Principal-in-charge for circulation plan to accommodate 9 million gsf of office/commercial growth in downtown Bellevue (Wash.). Principal-in-charge for 64 acre, 2 million gsf multi-use complex for FMC adjacent to San Jose International Airport. Project manager for transportation element of Sacramento Capitol Area Plan for the state governmental complex, and for Downtown Sacramento Redevelopment Plan. Project manager for Napa (Calif.) General Plan Circulation Element and Downtown Riverfront Redevelopment Plan, on parking program for downtown Walnut Creek, on downtown transportation plan for San Mateo and redevelopment plan for downtown Mountain View (Calif.), for traffic circulation and safety plans for California cities of Davis, Pleasant Hill and Hayward, and for Salem, Oregon.

Transportation Centers. Project manager for Daly City Intermodal Study which developed a $7 million surface bus terminal, traffic access, parking and pedestrian circulation improvements at the Daly City BART station plus development of functional plans for a new BART station at Colma. Project manager for design of multi-modal terminal (commuter rail, light rail, bus) at Mission Bay, San Francisco. In Santa Clarita Long Range Transit Development Program, responsible for plan to relocate system's existing timed-transfer hub and development of three satellite transfer hubs. Performed airport ground transportation system evaluations for San Francisco International, Oakland International, Sea-Tac International, Oakland International, Los Angeles International, and San Diego Lindberg.

Campus Transportation. Campus transportation planning assignments for UC Davis, UC Berkeley, UC Santa Cruz and UC San Francisco Medical Center campuses; San Francisco State University; University of San Francisco; and the University of Alaska and others. Also developed master plans for institutional campuses including medical centers, headquarters complexes and research & development facilities.

Special Event Facilities. Evaluations and design studies for football/baseball stadiums, indoor sports arenas, horse and motor racing facilities, theme parks, fairgrounds and convention centers, ski complexes and destination resorts throughout western United States.

Parking. Parking programs and facilities for large area plans and individual sites including downtowns, special event facilities, university and institutional campuses and other large site developments; numerous parking feasibility and operations studies for parking structures and surface facilities; also, resident preferential parking .

Transportation System Management & Traffic Restraint. Project manager on FHWA program to develop techniques and guidelines for neighborhood street traffic limitation. Project manager for Berkeley, (Calif.), Neighborhood Traffic Study, pioneered application of traffic restraint techniques in the U.S. Developed residential traffic plans for Menlo Park, Santa Monica, Santa Cruz, Mill Valley, Oakland, Palo Alto, Piedmont, San Mateo County, Pasadena, Santa Ana and others. Participated in development of photo/radar speed enforcement device and experimented with speed humps. Co-author of Institute of Transportation Engineers reference publication on neighborhood traffic control.

Bicycle Facilities. Project manager to develop an FHWA manual for bicycle facility design and planning, on bikeway plans for Del Mar, (Calif.), the UC Davis and the City of Davis. Consultant to bikeway plans for Eugene, Oregon, Washington, D.C., Buffalo, New York, and Skokie, Illinois. Consultant to U.S. Bureau of Reclamation for development of hydraulically efficient, bicycle safe drainage inlets. Consultant on FHWA research on effective retrofits of undercrossing and overcrossing structures for bicyclists, pedestrians, and handicapped.

MEMBERSHIPS

Institute of Transportation Engineers Transportation Research Board

PUBLICATIONS AND AWARDS

Residential Street Design and Traffic Control, with W. Homburger *et al*. Prentice Hall, 1989.

Co-recipient, Progressive Architecture Citation, *Mission Bay Master Plan*, with I.M. Pei WRT Associated, 1984.

Residential Traffic Management, State of the Art Report, U.S. Department of Transportation, 1979.

Improving The Residential Street Environment, with Donald Appleyard et al., U.S. Department of Transportation, 1979.

Strategic Concepts in Residential Neighborhood Traffic Control, International Symposium on Traffic Control Systems, Berkeley, California, 1979.

Planning and Design of Bicycle Facilities: Pitfalls and New Directions, Transportation Research Board, Research Record 570, 1976.

Co-recipient, Progressive Architecture Award, *Livable Urban Streets, San Francisco Bay Area and London*, with Donald Appleyard, 1979.

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EXHIBIT D

Shawn Smallwood, Ph.D.
3108 Finch Street
Davis, CA 95616

Lisa M. Gibson, Acting Environmental Review Officer
1650 Mission Street, Suite 400
San Francisco, CA 94103

12 February 2017

RE: Central SoMa Plan DEIR

Dear Ms. Gibson,

I write to comment on the Central SoMa Plan DEIR (San Francisco Planning Department 2016), which I understand is to cover development on 230 acres of residential and commercial use, including eight buildings between 200 feet and 400 feet high.

My qualifications for preparing expert comments are the following. I earned a Ph.D. degree in Ecology from the University of California at Davis in 1990, where I subsequently worked for four years as a post-graduate researcher in the Department of Agronomy and Range Sciences. My research has been on animal density and distribution, habitat selection, habitat restoration, interactions between wildlife and human infrastructure and activities, conservation of rare and endangered species, and on the ecology of invading species. I have authored numerous papers on special-status species issues, including "Using the best scientific data for endangered species conservation," published in Environmental Management (Smallwood et al. 1999), and "Suggested standards for science applied to conservation issues" published in the Transactions of the Western Section of The Wildlife Society (Smallwood et al. 2001). I served as Chair of the Conservation Affairs Committee for The Wildlife Society – Western Section. I am a member of The Wildlife Society and the Raptor Research Foundation, and I've been a part-time lecturer at California State University, Sacramento. I was also Associate Editor of wildlife biology's premier scientific journal, The Journal of Wildlife Management, as well as of Biological Conservation, and I was on the Editorial Board of Environmental Management.

I have performed wildlife surveys in California for thirty-two years. Over these years, I studied the impacts of human activities and human infrastructure on wildlife, including on golden eagle, Swainson's hawk, burrowing owl, mountain lion, San Joaquin kangaroo rat, and other species. I have performed wildlife surveys at many proposed project sites. I have also performed hundreds of hours of diurnal and nocturnal flight behavior surveys of birds and bats. I also collaborate with colleagues worldwide on the underlying science and policy issues related to anthropogenic impacts on wildlife.

My CV is attached.

BIOLOGICAL IMPACTS ASSESSMENT

The DEIR did not include an analysis of impacts and mitigation on biological resources. One of the key arguments for the DEIR's omission of a biological resources impacts assessment was given in the Initial Study (page 125), "*The occasional areas of ruderal, or weedy, vegetation generally provide habitat only for species habituated to urban life and high disturbance levels*." The argument is that because the site is already urbanized and because the wildlife species that occur there are adapted to urban conditions, the proposed project poses no potential adverse impacts to wildlife. Using this logic, however, there would be no reason to perform biological resource assessments for any proposed projects in California because one can readily find anthropogenic conditions to which local species might have habituated. Whether species of wildlife might have habituated to local conditions is a contrived standard and not one that appears in CEQA, the CEQA guidelines, or in the judicial record.

A second key argument for omitting a biological resources impacts assessment was the Initial Study's assertion (page 126), that "*…none of the reported occurrences of species documented in the CNDDB* [California Natural Diversity Data Base] *are within the Plan area*." The Initial Study, and now the DEIR, inappropriately relies on CNDDB to screen special-status species for occurrence likelihood. CNDDB is useful only for confirming the presence of a species, but cannot be used to conclude absence because the reporting to CNDDB is voluntary and not based on scientific sampling or equal access to properties. The limitations of CNDDB are well-known, and they are summarized in a warning presented by CDFW on the CNDDB web site (https://www.wildlife.ca.gov/Data /CNDDB/About): "*We work very hard to keep the CNDDB and the Spotted Owl Database as current and up-to-date as possible given our capabilities and resources. However, we cannot and do not portray the CNDDB as an exhaustive and comprehensive inventory of all rare species and natural communities statewide. Field verification for the presence or absence of sensitive species will always be an important obligation of our customers…*" Lack of CNDDB records on the project area is an invalid reason for omitting the biological resources assessment.

In other words, the reason for omitting a biological impacts assessment is that the Initial Study concluded: (1) There would be no significant impacts to wildlife caused by the construction of multiple high-rise and low-rise buildings, (2) There is no substantial change in conditions between the project reviewed in the 2013 Initial Study and the new project reviewed in the 2016 DEIR, and (3) The individual building projects would adhere to the San Francisco Planning Department's (2011) building design guidelines. The first reason is flawed because the Initial Study incorrectly used CNDDB and incorrectly assumed that habituated wildlife will be safe wildlife in the face of transparent and reflective building facades. The second reason is flawed because the new project is obviously very different from the project that was subjected to the 2013 Initial Study. The buildings are much taller. The third reason is more compelling, but it still does not justify omission of a biological resources impacts assessment in the DEIR. The DEIR needs to include reasonable predictions of likely bird-window collision fatality rates. The discussion needs to be had about how many birds of special-status species and species protected by the International Migratory Bird Treaty Act are likely to

perish each year after these high-rises are thrust into the aerial habitat space of migrating and resident birds.

A quick review of eBird (http://ebird.org/ebird/explore) revealed 12 August 2016 nocturnal visits on the project site by special-status species including yellow warbler, brown pelican, and California gull, as well as multiple other species protected by the International Migratory Bird Treaty Act. A review of eBird also reveals the use of the area by many species of bird, including additional special-status species such as double-crested cormorant, tricolored blackbird, Peregrine falcon and Cooper's hawk. The eBird records reveal what any biologist should expect of San Francisco, and that is the use of the peninsula as a migration route by many species of bird. Building glazed or glass-façaded high-rises in the middle of this migration route will obviously destroy many migrating birds, and those birds not colliding with the buildings will have to exert extra energy during migration to fly around the buildings.

Beginning on page 129, the Initial Study discusses bird collisions with windows, inappropriately citing the San Francisco Planning Department's 2011 Standards for Bird Safe Buildings as the source of the estimated annual 100 million to 1 billion birds killed by windows across the USA. In fact, this estimate comes from Klem (1990), which was based on extremely limited survey effort and multiple assumptions and is likely long since obsolete (more on this later). Whereas the Initial Study discusses the bird-window collision issue, its conclusions about the likely impacts are inconsistent with the Precautionary Principle in risk assessment and unrealistic, and therefore do not justify the omission of a biological resources assessment in the DEIR. If anything, the discussion of bird-window collisions in the Initial Study should have prompted a focused and much-expanded biological resources assessment in the DEIR.

The existing developed area is causing significant numbers of injuries and deaths of birds every year. For example, if there are homes or commercial buildings with windows, then there are ongoing impacts to birds. Window collisions are often characterized as either the second or third largest source or anthropogenic-caused bird mortality. The numbers behind these characterizations are often attributed to Klem's (1990) and Dunn's (1993) estimates of about 100 million to 1 billion bird fatalities in the USA, or more recently Loss et al.'s (2014) estimate of 365-988 million bird fatalities in the USA or Calvert et al.'s (2013) and Machtans et al.'s (2013) estimates of 22.4 million and 25 million bird fatalities in Canada, respectively. However, these estimates and their interpretation warrant examination because they were based on opportunistic sampling, volunteer study participation, and fatality monitoring by more inexperienced than experienced searchers.

Klem's (1990) estimate was based on speculation that 1 to 10 birds are killed per building per year, and this speculated range was extended to the number of buildings estimated by the US Census Bureau in 1986. Klem's speculation was supported by fatality monitoring at only two houses, one in Illinois and the other in New York. Also, the basis of his fatality rate extension has changed greatly since 1986. Whereas his estimate served the need to alert the public of the possible magnitude of the bird-window collision issue, it was highly uncertain at the time and undoubtedly outdated

more than three decades hence. Indeed, by 2010 Klem (2010) characterized the upper end of his estimated range – 1 billion bird fatalities – as conservative. Furthermore, the estimate lumped species together as if all birds are the same and the loss of all birds to windows has the same level of impact.

Homes with birdfeeders are associated with higher rates of window collisions than are homes without birdfeeders (Kummer and Bayne 2015, Kummer et al. 2016a), so the developed area might pose even greater hazard to birds if it includes numerous birdfeeders. Another factor potentially biasing national or North American estimates low was revealed by Bracey et al.'s (2016) finding that trained fatality searchers found 2.6× the number of fatalities found by homeowners on the days when both trained searchers and homeowners searched around homes. The difference in carcass detection was 30.4-fold when involving carcasses volitionally placed by Bracey et al. (2016) in blind detection trials. This much larger difference in trial carcass detection rates likely resulted because their placements did not include the sounds that typically alert homeowners to actual window collisions, but this explanation also raises the question of how often homeowner participants with such studies miss detecting window-caused fatalities because they did not hear the collisions.

By the time Loss et al. (2014) performed their effort to estimate annual USA bird-window fatalities, many more fatality monitoring studies had been reported or were underway. Loss et al. (2014) were able to incorporate many more fatality rates based on scientific monitoring, and they were more careful about which fatality rates to include. However, they included estimates based on fatality monitoring by homeowners, which in one study were found to detect only 38% of the available window fatalities (Bracey et al. 2016). Loss et al. (2014) excluded all fatality records lacking a dead bird in hand, such as injured birds or feather or blood spots on windows. Loss et al.'s (2014) fatality metric was the number of fatalities per building (where in this context a building can include a house, low-rise, or high-rise structure), but they assumed that this metric was based on window collisions. Because most of the bird-window collision studies were limited to migration seasons, Loss et al. (2014) developed an admittedly assumption-laden correction factor for making annual estimates. Also, only two of the studies included adjustments for carcass persistence and searcher detection error, and it was unclear how and to what degree fatality rates were adjusted for these factors. Although Loss et al. (2014) attempted to account for some biases as well as for large sources of uncertainty mostly resulting from an opportunistic rather than systematic sampling data source, their estimated annual fatality rate across the USA was highly uncertain and vulnerable to multiple biases, most of which would have resulted in fatality estimates biased low.

In my review of bird-window collision monitoring, I found that the search radius around homes and buildings was very narrow, usually 2 meters. Based on my experience with bird collisions in other contexts, I would expect that a large portion of bird-window collision victims would end up farther than 2 m from the windows, especially when the windows are higher up on tall buildings. In my experience, searcher detection rates tend to be low for small birds deposited on ground with vegetation cover or woodchips or other types of organic matter. Also, vertebrate scavengers entrain on

anthropogenic sources of mortality and quickly remove many of the carcasses, thereby preventing the fatality searcher from detecting these fatalities. Adjusting fatality rates for these factors – search radius bias, searcher detection error, and carcass persistence rates – would greatly increase nationwide estimates of bird-window collision fatalities.

The existing conditions – the developed area – is undoubtedly killing many birds each year. Not only are windows killing many birds, but so too are house cats, feral cats, electrocution distribution lines, electric power poles, and autos. This said, the proposed project will add a level of impact that is entirely missing from the CEQA review. Constructing buildings to 400 feet above ground will not only take aerial habitat from birds, but it will also interfere with the movement of birds in the region and it will result in large numbers of annual window collision fatalities.

