COPY

CHRISTOPHER J. CARR (CA SBN 184076)
E-mail: CCarr@mofo.com
NAVI SINGH DHILLON (CA SBN 279537)
E-mail: NDhillon@mofo.com
TYLER G. WELTI (CA SBN 257993)
E-mail: TWelti@mofo.com
DUSTIN C. ELLIOTT (CA SBN 303038)
E-mail: DElliott@mofo.com
MORRISON & FOERSTER LLP
425 Market Street
San Francisco, California 94105-2482
Telephone: 415.268.7000
Facsimile: 415.268.7522

Attorneys for Plaintiffs
OPHCA, LLC,
ORLOFF PROPERTY MANAGEMENT INC.,
CLIFFORD ORLOFF
and OLGA ORLOFF

SUPERIOR COURT OF CALIFORNIA

COUNTY OF ALAMEDA

OPHCA, LLC, ORLOFF PROPERTY MANAGEMENT INC., CLIFFORD ORLOFF and OLGA ORLOFF,

Plaintiffs,

vs.

CITY OF BERKELEY,

Defendant.

Case No. RG17850595

UNLIMITED JURISDICTION

VERIFIED COMPLAINT AND PETITION FOR WRIT OF MANDAMUS

DEMAND FOR JURY TRIAL

1. Plaintiffs OPHCA, LLC (OPHCA), Orloff Property Management Inc. (OPMI), Clifford Orloff and Olga Orloff (collectively, Plaintiffs) bring this action against Defendant the City of Berkeley (City or Defendant) and allege as follows:

THE CONTROVERSY

2. The San Francisco Bay Area, including the City of Berkeley, is in the midst of a housing crisis—the demand for housing far exceeds housing supply. This housing shortage has made rents soar. Plaintiffs want to bring much-needed housing to the City of Berkeley. The City's unlawful actions, however, have frustrated Plaintiffs' efforts, caused Plaintiffs considerable financial harm and stand to exacerbate the housing crisis by making the development of additional housing economically infeasible.

3. For years, Plaintiffs have spent substantial resources in connection with securing the City's approval to demolish an uninhabitable, 18-unit apartment building and replace it with a 56-unit building (the Project), consisting primarily of much-needed studio apartments ideal for students. The City approved the Project nearly a year ago. Yet the Project has not advanced because the City demands that Plaintiffs rent units at particular rates or pay so-called "fees" to mitigate claimed impacts to housing caused by the Project. These are not the usual (albeit substantial) fees for impacts to City facilities and services (e.g., sewer connections, school fees). Instead, they are an Affordable Housing Mitigation Fee (AHMF) and a Demolition Fee (Demo Fee), fees that the City claims are needed to address different impacts of building housing *on housing*. In addition to these claimed fees, per the City's demand, Plaintiffs have to date paid under protest over $170,000 of the $420,000 plus Building Permit Fee—a fee that bears no reasonable relationship to the actual costs of any associated service provided by the City. According to the City, the AHMF will be at least $1.1 million. Thus, the fees set by the City to date amount to at least $1.5 million, an amount that is grossly disproportionate to any costs or impacts associated with the Project. This amount does not include the Demo Fee, which the City has failed to set, although it previously proposed a fee of approximately $105,000 per unit to be demolished, which, if adopted, would add an additional approximately $1.9 million.

4. By design, the City seeks to unlawfully dictate rental rates by leaving Plaintiffs and other developers with no reasonable option but to provide below-market rental units or abandon housing projects. The effect of the City's purposeful decisions to set fees that are grossly excessive and unlawful is to exacerbate the City's housing shortage. The City has rendered the development of new housing like the Project economically infeasible.

5. In an effort to justify some of its fees, the City relies, at least in part, on flawed nexus studies. These studies purportedly address the impacts of new developments on the City's housing stock (including affordable housing) and purport to quantify fee amounts that would mitigate such impacts. For example, the City's AHMF has ranged from about $20,000 to $34,000 per unit. Among other fundamental flaws, the nexus study for the AHMF fails to account for the many positive effects of housing creation, including increased tax revenue. Accounting for such effects directly undermines the City's studies. Among other things, expert discovery will show that the City's studies overstate the degree to which new housing creates new jobs in the local economy. The City ignores the facts that (a) such jobs are likely to be filled by the relatively large pool of unemployed individuals already residing in the City (and thus do not result in the need for new affordable housing), and (b) the tax revenue from any new jobs created by additional housing is likely to fully offset the cost of any affordable housing subsidy that such a level of job creation purportedly requires. Correcting the numerous flaws in the nexus study for the AHMF (even if its basic assumptions and structure were accepted as lawful) reveals that new student housing has no impact on the demand for affordable housing, or, if it does, such an impact is a very small fraction of the amount claimed in the nexus study.

6. The City has stated that at some unknown future date it will set the monetary component of the Demo Fee at more than $100,000 per unit. The nexus study for the City's Demo Fee suffers from flaws similar to those of the nexus study for the AHMF. Moreover, the nexus study for the Demo Fee purports to account for alleged housing impacts that are duplicative of those purportedly addressed by the AHMF and confuses rent-stabilized housing with below-market rate housing.

7. The City also has imposed a Building Permit Fee that far exceeds the actual costs of the City's underlying services. Under protest, Plaintiffs have paid more than $170,000 to date to cover the City's claimed costs associated with reviewing the Project plan and issuing a building permit. The Building Permit Fee, as referenced above, totals more than $420,000. By comparison, the City of San Francisco charges about $45,000 in fees for similar administrative costs. Like its other fees, the City's Building Permit Fee is many times higher than the economic impacts they purport to address and thus is unlawful.

8. The City has chosen to impose grossly excessive fees as a means to generate revenue and regulate the rental prices of newly constructed units.

9. Among other things, Plaintiffs ask this Court to declare that the City's efforts to dictate rental prices and impose the excessive fees are unlawful. Plaintiffs also request a declaration that the AHMF and Demo Fee are unreasonable and unlawful wholly apart from the amounts of fees. Plaintiffs also seek relief precluding the City from demanding that Plaintiffs pay unlawful fees. The issuance of such relief will clear the way for Plaintiffs and other developers to move forward with bringing much-needed housing to the City of Berkeley, thereby helping to reduce rents too.

PARTIES

10. Plaintiff OPHCA, LLC is a California limited liability company. OPHCA owns real property located at 2631 – 2637 Durant Avenue, a few blocks away from the southwest corner of the U.C. Berkeley campus (the Durant Property). The property previously contained a decrepit and uninhabitable 18-unit apartment complex before OPHCA demolished it in January 2017. More than three years ago, OPHCA filed an application with the City to demolish and redevelop the Property. On June 28, 2016, the City approved that application, subject to certain conditions—including the payment of an AHMF for each unit of market rate housing constructed and a Demo Fee for each unit demolished. It was not until after OPHCA acquired the property, submitted its permit application, had its application deemed complete by the City and had its application approved by the City's Zoning Adjustments Board that the Demo Fee came

into existence. In fact, the Demo Fee requirement was created just prior to the City Council giving final approval for the Project.

11. Plaintiff Orloff Property Management Inc. (OPMI) is a California corporation existing and doing business in the City of Berkeley. OPMI owns a 65-year old, 5-unit apartment building at 2003-2005 Berkeley Way (the "Berkeley Way Property"). Any redevelopment of the Berkeley Way Property for additional rental housing would be subject to the 2016 Demolition Ordinance and the 2016 Affordable Housing Ordinance.

12. Plaintiffs Clifford Orloff and Olga Orloff are long-term residents of the City. They are the majority owners of OPHCA and the majority shareholders of OPMI, both of which are closely held, family-owned entities. Their business involves buying, renovating, developing and leasing apartment buildings. Investment in rental property, in Berkeley and elsewhere, has been Plaintiffs' core business since 1999. Plaintiffs continue to look for opportunities to purchase and develop real property in the City, including development of new rental housing that would be subject to the City's current Demolition Ordinance and its Affordable Housing Ordinance.

13. Defendant City of Berkeley is a political subdivision of the State of California and the local governing authority in Berkeley.

VENUE

14. Venue is proper in this Court because Defendant's acts and omissions giving rise the instant controversy took place in Alameda County. This dispute also concerns real property situated in Alameda County and Defendant resides in Alameda County.

THE PROPERTY

15. The Durant Property was in bad shape when Plaintiffs acquired it in July 2012. Built in 1925, the ravages of time (and student occupancy), coupled with the neglect of the prior owner, had taken their toll. Inspection reports indicated that, over the decades, more than half of the wooden framing and exterior stucco had been infested and destroyed by termites, beetles, fungus and decay. The roof needed replacing. Pipes were corroded. The plumbing was substandard. The electrical system consisted of unsafe and outdated knob and tube wiring. The foundation was shallow, cracked and damaged. An engineering report showed that the condition

of the deteriorated and fractured foundation would degrade yet further and possibly disintegrate in the event of an earthquake. For these and other reasons, the Durant Property was not safe for habitation.

16. Given the condition of the Durant Property, Plaintiffs determined its rehabilitation was infeasible. On March 5, 2013, Plaintiffs filed an application with the City seeking approval to demolish the building and build a new 56-unit building.

17. During the review of its use permit application and prior to filing suit (including by submitting protest letters in September 2016 to the City), Plaintiffs explained to the City that the fees imposed on the Project were unlawful for the reasons alleged herein. In those submissions, Plaintiffs informed the City of the factual elements of the dispute and the legal theory forming the basis for the protest. Plaintiffs also represented to the City that all legally required payments will be tendered when due and that they have sufficient funds to pay any such fees when due or otherwise have the means to ensure performance of any conditions necessary to meet the requirements of any exaction imposed by the City in connection with the Project. Plaintiffs presented copies of financial information reflecting their ability to pay. The City effectively ignored Plaintiffs' protest and failed to provide the information required by Government Code section 66020, subdivision (d)(1).

18. In early 2017, the City issued a final blight notice for the Durant Property largely because transient individuals were trespassing on it and creating a nuisance, including by lighting fires. Plaintiffs took reasonable steps to prevent such trespasses but were unable to stop individuals from trespassing as they used power tools to breach the building. Because the cost of round-the-clock guards would be prohibitively high, the City's final blight notice effectively required Plaintiffs to demolish the building, the only reasonable step that remained available to address the City's concerns. Accordingly, Plaintiffs demolished, in early 2017, the 18-unit building on the Durant Property in response to the City's blight notice. The City has refused to issue a final signoff of the demolition work until the Demo Fees have been paid; all other requirements have been met.

THE UNLAWFUL FEES

19. In June 2016, the City imposed on Plaintiffs the AHMF, purportedly relying on nexus studies and other materials. This requirement is included in the Conditional Use Permit (CUP) for the Project issued by the City to Plaintiff. The CUP authorizes construction on the Durant Property subject to numerous conditions, including the requirement that Plaintiffs create "affordable housing" units on-site or pay a fee to mitigate the Project's claimed impacts on affordable housing. The CUP also requires Plaintiffs to provide below market-rate units on-site or pay a demolition fee to mitigate claimed impacts to affordable housing. Again, these fees bear no reasonable relationship to any impacts, including housing impacts. Rather, the fees reflect the City's purposeful decision to compel individuals to rent units at below-market rates.

