

Commercial/Industrial Development School Fee Justification Study

Long Beach Unified School District

August 2, 2010

Prepared For:

Long Beach Unified School District
1515 Hughes Way
Long Beach, CA 90810
T 562.997.8000

Prepared By:

Dolinka Group, LLC
20 Pacifica, Suite 900
Irvine, CA 92618
T 949.250.8300
F 949.250.8301

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Executive Summary

This Commercial/Industrial Development School Fee Justification Study ("Study") analyzes the extent to which a nexus can be established in the Long Beach Unified School District ("School District") between categories of commercial/industrial development ("CID") and (i) the need for school facilities, (ii) the cost of school facilities, and (iii) the amount of statutory school fees ("School Fees") per square foot that may be levied for schools pursuant to the provisions of Assembly Bill ("AB") 181, Section 66001 of the Government Code, and subdivision (e) of Section 17621 of the Education Code.

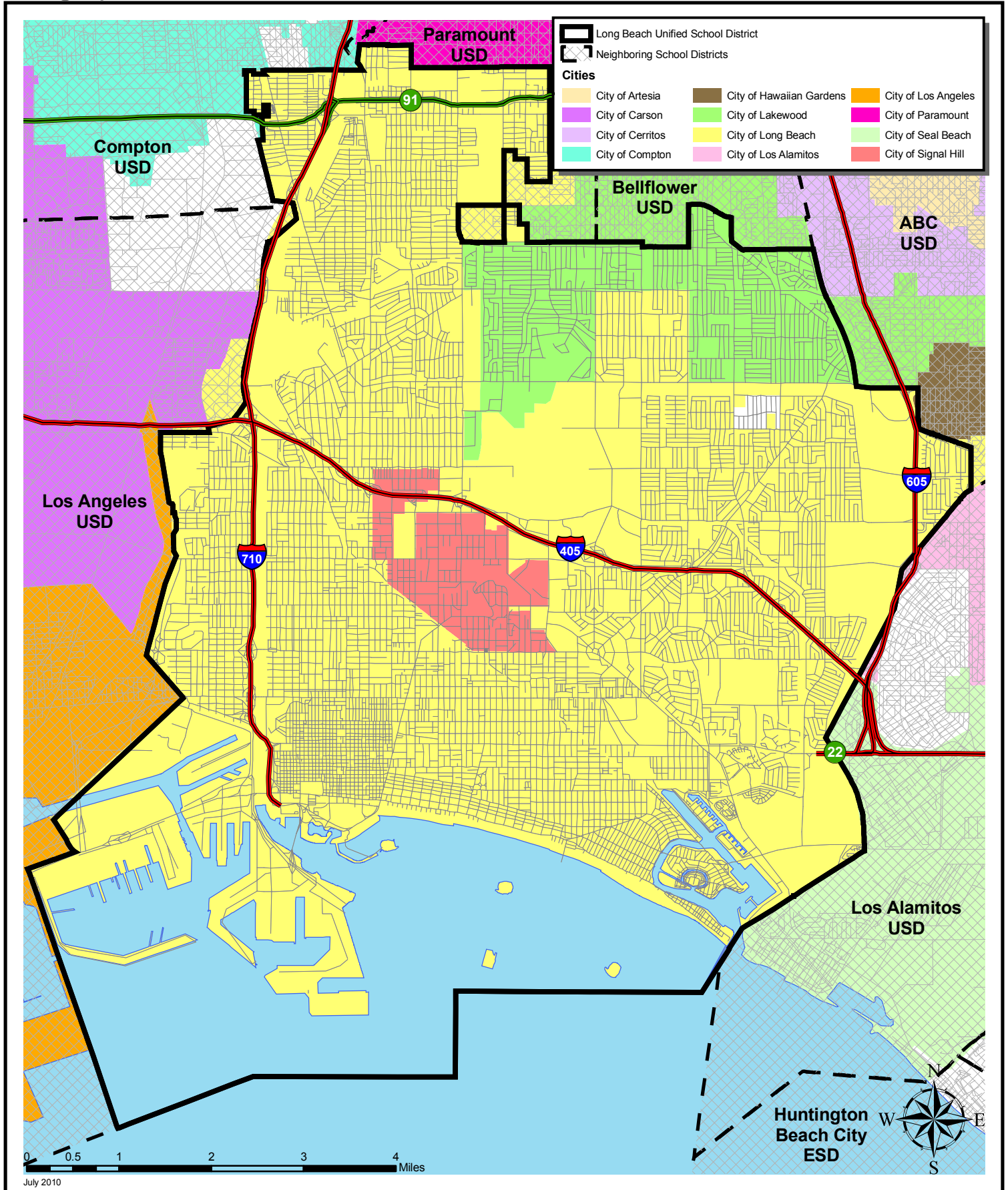
The School District provides education in grades kindergarten through 12 for students residing within all or a portion of the Cities of Avalon, Lakewood, Long Beach, and Signal Hill (collectively, "Cities") and a portion of the unincorporated County of Los Angeles ("County") (please see map on following page for a geographic profile of the School District). Collectively, the School District's school facilities in school year 2009/2010 have a capacity of 81,505 students per section 17071.10(a) of the Education Code. Of these 81,505 seats, 44,779 are at the elementary school level (i.e. grades kindergarten through 6), 13,776 are at the junior high school level (grades 7 and 8), and 22,950 are at the high school level. These capacities include seats from all new school facility construction projects funded by the State of California ("State"), and teaching stations purchased by the School District without State funding. Based on the California Basic Educational Data System ("CBEDS") enrollment data, the student enrollment of the School District in school year 2009/2010 is 85,179 students. Comparing facilities capacity to student enrollment, the School District's student enrollment exceeds facilities capacity at the elementary and high school levels, while facilities capacity exceeds student enrollment at the junior high school level in school year 2009/2010 (please see Section IV for more information on student enrollment and facilities capacity).