High-rise buildings intercept many nocturnal migrants as well as birds flying in daylight. Johnson and Hudson (1976) found 266 bird fatalities of 41 species within 73 months of monitoring of a four-story glass walkway at Washington State University (no adjustments attempted). Somerlot (2003) found 21 bird fatalities among 13 buildings on a university campus within only 61 days. Monitoring twice per week, Hager at al. (2008) found 215 bird fatalities of 48 species, or 55 birds/building/year, and at another site they found 142 bird fatalities of 37 species for 24 birds/building/year. Gelb and Delacretaz (2009) recorded 5,400 bird fatalities under buildings in New York City, based on a decade of monitoring only during migration periods, and some of the high-rises were associated with hundreds of fatalities each. Klem et al. (2009) monitored 73 building facades in New York City during 114 days of two migratory periods, tallying 549 collision victims, nearly 5 birds per day. Borden et al. (2010) surveyed a 1.8 km route 3 times per week during 12-month period and found 271 bird fatalities of 50 species. Parkins et al. (2015) found 35 bird fatalities of 16 species within only 45 days of monitoring under 4 building facades. From 24 days of survey over 48 day span, Porter and Huang (2015) found 47 fatalities under 8 buildings on a university campus. Sabo et al. (2016) found 27 bird fatalities 61 days of searches under 31 windows. In San Francisco, Kahle et al. (2016) found 355 collision victims within 1,762 days under a 5-story building. Ocampo-Peñuela et al. (2016) searched the perimeters of 6 buildings on a university campus, finding 86 fatalities after 63 days of surveys. One of these buildings produced 61 of the 86 fatalities, and another building with collision-deterrent glass caused only 2 of the fatalities. There is ample evidence available to support my prediction that the proposed 200-foot to 400-foot tall buildings will result in many collision fatalities of birds.

COLLISION FACTORS

Below is a list of collision factors I found in the scientific literature. Following this list are specific notes and findings taken from the literature and my own experience.

(1) Inherent hazard of a structure in the airspace used for nocturnal migration or other flights
(2) Window transparency, falsely revealing passage through structure or to indoor plants

(3) Window reflectance, falsely depicting vegetation, competitors, or open airspace
(4) Black hole or passage effect
(5) Window or façade extent, or proportion of façade consisting of window or other reflective surface
(6) Size of window
(7) Type of glass
(8) Lighting, which is correlated with window extent and building operations
(9) Height of structure (collision mechanisms shift with height above ground)
(10) Orientation of façade with respect to winds and solar exposure
(11) Structural layout causing confusion and entrapment
(12) Context in terms of urban-rural gradient, or surrounding extent of impervious surface vs vegetation
(13) Height, structure, and extent of vegetation grown near home or building
(14) Presence of birdfeeders or other attractants
(15) Relative abundance
(16) Season of the year
(17) Ecology, demography and behavior
(18) Predatory attacks or cues provoking fear of attack
(19) Aggressive social interactions

(1) Inherent hazard of structure in airspace.—Not all of a structure's collision risk can be attributed to windows. Overing (1938) reported 576 birds collided with the Washington Monument in 90 minutes on one night, 12 September 1937. The average annual fatality count had been 328 birds from 1932 through 1936. Gelb and Delacretaz (2009) and Klem et al. (2009) also reported finding collision victims at buildings lacking windows, although many fewer than they found at buildings fitted with widows.

(2) Window transparency.—Widely believed as one of the two principal factors contributing to avian collisions with buildings is the transparency of glass used in windows on the buildings (Klem 1989). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred where transparent windows revealed interior vegetation.

(3) Window reflectance.—Widely believed as one of the two principal factors contributing to avian collisions with buildings is the reflectance of glass used in windows on the buildings (Klem 1989). Reflectance can deceptively depict open airspace, vegetation as habitat destination, or competitive rivals as self-images (Klem 1989). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred toward the lower parts of buildings where large glass exteriors reflected outdoor vegetation. Klem et al. (2009) and Borden et al. (2010) also found that reflected outdoor vegetation associated positively with collisions.

(4) Black hole or passage effect.—Although this factor was not often mentioned in the bird-window collision literature, it was suggested in Sheppard and Phillips (2015). The black hole or passage effect is the deceptive appearance of a cavity or darkened ledge that certain species of bird typically approach with speed when seeking roosting sites. The deception is achieved when shadows from awnings or the interior light conditions

give the appearance of cavities or protected ledges. This factor appears potentially to be nuanced variations on transparency or reflectance or possibly an interaction effect of both of these factors.

(5) Window or façade extent.—Klem et al. (2009), Borden et al. (2010), Hager et al. (2013), and Ocampo-Peñuela et al. (2016) reported increased collision fatalities at buildings with larger reflective facades or higher proportions of facades composed of windows. However, Porter and Huang (2015) found a negative relationship between fatalities found and proportion of façade that was glazed.

(6) Size of window.—According to Kahle et al. (2016), collision rates were higher on large-pane windows compared to small-pane windows.

(7) Type of glass.—Klem et al. (2009) found that collision fatalities associated with the type of glass used on buildings. Otherwise, little attention has been directed towards the types of glass in buildings.

(8) Lighting.—Parkins et al. (2015) found that light emission from buildings correlated positively with percent glass on the façade, suggesting that lighting is linked to the extent of windows. Zink and Eckles (2010) reported fatality reductions, including an 80% reduction at a Chicago high-rise, upon the initiation of the Lights-out Program. However, Zink and Eckles (2010) provided no information on their search effort, such as the number of searches or search interval or search area around each building.

(9) Height of structure.—I found little if any hypothesis-testing related to high-rise buildings, including whether another suite of factors might relate to collision victims of high-rises. Are migrants more commonly the victims of high-rises? I would expect that some of the factors noted in other contexts will not be important with the upper portions of high-rises, such as birds attacking reflected self-images, or the extent of vegetation cover nearby, or the presence or absence of birdfeeders nearby.

(10) Orientation of façade.—Some studies tested façade orientation, but not convincingly. Confounding factors such as the extent and types of windows would require large sample sizes of collision victims to parse out the variation so that some portion of it could be attributed to orientation of façade.

(11) Structural layout.—Bird-safe building guidelines have illustrated examples of structural layouts associated with high rates of bird-window collisions, but little attention has been towards hazardous structural layouts in the scientific literature. An exception was Johnson and Hudson (1976), who found high collision rates at 3 stories of glassed-in walkways atop an open breezeway, located on a break in slope with trees on one side and open sky on the other, Washington State University.

(12) Context in urban-rural gradient.—Numbers of fatalities found in monitoring have associated negatively with increasing developed area surrounding the building (Hager et al. 2013), and positively with more rural settings (Kummer et al. 2016a). However, these relationships might not hold when it comes to high-rises.

(13) Height, structure and extent of vegetation near building.—Correlations have sometimes been found between collision rates and the presence or extent of vegetation near windows (Hager et al. 2008, Borden et al. 2010, Kummer et al. 2016a, Ocampo-Peñuela et al. 2016). However, Porter and Huang (2015) found a negative relationship between fatalities found and vegetation cover near the building.

(14) Presence of birdfeeders.—Dunn (1993) reported a weak correlation ($r = 0.13$, $P < 0.001$) between number of birds killed by home windows and the number of birds counted at feeders. However, Kummer and Bayne (2015) found that experimental installment of birdfeeders at homes increased bird collisions with windows 1.84-fold.

(15) Relative abundance.—Collision rates have often been assumed to increase with local density or relative abundance (Klem 1989), and positive correlations have been measured (Dunn 1993, Hager et al. 2008). However, Hager and Craig (2014) found a negative correlation between fatality rates and relative abundance near buildings.

(16) Season of the year.—Borden et al. (2010) found 90% of collision fatalities during spring and fall migration periods. The significance of this finding is magnified by 7-day carcass persistence rates of 0.45 and 0.35 in spring and fall, rates which were considerably lower than during winter and summer (Hager et al. 2012). In other words, the concentration of fatalities during migration seasons would increase after applying seasonally-explicit adjustments for carcass persistence.

(17) Ecology, demography and behavior.—Klem (1989) noted that certain types of birds were not found as common window-caused fatalities, including soaring hawks and waterbirds. Cusa et al. (2015) found that species colliding with buildings surrounded by higher levels of urban greenery were foliage gleaners, and species colliding with buildings surrounded by higher levels of urbanization were ground foragers. Sabo et al. (2016) found no difference in age class, but did find that migrants are more susceptible to collision than resident birds.

(18) Predatory attacks.—Panic flights caused by raptors were mentioned in 16% of window strike reports in Dunn's (1993) study. I have witnessed Cooper's hawks chasing birds into windows, including house finches next door to my home and a northern mocking bird chased directly into my office window.

(19) Aggressive social interactions.—I found no hypothesis-testing of the roles of aggressive social interactions in the literature other than the occasional anecdotal account of birds attacking their self-images reflected from windows. However, I have witnessed birds chasing each other and sometimes these chases resulting in one of the birds hitting a window.

SOLUTIONS

Given the magnitude of bird-window collision impacts, there are obviously great opportunities for reducing and minimizing these impacts going forward. Existing

structures can be modified or retrofitted to reduce impacts, and proposed new structures can be more carefully sited and designed to minimize impacts. However, the costs of some of these measures can be high and can vary greatly, but most importantly the efficacies of many of these measures remain uncertain. Both the costs and effectiveness of all of these measures can be better understood through experimentation and careful scientific investigation. Post-construction fatality monitoring should be an essential feature of any new building project. Below is a listing of mitigation options, along with some notes and findings from the literature.

(1) Retrofitting to reduce impacts
(1A) Marking windows
(1B) Managing outdoor landscape vegetation
(1C) Managing indoor landscape vegetation
(1D) Managing nocturnal lighting

(1A) Marking windows.—Whereas Klem (1990) found no deterrent effect from decals on windows, Johnson and Hudson (1976) reported a fatality reduction of about 67% after placing decals on windows. Many external and internal glass markers have been tested experimentally, some showing no effect and some showing strong deterrent effects (Klem 1989, 1990, 2009, 2011; Klem and Saenger 2013; Rössler et al. 2015). In an experiment of opportunity, Ocampo-Peñuela et al. (2016) found only 2 of 86 fatalities at one of 6 buildings – the only building with windows treated with a bird deterrent film.

(2) Siting and Designing to minimize impacts
(2A) Deciding on location of structure
(2B) Deciding on façade and orientation
(2C) Selecting type and sizes of windows
(2D) Designing to minimize transparency through two parallel facades
(2E) Designing to minimize views of interior plants
(2F) Landscaping to increase distances between windows and trees and shrubs

GUIDELINES ON BUILDING DESIGN

If the project goes forward, it should at a minimum adhere to available guidelines on building design intended to minimize collision hazards to birds. The American Bird Conservancy (ABC) produced an excellent set of guidelines recommending actions to: (1) Minimize use of glass; (2) Placing glass behind some type of screening (grilles, shutters, exterior shades); (3) Using glass with inherent properties to reduce collisions, such as patterns, window films, decals or tape; and (4) Turning off lights during migration seasons (Sheppard and Phillips 2015). The City of San Francisco (San Francisco Planning Department 2011) also has a set of building design guidelines, based on the excellent guidelines produced by the New York City Audubon Society (Orff et al. 2007). The ABC document and both the New York and San Francisco documents provide excellent alerting of potential bird-collision hazards as well as many visual examples. The San Francisco Planning Department's (2011) building design guidelines are more comprehensive than those of New York City, but they could have gone further. For example, the San Francisco guidelines probably should have also covered scientific

monitoring of impacts as well as compensatory mitigation for impacts that could not be avoided, minimized or reduced.

Although the San Francisco Planning Department deserves to be commended for its building design guidelines, some of its guidelines are in need of further review and consideration. Scientific research and understanding of the bird-window collision impacts remain low on the learning-curve, so we should expect rapid advances in understanding and solutions as scientific investigations are better funded and monitoring efforts expand and experimentation is implemented. At the time of the 2011 guidelines, only one building had been scientifically monitored for bird-window collisions (Kahle et al. 2016), so very few local scientific data on the impacts were available in San Francisco. As a result, too many of the guidelines are based on anecdotes and speculation. For example, the bird collision zone of 0-60 feet above ground (San Francisco Planning Department 2011:28) appears to have been based on speculation. No doubt low-rise buildings can kill many birds annually, but the evidence of this does not preclude high-rises from also killing many birds annually. When it comes to high-rises, it has often been difficult to determine how high a bird was flying when it collided with the building. Collision victims are found at the base of the building and could have fallen from 1 to 6 stories up, or perhaps from 7 to 40 stories up. It needs to be recognized that although the guidelines are commendable as a starting point, much remains to be learned about bird-window collisions, and flexibility for considering other measures or revised measures is warranted.

In another example of a standard that could perhaps use more foundation, the urban bird refuge standard (San Francisco Planning Department 2011:28) includes thresholds of 300 feet and 2 acres of open space. These thresholds appear to have been arbitrarily derived. What scientific evidence supports either of them? How would these standards bear on nocturnal migrants encountering large glass windows at 390 feet above ground? I am not arguing that these standards are incorrect, but rather that they might be arbitrary and therefore bear opportunities for improvement.

The DEIR should be revised to address some of the San Francisco Planning Department's (2011) building design guidelines for the project as a whole. There is no reason why the DEIR could not address macro-setting guidelines in the forms of checklist and text discussion. To be consistent with its own guidelines, the San Francisco Planning Department also might not want to follow through on its plan to amend the Planning Code to require greening of at least 50% of each site area and to construct at least 50% of roof area as living roofs (DEIR page II-34).

MITIGATION

The bird-collision impacts potentially caused by the project could be mitigated to less than significant levels by implementing three measures:

1. Adhere to the San Francisco Planning Department's (2011) building design guidelines and to any other avoidance and minimization measures that have been learned additional or since the 2011 guidelines document was produced;

2. Fund long-term scientific monitoring of the impact so that lessons learned can be applied to future projects or perhaps to effective retrofit solutions; and,

3. Offset impacts that could not be avoided, minimized or reduced by compensating for the impacts. Compensation can include habitat protections elsewhere or donations to wildlife rehabilitation facilities that will likely receive and care for injured birds.

CONCLUSION

The proposed project would impose 200- to 400-foot tall high-rises in the aerial habitat of many birds. Birds migrating through San Francisco at night, in route north or south along the coast, would encounter these high-rises. Many of these nocturnal migrants would be attracted to light emissions from the buildings or would encounter the buildings by chance, and many of these birds would perish due to collision with these buildings. Other birds would encounter the high-rises during daylight hours and would be deceived by the transparency or reflected images in the glass of windows. Many of these birds would perish. At lower stories – those near the ground – windows reflecting planted trees would deceive birds into flying toward the reflected images and to their deaths. The numbers of collision fatalities could be very large, and some of the collision victims could be members of species that are rare or declining, and some could be special-status species, such as Sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperi*), Olive-sided flycatcher (*Contopus cooperi*), Least Bell's vireo (*Vireo belli pusillus*), yellow warbler (*Setophaga petechia*), and Lawrence's goldfinch (*Spinus lawrencei*). However, it should be remembered that nearly all birds in California are protected by the international Migratory Bird Treaty Act. The EIR should be revised to address these potential impacts. Available bird-safe building guidelines should be followed where appropriate, but additional measures will be needed where the guidelines are either wrong or based on poor foundation.