20. The City bases the AHMF on a 2010 nexus study, which attempts to predict the effect of housing development on low income job creation and thus low income housing demand for the 2010-2015 period. The City claims the AHMF aims to mitigate such demand.

21. 2017 data are now available to measure the accuracy of the prior predictions, and the results are staggering: those predictions were inaccurate by orders of magnitude. This level of inaccuracy further confirms that the AHMF not only has no nexus to any impacts to affordable housing but that even if there were any resulting impacts (i.e., a nexus), the actual fee would be wildly excessive.

22. The City's conduct with respect to the Demo Fee is also egregious. Long after Plaintiffs filed their application to demolish and redevelop the Durant Property, the City passed a new Demolition Ordinance. Without sufficient notice or providing meaningful information concerning the basis for a so-called "Demo Fee," the City applied the new ordinance to the Project. Moreover, in approving the Project, the City failed to establish the monetary components for its Demo Fee, as required by state law and the City's own municipal code. Instead, the City left a blank check to itself in the CUP and later set a hearing to establish a Demo Fee amount in December 2016. At that hearing, the City, again, failed to set the Demo Fee. The City now claims it will hold another workshop on the Demo Fee at some date in the future, purportedly in June 2017. In violation of state law, its own municipal code and basic principles of due process,

the City has illegally imposed an undefined Demo Fee and is purposefully avoiding setting the monetary component of the Demo Fee to compel Plaintiffs to rent newly created units at below-market rates. Plaintiffs have invested years and many hundreds of thousands of dollars in connection with securing approvals for the Project. The City's unlawful conduct and unreasonable delay continue to financially harm Plaintiffs and exacerbate the housing supply problem in the City.

FIRST CAUSE OF ACTION

(Unlawful Fees)

23. Plaintiffs hereby incorporate each paragraph set forth above.

24. Under Article I, Section 19 of the California Constitution, local governments may not pass laws that take private property for a public purpose without payment of just compensation. Under the Mitigation Fee Act, Plaintiffs have a right to be free from fees and other exactions imposed as a condition of development unless the City demonstrates a legally sufficient relationship between the fee and actual impacts of the development. Gov. Code § 66000, et seq. Under the Costa-Hawkins Act, Plaintiffs have a right to set the initial rents for residential rental housing and all rents for newly constructed rental housing. Civ. Code § 1954.50, et seq. Section 17980(c)(1) of the California Health & Safety Code provides that whenever a city has determined that a "building is substandard" or "unsafe," the "owner shall have the choice of repairing or demolishing" the building. The California Constitution and statutory law (e.g., Gov. Code § 66024) also prohibits local governments from passing, without voter approval, fees that exceed the reasonable cost of services. As alleged above and below, and as will be proven at an evidentiary hearing, the fees imposed on the Project (including the AHMF, Demo Fee, and Building Permit Fee) bear no reasonable relationship to any impacts of the Project (i.e., there is no nexus), and, even if there were an actual nexus, the fees are grossly excessive. They violate California constitutional and statutory law.

25. Relying on Chapter 22.20 of its own municipal code, the City has decided to impose on Plaintiffs an AHMF. The fee as constructed bears no reasonable relationship to actual impacts, let alone any actual impacts it purports to mitigate, and, even if such impacts existed, it

would be excessive relative to them. The City's decision to apply the AHMF to the Project also conflicts with and is preempted by the Costa-Hawkins Act—as the Costa-Hawkins Act preempts local governments from regulating rental rates of newly constructed units. Likewise, the Demo Fee (Sub-Title 23 of the Berkeley Municipal Code) conflicts with and is preempted by the Costa-Hawkins Act.

26. Under the circumstances of this case (including the extensive delay and the purposeful decision to delay setting a fee amount), allowing the City to impose a monetary Demo Fee in the future would offend due process principles. Not only that, the City's decision to purposefully delay setting a fee amount constitutes an abuse of discretion and an unlawful act in that it fails to comply with the requirements of applicable law, including the Mitigation Fee Act. *See* Gov. Code § 66000, et seq., Berkeley Municipal Code Chapter 22 and Sub-Title 23. The City cannot in the future lawfully impose any Demo Fee on the Project.

27. Plaintiffs seek injunctive and declaratory relief that will prevent the City from imposing the unlawful fees and conditions on the Durant Property and other development projects in the City of Berkeley.

SECOND CAUSE OF ACTION

(Writ of Mandate– Code Civ. Proc. § 1085, 1094.5)

28. Plaintiffs incorporate herein each and every allegation set forth above.

29. The City's actions relating to the imposition of fees on Plaintiffs and the approval of related City permits/ordinances constitute an abuse of discretion, both individually and collectively. The City has failed to proceed in a manner required by law, and it decisions are not supported by the requisite evidence. Among other laws, the Mitigation Fee Act and the Costa-Hawkins Act bar the City from passing laws that set unreasonable and/or excessive fees or seek to control the rental rates of newly constructed units. The law required the City to present evidence supporting the fee amount for the Demo Fee prior to passing the ordinance that established the Demo Fee. *See* Gov. Code §§ 66016, 66017. Because the City did not follow applicable public meeting requirements, the Demo Ordinance was not effective at the time the conditional use permit for the Project was issued, and therefore the permit condition purporting to

require Plaintiffs to pay a Demo Fee is invalid. To the extent the City seeks to remedy these defects in the future, no future fee amounts can be applied to the Project retroactively, as doing so would violate the Mitigation Fee Act, the Berkeley Municipal Code, the vested rights doctrine and principles of due process.

30. In addition to a writ of mandamus, the issuance of an alternative writ is warranted directing the City to either promptly set aside the unlawful fee ordinances and/or permit conditions, or show cause why a writ of mandamus should not issue. Plaintiffs do not have an adequate remedy in the ordinary course of law, and the City's conduct may result in an irreparable injury to Plaintiffs, other developers and other current or future Berkeley residents. Plaintiffs have a beneficial interest in the issuance of a writ. The City's actions have resulted in an actual injury to Plaintiffs, and the issuance of an appropriate writ would remedy those injuries and prevent future injuries to Plaintiffs, other developers and current or future residents of Berkeley. Plaintiffs seek to advance the public interest by precluding the City from taking further steps to block the development of much-needed housing, which in turn will lead to the construction of more housing in Berkeley and help to reduce the price of housing in the City.

PRAYER FOR RELIEF

Plaintiffs pray for relief and judgment from this Court as follows:

1. A declaration to the effect that the fees imposed on the Project (including the AHMF) constitute unlawful takings under the California Constitution;

2. A declaration to the effect that the City laws that require Plaintiffs and other developers to pay unreasonable and/or excessive fees and impose restrictions on the rental prices of new units are preempted by state law, including the Costa-Hawkins Act;

3. A declaration to the effect that any effort to impose a Demo Fee (including a monetary fee) in the future on Plaintiffs (or other developers) violates applicable law, including the Mitigation Fee Act, the Costa-Hawkins Act and the Berkeley Municipal Code;

4. A declaration to the effect that the City's ordinances establishing the AHMF, Demo Fee and Building Permit Fee are invalid and unenforceable under applicable law, including the California Constitution, Mitigation Fee Act and Costa-Hawkins Act;

5. A declaration to the effect that the City cannot demand developers to pay unreasonable and/or excessive fees or provide units subject to rent controls;

6. A declaration to the effect that the fees the City seeks to collect from Plaintiffs with respect to the Project constitute unlawful taxes under the California Constitution;

7. A declaration to the effect that the nexus studies underlying the AHMF and the Demo Fee are flawed and cannot be used to support the imposition of the AHMF or the Demo Fee;

8. A declaration to the effect that the City may not revoke or rescind any approvals relating to the Project because the Court concludes any fee imposed by the City is unlawful;

9. An order directing the City to refund the Building Permit Fee paid by Plaintiff;

10. An order enjoining the City from taking steps to enforce the City ordinances creating the AHMF and the Demo Fee;

11. A writ directing the City to set aside the local laws creating the AHMF, the Demo Fee, Building Permit Fees and related fees;

12. Issuance of a preliminary and permanent injunction preventing Defendant from taking further action to enforce the AHMF and Demo Fee Ordinance, including against Plaintiffs;

13. An order directing the City to pay the reasonable legal fees and costs incurred by Plaintiffs in connection with bringing this lawsuit pursuant, but not limited to, Cal. Code Civ. Proc. Section 1021.5; and

14. An order granting further relief as the Court deems just and proper.

Dated: February 23, 2017

MORRISON & FOERSTER LLP

By: _____
CHRISTOPHER J. CARR

Attorneys for Plaintiffs
OPHCA, LLC, CLIFFORD ORLOFF, OLGA ORLOFF and ORLOFF PROPERTY MANAGEMENT INC.

VERIFICATION

I, Clifford Orloff, am a party to this action and a principal of the entity plaintiffs identified above and am authorized to execute this verification on behalf of all entity plaintiffs. I have reviewed the allegations above and, based on my personal knowledge, believe at this time that they are accurate.

I declare under penalty of perjury of the laws of the State of California that the foregoing is true and correct and that this declaration was executed in Berkeley, California on February 23, 2017.

CLIFFORD ORLOFF

Exhibit 2: Bay Area Economics' October 2010 Affordable Housing Fee Nexus Study for the City of Berkeley—Flaws in Theory, Methodology, and Assumptions with Resultant Impacts

1. Description of Theory, Methodology, and Assumptions

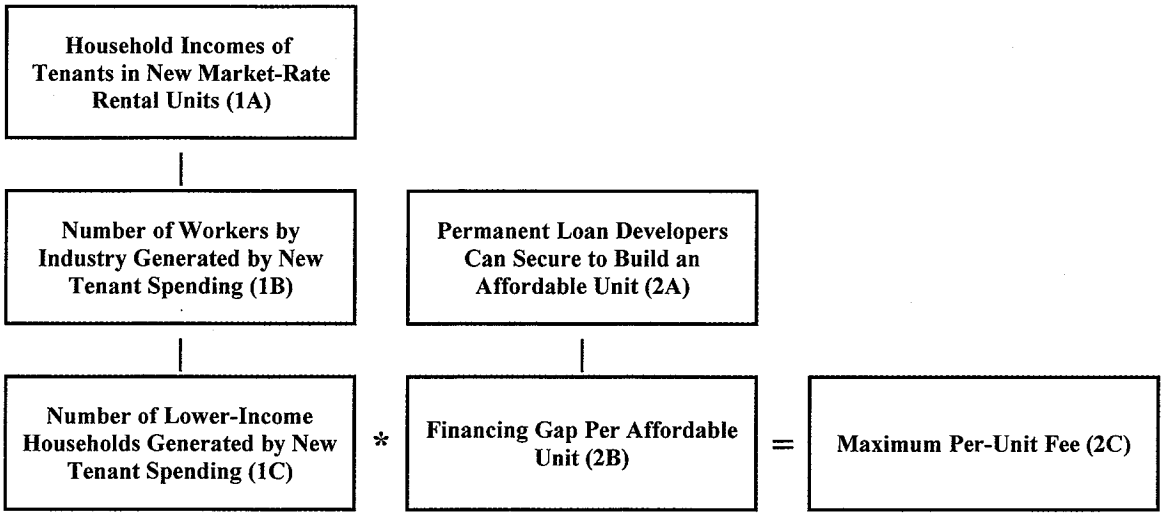
Affordable housing nexus studies are based on the premise that the development of market-rate housing increases the demand for affordable housing and that market-rate developers should, therefore, pay the cost of meeting that demand. But, as is clear from the Affordable Housing Fee Nexus Study Bay Area Economics ("BAE") submitted to the City of Berkeley (the "City") in October 2010 (the "2010 Study" or the "Study"),[1] the theoretical and methodological path from market-rate production, to affordable unit demand, to the fair cost of meeting that demand is both analytically and legally unsound.