New residential housing opportunities within the School District were also evaluated to confirm the availability of new homes for those who may relocate into the School District due to employment opportunities generated by new CID. Projections of the number of future residential units to be built within the School District's boundaries are based on information provided by the planning departments of the Cities in June 2010. Based on this information, approximately 10,343 new residential units could be developed within the School District through calendar year 2030. Of these 10,343 future residential units, 1,793 are expected to be single family detached ("SFD") units while 8,550 are expected to be multi-family attached ("MFA") units.

These units thereby provide room for new employees without the displacement of existing residents. Furthermore, as discussed in the Residential Development School Fee Justification Study ("Residential Study") dated August 2, 2010, some of these units will be constructed in the place of demolished residential units ("Reconstruction"). Based on information from the California Department of Finance ("DOF") for the Cities and County, Dolinka Group, LLC estimates approximately 730 SFD units and 750 MFA units could be demolished to make room for Reconstruction.

Long Beach Unified School District

Geographic Profile - School Year 2010/2011



To determine the commercial/industrial School Fee levels that satisfy the rigorous nexus requirements of AB 181, the Study divides CID into six (6) land use categories: retail and services, office, research and development, industrial/warehouse/manufacturing, hospital, and hotel/motel. The employment impacts of each of these land uses, in terms of the number of employees per 1,000 square feet of building space, are based on information from the San Diego Association of Governments ("SANDAG"). These employee impacts are shown in Table ES-1.

**Table ES-1
Employment Impacts per 1,000 Square Feet CID**

CID Land Use Category	Employees per 1,000 Square Feet
Retail and Services	2.2371
Office	3.4965
Research and Development	3.0395
Industrial/Warehouse/Manufacturing	2.6954
Hospital	2.7778
Hotel/Motel	1.1325

Additional data from the Southern California Association of Governments ("SCAG"), the U.S. Bureau of Census ("Census"), the DOF, the California Employment Development Department ("EDD"), and Acxiom Dataquick Information Systems ("Dataquick") provide a basis for estimating net school district household impacts (i.e., the number of households which locate within the School District per 1,000 square feet of CID floor space) for each category. This number includes only those households occupying new housing units within the School District, as opposed to existing units whose previous occupants may have included school-aged children. Multiplying net school district households by (i) the number of students per household and (ii) total school facilities costs per student, results in estimates of school facilities cost impacts. Collectively, this calculation represents the total school facilities cost impacts per 1,000 square feet of commercial/industrial floor space, resulting from each of the six (6) CID categories within the School District, expressed in 2010 dollars. These results are summarized in Table ES-2.