The EIR should be revised to include a biological resources assessment, which should report reasonable predictions of collision mortality. The EIR should also provide more detail about which building design guidelines will be implemented under which conditions. For example, macro-setting guidelines could be addressed in the EIR. The EIR should also provide details about fatality monitoring needed to quantify collision mortality. Finally, it should provide details about compensatory mitigation to offset the collision fatalities that cannot be prevented in building design.

Thank you for your consideration,

Shawn Smallwood, Ph.D.

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EXHIBIT E

Environmental Justice at the Local and Regional Level
Legal Background

Cities, counties, and other local governmental entities have an important role to play in ensuring environmental justice for all of California's residents. Under state law:

> "[E]nvironmental justice" means the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.

(Gov. Code, § 65040.12, subd. (e).) Fairness in this context means that the *benefits* of a healthy environment should be available to everyone, and the *burdens* of pollution should not be focused on sensitive populations or on communities that already are experiencing its adverse effects.

Many local governments recognize the advantages of environmental justice; these include healthier children, fewer school days lost to illness and asthma, a more productive workforce, and a cleaner and more sustainable environment. Environmental justice cannot be achieved, however, simply by adopting generalized policies and goals. Instead, environmental justice requires an ongoing commitment to identifying existing and potential problems, and to finding and applying solutions, both in approving specific projects and planning for future development.

There are a number of state laws and programs relating to environmental justice. This document explains two sources of environmental justice-related responsibilities for local governments, which are contained in the Government Code and in the California Environmental Quality Act (CEQA).

Government Code

Government Code section 11135, subdivision (a) provides in relevant part:

> No person in the State of California shall, on the basis of race, national origin, ethnic group identification, religion, age, sex, sexual orientation, color, or disability, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the state or by any state agency, is funded directly by the state, or receives any financial assistance from the state….

While this provision does not include the words "environmental justice," in certain circumstances, it can require local agencies to undertake the same consideration of fairness in the distribution of environmental benefits and burdens discussed above. Where, for example, a general plan update is funded by or receives financial assistance from the state or a state agency, the local government should take special care to ensure that the plan's goals, objectives, policies and implementation measures (a) foster equal access to a clean environment and public health benefits (such as parks, sidewalks, and public transportation); and (b) do not result in

concentration of polluting activities near communities that fall into the categories defined in Government Code section 11135.[1] In addition, in formulating its public outreach for the general plan update, the local agency should evaluate whether regulations governing equal "opportunity to participate" and requiring "alternative communication services" (*e.g.*, translations) apply. (See Cal. Code Regs., tit. 22, §§ 98101, 98211.)

Government Code section 11136 provides for an administrative hearing by a state agency to decide whether a violation of Government Code section 11135 has occurred. If the state agency determines that the local government has violated the statute, it is required to take action to "curtail" state funding in whole or in part to the local agency. (Gov. Code, § 11137.) In addition, a civil action may be brought in state court to enforce section 11135. (Gov. Code, § 11139.)

California Environmental Quality Act (CEQA)

Under CEQA, "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects …." (Pub. Res. Code, § 21002.) CEQA does not use the term "environmental justice." Rather, CEQA centers on whether a project may have a significant effect on the physical environment. Under CEQA, human beings are an integral part of the "environment." An agency is required to find that a "project may have a 'significant effect on the environment'" if, among other things, "[t]he environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly[.]" (Pub. Res. Code, § 21083, subd. (b)(3); see also CEQA Guidelines,[2] § 15126.2 [noting that a project may cause a significant effect by bringing people to hazards].) As set out below, by following well-established CEQA principles, local governments can help achieve environmental justice.

CEQA's Purposes

The importance of a healthy environment for all of California's residents is reflected in CEQA's purposes. In passing CEQA, the Legislature determined:

- "The maintenance of a quality environment for the people of this state now and in the future is a matter of statewide concern." (Pub. Res. Code, § 21000, subd. (a).)

- We must "identify any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds from being reached." (*Id.* at subd. (d).)

[1] To support a finding that such concentration will not occur, the local government likely will need to identity candidate communities and assess their current burdens.
[2] The CEQA Guidelines (Cal. Code Regs., tit. 14, §§ 15000, et seq.) are available at http://ceres.ca.gov/ceqa/.

- "[M]ajor consideration [must be] given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian." (*Id.* at subd. (g).)

- We must "[t]ake all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise." (Pub. Res. Code, § 21001, subd. (b).)

Specific provisions of CEQA and its Guidelines require that local lead agencies consider how the environmental and public health burdens of a project might specially affect certain communities. Several examples follow.

Environmental Setting and Cumulative Impacts

There are a number of different types of projects that have the potential to cause physical impacts to low-income communities and communities of color. One example is a project that will emit pollution. Where a project will cause pollution, the relevant question under CEQA is whether the environmental effect of the pollution is significant. In making this determination, two long-standing CEQA considerations that may relate to environmental justice are relevant – setting and cumulative impacts.

It is well established that "[t]he significance of an activity depends upon the setting." (*Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 718 [citing CEQA Guidelines, § 15064, subd. (b)]; see also *id.* at 721; CEQA Guidelines, § 15300.2, subd. (a) [noting that availability of listed CEQA exceptions "are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant."]) For example, a proposed project's particulate emissions might not be significant if the project will be located in a sparsely populated area, but may be significant if the project will be located in the air shed of a community whose residents may be particularly sensitive to this type of pollution, or already are experiencing higher-than-average asthma rates. A lead agency therefore should take special care to determine whether the project will expose "sensitive receptors" to pollution (see, e.g., CEQA Guidelines, App. G); if it will, the impacts of that pollution are more likely to be significant.[3]

In addition, CEQA requires a lead agency to consider whether a project's effects, while they might appear limited on their own, are "cumulatively considerable" and therefore significant. (Pub. Res. Code, § 21083, subd. (b)(3).) "'[C]umulatively considerable' means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." (*Id.*) This requires a local lead agency to determine whether pollution from a

[3] "[A] number of studies have reported increased sensitivity to pollution, for communities with low income levels, low education levels, and other biological and social factors. This combination of multiple pollutants and increased sensitivity in these communities can result in a higher cumulative pollution impact." Office of Environmental Health Hazard Assessment, *Cumulative Impacts: Building a Scientific Foundation* (Dec. 2010), Exec. Summary, p. ix, available at http://oehha.ca.gov/ej/cipa123110.html.

proposed project will have significant effects on any nearby communities, when considered together with any pollution burdens those communities already are bearing, or may bear from probable future projects. Accordingly, the fact that an area already is polluted makes it *more likely* that any additional, unmitigated pollution will be significant. Where there already is a high pollution burden on a community, the "relevant question" is "whether any additional amount" of pollution "should be considered significant in light of the serious nature" of the existing problem. (*Hanford, supra*, 221 Cal.App.3d at 661; see also *Los Angeles Unified School Dist. v. City of Los Angeles* (1997) 58 Cal.App.4th 1019, 1025 [holding that "the relevant issue … is not the relative amount of traffic noise resulting from the project when compared to existing traffic noise, but whether any additional amount of traffic noise should be considered significant in light of the serious nature of the traffic noise problem already existing around the schools."])

The Role of Social and Economic Impacts Under CEQA

Although CEQA focuses on impacts to the physical environment, economic and social effects may be relevant in determining significance under CEQA in two ways. (See CEQA Guidelines, §§ 15064, subd. (e), 15131.) First, as the CEQA Guidelines note, social or economic impacts may lead to physical changes to the environment that are significant. (*Id.* at §§ 15064, subd. (e), 15131, subd. (a).) To illustrate, if a proposed development project may cause economic harm to a community's existing businesses, and if that could in turn "result in business closures and physical deterioration" of that community, then the agency "should consider these problems to the extent that potential is demonstrated to be an indirect environmental effect of the proposed project." (See *Citizens for Quality Growth v. City of Mt. Shasta* (1988) 198 Cal.App.3d 433, 446.)

Second, the economic and social effects of a physical change to the environment may be considered in determining whether that physical change is significant. (*Id.* at §§ 15064, subd. (e), 15131, subd. (b).) The CEQA Guidelines illustrate: "For example, if the construction of a new freeway or rail line divides an existing community, the construction would be the physical change, but the social effect on the community would be the basis for determining that the effect would be significant." (*Id.* at § 15131, subd. (b); see also *id.* at § 15382 ["A social or economic change related to a physical change may be considered in determining whether the physical change is significant."])

Alternatives and Mitigation

CEQA's "substantive mandate" prohibits agencies from approving projects with significant environmental effects if there are feasible alternatives or mitigation measures that would substantially lessen or avoid those effects. (*Mountain Lion Foundation v. Fish and Game Commission* (1997) 16 Cal.4th 105, 134.) Where a local agency has determined that a project may cause significant impacts to a particular community or sensitive subgroup, the alternative and mitigation analyses should address ways to reduce or eliminate the project's impacts to that community or subgroup. (See CEQA Guidelines, § 15041, subd. (a) [noting need for "nexus" between required changes and project's impacts].)

Depending on the circumstances of the project, the local agency may be required to consider alternative project locations (see *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 404) or alternative project designs (see *Citizens of Goleta*

Valley v. Board of Supervisors (1988) 197 Cal.App.3d 1167, 1183) that could reduce or eliminate the effects of the project on the affected community.

The lead agency should discuss and develop mitigation in a process that is accessible to the public and the affected community. "Fundamentally, the development of mitigation measures, as envisioned by CEQA, is not meant to be a bilateral negotiation between a project proponent and the lead agency after project approval; but rather, an open process that also involves other interested agencies and the public." (*Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, 93.) Further, "[m]itigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments." (CEQA Guidelines, § 15126.4, subd. (a)(2).)

As part of the enforcement process, "[i]n order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented," the local agency must also adopt a program for mitigation monitoring or reporting. (CEQA Guidelines, § 15097, subd. (a).) "The purpose of these [monitoring and reporting] requirements is to ensure that feasible mitigation measures will actually be implemented as a condition of development, and not merely adopted and then neglected or disregarded." (*Federation of Hillside and Canyon Assns. v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1261.) Where a local agency adopts a monitoring or reporting program related to the mitigation of impacts to a particular community or sensitive subgroup, its monitoring and reporting necessarily should focus on data from that community or subgroup.

Transparency in Statements of Overriding Consideration

Under CEQA, a local government is charged with the important task of "determining whether and how a project should be approved," and must exercise its own best judgment to "balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian." (CEQA Guidelines, § 15021, subd. (d).) A local agency has discretion to approve a project even where, after application of all feasible mitigation, the project will have unavoidable adverse environmental impacts. (*Id.* at § 15093.) When the agency does so, however, it must be clear and transparent about the balance it has struck.

To satisfy CEQA's public information and informed decision making purposes, in making a statement of overriding considerations, the agency should clearly state not only the "specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits" that, in its view, warrant approval of the project, but also the project's "unavoidable adverse environmental effects[.]" (*Id.* at subd. (a).) If, for example, the benefits of the project will be enjoyed widely, but the environmental burdens of a project will be felt particularly by the neighboring communities, this should be set out plainly in the statement of overriding considerations.

* * * *

The Attorney General's Office appreciates the leadership role that local governments have played, and will continue to play, in ensuring that environmental justice is achieved for all of California's residents. Additional information about environmental justice may be found on the Attorney General's website at http://oag.ca.gov/environment.

EXHIBIT F

SFDPH
Environmental HEALTH
improving environments protecting health

San Francisco
Department of Public Health

Sustainable Communities Health Assessment: Central Corridor Plan

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Date: November 30, 2012

Project: The Central Corridor Plan

Background: The Planning Department will be developing an area plan for the area surrounding the southern portion of the Central Subway, known as the Central Corridor. The Planning Department has requested that the Department of Public Health review the plan area using its Sustainable Communities Index to support the inclusion of health protective language in the Plan document.

Requestor: Steve Wertheim, Planner, San Francisco Planning Department

Objectives:

- Conduct an assessment of health-relevant social and environmental conditions in the area between 2nd, 6th, Market, and Townsend Streets using the Sustainable Communities Index Indicators
- Synthesize priorities for neighborhood health, which could be potentially addressed through the Plan, considering data and stakeholder input during the planning process

Contact: **Meg Wall, Lead for Land Use Planning and Health, San Francisco Department of Public Health**
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I. Introduction

Social and environmental conditions are principle determinants of health, well-being, and human development. The San Francisco Department of Public Health is committed to addressing these determinants and develops tools to assess our progress towards creating a healthy and sustainable city. One of those tools, the Sustainable Communities Index, is a system of over 100 performance indicators for livable, equitable and prosperous urban cities. First developed in San Francisco in 2007 by the Department of Public Health in partnership with diverse public and private organizations, the Index provides a model for local health, equity, and sustainability measurement in urban areas. In San Francisco, the SCI has been used to guide and shape land use plans, for the Eastern Neighborhoods, Treasure Island, Western SoMa, and Executive Park.

This assessment will provide a baseline conditions summary for the Central Corridor Plan area, between Market, Townsend, 2nd, and 6th Streets. We assessed conditions using data from the Department of Public Health's Sustainable Communities Index. The content is organized by the SCI's seven Elements: Environment, Transportation, Community, Public Realm, Education, Housing, and Economy. Within each section a brief summary of the Plan area's performance on the SCI's indicators is provided. The next section provides a brief summary of common community concerns expressed in public workshop questionnaires and the online survey. The analysis concludes with a list of the key challenges that were evident from this analysis, which could be addressed through the Central Corridor Plan. Maps, data, methods, and limitations for the indicators examined can be found at www.SustainableSF.org.

II. Highlights from Baseline Conditions Analysis of Central Corridor Plan Area

This section briefly summarizes current health related strengths and vulnerabilities in the Central Corridor Plan area.

ENVIRONMENT

Environmental pollution and access to natural areas have important impacts on human health. Motor vehicle traffic is the predominant source of both air and noise pollution in San Francisco, which can negatively affect respiratory health, sleep, and stress. Trees and green spaces have the potential to mitigate air pollution and noise and also have positive impacts on crime, mental health, and overall well-being.

Currently in the Central Corridor Plan area, only 5% of the land area is open space and 90% of the land is impervious, leading to increased storm water runoff. Compared to the City average of 7 trees per acre, the

Central Corridor only has 1.6. In general, air quality across San Francisco is much better than most major metropolitan areas in the State. However, due to close proximity to freeways and high traffic roads, the area has some of the poorest air quality in the City, with 13% of households living in an area exposed to greater than 10ug/m^3 of fine particulate matter (PM 2.5) and 16% living in areas with ambient air pollution cancer risks greater than 100 in a million. The presence of freeways and high traffic roads also contributes to high traffic noise levels and 98% of households in the Plan area are presently exposed to an average day/night outdoor noise level of greater than 60 decibels, which is a standard set by the Health Department for potential concern and mitigation.

TRANSPORATION

The transportation system impacts health via environmental quality, road traffic accidents, ability to access important goods and services and neighborhood livability and walkability.