1.1. General Theory and Methodological Framework

In an attempt to forge a link between market-rate residential development and affordable housing demand, affordable housing nexus studies present the following general theory:

> [N]ewly constructed units represent new households…These households represent new income… that will consume goods and services…New consumption translates to new jobs; a portion of the jobs are at lower compensation levels…[L]ow compensation jobs translate to lower income households that cannot afford market rate units…and therefore need affordable housing.[2]

The 2010 Study translates this theory into the following methodological framework[3]:



1 Bay Area Economics, *Affordable Housing Fee Nexus Study Submitted to the City of Berkeley (October 2010)*, http://www.ci.berkeley.ca.us/uploadedFiles/Clerk/Level_3_-_City_Council/2011/01Jan/2011-01-25_Item_14a_Affordable_Housing_Impact_Fee.pdf (accessed September 23, 2016).

2 Keyser Marston Associates, Inc., *Residential Nexus Analysis, Inclusionary Housing Ordinance, Fremont, California, Prepared for City of Fremont (April 2010)*, 11, https://fremont.gov/DocumentCenter/Home/View/3720 (accessed October 10, 2016).

3 Parenthetical citations refer to one of the six "Steps" identified in the 2010 Study. BAE 2010, *supra* n. 1, at 16.

1.2. Outline of Methodology and Selected Assumptions

The following is an outline of the methodology and selected assumptions from the 2010 Study. The general framework (i.e., steps 1A through 2C) mirrors the one BAE outlined in the Study, while the subordinate framework (i.e., sub-steps 1A(i) through 2C(iii)) draws very closely from the Study's text to further explain the way BAE proceeds from one step to the next.

1A: Estimate household incomes of tenants in new Berkeley rental units.

1A(i): Estimate total monthly housing costs for a typical new market-rate rental unit in Berkeley by combining unit-weighted average rents in the typical new building (as determined by a survey of 4 buildings) and the Berkeley Housing Authority utility allowance.[4]

1A(ii): Annualize housing costs from 1A(i) and impute household income assuming that housing costs for the new households equal 30% of their gross household income.[5]

1A(iii): Calculate household income for a hypothetical 100-unit building by multiplying the per-household incomes determined in 1A(ii) by 100.[6]

1B: Determine the number of workers by industry generated by new tenant spending.

1B(i): Enter the gross household income for the hypothetical 100-unit building calculated in 1A(iii) (the "economic event") into the IMPLAN model for the 9-county San Francisco Bay area.[7]

1B(ii): Generate an IMPLAN model output showing **(a)** the number of all direct, indirect, and induced jobs ("total impacts") created by the economic event and **(b)** the distribution of those jobs across 16 industry sectors.[8]

1C: Determine the number of lower-income households generated by new tenant spending.

1C(i): Create income categories based on 2009 household income limits published by the California Department of Housing and Community Development.[9]

1C(ii): For each industry sector in 1B(ii)(b), assign the jobs associated with it to an income category based on a cross tabulation of income by industry constructed from the 2000 Public Use Microdata Sample (inflated to 2009 dollars).[10]

1C(iii): For each industry sector in 1B(ii)(b), convert the number of jobs created to households by dividing the number of jobs created by 1.7, the average number of workers per household in Alameda County according to the 2008 American Community Survey.[11]

1C(iv): For each household income category described in 1C(i) and controlling for unit type, compare (a) average market rents in Berkeley (determined by the Berkeley Rent Stabilization Board for Q3 2009) with (b) households' "maximum affordable monthly rent" (determined by assuming that rent plus utility costs equal 30% of gross household income);[12] where market rents generally exceed households' maximum affordable monthly rent, an income category can be considered "cost-burdened."

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4 BAE 2010, *supra* n. 1, at 17.

5 *Id.*

6 *Id.*

7 *Id.* at 17-18. *See infra* n. 59 regarding IMPLAN.

8 *Id.*

9 *Id.* at 19.

10 *Id.* at 19-20.

11 *Id.* at 20-21.

12 *Id.*

2A: Determine the permanent loan developers can secure to build an affordable unit.

2A(i): For each cost-burdened income category described in 1C(iv), calculate net operating income per unit by adjusting per-unit maximum affordable monthly rent downward by 35% for operating expenses and 5% for vacancy loss (both based on "interviews with affordable housing developers").[13]

2A(ii): Calculate monthly supportable debt service per unit by dividing the net operating incomes per unit derived in 2A(i) by 1.3, the assumed debt service coverage ratio required for a commercial loan.[14]

2A(iii): Convert the per-unit monthly supportable debt service determined in 2A(ii) to a maximum supportable loan amount by calculating the present value of the income stream generated by the debt service payments, assuming 30-year, fully amortizing debt accruing interest at a fixed rate of 6.5%.[15]

2B: Calculate the financing gap per affordable unit.

For each rent-burdened income category, subtract the maximum supportable loan amount derived in 2A(iii) from $400,200, the weighted average cost to develop an affordable unit in Berkeley as determined by a survey of 351 units developed in Berkeley (over an unspecified period of time);[16] the resulting figures are the per-unit financing gaps for each rent-burdened income category.

2C: Apply the per-unit financing gap to the number of lower-income households generated by new tenant spending.

2C(i): For each rent-burdened income category, calculate the total financing gap by multiplying the per-unit financing gaps calculated in 2B by the number of rent-burdened households calculated in 1C.[17]

2C(ii): Determine the maximum impact fee per 100-unit development by summing the total financing gaps for each rent-burdened income category in 2C(i).[18]

2C(iii): Divide the development-level fee calculated in 2C(ii) by 100 to calculate the maximum impact fee per unit purportedly justified by the Study.[19]

2. Flaws in Theory

At first glance, one of the more questionable aspects of the general theory underlying the 2010 Study is that it characterizes job creation solely as a negative externality, the damaging effects of which must be mitigated. Typically, economic impact analyses are used to demonstrate the positive effects on the local job market and broader economy associated with some proposed project (e.g., a stadium or a retail center). BAE's study mentions no such countervailing positive impacts or projections, however. In fact, the 2010 Study focuses solely on the negative effects of job creation, ignoring many positive effects that would very likely create a net-positive economic impact for lower-income households, as well as the rest of the Berkeley economy.

Two effects of job creation that, if taken into account, could completely offset the negative effects the 2010 Study predicts, are: (1) beneficial labor market transitions (i.e., employing the unemployed) and (2) increases in tax revenue. BAE's failure to consider these positive effects raises serious concerns about the soundness of the

13 *Id.* at 22.

14 *Id.*

15 *Id.* at 22-23.

16 *Id.*

17 *Id.* at 23.

18 *Id.*

19 *Id.*

theory underpinning the 2010 Study, regardless of its application (which, as discussed in **§§3-4** below, is also critically flawed).

2.1. Accounting for Positive Labor Market Transitions Could Nullify the 2010 Study's Estimate of Affordable Housing Demand and Thus the Need for a Fee Imposed to Meet that Demand.

According to the Berkeley Housing Element, between 2007 and 2010, an average of 181 market-rate units[20] received permits to begin construction each year.[21] Based on the 2010 Study, this level of market-rate production would generate 33 lower-income jobs.[22] Given the academic literature, even assuming that 100 percent of those jobs are created in the City of Berkeley, it is reasonable to conclude that all of the jobs would be filled by a member of the comparatively large pool of unemployed workers already living in Berkeley. This would erase all of the new affordable housing demand BAE claims a market-rate development would create and thus eliminate the need for an affordable housing impact fee imposed to meet such additional demand.

Recent academic studies on labor market transitions[23] have shown that, in any given year, the probability of unemployed workers transitioning out of the labor force (i.e., halting their search for employment) is approximately 22 percent, leaving 78 percent of those individuals either looking for work or transitioning into a new job.[24] More importantly, many of those individuals seeking jobs eventually find them. Based on a multivariate regression analysis of labor market transitions in the U.S. between 2005 and 2013, researchers found that 21 percent of all unemployed people transitioned into new employment every year.[25]

Based on 5-year average unemployment data through 2010, at any given time, there were 3,794 unemployed workers living in Berkeley.[26] Given that 22 percent of those workers were very likely to transition to employment each year, this means that 835 unemployed people living in Berkeley would likely find jobs every year when the 2010 Study was completed.[27] Since (as noted in **§3.2.3** below) about 44 percent of the people working in Berkeley live within Berkeley's city limits,[28] in 2010, approximately 466 unemployed people who lived in Berkeley very likely found jobs in Berkeley.[29]

Thus, in 2010, for every lower-income job purportedly created by market-rate development in a year, there were 11 unemployed people already living in Berkeley, all of whom were very likely to find employment

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20 This includes "moderate income" and "above moderate income" units.

21 City of Berkeley, *2015-2023 Housing Element*, 8, http://www.ci.berkeley.ca.us/uploadedFiles/Planning_and_Development/Level_3_-_Commissions/Commission_for_Planning/2015-2023%20Berkeley%20Housing%20Element_FINAL.pdf (accessed September 23, 2016).

22 BAE estimated that 17.5 lower-income jobs would be created per 100 market-rate units. BAE 2010, *supra* n. 1 at 21. 181*(17.5/100)=32.58

23 This is the general term often used in the literature to describe the transitions over time from employment, to unemployment, to non-participation.

24 Katherine Bradbury, *Labor Market Transitions and the Availability of Unemployment Insurance (2016)*, 26, https://www.bostonfed.org/publications/research-department-working-paper/2014/labor-market-transitions-and-the-availability-of-unemployment-insurance.aspx (accessed October 16, 2016); Murat Tasci and Jessica Ice 2015, *Job Polarization and Labor Market Transitions*, https://www.clevelandfed.org/newsroom-and-events/publications/economic-trends/2015-economic-trends/et-20150219-job-polarization-and-labor-market-transitions.aspx (accessed October 16, 2016).

25 Bradbury 2016, *supra* n. 24, at 26.

26 U.S. Census Bureau, *2006-2010 American Community Survey 5-Year Estimates.*

27 3,794*22%=834.68

28 *See infra* n. 100 and §3.2.3.