**Table ES-2
Gross School Facilities Cost Impacts per 1,000 Square Feet of CID (2010\$)**

CID Land Use Category	Elementary School Impacts	Middle School Impacts	High School Impacts	Gross School Facilities Cost Impacts^[1]
Retail and Services	\$1,263	\$381	\$2,055	\$3,699
Office	\$1,977	\$596	\$3,218	\$5,791
Research and Development	\$1,718	\$523	\$2,804	\$5,045
Industrial/Warehouse/Manufacturing	\$1,523	\$462	\$2,481	\$4,466
Hospital	\$1,566	\$474	\$2,559	\$4,599
Hotel/Motel	\$635	\$195	\$1,047	\$1,877

[1] Numbers may not sum due to rounding.

The revenue component of the Study estimates the potential fee revenues generated by CID, including residential fees paid by CID related households, as well as CID School Fees. CID related residential revenues are calculated based on the maximum proposed Alternative No. 2 Fee of \$5.09 per square foot, justified in the School District's School Facilities Needs Analysis dated July 16, 2010. The residential revenues per household are then multiplied by the number of net school district households per 1,000 square feet of CID and the product is subtracted from the gross school facilities cost impacts listed above. This results in net school facilities cost impacts by CID category. This impact is summarized in Table ES-3.

**Table ES-3
Net School Facilities Cost Impacts per 1,000 Square Feet of CID (2010\$)**

CID Land Use Category	Gross School Facilities Cost Impacts	Residential Revenues	Net School Facilities Cost Impacts
Retail and Services	\$3,699	\$332	\$3,367
Office	\$5,791	\$518	\$5,273
Research and Development	\$5,045	\$451	\$4,594
Industrial/Warehouse/Manufacturing	\$4,466	\$399	\$4,067
Hospital	\$4,599	\$411	\$4,188
Hotel/Motel	\$1,877	\$168	\$1,709

On January 27, 2010, the State Allocation Board ("SAB") maintained the maximum CID School Fee authorized by Section 17620 of the Education Code at \$0.47 per square foot. This amount represents the maximum the School District can receive from new CID. Justification of the CID School Fee is based on a comparison of net school facilities cost impacts with the maximum CID School Fee revenues of \$470 per 1,000 square feet. As shown in Table ES-3, the School District is justified in levying the maximum School Fee of \$0.47 per square foot, or \$470 per 1,000 square feet of CID, on future CID for all land use categories.

I. Introduction

Senate Bill ("SB") 50, which Governor Wilson signed on August 27, 1998, was enacted on November 4, 1998, following the approval of Proposition 1A by the voters of the State in the general election on November 3, 1998. SB 50 includes provisions for the following:

1. Issuance of State general obligation bonds in an amount not to exceed \$9.2 billion;
2. Reformation of the State School Building Program; and
3. Reformation of the School Fee/mitigation payment collection procedure.

Additionally, AB 16, which Governor Davis signed on April 26, 2002, was enacted following the approval of Proposition 47 ("Prop 47") by the voters of the State in the general election on November 5, 2002. Prop 47 includes the authorization for issuance of State general obligation bonds in the amount of \$13.05 billion, and AB 16 provides for additional reformation of the State School Building Program into the School Facilities Program. On March 2, 2004 the voters of the State approved Proposition 55 ("Prop 55"). Prop 55 includes the authorization for the additional issuance of State general obligation bonds in the amount of \$12.3 billion. Finally, AB 127, which Governor Schwarzenegger signed on May 20, 2006, was enacted following the approval of Proposition 1D ("Prop 1D") by the voters of the State in the general election of November 7, 2006. Prop 1D includes the authorization for the issuance of State general obligation bonds in the amount of \$10.4 billion.

The Mira-Hart-Murrieta Decisions, which formerly permitted school districts to collect mitigation payments in excess of School Fees under certain circumstances, are suspended by AB 127 until 2012. In lieu of the powers granted by the Mira-Hart-Murrieta Decisions, SB 50 and subsequent legislation provide school districts with a reformed School Fee collection procedure that, subject to certain conditions, authorizes school districts to collect alternative school facility fees ("Alternative Fees") on residential developments. However, not all school districts will qualify to charge Alternative Fees, and Alternative Fees cannot be imposed upon residential units that have existing agreements with a school district.

Therefore, school districts must still rely on School Fees as collected from CID to cover funding shortfalls created by residential development, as well as to cover impacts created by inter-district transfer students. However, before a school district can levy School Fees on new development, State law requires that certain "nexus" findings must be made and documented. The objective of this Study is to provide a rigorous basis for such findings.