Compared to other neighborhoods in the City, residents in the Plan area own fewer cars, drive less, and spend more time walking and cycling. However, the area also has among the highest densities of traffic in the city. Transit infrastructure and number of bike lanes are above average. However, pedestrian conditions are marginal. Of the street segments in the Plan area that were assessed with the Pedestrian Environmental Quality Index (PEQI), only 12% had reasonable or ideal conditions and only 30% of intersections had reasonable or ideal conditions. The incidence of severe injuries and deaths related to collisions between vehicles and pedestrians, cyclists, and other vehicles is amongst the highest in the City. The situation for pedestrians is especially troubling, as the average annual number of pedestrian injuries and fatalities per 100 road miles is six times higher in the Plan area compared to the City as a whole (48 vs. 8). Compared to other neighborhoods, the Plan area also has a higher proportion of drivers who are driving over the speed limit. While more residents who live in the Plan area may not be driving themselves, the traffic density, a general proxy for adverse environmental exposures and health hazards from traffic, is among the highest in the City due to the large arterials that carry traffic to and from freeways. Additionally, 100% of the current population in the plan area lives within 150 meters of a designated truck route (research suggests that the concentration of emitted motor vehicle pollutants may be highest within 150 meters of roadways).

COMMUNITY

Community organizations, support networks, and political engagement are all elements of community that have impacts on individual overall health, ranging from violence to chronic stress. Chronic stress in particular has been shown to be linked to a number of poor health outcomes like cardiovascular disease and low birth-weight.

The Plan area has above average rates for voting and access to community centers. In contrast, based on data from 2005-2007, the Central Corridor Plan area has amongst the highest violent and property crime rates in the City. During that time period, the number of assaults per 1,000 residents was 210 in the plan area and 44 for the City as a whole. Likewise, the property crime rate was 900 in the Plan area and 177 for the whole City. A high density of off sale alcohol outlets has been found to be associated with higher crime rates, and within the Plan area the density higher than most parts of the City. According to the Controller's Survey, 10% of residents feel unsafe in their neighborhood during the day and 34% feel so at night. Neighborhoods that experience less resident turn-over are more likely to develop lasting, supportive social networks among residents. Compared to other parts of the City, fewer residents in the plan area have lived in their home for more than a year and more than a third are at least somewhat likely to move away from San Francisco in the next three years.

PUBLIC REALM

Public realm includes all of the retail, public service, and aesthetic amenities necessary for individuals to thrive in their communities. Access to healthful resources, like parks, healthy food, and medical care, are important for individuals to be able to meet their basic needs. When important everyday resources are nearby, in walking friendly environments, individuals can increase their physical activity and improve the environment by using non-auto modes of transportation. Aesthetic elements of the public realm, such as art and the maintenance of public spaces, also have the ability to impact the amount of time people spend walking, as well as crime and overall human health.

Currently, the Central Corridor plan area performs well in provision of arts and cultural amenities, as well as libraries. The area also has among the best retail food access in the City. The area boasts 386 eating establishments per square mile compared to 74 for the City as a whole and has the equivalent of 5 supermarkets per square mile. However, there is room for improvement in the percent of food establishments that accept federal food assistance benefits. The area also has a high concentration of other retail establishments, which contribute to the walkability of the neighborhood.

Public infrastructure areas that the Plan area performs more poorly in include public health facilities and parks and open space. The Recreational Area Access Score assesses relative access to park acreage at any point in the City. Here again the Plan area was one of the lowest performers. Currently 67% of residents live within ½ mile of a public recreational facility compared to 91% for the City as a whole. Additionally, only 16% of residents are within ¼ mile of a community garden compared to 26% across the City. Lastly, there are no public health facilities within the Plan area.

EDUCATION

Education is one of the most consistently strong correlates of human health. Higher educational attainment is associated with higher lifetime earnings, positive health behaviors, and prolonged life expectancy.

The plan area performs poorly with regards to educational infrastructure. The Elementary School Access Score, which considers the quality, proximity, and quantity of all elementary school slots per housing unit within one mile of any point in the City, is amongst the lowest in the City within the Plan area. This is a function of there being both few and poor performing elementary schools in the South of Market area. Parental perceptions of the area's educational options are reflected by the low percent of parents choosing the area's attendance area elementary school, Webster, as their first choice. Webster however, is not actually in the plan area and is closer to the intersection of Potrero Hill/Mission/Bayview. Bessie Carmichael Elementary, a Citywide school that gives no priority based on living near the school, is the only school in the Plan area and, like Webster, performs below state standards (this excludes Five Key's, which is operated by the Sherriff's Department).

The plan area currently has a higher than average number of child care center spots per 0-14 year old living in the Plan area.

HOUSING

The cost and quality of housing have important impacts on human health. When housing costs are high relative to income, families and individuals may struggle to pay for other important expenses like food, transportation, or medical care. Families and individuals struggling to afford housing may also live in overcrowded conditions, which can lead to spread of infectious diseases and poor educational outcomes for children. Lastly low-income individuals may be forced to live in substandard housing that is poorly maintained, thereby being exposed to mold, lead, pests, and other hazards.

Housing affordability and safety are current challenges for the Central Corridor Plan area. Based on the Regional Housing Needs Determination published by ABAG, by 2010 San Francisco had only met 4% of the 2007-2014 housing production targets for individuals living between 50-80% of the Area Median Income (AMI) and 13% for individuals living between 80-120% of the AMI. This contrasts with 26% of targets being met for individuals living below 50% of the AMI and 64% for market rate housing. Within the Central Corridor Plan area, 24% of the households currently pay 50% of their household income to gross rent, making the area among the most rent burdened in the City. Fewer households own their homes and more households are living in overcrowded conditions. While 25% of the total units are inclusionary, public, redevelopment agency assisted, or part of a community land trust, only 24% of the rental housing is subject to rent control, compared to 86% for the City as

a whole. The area also has some of the highest poverty with 31% of the population living at or below 200% of the poverty threshold. Health and building code violations are also amongst the highest in the Plan area, at 19 per 1,000 residents, compared to 5 for the City as a whole. Three of the area's housing related strengths however, are a higher level of ethnic diversity, a lower rate of no-fault evictions, and high residential density to support a walkable neighborhood.

ECONOMY

Income is one of the strongest and most consistent predictors of health and disease in public health research literature. The strong relationship between income and health is not limited to a single illness or disease. When jobs are nearby housing, individuals' commute times may be shorter and use of active transportation may increase. Locally owned businesses generally benefit the local economy more than national chains and green businesses are good for the environment and worker health. Banks and credit unions are important community asset that can facilitate in building wealth and avoiding high interest loans from check cashers and payday lenders.

The Central Corridor Plan area has among the highest job densities in the City, yet also has among the lowest proportions of residents who actually work in the City. The plan area contains 15% of the City's minority and women owned local business enterprises and 8% of the City's green businesses, which is significant considering that the plan area only makes up roughly 1% of the City's land area. All residents within the plan area currently live within ½ mile of a savings bank or credit union. Current challenges include potentially lower employment rates within the plan area and a lower number of residents that are covered by health insurance.

HEALTH OUTCOMES

Many population health outcomes are relatively poorer in the zip codes that make up the Plan area (94105, 94103, 94158). Hospitalization rates for asthma, diabetes, chronic obstructive pulmonary disease, alcohol, and mental health are high. The only zip code for which we have premature mortality data is 94103, and within this zip code HIV/AIDS is the leading cause of premature mortality for males and unintentional drug overdose is the leading cause for females. Eleven percent of babies born to women residing in the plan area are born low birth weight and only 89% of mothers receive prenatal care during their first trimester. The health outcomes in this area could in part be influenced by the density of service providers and supportive housing which serve and attract vulnerable populations to the area.

III. Stakeholder Input Relevant to Health

Public comment gathered through the online survey and workshop questionnaires, while not necessarily representative of the area population, identified a number of health-relevant concerns. The following were the most common respondent concerns:

- Pedestrian and cyclist safety
- Crime
- Trash and grime
- Lack of trees and green space

Respondents generally want more housing and work space, but there are mixed opinions on how much of the housing should be affordable and to what income levels it should be affordable. There were frequent requests for wider sidewalks, protected bike lanes, better lighting, more retail and dining, more public seating, trees, and small parks. Similar numbers of respondents felt that there were enough schools (48%) or that there should be more (44%).

IV. Recommendations

Based on this analysis of current conditions in the Plan area, as well as pubic concerns, we identified several potential opportunity areas for improving neighborhood health. We recommend that Planning work in collaboration with DPH to select Plan policies and implementation actions to address the following challenges.

ENVIRONMENTAL CHALLENGES

- Few trees
- Few parks and open spaces
- Air pollution
- Noise

TRANSPORTATION CHALLENGES

- Pedestrian safety
- Bicycle safety
- High traffic density

SOCIAL CHALLENGES

- Crime
- Residential turnover

PUBLIC REALM NEEDS

- Lack of health facilities
- Sidewalk maintenance/cleanliness

EDUCATION CHALLENGES

- Few/under-performing schools

HOUSING CHALENGES

- Housing affordability
- Housing safety and habitability

ECONOMIC CHALENGES

- Unemployment

Health and Sustainability Indicator Performance for the Central Corridor

Background

The Sustainable Communities Index is a system of over 100 performance indicators for livable, equitable and prosperous urban cities. First developed in San Francisco in 2007 by the Department of Public Health in partnership with diverse public and private organizations, the Index provides a model for local health, equity, and sustainability measurement in urban areas. In San Francisco, the SCI has been used to guide and shape land use plans, for the Eastern Neighborhoods, Treasure Island, Western SoMa, and Executive Park.

Methods and Data Sources

For this study, we used SCI Indicators to assess current conditions in the Central Corridor Plan area (the area bounded by Market, 2nd, 6th, and Townsend Streets) with the goal of managing environmental and social challenges in the plan area. Indicator maps, methodologies, data sources, and limitations can be found on the SCI website at www.SustainableSF.org.

When possible, indicator data was analyzed specifically for the area within the Plan boundaries. In some cases however, data was not available for the specific area of interest. In cases where the Supervisorial District or PUMA (public use micro-data area) were the lowest geographic levels, the values for District 6 or PUMA 2203 were used. When census tracts, zip codes and, transportation districts we the lowest level of geography for an indicator, the proportion of the total Plan area residential square footage that fell within, each district, tract, zip code was calculated. Those proportions were then multiplied by the value for the respective tract, zip code, or district to calculate a "residential distribution" weighted average indicator value for the Plan area. In cases were census tracts, zip codes, or transportation districts are the lowest geographic value, this is noted within the table.

Interpretation

The table lists all of the indicators that are used to measure progress towards each objective. The table includes indicator values for the city as a whole and the Central Corridor Plan area. To determine relative performance, we divided the range of values at the lowest geographic level for each indicator into quintiles. The Plan area was then given a score based on where it fell between the worst and the best quintiles (scores: -2, -1, 0, 1, or 2). In the table, the score for each indicator is also expressed using plus, minus, and tilde signs, with pluses denoting good performance and minuses denoting poor performance.

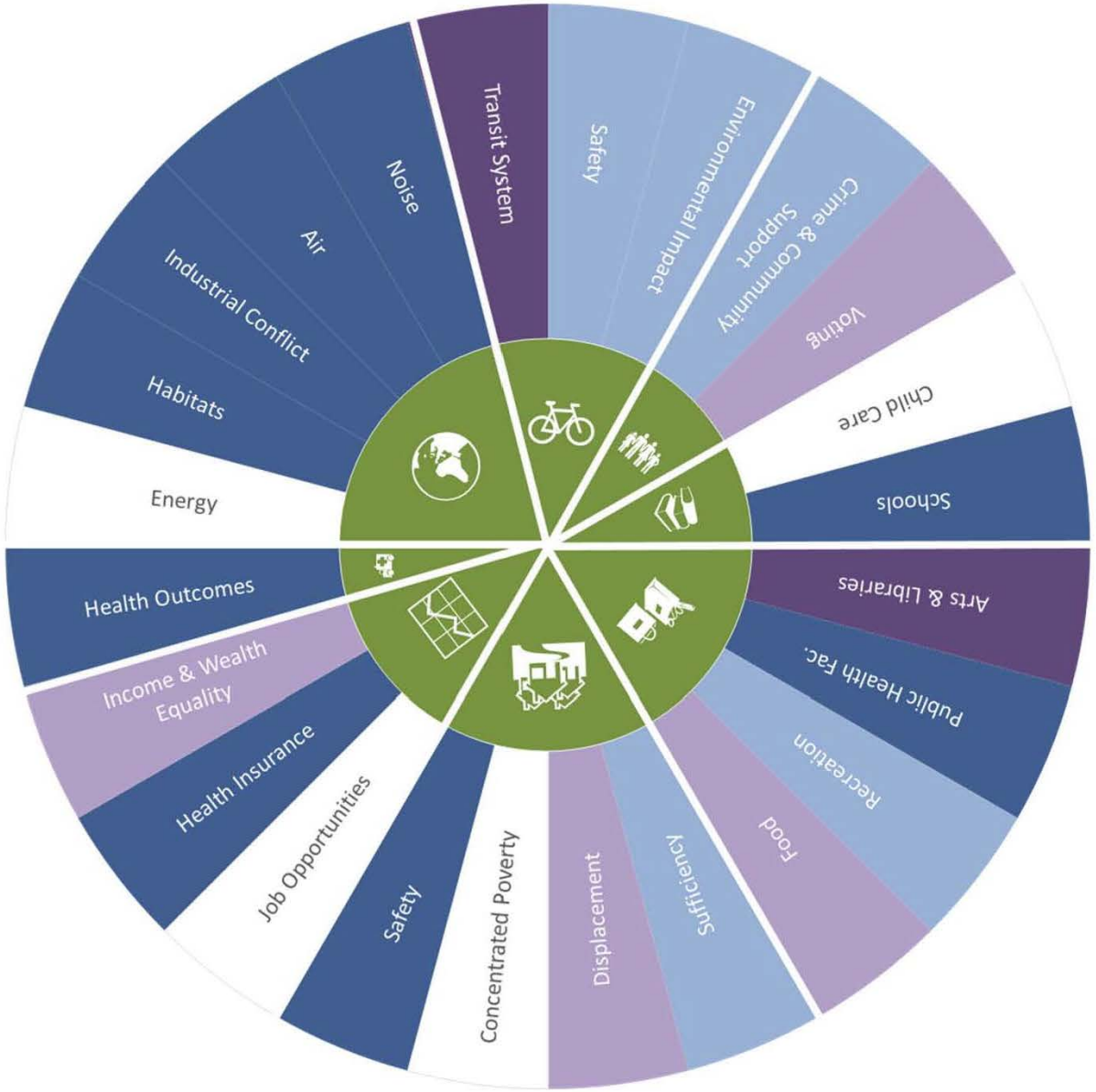
The radial summary chart illustrates how the Plan area currently performs in each Objective in the SCI. Collectively, the objectives achieve a vision of a healthy and sustainable city. In the summary chart, each objective is represented as a piece of the pie and is labeled according to its overall theme, e.g. the objective "Ensure the safety of the transportation system" is labeled as "Safety" and falls within the Transportation chunk of the pie that is represented with a bicycle icon. For the summary radial chart, we

derived the Central Corridor's performance for each SCI objective by calculating the average of the scores for all of the indicators that fell within each objective.

Objectives that perform below average are shaded red, while objectives that perform above average are shaded light blue.