29 835*0.44=367.40

in Berkeley, available to fill it.[30] To the extent that people already living in Berkeley fill the lower-income jobs purportedly generated by market-rate development, there is no justifiable need to build new housing for the workers who will fill those jobs. And, more importantly, there is no reasonable justification for imposing a fee the sole and explicit purpose of which is to subsidize the development of such housing. This discussion brings to light a critical assumption underlying the 2010 Study, and indeed all affordable housing nexus studies: In order for such studies to conclude that a given economic event has "created" a brand new job, they must assume that the job is *permanent*. Certainly, there would be no justification for incurring the immense cost to build an affordable housing development ($400,200 per unit by BAE's reckoning) to subsidize the cost of housing a lower-income household for a few months or even a few years.[31] Since the discussion above regarding the probability of a job being filled by an unemployed Berkeley resident focuses only on the *initial* job-taker, it does not account for the prospect that successive job takers will be unemployed Berkeley residents and thus not new residents. Consequently, the 1:11 ratio of available jobs to unemployed Berkeleyans likely to find a job (discussed above) is a conservative estimate.

The impact of accounting for these positive labor market transitions on the 2010 Study's maximum fee is discussed further in **§3.2.4** below.

2.2. Accounting for Tax Revenue Could Nullify the 2010 Study's Maximum Impact Fee.

New jobs do not exist in a vacuum. That is, job growth entails growth in all of the businesses that employ new workers, as well as many government programs funded by the resulting tax revenue. Businesses take in revenue and they, as well as their employees, pay taxes to federal, state, and local governments to fund many important public programs, including those aimed at developing affordable housing. From the perspective of government, these payments are a positive externality associated with job creation. As such, they should offset any calculation meant to quantify the negative externalities associated with job creation.

At each level of government—federal, state, and local—there are multiple programs designed and operated to subsidize affordable housing development. These programs take in tax revenue, which is then used to provide grants and low-cost loans and to stimulate private investment in affordable housing. These activities provide a great deal of financial leverage in affordable housing financings such that every dollar spent by government (e.g., on gap financing such as grants or soft loans) generates many more in value, often determining whether or not a project is even feasible.[32]

According to the 2010 Study, it would cost $3.4 million to fully subsidize the affordable housing demand generated by the development of a 100-unit, market-rate apartment building in Berkeley.[33] This is based on BAE's argument that every such development in Berkeley creates 64 jobs, which in turn generate demand for 10 affordable units requiring a given level of government subsidy.[34] However, the 2010 Study fails to account for the fact that these 64 jobs—as well as the new household income that created them—generate a significant amount of tax revenue for government (even though accounting for this fact would reduce considerably, if not nullify, the Study's maximum fee calculation).

Given the 64 new jobs BAE estimated would result from the development of a 100-unit market-rate project, IMPLAN projects annual tax revenues of approximately $1.38 million.[35] Additionally, assuming the same ratio of labor income to taxes IMPLAN employs, the households in the new 100-unit, market-rate project

30 367.40/32.58=11.27

31 This topic is discussed further at n. 106 below.

32 *See* SPUR, *San Francisco's Affordable Housing Bond (August 2, 2002)*, http://www.spur.org/publications/spur-report/2002-08-02/san-francisco-s-affordable-housing-bond (accessed October 16, 2016).

33 BAE 2010, *supra* n. 1, at 23. As discussed in §3.3 below, the actual cost to government is likely a small fraction of this amount.

34 *Id.* at 18-20.

helping to create those jobs would generate approximately $4.6 million of annual tax revenues. Thus, assuming similar tax rates over time, the government will receive nearly $6 million (plus any annual tax growth due to income growth) every year for as long as these jobs exist.
Since, as discussed in **§2.1** above, affordable housing nexus studies are based on the assumption that the job creation they predict is permanent, the amount of tax revenue generated by these jobs over time is substantial. Assuming a conservative discount rate,[36] the value of this perpetual annuity would be more than $130 million.[37]

Moreover, as discussed above, government affordable housing programs offer a great deal of financial leverage. According to research from SPUR, "most affordable family rental programs in California have leverage ratios of 3.0 to 4.0x."[38] Assuming 3.5x leverage for the more than $130 million of tax revenue referenced above would equate to more than $456 million of value for affordable housing development, 134 times the $3,401,671 of subsidy required to meet the affordable housing demand BAE estimates. Arguably, this completely eliminates the justification for a fee imposed to provide such a subsidy.

The discussion in **§3.4** below shows how, even under assumptions extremely favorable to the 2010 Study's argument, accounting for tax revenues continues to have a substantial, negative impact the Study's maximum fee estimate.

3. Flaws in Methodology and Assumptions with Resultant Impacts[39]

While the serious flaws in the theory underlying the 2010 Study are, in and of themselves, sufficient justification to reject the Study's findings, the multiple flaws in its methodology and assumptions—and the extent to which correcting them materially reduces the Study's maximum fee calculation—provide additional, compelling justification.

3.1. The 2010 Study Overestimated Market-Rate Tenants' Income and Thus the Economic Stimulus Resulting from Market-Rate Development in Berkeley.[40]

According to BAE, in order to determine the number of jobs created by the development of market-rate housing, it must first estimate the dollar amount of the economic stimulus created by such development (i.e., the amount of money that is injected into the economy by new higher-income households).[41] To do that in the 2010 Study, BAE (1) estimated total monthly housing costs for new market-rate units in Berkeley,[42] which it then used to (2) estimate the annual gross income of the households occupying those new market-rate units.[43] Given those gross incomes, BAE then (3) calculated the annual gross income for households in a hypothetical 100-unit market-rate building and (4) determined the amount of that income

35 This is based on IMPLAN3 model estimates of the tax revenue resulting from the economic event BAE describes in the 2010 Study, expressed in 2010 dollars. Unlike BAE's model, this model's geographic scope is limited to Alameda County.

36 $5,980,250/0.0458=$130,288,671. This calculation uses the average 10-year treasury rate over the past 25 years. *See* http://www.multpl.com/10-year-treasury-rate/table/by-year.

37 This approach employs the conservative assumption that inflation and income growth cancel each other out across all income levels.

38 SPUR 2002, *supra* n. 32, at 18.

39 For convenience, the impacts on the 2010 Study's $34,017 maximum fee resulting from corrections to these flaws are underlined throughout this section.

40 *See* Step 1A in *supra* §1.2.

41 BAE 2010, *supra* n. 1, at 16.

42 *Id.* at 17.

43 *Id.*

those households spend in the local economy every year.[44] In the 2010 Study, BAE misestimated (1) and overestimated (2), (3), and (4)—all of which impact the Study's maximum fee calculation significantly.

3.1.1. The 2010 Study Misestimated Total Monthly Housing Costs for Many New Market-Rate Units in Berkeley by Using a Needlessly Imprecise Measurement for Market-Rate Rents.

In order to estimate total annual housing costs for new market-rate units in Berkeley, BAE surveyed four recently constructed buildings to determine average market-rate rents by unit type (i.e., Studio, 1-Bedroom, 2-Bedroom/1-Bath, 2-Bedroom/2-Bath, and 3-Bedroom).[45] BAE then calculated an average monthly rent figure for these four buildings ($2,469), weighted to reflect the distribution of unit types in the buildings, and used an annualized version of this average figure in the Study as a proxy for rent levels at all future market-rate developments.[46] The sum of this rent estimate and a figure for average utility costs ($87)[47] is what BAE called "total monthly housing costs."[48]

Using such a proxy, rather than the *actual* rent levels, for any proposed project can lead to significant over- and underestimation of aggregate housing costs (and thus residents' incomes and the economic stimulus generated thereby) at that project. For example, accounting for the actual unit mix at a 56-unit project with 40 studio and 16 two-bedroom/one bath units (the actual unit mix at 2631 Durant) would reduce the 2010 Study's $34,017 maximum fee by $6,031 (18 percent).[49]

In any event, BAE's housing cost estimates should be based on a richer data set and should account for more factors that determine rent levels such as amenities, target demographics, and unit quality. Determining average rents in an entire city based on a survey with a sample size of only four buildings, all of which have been constructed within months of each other (some by the same developer), is a poor proxy for new market-rate housing costs in a city over time.

While it might prove too burdensome to conduct project-specific nexus studies for every proposed project, at the very least, the analysis should account for the proposed project's actual unit mix, which is one of the most important drivers of project income and which is information BAE already uses in its analysis.[50] To account for unit mix in this way, BAE could simply enter average rent figures by unit type—which it used to calculate unit-weighted average housing costs for Studio, 1-Bedroom, 2-Bedroom/1-Bath, 2-Bedroom/2-Bath, and 3-Bedroom units as discussed above—into its model to determine maximum fees *for each unit type*. The City could then calculate fees for each proposed project based on that project's *actual unit mix*, thus reducing the type of errors described in the example above.[51]

3.1.2. The 2010 Study Overestimated the Annual Gross Income of the Households Occupying New Market-Rate Housing Units in Berkeley by Materially Understating Housing Cost Burden.

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44 *Id.*

45 *Id.* at 17, 36.

46 *Id.* at 17.

47 Based on Berkeley Housing Authority's utility allowance. *Id.*

48 Total Monthly Housing Costs=Monthly Rent+Monthly Utilities. *Id.*

49 ((40*$1,819)+(16*$2,508))/56=$1,425.

50 *Id. at* 17.

51 BAE could also increase precision by calculating fees based on square footage, which is common in other consultants' affordable housing nexus fee studies. *See e.g.* KMA, *supra* n. 2, at 8.

In order to estimate the annual gross income of households occupying new market-rate units in Berkeley, BAE annualized the total monthly housing costs it calculated as described in **§3.1.1** above and then divided that number by what it assumed to be most households' housing cost burden—the percentage of gross household income spent on rent and utilities.[52] For the purposes of the 2010 Study, BAE assumed (without providing any rationale or data) that the housing cost burden for households in Berkeley was only 30 percent.[53]

By assuming housing costs equaled only 30 percent of gross household income, BAE materially understated the share of household income spent on housing in Berkeley. As a result, BAE significantly overestimated the annual income of the households occupying new market-rate units in the city. According to U.S. Census data, when the 2010 Study was finalized, median gross rent alone (i.e., not including utility costs) accounted for approximately 35 percent of renters' household income in Berkeley.[54] Moreover, based on BAE's own data, assumptions, and calculations, students—which, according to BAE, "occupy the majority of new housing units in Berkeley"[55]—spend about 38 percent of household income on housing.[56] Thus, using BAE's own methodology, the housing cost burden for households occupying new market-rate units in Berkeley likely equaled between 35 and 38 percent of those households' gross income.

All other assumptions and calculations remaining the same, assuming a housing cost burden equal to 35 or 38 percent (based on U.S. Census data), rather than the 30% BAE assumes, would reduce the 2010 Study's $34,017 maximum fee by $4,848 (14 percent) and $7,151 (21 percent), respectively.[57]

3.1.3. The 2010 Study Overestimated the Aggregate Income in New Market-Rate Developments By Failing to Account for Vacancy Rates.