II. Legislation

State legislation, specifically AB 2926, AB 1600, and AB 181, provides guidelines, procedures, and restrictions on the levy of School Fees for school facilities, especially with regard to CID. In order to determine the appropriate School Fees for CID, the Study follows the same nexus requirements as outlined by the ABs listed above. Relevant provisions of this legislation are summarized below:

A. AB 2926

AB 2926 was enacted by the State in 1986. Among other things, AB 2926 added various sections to the Government Code which authorize school districts to levy School Fees on new residential development and CID in order to pay for school facilities required by such development. In addition, AB 2926 provides for the following:

1. No city or county can issue a building permit for a development project unless such School Fees have been paid.
2. School Fees for CID must be supported by the finding that such School Fees "are reasonably related and limited to the needs for schools caused by the development".
3. School Fees for 1987 were limited to a maximum of \$1.50 per square foot of enclosed residential floor space and \$0.25 per square foot of enclosed commercial/industrial floor space.
4. Every year, School Fees shall be subject to annual increases based on the statewide cost index for Class B construction, as determined by the SAB at its January meeting.

The provisions of AB 2926 have since been expanded and revised by AB 1600 and AB 181.

B. AB 1600

AB 1600, which created Sections 66000 *et seq.* of the Government Code, was enacted by the State in 1987. AB 1600 requires that all public agencies satisfy the following requirements when establishing, increasing, or imposing a fee as a condition of approval for a development project.

1. Determine the purpose of the fee.
2. Identify the facilities to which the fee will be applied.
3. Determine that there is a reasonable relationship between the need for public facilities and the type of development on which a fee is imposed.
4. Determine that there is a reasonable relationship between the amount of the fee and the public facility or portion of the public facility attributable to the development on which the fee is imposed.

5. Provide an annual accounting of all utilization of fee revenues, and provide further finding each year that the relationship stated in the previous paragraph still exists if any portion of the fee remains unexpended or uncommitted in the School District's accounts five (5) or more years after it was collected.

In other words, AB 1600 limits the ability of a school district to levy School Fees unless (i) there is a need for the revenues to be generated by School Fees and (ii) there is a nexus or reasonable causal relationship between the need for School Fee revenues and the type of development project on which the School Fees are imposed. (The requirements of AB 1600 were clarified with the passage in 2006 of AB 2751, which codifies the findings of *Shapell Industries vs. Milpitas Unified School District*.) The Study will provide information necessary to establish such a nexus between School Fees and residential development, including Reconstruction.

C. AB 181

AB 181, enacted by the State in 1989, made significant changes in several State Codes, including Sections 53080 *et seq.* of the Government Code which was re-codified as Sections 17620 *et seq.* of the Education Code on January 1, 1998. Changes in Section 53080 included additional requirements and procedures for imposing School Fees and other conditions on new development. Specifically, AB 181 imposes more stringent nexus requirements on school districts that wish to levy School Fees on CID, as follows:

1. In order to levy a School Fee on CID, a formal study must be conducted to determine the impact of "the increased number of employees anticipated to result" from new CID on the "cost of providing school facilities within the School District".
2. Only that portion of the School Fee justified by the "nexus findings" contained in this study may be levied. Nexus findings must be made on an individual project basis or on the basis of categories of CID, and must "utilize employee generation estimates that are based on commercial/industrial factors within the school district." Categories to be evaluated may include, but are not limited to, office, retail, transportation, communications and utilities, light industrial, heavy industrial, research and development, and warehouse uses.
3. Starting in 1990, maximum School Fees for residential and CID will be subject to increases every two (2) years rather than annually.
4. An appeals procedure shall be established whereby the levy of School Fees on a commercial/industrial project may be appealed to the governing board of a school district. Grounds for an appeal must include, but are not limited to, improper project classification by commercial/industrial category, or the application of improper or inaccurate employee or student generation factors to the project.

In summary, AB 181 establishes additional requirements which must be satisfied by school districts prior to their levying School Fees on CID.

III. Objective and Methodology of Study

The School District is projecting an increase in student enrollment attributable to new residential development in future years. This projected growth will create a demand for new school facilities within the School District and the need to incur significant facilities costs to meet that demand. As a result, the School District has determined that School Fees should be levied on development projects that have an impact on the School District. In particular, the School District has determined that School Fees must be levied on new commercial/industrial projects if findings can be made that such projects will lead to higher student enrollment and increased facilities costs. The objective of the Study is to provide a basis for such findings pursuant to the requirements of AB 181, the provisions of Section 66001 of the Government Code, and subdivision (e) of Section 17621 of the Education Code.