Health and Sustainability Indicator Performance

Central Corridor



- Environment
- Transportation
- Community
- Public Realm
- Education
- Housing
- Economy
- Health Outcomes

Performance	Rating
Worst 20%	- -
>20% - 40%	-
>40% - 60%	~
>60% - 80%	+
Best 20%	++

En. Environment			
Objectives and Indicators	*San Francisco*	*CC*	*Performance*
En.1 Decrease consumption of energy and natural resources			
Primary Indicators			
En.1.a Annual residential natural gas use per capita (therms)*	186	66	+ +
En.1.b Annual residential electricity use per capita (kilowatt hours)*	1,762	2,416	- -
En.1.c Gross per capita water use (gallons per day)	91.5	NA	NA
En.1.d Annual solid waste disposal and waste diversion (tons per capita)	0.57	NA	NA
En.1.e Renewable energy installed capacity (MWh) in San Francisco and percent energy supplied from renewable sources	NA	NA	NA
En.2 Restore, preserve and protect healthy natural habitats			
Primary Indicators			
En.2.a Total miles of Bay and Coastal Trails completed in San Francisco County (% complete)	Costal Trail: 69% Bay Trail: 44%	NA	NA
En.2.b Distribution of open spaces and natural areas (% of land area that is open space)	22.8%	4.7%	-
En.2.c Number of trees four meters tall or higher	7.0	1.6	- -
En.2.d Proportion of ground covered with impervious surfaces	63.5%	89.8%	- -
En.3 Reduce residential and industrial conflicts			
Primary Indicators			
En.3.a Distribution of brownfields and leaking underground storage tanks (# per square mile)	BF: 2.6 LUST: 2.1	BF: 12.28 LUST: 4.94	- -
En.4 Preserve clean air quality			
Primary Indicators			
En.4.a Proportion of population living in areas with a PM 2.5 concentration of 10 ug/m3 or more and proportion of population living in areas with a cancer risk of 100/1,000,000 or more.	PM2.5: 1.2% Cancer: 3.3%	PM2.5: 13.3% Cancer: 15.9%	- -
En.4.b Proportion households living 300 meters of an air pollution point source	3%	12%	- -
En.5 Maintain safe levels of community noise			
Primary Indicators			
En.5.a Proportion of population exposed to an average day/night outdoor noise level >60dB	70%	97.50%	- -

* (Zips: 94105, 94103, 94158)

T. Transportation			
Objectives and Indicators	*San Francisco*	*CC*	*Performance*
T.1 Create a resource-efficient, equitable transportation system			
T.1.a Proportion of households without a motor vehicle§	29%	40%	+
T.1.b Proportion of trips made by walking, biking or transit (non-auto modes)ǂ	51%	82%	+ +
T.1.c Time spent walking or biking (for utilitarian/non-leisure trips) per capitaǂ	28 min/day	43 min/day	+ +
T.1.d Average commute travel time per transit tripǂ	39 min	29 min	+ +
T.1.e Average transit cost for people living at or below the median household income	NA	NA	NA
T.1.f Proximity to frequent transit service (residents and workers)	Res: 21% Jobs: 89%	Res: 75% Jobs: 89%	+ +
T.2 Ensure the safety of the transportation system			
T.2.a Average annual severe/fatal traffic injuries per 100 roadway miles	Total: 21 Ped: 8 Bike: 2 Vehicle: 11	Total: 70 Ped: 48 Bike: 5 Vehicle: 16	- - -
T.2.b Pedestrian Environmental Quality Index (PEQI) Score: % with Reasonable or Ideal pedestrian conditions	NA	Street segments:12% Intersections: 30%	●
T.2.c Ratio of Bicycle Path and Lane Miles to All Road Miles	0.1 (109.5 mi.)	0.37 (7.0 mi.)	+ +
T.2.d Percent of drivers exceeding the speed limit by 5 miles per hour or more	18%	22%	-
T.3 Reduce adverse environmental health impacts of the transportation system			
T.3.a Average daily distance travelled in private autos by residents (miles)ǂ	11.6	4.3	+ +
T.3.b Traffic density (% of households living in areas the top two traffic density quintiles)	13%	72%	- -
T.3.c Proportion of households living within 150 meters of a designated truck route	44%	100%	- -

§ (2000 Tracts: 176.01, 176.02, 178, 179.01, 180, 607)
ǂ (TAZD: SOMA & Downtown)

C. Community			
Objectives and Indicators	*San Francisco*	*CC*	*Performance*
C.1 C.1 Promote socially cohesive neighborhoods, free of crime and violence			
Primary Indicators			
C.1.a Number of violent crimes (per 1,000 population)	Homicide: 0.3 Assault: 44 Sexual: 1.7	Homicide: 0.5 Assault: 210 Sexual: 6.2	- -
C.1.b Number of property crimes (per 1,000 population)	177	900	- -
C.1.c Proportion of the population, 1 year and older, living in the same house as one year ago§	84%	71%	- -
C.1.d Proportion of population within 1/2 mile from community center	85%	100%	+ +
C.1.e Density of off-sale alcohol outlets (# per square mile)	17.4	57	- -
Secondary Indicators			
C.1.f Proportion of households that are very or somewhat likely to move away from San Francisco in the next three years*	25%	36%	- -
C.1.g Number of neighborhood block party permits	82	0	- -
C.1.h Number of spiritual and religious centers (per 10,000 residents)	8.3	7.3	-
C.1.i Residents' perceived safety (% who feel unsafe or very unsafe)*	Day: 5% Night: 25%	Day: 10% Night: 34%	- - -
C.2 Increase civic, social, and community engagement			
Primary Indicators			
C.2.a Voting rates	61%	59%	+
Secondary Indicators			
C.2.b Volunteerism	22.6%	NA	NA
C.2.c Public meeting attendance	12.2%	NA	NA
C.3 Assure equitable and democratic participation throughout the planning process			
No Indicators			

§ (2000 Tracts: 176.01, 176.02, 178, 179.01, 180, 607)

* (Zips: 94105, 94103, 94158)

PR. Public Realm			
Objectives and Indicators	*San Francisco*	*CC*	*Performance*
PR.1 Assure spaces for libraries, performing arts, theatre, museums, concerts, and festivals for personal and educational fulfillment			
Primary Indicators			
PR.1.a Art and cultural facilities by admission fee (# of facilities)	131	11 (8 with general admission $10 or less)	NA
PR.1.b Per capita public arts funding distributed by the San Francisco Arts Commission	$40	$162 (District 6)	+ +
PR.1.c Proportion of population within 1 mile of a public library	1/2 mile: 58% 1 mile: 97%	1/2 mile: 35.4% 1 mile: 100%	~
PR.1.d Locations of public art installations and murals (# public art works and murals per 10,000 residents)	7.5	11.8	+ +
PR.2 Assure affordable and high quality public health facilities			
Primary Indicators			
PR.2.a Public health facilities near major transit corridors (% of facilities by type)	DPH Clinic: 39% Community Clinic: 62% Hospital: 31%	No facilities	- -
PR.2.b Number of hospital beds per 100,000 population and hospital bed occupancy rates	544 - 58.7%	NA	NA
PR.3 Increase park, open space and recreation facilities			
Primary Indicators			
PR.3.a Recreational area access score	56	16.3	- -
PR.3.b Proportion of population within 1/4 mile of a recreation facility	1/4 mile: 47% 1/2 mile: 91%	1/4 mile: 29% 1/2 mile: 67%	-
Secondary indicators			
PR.3.c Proportion of households with 1/4 mile access to a community garden	26%	16%	~
PR.4 Increase accessibility, beauty, safety, and cleanliness of public spaces			
Primary Indicators			
PR.4.a San Francisco street tree distribution	NA	NA	NA
PR.4.b Streetscape improvements [in process]	NA	NA	NA
PR.4.c Street maintenance scores [in process]	NA	NA	NA
PR.5 Assure access to daily goods and service needs			
Primary Indicators			
PR.5.a Neighborhood completeness indicator for key public services (# of resources per square mile)			
Childcare Center Slots	275.3	260.3	NA
Community Center	4.1	15.5	NA
Community Garden	1.1	0.0	NA
Library	0.6	0.0	NA
Open Space & Park Less Than 1/2 Acre	4.8	10.3	NA
Parks 1/2 Acre or Larger	6.7	6.9	NA
Post Office	0.9	1.7	NA

Public Art Installations	12.8	1.7	NA
Public Health Facility	1.7	0.0	NA
Public School	2.4	1.7	NA
Rec Facility	2.4	1.7	NA
PR.5.b Neighborhood completeness indicator for key retail services (# of resources per square mile)			
Auto Repair Shop	6.5	50.0	NA
Bank and Credit Union	5.7	13.8	NA
Beauty/Barber Shop	23.5	46.6	NA
Bike Shop	1.0	5.2	NA
Dry Cleaner	4.6	6.9	NA
Eating Establishments	73.6	386.2	NA
Gym	4.6	24.1	NA
Hardware Store	1.3	5.2	NA
Healthy Retail Food	2.6	8.6	NA
Laundromat	3.3	1.7	NA
Pharmacy	3.5	3.6	NA
Video Rental/Movie Theater	2.5	8.6	NA

PR.6 Promote affordable and high-quality food access and sustainable agriculture			
Primary Indicators			
PR.6.a Retail Food Access Score	41	56	+ +
Distribution of retail food sources (# of resources per square mile)			
Supermarket	1.7	5.2	+ +
Warehouse Club Stores	0.1	1.7	+ +
Grocery, Other	2.0	3.4	+ +
Fruit/Vegetable Market	1.0	1.7	+
Meat/Fish/Poultry	1.2	0.0	-
Farmers Market	0.4	1.7	+ +
Convenience	9.3	39.7	+ +
PR.6.b Proportion of retail food establishments that accept state/federal food assistance programs	Healthy: 65% Unhealthy: 36%	Healthy: 60% Unhealthy: 15%	~ -
PR.6.c Proportion of households within 1/2 mile of a farmer's market (Were going to include in food indicator but is it better to break it out because of the social/community cobenefits that farmers' markets have, plus there is notible inequity in their distribution accross the city)	41%	52%	~

Ed. Education			
Objectives and Indicators	*San Francisco*	*CC*	*Performance*
Ed.1 Assure affordable and high quality child care for all neighborhoods			
Primary Indicators			
Ed.1.a Maximum capacity of licensed child care facilities and child care population (# slots in licensed child care centers and licensed child care family homes per child, 0-14 years old)	Centers: 0.14 (12,965 slots) Homes: 0.04 (4,035 slots)	Centers: 0.27 (151 slots) Homes: 0 (0 slots)	+ + - -
Ed.1.b Unmet need for child care subsidies	NA	NA	NA
Ed.1.c Average child care costs as a proportion of family budget§	12%	15%	- -
Ed.2 Assure accessible and high quality educational facilities			
Primary Indicators			
Ed.2.a Elementary school access indicator	30	7	- -
Ed.2.b Proportion of students selecting attendance area school as their first choice elementary school	23%	9%	- -
Ed.2.c Proportion of schools achieving an Academic Performance Index Base of 800 or more	49%	0%	- -
Secondary Indicators			- -
Ed.2.d Proportion of public schools with a school garden	52%	0%	- -
Ed.2.e Proportion of students graduating from high school by school	82%	NA	NA
Ed.2.f Ratio of public school population to citywide school-aged population	NA	NA	NA

§ (2000 Tracts: 176.01, 176.02, 178, 179.01, 180, 607)

H. Housing			
Objectives and Indicators	*San Francisco*	*CC*	*Performance*
H.1 Preserve and construct housing in proportion to demand with regards to size, affordability, and tenure			
Primary Indicators			
H.1.a Proportion of housing production to housing need by income category (difference between production targets for 2007-2014, and actual production during 2007-2010) *Very low (50% AMI)* *Low (80% AMI)* *Moderate (120% AMI)* *Above moderate (Market rate)*	 26% 4% 13% 64%	 NA NA NA NA	 NA NA NA NA
H.1.b Proportion of households whose gross rent is 50% or more of their household income§	20%	24%	- -
H.1.c Housing purchasing capacity of the median income household	NA	NA	NA
H.1.d Proportion households that own their homes	36%	23%	-
Secondary Indicators			
H.1.e Proportion of households NOT living in overcrowded conditions§	95%	95%	-
H.1.f Housing wage as a percent of minimum wage	NA	NA	NA
H.1.g Residential density	12.5	20.3	+
H.2 Protect residents from involuntary displacement			
Primary Indicators			
H.2.a Bay Area regional trends in fair market rate rents for a two bedroom unit	NA	NA	NA
H.2.b Number and rate of no-fault evictions	11.2	1.2	+ +
H.2.c Proportion of SF housing that is for rent or puchase that is affordable (% that is public, inclusionary, redevelopment agency affordable, or community land trust; OR rent controlled (built 1979 or earlier)¥)	Affordable: 6% Rent Cont.: 86%	Affordable: 25% Rent Cont: 24%	+ + - -
H.3 Decrease concentrated poverty			
Primary Indicators			
H.3.a Ethnic diversity index (0-100)	63	64	+
H.3.d Proportion living at or below 200% of the Census poverty threshold§	26%	31%	-
H.4 Assure access to healthy quality housing			
Primary Indicators			
H.4.a Health and building code violations for housing and habitability per 1,000 population	4.7	18.8	- -

¥ (2010 Tracts: 176.01, 178.01, 178.02, 180, 607, 615)
§ (2000 Tracts: 176.01, 176.02, 178, 179.01, 180, 607)

Ec. Economy			
Objectives and Indicators	*San Francisco*	*CC*	*Performance*
Ec.1 Increase high-quality employment opportunities for local residents			
Primary Indicators			
Ec.1.a Jobs paying wages greater than or equal to the self-sufficiency wage	NA	NA	NA
Ec.1.b Proportion of residents who both live and work in San Francisco§	76%	70%	- -
Ec.1.c Jobs per square mile	11,519	67,385	+ +
Secondary Indicators			
Ec.1.d Proportion of job openings available to individuals without a college degree	NA	NA	NA
Ec.2 Increase jobs that provide healthy, safe and meaningful work			
Primary Indicators			
Ec.2.a Proportion of population covered by health insurance	88.3%	81.3% (PUMA 2203)	- -
Ec.2.b Occupational non-fatal injury rate by industry	NA	NA	NA
Secondary Indicators			
Ec.2.c Proportion of population receiving paid sick days benefits	100%	100%	+ +
Ec.3 Increase equality in income and wealth			
Primary Indicators			
Ec.3.a Income inequality (Gini coefficient)	0.51 (highest in CA)	NA	NA
Ec.3.b Geographic, ethnic, and annual variations in employment rates (% employed)§	93%	95%	-
Ec.3.c Proportion of population within 1/2 mile of a savings bank or credit union	81%	100%	+ +
Ec.3.d Minority and women owned Local Business Enterprises	813 (100%)	125 (15%)	●
Ec.4 Protects and enhances natural resources and the environment			
Primary Indicators			
Ec.4.a Distribution of green businesses	168 (100%)	14 (8%)	●

§ (2000 Tracts: 176.01, 176.02, 178, 179.01, 180, 607)