As part of estimating the amount of money households occupying new market-rate units would spend in the local economy, BAE calculated the annual gross income for households in a hypothetical new, 100-unit market-rate development (its "aggregate income") by multiplying the annual incomes for these households (calculated as described in **§3.1.1** above) by 100.[58] BAE then entered this entire aggregate income figure into IMPLAN[59] to determine the number of jobs generated by the resulting economic stimulus.[60]

By failing to adjust the above-referenced aggregate income figure downward to account for vacancies in the hypothetical 100-unit building, BAE overestimated the amount of money households occupying such a building would spend in the local economy. Because residential projects are never 100 percent occupied,[61] analysts interested in determining the cash flows from operating such projects (e.g., for underwriting a mortgage loan) typically discount those cash flows

52 Annual Household Income=(Annual Rent+Annual Utility Costs)/Housing Cost Burden. *See* BAE, *supra* n. 1, at 17.

53 *Id.*

54 U.S. Census, *supra* n. 26.

55 BAE, *supra* n. 1, at 42.

56 $15,336/$40,889=38%. *Id. at* 43.

57 *See* §3.1.2 in *infra* Table A.

58 BAE 2010, *supra* n. 1, at 16.

59 *See* pp. 35-38 in the 2010 Study for a more detailed description of the IMPLAN model and its application in the Study.

60 In Table 4.1 on page 17 of the 2010 Study, BAE reports $10,220,000 of "Aggregate Income" for a 100-unit development and then, on page 18, BAE describes using IMPLAN to estimate the number of jobs such "a 100-unit apartment complex generates." Nowhere in the Study does BAE indicate that it has adjusted the $10,220,000 aggregate income estimate downward to account for vacancy rates or, as discussed in §3.1.4 below, taxes and savings.

based on a reasonable vacancy rate. For example, in the 2010 Study itself, BAE used a 5 percent vacancy rate—which it notes is based on "interviews with affordable housing developers"—to calculate cash flow for new affordable housing projects in Berkeley.[62]

All other assumptions and calculations remaining the same, assuming a 5 percent vacancy rate for the hypothetical new, market-rate property would reduce the 2010 Study's $34,017 maximum fee by $1,701 (5 percent).[63]

3.1.4. The 2010 Study Overestimated the Amount of Money Households in a New Market-Rate Project Would Spend in the Local Economy By Failing to Account for Disposable Income and Savings.

As discussed in **§3.1.3** above, BAE entered the entire aggregate income of households occupying a hypothetical new, 100-unit market-rate project into the IMPLAN model to determine the number of jobs generated by the resulting economic stimulus.

By failing to adjust the above-referenced aggregate income figure downward to account for the disposable income and savings of the households occupying the hypothetical new project, BAE overestimated the amount of money those households would spend in the local economy. Clearly, not all of a household's income is available to spend around town; gross income is reduced by many required and discretionary outlays, none of which enter the local economy. State and federal taxes—including income taxes, Social Security taxes, and Medicare taxes—are the most obvious examples of required outlays. Since state and federal taxes are paid to governmental entities outside of a city or region, they represent a portion of household income not spent locally. According to data from the U.S. Department of Commerce, after accounting for these taxes, working households in the U.S. have only 84 percent of their gross income left to spend in the local economy.[64] All other assumptions and calculations remaining the same, reducing BAE's calculation of aggregate income in a new market-rate development by 16 percent (to reflect the fact that only 84 percent of gross income is disposable income) would reduce the 2010 Study's $34,017 maximum fee by $5,432 (16 percent).[65]

Household savings—the amount of money that individuals in a household deduct from their disposable personal income to set aside as a nest egg or for retirement—are a prime example of discretionary outlays that further reduce the proportion of gross income households spend in the local economy. Based on data from the U.S. Bureau of Economic Analysis, personal savings in the United States averaged approximately 5 percent for the 10-year period ended June 2015 and 8 percent in the long term (i.e., the period between 1959 and 2016).[66] All other assumptions and calculations remaining the same, conservatively assuming a savings rate of 5 percent for the households in BAE's hypothetical new, 100-unit market-rate development would reduce the 2010 Study's $34,017 maximum fee by $1,655 (5 percent).[67]

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61 Even if all units are occupied at a given moment, there will be some economic vacancy loss over time due to unit turnover and resulting maintenance.

62 BAE 2010, *supra* n. 1, at 23.

63 *See* §3.1.3 in *infra* Table A.

64 U.S. Census Bureau, *The Effect of Taxes and Transfers on Income and Poverty in the United States: 2005*, 4, https://www.census.gov/prod/2007pubs/p60-232.pdf (accessed September 23, 2016).

65 *See* §3.1.4(a) in *infra* Table A.

66 U.S. Bureau of Economic Analysis, *Personal Saving Rate [PSAVERT]*, retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/PSAVERT (accessed September 23, 2016).

67 *See* §3.1.4(b) in *infra* Table A.

Based on adjustments to aggregate household income made by other affordable housing nexus consultants, the assumed 21 percent reduction for disposable income and savings described above (i.e., 16 percent plus 5 percent) is actually quite conservative. For example, in a 2014 affordable housing nexus study for the City of Hayward, David Paul Rosen and Associates ("DRA") reduced aggregate household income by 25 percent before entering it into the IMPLAN model, explaining as follows:

> To arrive at disposable income, gross income for residents of prototypical units must be adjusted downward to account for Federal and State income taxes, Social Security and Medicare (FICA) taxes, and personal savings…Based on a review of data from the Tax Policy Center (a joint venture of the Brookings Institution and the Urban Institute), and the California Franchise Tax Board, disposable income for households in the income levels projected for the prototypical housing tract is estimated at 75 percent of total household income.[68]

All other assumptions and calculations remaining the same, reducing aggregate household income by 25 percent before entering it into the IMPLAN model (as DRA does) would reduce the 2010 Study's $34,017 maximum fee by $8,504 (25 percent).

3.1.5. The 2010 Study Overestimated the Amount of Money Households in a New Market-Rate Project Would Spend in the Local Economy By Failing to Account for the Unique Spending Pattern of Berkeley's Large Student Population.

Applying BAE's methodology in a city with so many students is problematic since there are compelling reasons to either exclude or heavily discount student spending. The theory underlying the 2010 Study posits that market-rate units create affordable housing demand by attracting high-spending households to Berkeley (i.e., encouraging households to move to the City that otherwise would not have located there). Yet the prospect of attending world-class educational institutions is likely what attracts students to Berkeley, and not the prospect of living in Berkeley per se. By itself, this disconnect casts doubt on the fairness and legality of a fee intended to mitigate the negative effects "attributable"[69] to market-rate developments—at least to the extent that they house students.

As discussed in **§3.1.2** above, BAE has asserted that "the majority" of the new renter households in Berkeley are occupied by students. Assuming that only half of those households are student-occupied and choosing to omit them from BAE's analysis since they are not "attributable" to the development would reduce the 2010 Study's $34,017 maximum fee by $17,009 (50 percent).

Even if one believes that student spending should be counted in BAE's analysis, calculating its impact on the local economy is much more difficult than BAE admits and, more importantly, requires deep discounts to spending estimates. First, the fact that students' rent payments are often covered at least in part by their families, most of whom live outside of Berkeley, makes it very difficult to determine student spending levels based on the income necessary to make a rent payment. Second, a significant portion of student spending is captured—in the form of tuition, books, school supplies, and even health care costs—by the institutions students attend. The portion of students' income paid to these institutions should be excluded from BAE's economic stimulus estimate since it does not represent income "attributable" to the development. That is, students would be paying such costs to these institutions regardless of where they lived.

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68 David Paul Rosen and Associates, *City of Hayward Inclusionary Housing and Nexus Study, Public Review Draft Report (September 24, 2014)*, 42, http://docplayer.net/14432573-City-of-hayward-inclusionary-housing-and-nexus-study.html (accessed September 23, 2016).

69 The Mitigation Fee Act provides that jurisdictions may collect fees to mitigate the cost of providing additional public services the need for which is "attributable" to private actions. Cal. Gov. Code §66001(g).

In the 2010 Study, BAE estimated student spending levels based on information provided by UC Berkeley's Financial Aid and Scholarships Office for 2010-2011.[70] Given this data, BAE calculated annual income of $40,889 for the average student, which it then multiplied by 2 (to reflect the unjustified assumption that students form households at a rate of two earners per household), yielding an annual income estimate of $81,778.[71] However, as discussed above, much of this income is attributable to University action and not to actions taken by the developers. While it's difficult to determine all of the costs attributable to the University, student fees clearly represent a large portion of such costs. These fees, and the number of students admitted to the University to pay the fees, are determined by the University and not by developers. Subtracting only student fees[72] from BAE's $81,778 annual student household income estimate would result in gross income of $55,492 available for each student household (still assuming two students living together) to spend in the local economy.[73]

If, as BAE has suggested, at least half of the new renter households in Berkeley are student-occupied, then using the $55,492 income estimate discussed above to account for those households would reduce the 2010 Study's $34,017 maximum fee by $7,777 (23 percent).[74]

3.2. The 2010 Study Overestimated the Job Creation Effects of Market-Rate Development.[75]

After attempting to estimate the dollar amount of the economic stimulus created by a hypothetical new, 100-unit market-rate development, BAE entered the resulting amount into the IMPLAN model in an effort to determine the number, and distribution by industry, of jobs that such an economic stimulus would create.[76] The result was an estimate of 64 jobs, 18 of which BAE argued were lower-income jobs, distributed across 16 industries.[77] The extent to which IMPLAN is actually effective at calculating the job creation and distribution effects it purports to calculate is questionable at best. However, this report focuses on (1) the manner in which BAE overestimated job creation effects by misusing the IMPLAN model, and (2) the extent to which these overestimations affect the 2010 Study's maximum fee calculation.[78]

3.2.1. The 2010 Study Overestimated the Job Creation Effects of Market-Rate Development By Focusing on an Overly Broad Jurisdictional Area.

70 BAE 2010, *supra* n. 1, at 42-43.

71 *Id.*

72 A more comprehensive accounting would include deductions for books, school supplies, health care costs, and anything other costs paid to the University. However, the conservative estimate used here accounts only for student fees (i.e., "tuition").

73 Annual Student Household Income-Annual Student Fees per Household=$81,778-$26,286=$55,492. *See* BAE 2010, *supra* n. 1, at 42-43.

74 *See* §3.1.5 in *infra* Table A. This calculation assumes that 50 percent of occupants in new market-rate units are students.

75 *See* 1B and 1C in *supra* §1.2.

76 BAE 2010, *supra* n. 1, at 17-18.

77 *Id.* at 19. As discussed in Step 1C(ii) of §1.2 above, for each industry sector in Step 1B(ii)(b), BAE assigned the jobs associated with it to an income category based on a cross tabulation of income by industry constructed from the 2000 Public Use Microdata Sample.

78 However, testing the 2010 Study and its predecessors against empirical evidence to determine whether or not there is a correlation between predicted results and actual results will be a follow-up project.

The Mitigation Fee Act[79] describes in detail the fees a "local agency"[80] may collect to mitigate the cost of providing additional "public services"[81] the need for which is "attributable" to private actions[82] and requires that any such fee be used "solely and exclusively for the purpose or purposes...for which the fee was collected" and not "levied, collected, or imposed for general revenue purposes;" further, the Act requires that the local agency refund any fees collected to the extent that they are not used for the purpose identified.[83]

The clear intent of such a regulatory scheme is to allow a public entity to recoup its costs when private actions require it to provide more of some service than is typically required. Here, the City of Berkeley is seeking to recoup the cost of providing more affordable housing than it would normally provide based on the theory that the development of new market-rate housing is driving the need for such additional affordable housing.

Thus, the fees at issue should only mitigate the cost of the affordable housing the City of Berkeley provides (or at least intends to provide). However, the 2010 Study bases its maximum fee estimates on the cost of providing affordable housing all over the nine-county Bay Area.[84] Consequently, if it were to charge the 2010 Study's $34,017 maximum fee, the City of Berkeley (with its 18 square-mile footprint and 121,000 residents) would be charging fees to develop affordable housing across the entire Bay Area (with its 6,700 square-mile footprint and 7.6 million residents).

While BAE argues that the City of Berkeley is justified in mitigating affordable housing demand generated elsewhere in the region by development within its borders,[85] such an argument is not consistent with a regulatory scheme intended to allow a public entity to recoup its costs when private actions require it to provide more of some service than is typically required. That is, accurately accounting for affordable housing demand generated in other jurisdictions would require Berkeley to both consider the affordability gaps common in those jurisdictions[86] and disburse fee revenues to those jurisdictions to mitigate those effects. Since Berkeley does not do the former, it is likely overcharging developers to close the wrong financing gaps. Since it does not do the latter, it is violating the requirement that jurisdictions must refund any fees collected to the extent that they are not used for the purpose identified.[87]

For obvious reasons, consultants conducting affordable housing nexus analyses rarely discuss the changes in job creation impacts that result from selecting different jurisdictional scopes. However,

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79 Cal. Gov. Code §§66000-66008.

80 This means "a county, city, whether general law or chartered, city and county, school district, special district, authority, agency, any other municipal public corporation or district, or other political subdivision of the state." *Id.* at §66000(c).

81 *Id.* at §66000(d).

82 "A fee shall not include the costs attributable to existing deficiencies in public facilities, but may include the costs attributable to the increased demand for public facilities reasonably related to the development project in order to (1) refurbish existing facilities to maintain the existing level of service or (2) achieve an adopted level of service that is consistent with the general plan." *Id.* at §66001(g).

83 *Id.* at §66001(e).

84 "The IMPLAN model is customized to reflect the economic characteristics of the specified region—in this case the nine-county Bay Area. The nexus analysis considers regional employment generation, rather than jobs generated in Berkeley exclusively..." BAE 2010, *supra* n. 1, at 18.

85 "If the analysis solely considered workers living in Berkeley, it would in effect discount the needs of households who currently cannot afford to live in Berkeley, and propagate the need for affordable housing in the City. In essence, this analysis considers employment effects beyond the City's borders in order to address the City's 'fair share' of regional housing need." *Id.*

86 Note that these gaps are likely lower than those observed in Berkeley since Berkeley's lower-income workers are choosing to live there instead of in Berkeley.

87 Cal. Gov. Code §66001(d)(2).

comparing two studies conducted (1) around the same time, (2) in overlapping jurisdictions, and (3) using IMPLAN to estimate similarly sized economic events should provide a rough estimate of the variation that results from narrowing jurisdictional scope. Keyser Marston Associates, Inc. ("KMA") prepared an affordable housing nexus analysis in 2010 for the City of Fremont (the "Fremont Study") that used IMPLAN to estimate the job creation effects in Alameda County given a $10.4 million economic event (43 jobs created). The Fremont study can be compared to BAE's 2010 Study which used IMPLAN to estimate the job creation effects in the 9-county San Francisco Bay area (which, of course, includes Alameda County) given a $10.2 million economic event (64 jobs created). Based on this comparison, reducing the IMPLAN model's jurisdictional scope from the regional level to the county level would reduce the number of jobs created by a similarly sized economic event by *at least* 32 percent.[88]

All other assumptions and calculations remaining the same, applying the 32 percent reduction discussed above to limit jurisdictional scope to the county level (which appears to be standard practice in at least two other consulting firms' Bay Area affordable housing fee nexus studies[89]) would reduce the 2010 Study's $34,017 maximum fee by $10,886 (32 percent).[90]

This is a conservative estimate of the appropriate downward adjustment to apply to BAE's job creation figure for many reasons, the most important of which are: (a) as argued above, the proper jurisdiction for Berkeley's affordable housing nexus study is the City of Berkeley and (b) Alameda County's share of the region's jobs is only 21 percent, while Berkeley's share is only 2.3 percent.[91] It should also be noted that at least one recent affordable housing nexus study has both limited the scope of its analysis to jobs created within a particular city, and used that City's share of jobs to adjust job creation estimates downward. In its study for the City of Oakland, Vernazza Wolfe Associates, Inc. limited the scope of its analysis to jobs created within the City of Oakland and did so by reducing Alameda County's IMPLAN-generated job creation estimate downward based on Oakland's share of Alameda County jobs (28 percent).[92]

3.2.2. The 2010 Study Overestimated the Job Creation Effects of Market-Rate Development By Relying on Total, Rather Than Direct, Economic Impacts.

The Mitigation Fee Act requires a "*reasonable relationship* between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed" (emphasis added).[93] In the 2010 Study, however, BAE's methodology for estimating job creation effects (and thus the relationship between the amount of the maximum affordable housing nexus fee and the cost to develop affordable housing for lower-income workers) exceeds the bounds of reasonableness. BAE accounts not only for the direct economic impact of the market-rate development (e.g., jobs for cashiers and baggers who work at Berkeley grocery stores)

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88 Given the larger economic event ($10.4 million versus $10.2 million) used in the Fremont study, this is likely a conservative estimate of the potential reduction in jobs created. *See* KMA, *supra* n. 2, at 5.

89 *See e.g.* DRA, *supra* n. 68, at 39; KMA, *supra* n. 2, at 29-31; Keyser Marston Associates, Inc., *Napa County Affordable Housing Ordinance Revisions, Update and Economic Analysis, Residential Component*, 18, (unpublished professional report, November 2009) (copy on file with the County of Napa, California).

90 *See* §3.2.1 in *infra* Table A.

91 Association of Bay Area Governments and Metropolitan Transportation Commission, *Bay Area Plan July 2013: Strategy for a Sustainable Region (Final Forecast of Jobs, Population, and Housing)*, 29, 42, http://planbayarea.org/pdf/final_supplemental_reports/FINAL_PBA_Forecast_of_Jobs_Population_and_Housing.pdf (accessed October 17, 2016).

92 Vernazza Wolfe Associates, Inc. and Hausrath Economics Group, *Oakland Affordable Housing Impact Fee Nexus Analysis (March 10, 2016)*, 11, http://www2.oaklandnet.com/oakca1/groups/ceda/documents/report/oak057583.pdf (accessed October 17, 2016).

93 Cal. Gov. Code §66001(b).

but also the indirect impacts (e.g., jobs for people who work for the grocery store's suppliers or truck drivers who deliver goods to the store) and induced impacts (e.g., employment generated when cashiers, baggers, suppliers, and truck drivers spend money in the economy) (collectively, the "total impacts").[94]

The greater the scope of these impacts, the more tenuous—and less reasonable—the relationship between the developer's actions and the resulting impacts becomes. To rely on total impacts is to charge a real estate developer in Berkeley a fee to subsidize the housing costs of a cashier at a cafe in Petaluma simply because that cashier sells coffee to a truck driver, who lives in Santa Rosa, on her way to delivering produce to a wholesaler in Vallejo, who sells the produce to a super market in Berkeley, where the residents of the developer's project buy their groceries. It's hard to believe that the average rational person would call such a tenuously linked relationship "reasonable."

The results of other nexus studies indicate that relying on direct, rather than total, impacts reduces job creation estimates by approximately 44 percent. For example, KMA reported 23 direct impact jobs versus 40 total jobs (a 43 percent difference) in the Napa County report and 49 direct impact jobs created versus 89 total jobs created (a 45 percent difference) in a residential nexus analysis for the City and County of San Francisco.[95] All other assumptions and calculations remaining the same, reducing BAE's job creation estimate by 44 percent to account for the difference between relying on direct, versus total, impacts would reduce the 2010 Study's $34,017 maximum fee by $14,968 (44 percent).[96]

3.2.3. The 2010 Study Overestimated the Job Creation Effects of Market-Rate Development By Failing to Account for Commuters.

After using IMPLAN to calculate the total number of jobs created by a market-rate development and then purportedly determining which of those jobs were lower-income jobs,[97] BAE then used the entire estimate of lower-income jobs in later calculations to determine a maximum affordable housing impact fee.[98] This erroneously assumes that all new jobs created in Berkeley will be filled by people living in Berkeley (thus creating demand for new affordable housing). Adjusting BAE's job creation estimate to account for commuting rates would reduce BAE's maximum fee estimate significantly.

People who live outside of cities into which they commute daily for work will fill a significant percentage of the jobs created by any economic stimulus associated with new market-rate development. Even BAE acknowledged this point when—in a nexus study it prepared for Pinellas County, Florida—it adjusted downward the number of jobs purportedly created by market-rate development to reflect the commuting rate.[99] According to a report by Nelson/Nygaard Consulting

94 BAE 2010, *supra* n. 1, at 18, 38-41.

95 *See supra* n. 89 (Napa County Report) at 7; Keyser Marston Associates, Inc., *Residential Nexus Analysis, City and County of San Francisco*, 6, http://sf-planning.org/sites/default/files/FileCenter/Documents/8380-FINAL%20Resid%20Nexus_04-4-07.pdf (accessed September 23, 2016).

96 *See* §3.2.2 in *infra* Table A.

97 *See* Steps 1B, 1C(i), and 1C(ii) in *supra* §1.2.

98 BAE 2010, *supra* n. 1, at 17-19.

99 *See* Bay Area Economics, *Housing Nexus Study: Pinellas County and the Cities of Clearwater, Largo, and St. Petersburg* (unpublished professional report, 2009) (copy on file with Pinellas County, Florida).

Associates prepared for the City of Berkeley, "56% of Berkeley jobs are filled by 36,000 people who commute from residences outside the City of Berkeley."[100]

All other assumptions and calculations remaining the same, reducing BAE's job creation estimate by 56 percent to account for commuting rates would reduce the 2010 Study's $34,017 maximum fee by $19,050 (56 percent).[101]

3.2.4. The 2010 Study Overestimated the Job Creation Effects of Market-Rate Development by Failing to Account for Unemployed Workers.

As explained in **§2.1** above, for every one of the lower-income jobs purportedly created by market-rate development in a year, there are 11 unemployed people already living in Berkeley, all of whom are very likely to find employment in Berkeley, available to fill it. Consequently, it is reasonable to conclude that *all* of the lower-income jobs created by market-rate housing would be filled by a member of the comparatively large pool of unemployed workers already living in Berkeley, thus eliminating the need for the proposed impact fee.