D. Demographics		
Indicators	*San Francisco*	*CC*
D.1 Population density (population per square mile)	17,081	18,231
D.2 Population by ethnicity		
African American/ Black	6%	7%
Asian / Pacific Islander	33%	40%
Latino/a	15%	8%
Native American/ (non-Latino/a)	0.2%	0.4%
White (non-Latino/a) (non-Latino/a)	42%	41%
Multi-ethnic (non-Latino/a)	3%	3%
Other ethnicity (non-Latino/a) Alaska Native (non-Latino/a)	0.3%	0.3%
D.3 Per capita and household median income§	Per capita: $44,373 Household: $70,040	Per capita: $72,865 Household: $82,578
D.4 Proportion living at or below 200% of the Census poverty threshold§	26%	31%
D.5 Average household size	2.4	1.6
D.6 Employment rate§	93%	95%
D.7 Proportion of residents, 1 year and older, who are still living in the same house as one year ago§	84%	71%
D.8 Percent of adults, 25 years and older, with a high school education or more§	86%	88%
D.9 Proportion of population that is foreign-born§	34%	37%
D.10 Householder marital status (% of all householders by partnership status)		
Husband-wife married	32%	23%
Partnered (same and opposite sex)	9%	10%
Unpartnered	59%	68%
D.11 Proportion of youth and seniors	Youth: 13.4% Seniors: 13.6%	Youth: 4.9% Seniors: 22.6%
D.12 Proportion of households with children under 18 years old	22%	8%
D.13 San Francisco home sales (average cost per square foot)*	$590	$691
D.14 Proportion of households that are linguistically isolated (% households in which all members age 14 years and over speak a non-English language and also speak English less than "very well")§	13%	15%
D.15 Cost of living by family type over time (Annual income needed for 1 adult, 2011)	$30,286	NA
HH.1.g Homeless population (# of street homeless per 1,000 residents)	4	11 (District 6)

¥ (2010 Tracts: 176.01, 178.01, 178.02, 180, 607, 615)
§ (2000 Tracts: 176.01, 176.02, 178, 179.01, 180, 607)
* (Zips: 94105, 94103, 94158)

HO. Health Outcomes			
Indicators	*San Francisco*	*CC*	*Performance*
HO.1 Asthma hospitalization rate per 10,000*	8.9	15.4	- -
HO.2 Diabetes hospitalization rate per 10,000*	12.1	22.7	- -
HO.3 Chronic obstructive pulmonary disease hospitalization rate per 10,000*	11.4	34.7	- -
HO.4 Heart failure hospitalization rate per 10,000*	30.3	72	- -
HO.5 Hospitalization rate for alcohol abuse per 10,000*	7.9	27.1	- -
HO.6 Mental health hospitalization rate per 10,000*	NA	183.7	- -
HO.7 Leading causes of death by age-adjusted death rates per 100,000 (#1 cause)	Ischemic heart disease	NA	NA
HO.8 Leading causes of death by years of life lost (#1 cause)	Ischemic heart disease	NA	NA
HO.9 Leading causes of death by years of life lost by zip code (#1 cause)*	Ischemic heart disease	HIV/AIDS (94103) Ischemic heart disease (94107)	NA
HO.10 Infant mortality rate	3.7	NA	NA
HO.11 Low birth weight births (% of live births that are low birth weight)*	7%	11%	- -
HO.12 Percentage of mothers receiving prenatal care in first trimester*	87%	89%	-

* (Zips: 94105, 94103, 94158)

EXHIBIT G

Addressing Climate Change at the Project Level
California Attorney General's Office

Under the California Environmental Quality Act (CEQA), local agencies have a very important role to play in California's fight against global warming – one of the most serious environmental effects facing the State today. Local agencies can lead by example in undertaking their own projects, insuring that sustainability is considered at the earliest stages. Moreover, they can help shape private development. Where a project as proposed will have significant global warming related effects, local agencies can require feasible changes or alternatives, and impose enforceable, verifiable, feasible mitigation to substantially lessen those effects. By the sum of their actions and decisions, local agencies will help to move the State away from "business as usual" and toward a low-carbon future.

Included in this document are various measures that may reduce the global warming related impacts at the individual project level. (For more information on actions that local governments can take at the program and general plan level, please visit the Attorney General's webpage, "CEQA, Global Warming, and General Plans" at http://ag.ca.gov/globalwarming/ceqa/generalplans.php.)

As appropriate, the measures can be included as design features of a project, required as changes to the project, or imposed as mitigation (whether undertaken directly by the project proponent or funded by mitigation fees). The measures set forth in this package are examples; the list is not intended to be exhaustive. Moreover, the measures cited may not be appropriate for every project. The decision of whether to approve a project – as proposed or with required changes or mitigation – is for the local agency, exercising its informed judgment in compliance with the law and balancing a variety of public objectives.

Mitigation Measures by Category

Energy Efficiency

Incorporate green building practices and design elements.	The California Department of Housing and Community Development's Green Building & Sustainability Resources handbook provides extensive links to green building resources. The handbook is available at http://www.hcd.ca.gov/hpd/green_build.pdf. The American Institute of Architects (AIA) has compiled fifty readily available strategies for reducing fossil fuel use in buildings by fifty percent. AIA "50 to 50" plan is presented in both guidebook and wiki format at http://wiki.aia.org/Wiki%20Pages/Home.aspx.

Meet recognized green building and energy efficiency benchmarks.	For example, an ENERGY STAR-qualified building uses less energy, is less expensive to operate, and causes fewer greenhouse gas emissions than comparable, conventional buildings. http://www.energystar.gov/index.cfm?c=business.bus_index. California has over 1600 ENERGY STAR-qualified school, commercial and industrial buildings. View U.S. EPA's list of Energy Star non-residential buildings at http://www.energystar.gov/index.cfm?fuseaction=labeled_buildings.locator. Los Angeles and San Francisco top the list of U.S. cities with the most ENERGY STAR non-residential buildings. http://www.energystar.gov/ia/business/downloads/2008_Top_25_cities_chart.pdf. Qualified ENERGY STAR homes must surpass the state's Title 24 energy efficiency building code by at least 15%. Los Angeles, Sacramento, San Diego, and San Francisco-Oakland are among the top 20 markets for ENERGY STAR homes nationwide. http://www.energystar.gov/ia/new_homes/mil_homes/top_20_markets.html. Builders of ENERGY STAR homes can be more competitive in a tight market by providing a higher quality, more desirable product. See http://www.energystar.gov/ia/partners/manuf_res/Horton.pdf. There are a variety of private and non-profit green building certification programs in use in the U.S. See U.S. EPA's Green Building / Frequently Asked Questions website, http://www.epa.gov/greenbuilding/pubs/faqs.htm. Public-Private Partnership for Advancing Housing Technology maintains a list of national and state Green Building Certification Programs for housing. See http://www.pathnet.org/sp.asp?id=20978. These include the national Leadership in Energy and Environmental Design (LEED) program, and, at the state level, Build it Green's GreenPoint Rated system and the California Green Builder program. Other organizations may provide other relevant benchmarks.
Install energy efficient lighting (e.g., light emitting diodes (LEDs)), heating and cooling systems, appliances, equipment, and control systems.	Information about ENERGY STAR-certified products in over 60 categories is available at http://www.energystar.gov/index.cfm?fuseaction=find_a_product. The California Energy Commission maintains a database of all appliances meeting either federal efficiency standards or, where there are no federal efficiency standards, California's appliance efficiency standards. See http://www.appliances.energy.ca.gov/. The Electronic Product Environmental Assessment Tool (EPEAT) ranks computer products based on a set of environmental criteria, including energy efficiency. See http://www.epeat.net/AboutEPEAT.aspx. The nonprofit American Council for an Energy Efficient Economy maintains an Online Guide to Energy Efficient Commercial Equipment, available at http://www.aceee.org/ogeece/ch1_index.htm. Utilities offer many incentives for efficient appliances, lighting, heating and cooling. To search for available residential and commercial incentives, visit Flex Your Power's website at http://www.fypower.org/.

Use passive solar design, e.g., orient buildings and incorporate landscaping to maximize passive solar heating during cool seasons, minimize solar heat gain during hot seasons, and enhance natural ventilation. Design buildings to take advantage of sunlight.	See U.S. Department of Energy, Passive Solar Design (website) http://www.energysavers.gov/your_home/designing_remodeling/index.cfm/mytopic=10250. See also California Energy Commission, Consumer Energy Center, Passive Solar Design (website) http://www.consumerenergycenter.org/home/construction/solardesign/index.html. Lawrence Berkeley National Laboratories' Building Technologies Department is working to develop innovative building construction and design techniques. Information and publications on energy efficient buildings, including lighting, windows, and daylighting strategies, are available at the Department's website at http://btech.lbl.gov.
Install light colored "cool" roofs and cool pavements.	A white or light colored roof can reduce surface temperatures by up to 100 degrees Fahrenheit, which also reduces the heat transferred into the building below. This can reduce the building's cooling costs, save energy and reduce associated greenhouse gas emissions, and extend the life of the roof. Cool roofs can also reduce the temperature of surrounding areas, which can improve local air quality. See California Energy Commission, Consumer Energy Center, Cool Roofs (webpage) at http://www.consumerenergycenter.org/coolroof/. See also Lawrence Berkeley National Laboratories, Heat Island Group (webpage) at http://eetd.lbl.gov/HeatIsland/.
Install efficient lighting, (including LEDs) for traffic, street and other outdoor lighting.	LED lighting is substantially more energy efficient than conventional lighting and can save money. See http://www.energy.ca.gov/efficiency/partnership/case_studies/TechAsstCity.pdf (noting that installing LED traffic signals saved the City of Westlake about $34,000 per year). As of 2005, only about a quarter of California's cities and counties were using 100% LEDs in traffic signals. See California Energy Commission (CEC), Light Emitting Diode Traffic Signal Survey (2005) at p. 15, available at http://www.energy.ca.gov/2005publications/CEC 400 2005 003/CEC 400 2005 003.PDF. The California Energy Commission's Energy Partnership Program can help local governments take advantage of energy saving technology, including, but not limited to, LED traffic signals. See http://www.energy.ca.gov/efficiency/partnership/.
Reduce unnecessary outdoor lighting.	See California Energy Commission, Reduction of Outdoor Lighting (webpage) at http://www.energy.ca.gov/efficiency/lighting/outdoor_reduction.html.

Use automatic covers, efficient pumps and motors, and solar heating for pools and spas.	During the summer, a traditional backyard California pool can use enough energy to power an entire home for three months. Efficiency measures can substantially reduce this waste of energy and money. See California Energy Commission, Consumer Energy Center, Pools and Spas (webpage) at http://www.consumerenergycenter.org/home/outside/pools_spas.html. See also Sacramento Municipal Utilities District, Pool and Spa Efficiency Program (webpage) at http://www.smud.org/en/residential/saving-energy/Pages/poolspa.aspx.
Provide education on energy efficiency to residents, customers and/or tenants.	Many cities and counties provide energy efficiency education. See, for example, the City of Stockton's Energy Efficiency website at http://www.stocktongov.com/energysaving/index.cfm. See also "Green County San Bernardino," http://www.greencountysb.com at pp. 4-6. Businesses and development projects may also provide education. For example, a homeowners' association (HOA) could provide information to residents on energy-efficient mortgages and energy saving measures. See The Villas of Calvera Hills, Easy Energy Saving Tips to Help Save Electricity at http://www.thevillashoa.org/green/energy/. An HOA might also consider providing energy audits to its residents on a regular basis.

Renewable Energy and Energy Storage

Meet "reach" goals for building energy efficiency and renewable energy use.	A "zero net energy" building combines building energy efficiency and renewable energy generation so that, on an annual basis, any purchases of electricity or natural gas are offset by clean, renewable energy generation, either on-site or nearby. Both the California Energy Commission (CEC) and the California Public Utilities Commission (CPUC) have stated that residential buildings should be zero net energy by 2020, and commercial buildings by 2030. See CEC, 2009 Integrated Energy Policy Report (Dec. 2009) at p. 226, available at http://www.energy.ca.gov/2009publications/CEC-100-2009-003/CEC-100-2009-003-CMF.PDF; CPUC, Long Term Energy Efficiency Strategic Plan (Sept. 2008), available at http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency/eesp/.
Install solar, wind, and geothermal power systems and solar hot water heaters.	The California Public Utilities Commission (CPUC) approved the California Solar Initiative on January 12, 2006. The initiative creates a $3.3 billion, ten-year program to install solar panels on one million roofs in the State. Visit the one-stop GoSolar website at http://www.gosolarcalifornia.org/. As mitigation, a developer could, for example, agree to participate in the New Solar Homes program. See http://www.gosolarcalifornia.org/builders/index.html. The CPUC is in the process of establishing a program to provide solar water heating incentives under the California Solar Initiative. For more information, visit the CPUC's website at http://www.cpuc.ca.gov/puc/energy/solar/swh.htm. To search for available residential and commercial renewable energy incentives, visit Flex Your Power's website at http://www.fypower.org/.

Install solar panels on unused roof and ground space and over carports and parking areas.	In 2008 Southern California Edison (SCE) launched the nation's largest installation of photovoltaic power generation modules. The utility plans to cover 65 million square feet of unused commercial rooftops with 250 megawatts of solar technology – generating enough energy to meet the needs of approximately 162,000 homes. Learn more about SCE's Solar Rooftop Program at http://www.sce.com/solarleadership/solar-rooftop-program/general-faq.htm. In 2009, Walmart announced its commitment to expand the company's solar power program in California. The company plans to add solar panels on 10 to 20 additional Walmart facilities in the near term. These new systems will be in addition to the 18 solar arrays currently installed at Walmart facilities in California. See http://walmartstores.com/FactsNews/NewsRoom/9091.aspx. Alameda County has installed two solar tracking carports, each generating 250 kilowatts. By 2005, the County had installed eight photovoltaic systems totaling over 2.3 megawatts. The County is able to meet 6 percent of its electricity needs through solar power. See http://www.acgov.org/gsa/Alameda%20County%20-%20Solar%20Case%20Study.pdf. In 2007, California State University, Fresno installed at 1.1-megawatt photovoltaic (PV)-paneled parking installation. The University expects to save more than $13 million in avoided utility costs over the project's 30-year lifespan. http://www.fresnostatenews.com/2007/11/solarwrapup2.htm.
Where solar systems cannot feasibly be incorporated into the project at the outset, build "solar ready" structures.	U.S. Department of Energy, A Homebuilder's Guide to Going Solar (brochure) (2008), available at http://www.eere.energy.gov/solar/pdfs/43076.pdf.
Incorporate wind and solar energy systems into agricultural projects where appropriate.	Wind energy can be a valuable crop for farmers and ranchers. Wind turbines can generate energy to be used on-site, reducing electricity bills, or they can yield lease revenues (as much as $4000 per turbine per year). Wind turbines generally are compatible with rural land uses, since crops can be grown and livestock can be grazed up to the base of the turbine. See National Renewable Energy Laboratory, Wind Powering America Fact Sheet Series, Wind Energy Benefits, available at http://www.nrel.gov/docs/fy05osti/37602.pdf. Solar PV is not just for urban rooftops. For example, the Scott Brothers' dairy in San Jacinto, California, has installed a 55-kilowatt solar array on its commodity barn, with plans to do more in the coming years. See http://www.dairyherd.com/directories.asp?pgID=724&ed_id=8409 (additional California examples are included in article.)

Include energy storage where appropriate to optimize renewable energy generation systems and avoid peak energy use.	See National Renewable Energy Laboratory, Energy Storage Basics (webpage) at http://www.nrel.gov/learning/eds_energy_storage.html. California Energy Storage Alliance (webpage) at http://storagealliance.org/about.html. Storage is not just for large, utility scale projects, but can be part of smaller industrial, commercial and residential projects. For example, Ice Storage Air Conditioning (ISAC) systems, designed for residential and nonresidential buildings, produce ice at night and use it during peak periods for cooling. See California Energy Commission, Staff Report, Ice Storage Air Conditioners, Compliance Options Application (May 2006), available at http://www.energy.ca.gov/2006publications/CEC-400-2006-006/CEC-400-2006-006-SF.PDF.
Use on-site generated biogas, including methane, in appropriate applications.	At the Hilarides Dairy in Lindsay, California, an anaerobic-lagoon digester processes the run-off of nearly 10,000 cows, generating 226,000 cubic feet of biogas per day and enough fuel to run two heavy duty trucks. This has reduced the dairy's diesel consumption by 650 gallons a day, saving the dairy money and improving local air quality. See http://www.arb.ca.gov/newsrel/nr021109b.htm; see also Public Interest Energy Research Program, Dairy Power Production Program, Dairy Methane Digester System, 90-Day Evaluation Report, Eden Vale Dairy (Dec. 2006) at http://www.energy.ca.gov/2006publications/CEC 500 2006 083/CEC 500 2006 083.PDF. Landfill gas is a current and potential source of substantial energy in California. See Tom Frankiewicz, Program Manager, U.S. EPA Landfill Methane Outreach Program, Landfill Gas Energy Potential in California, available at http://www.energy.ca.gov/2009_energypolicy/documents/2009-04-21_workshop/presentations/05-SCS_Engineers_Presentation.pdf. There are many current and emerging technologies for converting landfill methane that would otherwise be released as a greenhouse gas into clean energy. See California Integrated Waste Management Board, Emerging Technologies, Landfill Gas-to-Energy (webpage) at http://www.ciwmb.ca.gov/LEACentral/TechServices/EmergingTech/default.htm.

Use combined heat and power (CHP) in appropriate applications.	Many commercial, industrial, and campus-type facilities (such as hospitals, universities and prisons) use fuel to produce steam and heat for their own operations and processes. Unless captured, much of this heat is wasted. CHP captures waste heat and re-uses it, e.g., for residential or commercial space heating or to generate electricity. See U.S. EPA, Catalog of CHP Technologies at http://www.epa.gov/chp/documents/catalog_of_%20chp_tech_entire.pdf and California Energy Commission, Distributed Energy Resource Guide, Combined Heat and Power (webpage) at http://www.energy.ca.gov/distgen/equipment/chp/chp.html. The average efficiency of fossil-fueled power plants in the United States is 33 percent. By using waste heat recovery technology, CHP systems typically achieve total system efficiencies of 60 to 80 percent. CHP can also substantially reduce emissions of carbon dioxide. http://www.epa.gov/chp/basic/efficiency.html. Currently, CHP in California has a capacity of over 9 million kilowatts. See list of California CHP facilities at http://www.eea-inc.com/chpdata/States/CA.html. The Waste Heat and Carbon Emissions Reduction Act (Assembly Bill 1613 (2007), amended by Assembly Bill 2791 (2008)) is designed to encourage the development of new CHP systems in California with a generating capacity of not more than 20 megawatts. Among other things, the Act requires the California Public Utilities Commission to establish (1) a standard tariff allowing CHP generators to sell electricity for delivery to the grid and (2) a "pay as you save" pilot program requiring electricity corporations to finance the installation of qualifying CHP systems by nonprofit and government entities. For more information, see http://www.energy.ca.gov/wasteheat/.

Water Conservation and Efficiency

Incorporate water-reducing features into building and landscape design.	According to the California Energy Commission, water-related energy use – which includes conveyance, storage, treatment, distribution, wastewater collection, treatment, and discharge – consumes about 19 percent of the State's electricity, 30 percent of its natural gas, and 88 billion gallons of diesel fuel every year. See http://www.energy.ca.gov/2007publications/CEC 999 2007 008/CEC 999 2007 008.PDF. Reducing water use and improving water efficiency can help reduce energy use and greenhouse gas emissions.
Create water-efficient landscapes.	The California Department of Water Resources' updated Model Water Efficient Landscape Ordinance (Sept. 2009) is available at http://www.water.ca.gov/wateruseefficiency/landscapeordinance/technical.cfm. A landscape can be designed from the beginning to use little or no water, and to generate little or no waste. See California Integrated Waste Management Board, Xeriscaping (webpage) at http://www.ciwmb.ca.gov/organics/Xeriscaping/.

Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls and use water-efficient irrigation methods.	U.S. Department of Energy, Best Management Practice: Water-Efficient Irrigation (webpage) at http://www1.eere.energy.gov/femp/program/waterefficiency_bmp5.html. California Department of Water Resources, Landscape Water Use Efficiency (webpage) at http://www.water.ca.gov/wateruseefficiency/landscape/. Pacific Institute, More with Less: Agricultural Water Conservation and Efficiency in California (2008), available at http://www.pacinst.org/reports/more_with_less_delta/index.htm.
Make effective use of graywater. (Graywater is untreated household waste water from bathtubs, showers, bathroom wash basins, and water from clothes washing machines. Graywater to be used for landscape irrigation.)	California Building Standards Commission, 2008 California Green Building Standards Code, Section 604, pp. 31-32, available at http://www.documents.dgs.ca.gov/bsc/2009/part11_2008_calgreen_code.pdf. California Department of Water Resources, Dual Plumbing Code (webpage) at http://www.water.ca.gov/recycling/DualPlumbingCode/. See also Ahwahnee Water Principles, Principle 6, at http://www.lgc.org/ahwahnee/h2o_principles.html. The Ahwahnee Water Principles have been adopted by City of Willits, Town of Windsor, Menlo Park, Morgan Hill, Palo Alto, Petaluma, Port Hueneme, Richmond, Rohnert Park, Rolling Hills Estates, San Luis Obispo, Santa Paula, Santa Rosa, City of Sunnyvale, City of Ukiah, Ventura, Marin County, Marin Municipal Water District, and Ventura County.
Implement low-impact development practices that maintain the existing hydrology of the site to manage storm water and protect the environment.	Retaining storm water runoff on-site can drastically reduce the need for energy-intensive imported water at the site. See U.S. EPA, Low Impact Development (webpage) at http://www.epa.gov/nps/lid/. Office of Environmental Health Hazard Assessment and the California Water and Land Use Partnership, Low Impact Development at http://www.coastal.ca.gov/nps/lid-factsheet.pdf.
Devise a comprehensive water conservation strategy appropriate for the project and location.	The strategy may include many of the specific items listed above, plus other innovative measures that are appropriate to the specific project.
Design buildings to be water-efficient. Install water-efficient fixtures and appliances.	Department of General Services, Best Practices Manual, Water-Efficient Fixtures and Appliances (website) at http://www.green.ca.gov/EPP/building/SaveH2O.htm. Many ENERGY STAR products have achieved their certification because of water efficiency. See California Energy Commission's database, available at http://www.appliances.energy.ca.gov/.

Offset water demand from new projects so that there is no net increase in water use.	For example, the City of Lompoc has a policy requiring new development to offset new water demand with savings from existing water users. See http://www.cityoflompoc.com/utilities/pdf/2005_uwmp_final.pdf at p. 29.
Provide education about water conservation and available programs and incentives.	See, for example, the City of Santa Cruz, Water Conservation Office at http://www.ci.santa-cruz.ca.us/index.aspx?page=395; Santa Clara Valley Water District, Water Conservation at http://www.valleywater.org/conservation/index.shtm; and Metropolitan Water District and the Family of Southern California Water Agencies, Be Water Wise at http://www.bewaterwise.com. Private projects may provide or fund similar education.

Solid Waste Measures

Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).	Construction and demolition materials account for almost 22 percent of the waste stream in California. Reusing and recycling these materials not only conserves natural resources and energy, but can also save money. For a list of best practices and other resources, see California Integrated Waste Management Board, Construction and Demolition Debris Recycling (webpage) at http://www.ciwmb.ca.gov/condemo/.
Integrate reuse and recycling into residential industrial, institutional and commercial projects.	Tips on developing a successful recycling program, and opportunities for cost-effective recycling, are available on the California Integrated Waste Management Board's Zero Waste California website. See http://zerowaste.ca.gov/. The Institute for Local Government's Waste Reduction & Recycling webpage contains examples of "best practices" for reducing greenhouse gas emissions, organized around waste reduction and recycling goals and additional examples and resources. See http://www.ca-ilg.org/wastereduction.
Provide easy and convenient recycling opportunities for residents, the public, and tenant businesses.	Tips on developing a successful recycling program, and opportunities for cost effective recycling, are available on the California Integrated Waste Management Board's Zero Waste California website. See http://zerowaste.ca.gov/.
Provide education and publicity about reducing waste and available recycling services.	Many cities and counties provide information on waste reduction and recycling. See, for example, the Butte County Guide to Recycling at http://www.recyclebutte.net. The California Integrated Waste Management Board's website contains numerous publications on recycling and waste reduction that may be helpful in devising an education project. See http://www.ciwmb.ca.gov/Publications/default.asp?cat=13. Private projects may also provide waste and recycling education directly, or fund education.

Land Use Measures

Ensure consistency with "smart growth" principles – mixed-use, infill, and higher density projects that provide alternatives to individual vehicle travel and promote the efficient delivery of services and goods.	U.S. EPA maintains an extensive Smart Growth webpage with links to examples, literature and technical assistance, and financial resources. See http://www.epa.gov/smartgrowth/index.htm. The National Oceanic and Atmospheric Administration's webpage provides smart growth recommendations for communities located near water. See Coastal & Waterfront Smart Growth (webpage) at http://coastalsmartgrowth.noaa.gov/. The webpage includes case studies from California. The California Energy Commission has recognized the important role that land use can play in meeting our greenhouse gas and energy efficiency goals. The agency's website, Smart Growth & Land Use Planning, contains useful information and links to relevant studies, reports, and other resources. See http://www.energy.ca.gov/landuse/. The Metropolitan Transportation Commission's webpage, Smart Growth / Transportation for Livable Communities, includes resources that may be useful to communities in the San Francisco Bay Area and beyond. See http://www.mtc.ca.gov/planning/smart_growth/. The Sacramento Area Council of Governments (SACOG) has published examples of smart growth in action in its region. See Examples from the Sacramento Region of the Seven Principles of Smart Growth / Better Ways to Grow, available at http://www.sacog.org/regionalfunding/betterways.pdf.
Meet recognized "smart growth" benchmarks.	For example, the LEED for Neighborhood Development (LEED-ND) rating system integrates the principles of smart growth, urbanism and green building into the first national system for neighborhood design. LEED-ND is a collaboration among the U.S. Green Building Council, Congress for the New Urbanism, and the Natural Resources Defense Council. For more information, see http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148.
Educate the public about the many benefits of well-designed, higher density development.	See, for example, U.S. EPA, Growing Smarter, Living Healthier: A Guide to Smart Growth and Active Aging (webpage), discussing how compact, walkable communities can provide benefits to seniors. See http://www.epa.gov/aging/bhc/guide/index.html. U.S. EPA, Environmental Benefits of Smart Growth (webpage) at http://www.epa.gov/dced/topics/eb.htm (noting local air and water quality improvements). Centers for Disease Control and Prevention (CDC), Designing and Building Healthy Places (webpage), at http://www.cdc.gov/healthyplaces/. The CDC's website discusses the links between walkable communities and public health and includes numerous links to educational materials. California Department of Housing and Community Development, Myths and Facts About Affordable and High Density Housing (2002), available at http://www.hcd.ca.gov/hpd/mythsnfacts.pdf.

Incorporate public transit into the project's design.	Federal Transit Administration, Transit-Oriented Development (TOD) (webpage) at http://www.fta.dot.gov/planning/planning_environment_6932.html (describing the benefits of TOD as "social, environmental, and fiscal.") California Department of Transportation (Caltrans), Statewide Transit-Oriented Development Study: Factors for Success in California (2002), available at http://transitorienteddevelopment.dot.ca.gov/miscellaneous/StatewideTOD.htm Caltrans, California Transit-Oriented Development Searchable Database (includes detailed information on numerous TODs), available at http://transitorienteddevelopment.dot.ca.gov/miscellaneous/NewHome.jsp. California Department of Housing and Community Development, Transit Oriented Development (TOD) Resources (Aug. 2009), available at http://www.hcd.ca.gov/hpd/tod.pdf.
Preserve and create open space and parks. Preserve existing trees, and plant replacement trees at a set ratio.	U.S. EPA, Smart Growth and Open Space Conservation (webpage) at http://www.epa.gov/dced/openspace.htm.
Develop "brownfields" and other underused or defunct properties near existing public transportation and jobs.	U.S. EPA, Smart Growth and Brownfields (webpage) at http://www.epa.gov/dced/brownfields.htm. For example, as set forth in the Local Government Commission's case study, the Town of Hercules, California reclaimed a 426-acre brownfield site, transforming it into a transit-friendly, walkable neighborhood. See http://www.lgc.org/freepub/docs/community_design/fact_sheets/er_case_studies.pdf. For financial resources that can assist in brownfield development, see Center for Creative Land Recycling, Financial Resources for California Brownfields (July 2008), available at http://www.cclr.org/media/publications/8-Financial_Resources_2008.pdf.
Include pedestrian and bicycle facilities within projects and ensure that existing non-motorized routes are maintained and enhanced.	See U.S. Department of Transportation, Federal Highway Administration, Bicycle and Pedestrian Program (webpage) at http://www.fhwa.dot.gov/environment/bikeped/. Caltrans, Pedestrian and Bicycle Facilities in California / A Technical Reference and Technology Transfer Synthesis for Caltrans Planners and Engineers (July 2005), available at http://www.dot.ca.gov/hq/traffops/survey/pedestrian/TR_MAY0405.pdf. This reference includes standard and innovative practices for pedestrian facilities and traffic calming.

Transportation and Motor Vehicles

Meet an identified transportation-related benchmark.	A logical benchmark might be related to vehicles miles traveled (VMT), e.g., average VMT per capita, per household, or per employee. As the California Energy Commission has noted, VMT by California residents increased "a rate of more than 3 percent a year between 1975 and 2004, markedly faster than the population growth rate over the same period, which was less than 2 percent. This increase in VMT correlates to an increase in petroleum use and GHG production and has led to the transportation sector being responsible for 41 percent of the state's GHG emissions in 2004." CEC, The Role of Land Use in Meeting California's Energy and Climate Change Goals (Aug. 2007) at p. 9, available at http://www.energy.ca.gov/2007publications/CEC-600-2007-008/CEC-600-2007-008-SF.PDF. Even with regulations designed to increase vehicle efficiency and lower the carbon content of fuel, "reduced VMT growth will be required to meet GHG reductions goals." *Id.* at p. 18.
Adopt a comprehensive parking policy that discourages private vehicle use and encourages the use of alternative transportation.	For example, reduce parking for private vehicles while increasing options for alternative transportation; eliminate minimum parking requirements for new buildings; "unbundle" parking (require that parking is paid for separately and is not included in rent for residential or commercial space); and set appropriate pricing for parking. See U.S. EPA, Parking Spaces / Community Places, Finding the Balance Through Smart Growth Solutions (Jan. 2006), available at http://www.epa.gov/dced/pdf/EPAParkingSpaces06.pdf. Reforming Parking Policies to Support Smart Growth, Metropolitan Transportation Commission (June 2007) at http://www.mtc.ca.gov/planning/smart_growth/parking_seminar/Toolbox_Handbook.pdf. See also the City of Ventura's Downtown Parking and Mobility Plan, available at http://www.cityofventura.net/community_development/resources/mobility_parking_plan.pdf, and Ventura's Downtown Parking Management Program, available at http://www.ci.ventura.ca.us/depts/comm_dev/downtownplan/chapters.asp.
Build or fund a major transit stop within or near the development.	"'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." (Pub. Res. Code, § 21064.3.) Transit Oriented Development (TOD) is a moderate to higher density development located within an easy walk of a major transit stop. http://transitorienteddevelopment.dot.ca.gov/miscellaneous/NewWhatisTOD.htm. By building or funding a major transit stop, an otherwise ordinary development can become a TOD.