Allowing for the possibility that some of the new lower-income jobs would be filled by unemployed people from outside Berkeley who move to the city for work, reliable data still limit the number of jobs for which this is likely to be true. This limitation can be demonstrated by comparing the total number of job openings in Berkeley to the number of those jobs filled by unemployed Berkeleyans. Based on 5-year average data through 2010 from the Bureau of Labor Statistics ("BLS"), there were approximately 3 unemployed persons per job opening in the U.S. during that period.[102] This means that the average number of job openings in Berkeley for 2006 through 2010 was approximately 1,265.[103] As shown in **§2.1** above, BLS and U.S. Census data for the same period show that approximately 466 unemployed people who live in Berkeley will very likely find jobs in Berkeley each year. Thus, based on the relevant BLS and U.S. Census data, at least 37 percent of all new job openings in Berkeley during the relevant period (since 466/1,265=37%) were very likely filled by unemployed people who already lived in Berkeley.

With all other assumptions and calculations remaining the same, accounting for the information that 37 percent of all new job openings in Berkeley will very likely be filled by people already living in Berkeley would reduce the 2010 Study's $34,017 maximum fee by $10,886 (32 percent).[104]

3.3. The 2010 Study Overestimated Financing Gaps for New Affordable Housing Units By Overestimating Affordable Unit Financing and Development Costs.

In order to determine the amount of money developers should pay to mitigate the affordable housing demand their market-rate development activities have supposedly created, BAE multiplied the number of

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100 Nelson/Nygaard Consulting Associates, *Southside/Downtown Transportation Demand Management Study Existing Conditions Report, Report to the City of Berkeley, California (April 2000)*, 5-1, http://www.ci.berkeley.ca.us/ContentDisplay.aspx?id=8516 (accessed September 23, 2016). Note that, while decreasing this percentage would increase the maximum fee calculated in this section, doing so would also decrease the maximum fee calculated in §3.2.4 (because it would increase the probability of an unemployed Berkeleyan taking one of the jobs purportedly created by market-rate development).

101 *See* §3.2.3 in *infra* Table A.

102 Bureau of Labor Statistics, U.S. Department of Labor, *Issues in Labor Statistics, Summary 10-3/March 2010*, https://www.bls.gov/opub/ils/pdf/opbils80.pdf (accessed January 5, 2016); Bureau of Labor Statistics, U.S. Department of Labor, *Job Openings and Labor Turnover Survey Highlights, December 2010*, http://www.bls.gov/jlt/jlt_labstatgraphs_december2010.pdf (accessed January 5, 2016).

103 *See supra* n. 26. 3,794/3=1264.66

104 *See* §3.2.4 in *infra* Table A.

lower-income units calculated as described in §3.2 above by a "financing gap."[105] BAE calculated this gap by subtracting (a) what it estimated to be the maximum amount an affordable housing developer could borrower to finance an affordable project (i.e., its "financing costs") from (b) the weighted average cost to develop an affordable project in Berkeley.[106] This overestimated financing gaps by overestimating financing costs for affordable units. As a result, BAE significantly overestimated the fee levels required to mitigate the resulting financing gaps.

BAE estimated the maximum amount an affordable housing developer could borrower to finance an affordable unit by assuming that the entire project would be financed, much like a single-family home, using one commercially available mortgage.[107] This method fails to account for a host of financing sources common in multifamily affordable housing transactions, all of which reduce these projects' reliance on commercial loans like the one BAE imagines and, as a result, significantly reduce financing costs. Major financing sources for affordable projects include federal tax-exempt bond financing, federal low-income housing tax credit ("LIHTC") equity, U.S. Department of Housing and Urban Development programs such as Section 8 and Section 202, state Multifamily Housing Program funds, Federal Home Loan Bank Affordable Housing Program grant funds, former redevelopment agency grant funds, and local government sources (often including grants and low- or no-cost loans). All of these sources—which, according to the Association of Bay Area Governments ("ABAG"), collectively account for 84 percent of the financing for the typical affordable housing development in the Bay Area[108]—greatly reduce the amount of money affordable housing developers have to borrow from commercial mortgage lenders.

Accounting for just one of the above-mentioned financing sources—as DRA did in its 2014 affordable housing nexus study for the City of Hayward—would reduce the 2010 Study's maximum fee significantly. In its 2014 study, DRA recognized that (for many important reasons[109]) the lion's share of new affordable housing development is funded using LIHTC equity. Consequently, DRA discounted its financing cost calculation by 25 percent, explaining its rationale as follows:

> Recent affordable housing in the City typically has been financed using 4 percent tax credits. For these projects, tax credit equity filled about 25 percent of total project costs on affordable tax credit units. This ratio has been used to adjust the portion of the affordability gap assumed to fall to the responsibility of the developer, and to be filled by the impact fee.[110]

All other assumptions and calculations remaining the same, applying the above-referenced 25 percent reduction to the total affordable housing development cost figure used in the 2010 Study would reduce the Study's $34,017 maximum fee by $13,291 (39 percent).[111]

It should be noted that DRA's 25-percent financing cost reduction is a very conservative estimate for several reasons. First, the 2010 Study's methodology still assumes that the balance of total financing costs are covered by expensive commercial debt. In reality, as ABAG notes, sources other than commercial

105 BAE 2010, *supra* n. 1, at 23.

106 Note that this methodology requires an assumption of permanent job creation since it would be much more cost effective to directly subsidize rents for short-term employees. Indeed, the City of Berkeley could cover the $632 per month it costs to subsidize rent for a two-person household earning 50 percent of AMI (See p. 14 of the 2010 Study) for several decades before the city spent what it would cost to develop a single affordable unit.

107 BAE 2010, *supra* n. 1, at 22-23.

108 Association of Bay Area Governments, *Affordable Housing Funding Gap Analysis (April 30, 2014)*, 14, http://planbayarea.org/pdf/prosperity/research/Affordable_Housing_Funding_Gap_Analysis.pdf (accessed September 23, 2016).

109 *See generally* Office of the Comptroller of the Currency, *Low-Income Housing Tax Credits: Affordable Housing Investment Opportunities for Banks (April 2014)*, https://www.occ.gov/topics/community-affairs/publications/insights/insights-low-income-housing-tax-credits.pdf (accessed October 17, 2016).

110 DRA, *supra* n. 68, at 33.

111 *See* §3.2.1 in *infra* Table A.

mortgage debt typically cover all but 16 percent of total financing costs.[112] Second, the ratio of LIHTC equity to total financing sources is likely much higher than the 25 percent DRA estimates since, historically, more than half of the LIHTC projects in Berkeley have been "9 percent" tax credit projects (compared to "4 percent" projects),[113] which produce subsidies closer to 55% of total development costs.[114]

3.4. The 2010 Study Overestimated the Justifiable Level of the Affordable Housing Mitigation Fee by Failing to Account for the Tax Revenue Generated by Market-Rate Development.

The 2010 Study purports to calculate the maximum fee Berkeley is justified in charging developers to mitigate the increase in government expenditures on affordable housing supposedly necessitated by those developers' actions (namely, their development of market-rate housing resulting in job creation). However, any attempt to quantify the net cost to government associated with job creating activities must also account for benefits such as generation of tax revenue. As discussed in **§2.2** above, the more than $456 million of value generated for the government by the development of a 100-unit, market rate residential project in Berkeley is more than sufficient to cover the cost of subsidizing the affordable housing demand BAE estimates (i.e., it's 134x the amount of BAE's required subsidy calculation).

Even under assumptions extremely favorable to the 2010 Study's argument, accounting for tax revenues continues to have a significant, negative impact the Study's maximum fee estimate. Assuming, very conservatively,[115] that governments spend only 2.6 percent of their budgets on housing programs each year, the nearly $12 million of resulting value[116] would still greatly exceed the $3.4 million of subsidy required to meet the affordable housing demand those jobs supposedly create.[117] Further, after adjusting this $12 million figure downward to account only for state and local tax revenue, more than $5.3 million would remain. Finally, even after reducing this $5.3 million figure to account for the relevant adjustments already described in this report,[118] more than $2.4 million would remain.

Reducing BAE's $3.4 million government subsidy estimate by this $2.4 million remaining value[119] to account for taxes already paid to the government would reduce the 2010 Study's $34,017 maximum fee by $24,065 (71 percent).

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112 ABAG, *supra* n.108.

113 *See* U.S. Department of Housing and Urban Development, *LIHTC Database Access*, http://lihtc.huduser.gov (accessed October 17, 2016).

114 *See* Westmont Advisors, *How to Calculate Low Income Housing Tax Credit*, http://westmontadvisors.com/tax-credit-advisory/how-to-calculate-the-low-income-housing-tax-credit-lihtc/ (accessed October 17, 2016); OCC, *supra* n. 109.

115 In recent years, housing and community development funding as a percentage of total government budgets at the local, state, and federal levels have been as follows: City of Berkeley, 7%; California, 2.6%; United States, 5.7%. City of Berkeley, *Budget Basics, FY 2012 & FY 2013*, http://www.ci.berkeley.ca.us/City_Manager/Budget_Office/Budget_Introduction.aspx (accessed October 16, 2016); National Priorities Project, *Federal Spending: Where Does the Money Go?*, https://www.nationalpriorities.org/budget-basics/federal-budget-101/spending/ (accessed October 16, 2016); State of California, *Enacted Budget Summary*, http://www.ebudget.ca.gov/2016-17/Enacted/BudgetSummary/BSS/BSS.html (accessed October 16, 2016).

116 $456,010,349*0.026=$11,856,269

117 *See* BAE 2010, supra n. 1, at 23.

118 This entails adjusting the $5.3 million figure downward to account for the percentage reductions described in §§3.1.1-3.1.5 and 3.2.2 above and in Table A below. Note that some reductions (i.e., those in §§3.1.1, 3.1.2, 3.1.3, and 3.1.5) apply to the tax revenue associated with both (a) the households in the new market-rate development and (b) the households supposedly created by the spending from those households, while other reductions apply to the tax revenue from only one of these sources. Also, the $5.3 million figure already accounts for the reduction described in §3.2.1 because, as mentioned in n. 35 above, the IMPLAN3 model for the relevant tax revenue calculation estimates impacts at the county level.

119 The full estimated value is $2,406,428.

4. Summary of Impacts; Cumulative Effects

Flaws in the general theory underlying the 2010 Study, as well as in the methodology and assumptions BAE uses to apply that theory, render meaningless the Study's maximum per-unit fee calculation. Focusing solely on the purported negative effects of job creation, the theory ignores positive effects—such as beneficial labor market transitions and increases in tax revenue—that are likely to completely counterbalance any negative effects of job creation related to market-rate development. Accounting for these positive effects alone removes the nexus-based justification for the 2010 Study's findings and thus nullifies its proposed fee.

Assuming only for the sake of argument that the flaws in the theory underlying the 2010 Study are not sufficient reason to reject its findings, the flaws in the Study's methodology and assumptions reduce its maximum per-unit fee estimate to a minute fraction of its original amount. This effort has described serious flaws—many of which are outlined in the table below—that, if corrected, would have a significant negative impact on the $34,017 maximum per-unit fee identified in the 2010 Study. As discussed in the sections above and shown in **Table A** below, reasonable adjustments to the Study's methodology and assumptions create reductions in its maximum per-unit fee estimate ranging from $1,654, or 5 percent, to $24,065, or 71 percent, *per adjustment.*

As also shown in **Table A**, the cumulative impact of correcting these flaws reduces the 2010 Study's maximum per-unit impact fee to a negligible level. The final "Resulting Fee" amount shown in the table is greater than $0 due only to the use of percentage-based fee reductions throughout this report. Since, as discussed in **§3.4** above, the tax-related value accruing to government from the hypothetical market-rate development ($5.4 million) alone exceeds the amount of affordable housing subsidy BAE estimates is required by that development ($3.4 million), applying only the reduction described in **§3.4** would actually reduce the Study's $34,017 maximum fee to $0.

Importantly, **Table A** also shows that this cumulative impact is not particularly sensitive to omission of any one adjustment—or even multiple adjustments. For example, after the first three of twelve adjustments, the maximum fee has already been reduced by 93 percent. Moreover, even after deleting all three of those adjustments, the cumulative reduction in the fee would still exceed 88 percent. To put it another way, even after rejecting several of the arguments and adjustments presented in this report, the remaining adjustments are likely to produce a maximum per-unit fee equal to a small fraction of its original amount.[120]

Table A: Impacts of Adjustments to Methodology and Assumptions in the 2010 Study[121]		**Adjustment-Specific Impacts on $34,017 Maximum Fee**			**Cumulative Impacts on $34,017 Maximum Fee**	
Ex. 3 § Ref.	**Adjustment**	**Reduction (%)**	**Reduction ($)**	**Resulting Fee ($)**	**Reduction (%)**	**Resulting Fee ($)**
3.4	Reduce the total fee amount to account for tax revenues	**71%**	$24,065	$9,952	71%	$9,952
3.2.3	Reduce total job creation by 56% to account for commuters	**56%**	$19,050	$14,968	87%	$4,379
3.2.2	Reduce total job creation by 44% to reflect only direct impacts	**44%**	$14,968	$19,050	93%	$2,452
3.3	Assume non-debt financing accounts for 25% of affordable housing total development costs	**39%**	$13,291	$20,727	96%	$1,494
3.2.1	Reduce total job creation by 32% to estimate impacts at the county, rather than the regional, level	**32%**	$10,886	$23,132	97%	$1,016

120 Because the 71-percent downward adjustment in **§3.4** already accounts for the adjustments described in **§§3.1.1** through **3.2.2**, reducing or removing any of the adjustments in **§§3.1.1** through **3.2.2** would not necessarily increase the resulting fee; instead, any such reduction or removal would likely just increase the size of the reduction allocated to the adjustment in **§3.4**.

121 Section references identify sections in the main body of this report. In sections that explore multiple alternative adjustments, the adjustment resulting in the *smallest* reduction to the maximum fee is presented in this table (and underlined in §3 above).

3.2.4	Assume unemployed workers living in Berkeley fill 32% of total jobs created	**32%**	$10,886	$23,132	98%	$691
3.1.5	Account for the unique spending pattern of Berkeley's large student population	**23%**	$7,777	$26,240	98%	$533
3.1.1	Account for the weighted-average monthly rent at 2631 Durant	**18%**	$6,031	$27,987	99%	$438
3.1.4(a)	Reduce gross household income by 16% to account for state and federal taxes	**16%**	$5,432	$28,586	99%	$368
3.1.2	Assume portion of household income spent on housing costs equal to 35%	**14%**	$4,848	$29,169	99%	$316
3.1.3	Assume 5% vacancy rate for the hypothetical new, 100-unit market-rate development	**5%**	$1,701	$32,317	99%	$300
3.1.4(b)	Reduce gross household income by 5% to account for savings	**5%**	$1,654	$32,363	99%	**$286**

Appendix A: Response to BAE's Appendix on Student Spending Estimates; Additional Reductions to 2010 Study's Maximum Fee

In the 2010 Study BAE argues that, despite their lower incomes, students actually spend *more* in the local economy than market-rate households ($81,800 compared to $68,000 for market-rate households earning $102,200 per year).[122] This argument is based on faulty assumptions that, if corrected, would actually justify reductions to the 2010 Study's $34,017 maximum fee *in addition to* those already discussed in **§3.1.5** above.

Before discussing additional adjustments to BAE's maximum fee calculation, it should be noted that BAE bases its student spending calculations on budget amounts provided by U.C. Berkeley's Financial Aid and Scholarships Office, which establish the *maximum* amount a student can borrow in federal student loans to pay for expenses while in school.[123] Yet, for a number of reasons, actual student spending levels are likely lower than these budgeted amounts. While some students who finance their education with borrowing will "max out" their student loan debt, many others will choose to borrow and spend more sparingly so as to minimize future debt service. Moreover, even assuming a student borrows the maximum amount available, he or she will not necessarily spend all of the resulting loan proceeds in the local economy; that is, total income does not necessarily equal total local spending. For students who receive financial support from family members or similar sources, constraints on those students' local spending likely come from the supporters themselves (e.g., parents necessarily limit the spending of the children they support). Thus, a maximum budget amount is not the proper metric to conservatively gauge student spending.

Assuming only for the sake of argument that student financial aid budgets are an acceptable proxy for local student spending, correcting some of the faulty assumptions BAE employs in its student spending calculations would still justify additional reductions to the 2010 Study's $34,017 maximum fee. First, BAE assumes without empirical justification, that students form households at a rate of two earners per household.[124] In addition to lacking factual support, this assumption ignores the argument than many students form households with non-students. Using the 1.7

122 BAE 2010, *supra* n. 1, at 42-43 ("Appendix D").

123 *Id.* at 42; University of California, Berkeley, *Cost of Attendance*, http://financialaid.berkeley.edu/cost-attendance (accessed January 24, 2017).

124 *Id.*

average earner-per-household figure BAE relies on elsewhere in the 2010 Study[125] would reduce BAE's $81,800 student local spending estimate to $69,511.[126]

Second, BAE fails to adjust its calculation of local student household spending to account for portions of the year when students are likely to be away from Berkeley (e.g., between semesters and during the summer). Adjusting BAE's estimates of items other than rent, utilities, and student fees to count spending only during the school year would further reduce BAE's local student spending estimate to $64,235[127] (compared to $68,000 for market-rate households earning $102,200 per year).

Adjusting the $55,492 student household gross income estimate discussed **§3.1.5** above (which already accounts for the flaws described in that section) to include the revisions described in this Appendix would reduce that estimate to $41,891,[128] which would in turn reduce the 2010 Study's maximum fee by an *additional* $2,263 (7 percent). Thus, combining the adjustment described (and underlined) at the end of **§3.1.5** with the adjustments described in this Appendix would reduce the Study's $34,017 maximum fee by a *total* of $10,040 (30 percent).

125 *See e.g.* BAE 2010, *supra* n. 1, at 21.

126 ($15,336+$4,332+$2,146+$2,068+$1,647+$2,217+$13,143)*1.7=$69,511. *See* BAE, *supra* n. 1, at 43.

127 ($15,336+$3,249+$1,609+$1,551+$1,235+$1,662+$13,143)*1.7=$64,235. *Id.*

128 ($15,336+$3,249+$1,609+$1,551+$1,235+$1,662)*1.7=$41,891. *Id.*

PLAN CHECK FEES → $ 174,186.48

~~$421,674.19~~

CITY OF BERKELEY

Permit Service Center

PLAN CHECK STATUS-BUILDING & FIRE PROTECTION

Permit Application Number: B2016-05821

Project Address: 2631 Durant Ave

ESTIMATED Plan Check Response Date: 1/31/17

* **Please do not call for permit status prior to the Estimated Response Date noted above.**

- If there are comments we will email a notification letter to the applicant. The applicant must be registered through the City's Online Service Center in order to view the correction letter.
- If there are no comments, the applicant will receive e-mail notification that the project is approved and the remaining fees due.

*Plan Check status is now available online. To access status on your application, got to the City's website

https://permits.cityofberkeley.info/Community/

THANK YOU FOR YOUR COOPERATION

Rev 2016

Comparison of Fees for $8,000,000 project	San Francisco	Berkeley	% increase
Plan Review Fee	$31,331	$174,186	555.95%
Building Permit Issuance Fee	$14,182	$247,488	1745.09%
total	$45,513	$421,674	926.49%

SAN FRANCISCO DBI DEPARTMENT OF BUILDING INSPECTION

FEE SCHEDULE

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October 2015

TABLE 1A-A (1 of 3)

The following building permit fees apply to all building permits issued on and after **October 19, 2015**. The Building Permit Fee is the Plan Review Fee plus the Permit Issuance Fee.

TOTAL VALUATION	PLAN REVIEW FEE	PERMIT ISSUANCE FEE
$1.00 to $2,000.00	$131.29 for the first $500.00 plus $5.42 for each additional $100.00 or fraction thereof, to and including $2,000.00	$56.27 for the first $500.00 plus $2.33 for each additional $100.00 or fraction thereof, to and including $2,000.00
$2,001.00 to $50,000.00	$212.59 for the first $2,000.00 plus $13.02 for each additional $1,000.00 or fraction thereof, to and including $50,000.00	$91.22 for the first $2,000.00 plus $5.58 for each additional $1,000.00 or fraction thereof, to and including $50,000.00
$50,001.00 to $200,000.00	$837.55 for the first $50,000.00 plus $8.68 for each additional $1000.00 or fraction thereof, to and including $200,000.00	$359.06 for the first $50,000.00 plus $3.72 for each additional $1000.00 or fraction thereof, to and including $200,000.00
$200,001.00 to $500,000.00	$2,139.55 for the first $200,000.00 plus $6.07 for each additional $1000.00 or fraction thereof, to and including $500,000.00	$917.06 for the first $200,000.00 plus $2.60 for each additional $1000.00 or fraction thereof, to and including $500,000.00
$500,001.00 to $1,000,000.00	$3,960.55 for the first $500,000.00 plus $5.42 for each additional $1,000.00 or fraction thereof, to and including $1,000,000.00	$1,697.06 for the first $500,000.00 plus $2.33 for each additional $1,000.00 or fraction thereof, to and including $1,000,000.00
$1,000,001.00 to $5,000,000.00	$6,670.55 for the first $1,000,000.00 plus $4.77 for each additional $1,000.00 or fraction thereof, to and including $1,000,000.00	$2,862.06 for the first $1,000,000.00 plus $2.05 for each additional $1,000.00 or fraction thereof, to and including $1,000,000.00
$5,000,001.00 to $50M	$25,751.00 for the first $5,000,000.00 plus $4.80 for each additional $1,000.00 or fraction thereof	$11,062.00 for the first $5,000,000.00 plus $4.04 for each additional $1,000.00 or fraction thereof