Provide public transit incentives such as free or low-cost monthly transit passes to employees, or free ride areas to residents and customers.	See U.S. Department of Transportation and U.S. EPA, Commuter Choice Primer / An Employer's Guide to Implementing Effective Commuter Choice Programs, available at http://www.its.dot.gov/JPODOCS/REPTS_PR/13669.html. The Emery Go Round shuttle is a private transportation service funded by commercial property owners in the citywide transportation business improvement district. The shuttle links a local shopping district to a Bay Area Rapid Transit stop. See http://www.emerygoround.com/. Seattle, Washington maintains a public transportation "ride free" zone in its downtown from 6:00 a.m. to 7:00 p.m. daily. See http://transit.metrokc.gov/tops/accessible/paccessible_map.html#fare.
Promote "least polluting" ways to connect people and goods to their destinations.	Promoting "least polluting" methods of moving people and goods is part of a larger, integrated "sustainable streets" strategy now being explored at U.C. Davis's Sustainable Transportation Center. Resources and links are available at the Center's website, http://stc.ucdavis.edu/outreach/ssp.php.
Incorporate bicycle lanes, routes and facilities into street systems, new subdivisions, and large developments.	Bicycling can have a profound impact on transportation choices and air pollution reduction. The City of Davis has the highest rate of bicycling in the nation. Among its 64,000 residents, 17 percent travel to work by bicycle and 41 percent consider the bicycle their primary mode of transportation. See Air Resources Board, Bicycle Awareness Program, Bicycle Fact Sheet, available at http://www.arb.ca.gov/planning/tsaq/bicycle/factsht.htm. For recommendations on best practices, see the many resources listed at the U.S. Department of Transportation, Federal Highway Administration's Bicycle and Pedestrian website at http://www.fhwa.dot.gov/environment/bikeped/publications.htm. See also Caltrans Division of Research and Innovation, Designing Highway Facilities To Encourage Walking, Biking and Transit (Preliminary Investigation) (March 2009), available at http://www.dot.ca.gov/research/researchreports/preliminary_investigations/docs/pi-design_for_walking_%20biking_and_transit%20final.pdf.
Require amenities for non-motorized transportation, such as secure and convenient bicycle parking.	According to local and national surveys of potential bicycle commuters, secure bicycle parking and workplace changing facilities are important complements to safe and convenient routes of travel. See Air Resources Board, Bicycle Awareness Program, Bicycle Fact Sheet, available at http://www.arb.ca.gov/planning/tsaq/bicycle/factsht.htm.

Ensure that the project enhances, and does not disrupt or create barriers to, non-motorized transportation.	See, e.g., U.S. EPA's list of transit-related "smart growth" publications at http://www.epa.gov/dced/publications.htm#air, including Pedestrian and Transit-Friendly Design: A Primer for Smart Growth (1999), available at www.epa.gov/dced/pdf/ptfd_primer.pdf. See also Toolkit for Improving Walkability in Alameda County, available at http://www.acta2002.com/ped toolkit/ped_toolkit_print.pdf. Pursuant to the California Complete Streets Act of 2008 (AB 1358, Gov. Code, §§ 65040.2 and 65302), commencing January 1, 2011, upon any substantive revision of the circulation element of the general plan, a city or county will be required to modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users.
Connect parks and open space through shared pedestrian/bike paths and trails to encourage walking and bicycling. Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.	Walk Score ranks the "walkability" of neighborhoods in the largest 40 U.S. cities, including seven California cities. Scores are based on the distance to nearby amenities. Explore Walk Score at http://www.walkscore.com/. In many markets, homes in walkable neighborhoods are worth more than similar properties where walking is more difficult. See Hoak, *Walk appeal / Homes in walkable neighborhoods sell for more: study*, Wall Street Journal (Aug. 18, 2009), available at http://www.marketwatch.com/story/homes-in-walkable-neighborhoods-sell-for-more-2009-08-18. By creating walkable neighborhoods with more transportation choices, Californians could save $31 million and cut greenhouse gas emissions by 34 percent, according to a study released by Transform, a coalition of unions and nonprofits. See Windfall for All / How Connected, Convenient Neighborhoods Can Protect Our Climate and Safeguard California's Economy (Nov. 2009), available at http://transformca.org/windfall-for-all#download-report.
Work with the school districts to improve pedestrian and bike access to schools and to restore or expand school bus service using lower-emitting vehicles.	In some communities, twenty to twenty-five percent of morning traffic is due to parents driving their children to school. Increased traffic congestion around schools in turn prompts even more parents to drive their children to school. Programs to create safe routes to schools can break this harmful cycle. See California Department of Public Health, Safe Routes to School (webpage) and associated links at http://www.cdph.ca.gov/HealthInfo/injviosaf/Pages/SafeRoutestoSchool.aspx. See also U.S. EPA, Smart Growth and Schools (webpage), available at http://www.epa.gov/dced/schools.htm. California Center for Physical Activity, California Walk to School (website) at http://www.cawalktoschool.com Regular school bus service (using lower-emitting buses) for children who cannot bike or walk to school could substantially reduce private vehicle congestion and air pollution around schools. See Air Resources Board, Lower Emissions School Bus Program (webpage) at http://www.arb.ca.gov/msprog/schoolbus/schoolbus.htm.

Institute teleconferencing, telecommute and/or flexible work hour programs to reduce unnecessary employee transportation.	There are numerous sites on the web with resources for employers seeking to establish telework or flexible work programs. These include U.S. EPA's Mobility Management Strategies: Commuter Programs website at http://www.epa.gov/otaq/stateresources/rellinks/mms_commprograms.htm; and Telework, the federal government's telework website, at http://www.telework.gov/. Through a continuing FlexWork Implementation Program, the Traffic Solutions division of the Santa Barbara County Association of Governments sponsors flexwork consulting, training and implementation services to a limited number of Santa Barbara County organizations that want to create or expand flexwork programs for the benefit of their organizations, employees and the community. See http://www.flexworksb.com/read_more_about_the_fSBp.html. Other local government entities provide similar services.
Provide information on alternative transportation options for consumers, residents, tenants and employees to reduce transportation-related emissions.	Many types of projects may provide opportunities for delivering more tailored transportation information. For example, a homeowner's association could provide information on its website, or an employer might create a Transportation Coordinator position as part of a larger Employee Commute Reduction Program. See, e.g., South Coast Air Quality Management District, Transportation Coordinator training, at http://www.aqmd.gov/trans/traing.html.
Educate consumers, residents, tenants and the public about options for reducing motor vehicle-related greenhouse gas emissions. Include information on trip reduction; trip linking; vehicle performance and efficiency (e.g., keeping tires inflated); and low or zero-emission vehicles.	See, for example U.S. EPA, SmartWay Transport Partnership: Innovative Carrier Strategies (webpage) at http://www.epa.gov/smartway/transport/what-smartway/carrier-strategies.htm. This webpage includes recommendations for actions that truck and rail fleets can take to make ground freight more efficient and cleaner. The Air Resources Board's Drive Clean website is a resource for car buyers to find clean and efficient vehicles. The web site is designed to educate Californians that pollution levels range greatly between vehicles. See http://www.driveclean.ca.gov/. The Oregon Department of Transportation and other public and private partners launched the Drive Less/Save More campaign. The comprehensive website contains fact sheets and educational materials to help people drive more efficiently. See http://www.drivelesssavemore.com/.
Purchase, or create incentives for purchasing, low or zero-emission vehicles.	See Air Resources Board, Low-Emission Vehicle Program (webpage) at http://www.arb.ca.gov/msprog/levprog/levprog.htm. Air Resource Board, Zero Emission Vehicle Program (webpage) at http://www.arb.ca.gov/msprog/zevprog/zevprog.htm. All new cars sold in California are now required to display an Environmental Performance (EP) Label, which scores a vehicle's global warming and smog emissions from 1 (dirtiest) to 10 (cleanest). To search and compare vehicle EP Labels, visit www.DriveClean.ca.gov.

Create a ride sharing program. Promote existing ride sharing programs e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading for ride sharing vehicles, and providing a web site or message board for coordinating rides.	For example, the 511 Regional Rideshare Program is operated by the Metropolitan Transportation Commission (MTC) and is funded by grants from the Federal Highway Administration, U.S. Department of Transportation, the Metropolitan Transportation Commission, the Bay Area Air Quality Management District and county congestion management agencies. For more information, see http://rideshare.511.org/. As another example, San Bernardino Associated Governments works directly with large and small employers, as well as providing support to commuters who wish to share rides or use alternative forms of transportation. See http://www.sanbag.ca.gov/commuter/rideshare.html. Valleyrides.com is a ridesharing resource available to anyone commuting to and from Fresno and Tulare Counties and surrounding communities. See http://www.valleyrides.com/. There are many other similar websites throughout the state.
Create or accommodate car sharing programs, e.g., provide parking spaces for car share vehicles at convenient locations accessible by public transportation.	There are many existing car sharing companies in California. These include City CarShare (San Francisco Bay Area), see http://www.citycarshare.org/; and Zipcar, see http://www.zipcar.com/. Car sharing programs are being successfully used on many California campuses.
Provide a vanpool for employees.	Many local Transportation Management Agencies can assist in forming vanpools. See, for example, Sacramento Transportation Management Association, Check out Vanpooling (webpage) at http://www.sacramento-tma.org/vanpool.html.
Create local "light vehicle" networks, such as neighborhood electric vehicle systems.	See California Energy Commission, Consumer Energy Center, Urban Options - Neighborhood Electric Vehicles (NEVs) (webpage) at http://www.consumerenergycenter.org/transportation/urban_options/nev.html. The City of Lincoln has an innovative NEV program. See http://www.lincolnev.com/index.html.
Enforce and follow limits idling time for commercial vehicles, including delivery and construction vehicles.	Under existing law, diesel-fueled motor vehicles with a gross vehicle weight rating greater than 10,000 pounds are prohibited from idling for more than 5 minutes at any location. The minimum penalty for an idling violation is now $300 per violation. See http://www.arb.ca.gov/enf/complaints/idling_cv.htm.
Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles.	For a list of existing alternative fuel stations in California, visit http://www.cleancarmaps.com/. See, e.g., Baker, *Charging-station network built along 101*, S.F. Chron. (9/23/09), available at http://articles.sfgate.com/2009-09-23/news/17207424_1_recharging-solar-array-tesla-motors.

Agriculture and Forestry (additional strategies noted above)

Require best management practices in agriculture and animal operations to reduce emissions, conserve energy and water, and utilize alternative energy sources, including biogas, wind and solar.	Air Resources Board (ARB), Economic Sectors Portal, Agriculture (webpage) at http://www.arb.ca.gov/cc/ghgsectors/ghgsectors.htm. ARB's webpage includes information on emissions from manure management, nitrogen fertilizer, agricultural offroad equipment, and agricultural engines. "A full 90% of an agricultural business' electricity bill is likely associated with water use. In addition, the 8 million acres in California devoted to crops consume 80% of the total water pumped in the state." See Flex Your Power, Agricultural Sector (webpage) at http://www.fypower.org/agri/. Flex Your Power, Best Practice Guide / Food and Beverage Growers and Processors, available at http://www.fypower.org/bpg/index.html?b=food_and_bev. Antle et al., Pew Center on Global Climate Change, Agriculture's Role in Greenhouse Gas Mitigation (2006), available at http://www.pewclimate.org/docUploads/Agriculture's%20Role%20in%20GHG%20Mitigation.pdf.
Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas and other open space that provide carbon sequestration benefits.	"There are three general means by which agricultural and forestry practices can reduce greenhouse gases: (1) avoiding emissions by maintaining existing carbon storage in trees and soils; (2) increasing carbon storage by, e.g., tree planting, conversion from conventional to conservation tillage practices on agricultural lands; (3) substituting bio-based fuels and products for fossil fuels, such as coal and oil, and energy-intensive products that generate greater quantities of CO2 when used." U.S. EPA, Carbon Sequestration in Agriculture and Forestry, Frequently Asked Questions (webpage) at http://www.epa.gov/sequestration/faq.html. Air Resources Board, Economic Sectors Portal, Forestry (webpage) at http://www.arb.ca.gov/cc/ghgsectors/ghgsectors.htm.
Protect existing trees and encourage the planting of new trees. Adopt a tree protection and replacement ordinance.	Tree preservation and planting is not just for rural areas of the state; suburban and urban forests can also serve as carbon sinks. See Cal Fire, Urban and Community Forestry (webpage) at http://www.fire.ca.gov/resource_mgt/resource_mgt_urbanforestry.php.

Off-Site Mitigation

If, after analyzing and requiring all reasonable and feasible on-site mitigation measures for avoiding or reducing greenhouse gas-related impacts, the lead agency determines that additional mitigation is required, the agency may consider additional off-site mitigation. The project proponent could, for example, fund off-site mitigation projects that will reduce carbon emissions, conduct an audit of its other existing operations and agree to retrofit, or purchase verifiable carbon "credits" from another entity that will undertake mitigation.

The topic of off-site mitigation can be complicated. A full discussion is outside the scope of this summary document. Issues that the lead agency should consider include:

- The location of the off-site mitigation. (If the off-site mitigation is far from the project, any additional, non-climate related co-benefits of the mitigation may be lost to the local community.)

- Whether the emissions reductions from off-site mitigation can be quantified and verified. (The California Registry has developed a number of protocols for calculating, reporting and verifying greenhouse gas emissions. Currently, industry-specific protocols are available for the cement sector, power/utility sector, forest sector and local government operations. For more information, visit the California Registry's website at http://www.climateregistry.org/.)

- Whether the mitigation ratio should be greater than 1:1 to reflect any uncertainty about the effectiveness of the off-site mitigation.

Offsite mitigation measures that could be funded through mitigation fees include, but are not limited to, the following:

- Energy efficiency audits of existing buildings.

- Energy efficiency upgrades to existing buildings not otherwise required by law, including heating, ventilation, air conditioning, lighting, water heating equipment, insulation and weatherization (perhaps targeted to specific communities, such as low-income or senior residents).

- Programs to encourage the purchase and use of energy efficient vehicles, appliances, equipment and lighting.

- Programs that create incentives to replace or retire polluting vehicles and engines.

- Programs to expand the use of renewable energy and energy storage.

- Preservation and/or enhancement of existing natural areas (e.g., forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, and groundwater recharge areas) that provide carbon sequestration benefits.

- Improvement and expansion of public transit and low- and zero-carbon transportation alternatives.