A. Overview of Methodology

In order to determine the nexus relationships identified in AB 181, the Study analyzes the various linkages between CID and (i) the need for school facilities, (ii) the cost of school facilities, and (iii) the amount of the School Fee that can justifiably be levied. The primary connections or linkages include the following:

1. Job creation (i.e., new CID within the School District creates new jobs);
2. Household formation (i.e., job creation within the School District leads to the formation of new households in the School District);
3. Student generation (i.e., household formation within the School District generates new students);
4. Facilities requirements (i.e., student generation within the School District leads to the need to incur additional costs for new school facilities); and
5. School Fee requirements (i.e., additional costs for new school facilities within the School District leads to the need to levy School Fees for new development).

The above linkages result in a series of impacts which (i) connect new CID with increased school facilities costs and (ii) connect increased school facilities costs with School Fees on CID buildings. These impacts are identified for different CID land use categories, based on a "prototypical unit" of 1,000 square feet of new commercial or industrial floor space for each category. These "linkage impacts" include five (5) major types:

1. Employment Impacts
2. Household Impacts
3. Student Generation Impacts
4. School Facilities Cost Impacts
5. Fee Revenues

The nature and components of these impacts are summarized in Section III.C, along with the key assumptions and data sources used in estimating their magnitude.

Analysis of the first four (4) linkage impacts provides an estimate of the gross school facilities cost impacts per 1,000 square feet of floor space for each CID category. Analysis and comparison of all five (5) impacts provide an estimate of (i) net school facilities cost impacts (i.e., gross school facilities cost impacts minus residential revenues) per 1,000 square feet of CID floor space and (ii) the maximum commercial/industrial School Fee that can be justified.

B. CID Land Use Categories

Linkage impacts are analyzed for the following CID land use categories:

- » Retail and Services
- » Office
- » Research and Development
- » Industrial/Warehouse/Manufacturing
- » Hospital
- » Hotel/Motel

Retail and Services

The retail and services category includes commercial establishments which sell general merchandise, building materials, hard goods, apparel, and other items and services to consumers. Additional establishments in the retail and services category include nurseries, discount stores, restaurants, entertainment theme parks, new/used car sales facilities, service stations, supermarkets, banks, real estate sales offices, and similar uses.

Office

A general office building houses one (1) or more tenants and is the location where affairs of a business, commercial or industrial organization, professional person or firm are conducted. The building or buildings may be limited to one (1) tenant, either the owner or lessee, or contain a mixture of tenants including professional services, insurance companies, investment brokers, company headquarters, and services for the tenants such as a bank or savings and loan, a restaurant or cafeteria, and service retail and services facilities. There may be large amounts of space used for file storage or data processing.

The office category may also include medical offices that provide diagnoses and outpatient care on a routine basis, but which are unable to provide prolonged in-house medical/surgical care. A medical office is generally operated by either a single private physician or a group of doctors.

Research and Development

Research and development facilities are those primarily associated with the application of scientific research to the development of high technology products. Areas of concentration include materials science, computer, electronic, and telecommunications products. Facilities may also contain offices and fabrication areas. Activities performed range from pure research to product development, testing, assembly, and distribution.

Industrial/Warehouse/Manufacturing

Warehouses are facilities that are primarily devoted to the storage of materials. They may also include office and maintenance areas. This category also includes buildings in which a storage unit or vault is rented for the storage of goods.

Manufacturing facilities are building structures where the primary activity is the conversion of raw materials or parts into finished products. Size and type of activity may vary substantially from one facility to another. In addition to actual production of goods, manufacturing facilities generally have office, warehouse, research and associated functions. This category includes light industrial facilities such as printing plants, material testing laboratories, assemblers of data processing equipment, and power stations.

Hospital

Hospital refers to any institution where medical or surgical care is given to non-ambulatory and ambulatory patients. The term does not however, refer to medical clinics (facilities that provide diagnoses and outpatient care only) or to nursing homes (facilities devoted to the care of persons unable to care for themselves).

Hotel/Motel

Hotels and motels are commercial establishments primarily engaged in providing lodging, or lodging and meals, for the general public. As defined by Government Code Section 65995(d), the hotel/motel category includes, but is not limited to, any hotel, motel, inn, tourist home, or other lodging for which the maximum term of occupancy does not exceed 30 days. It does not, however, include any residential hotel as defined by Section 50519(b)(1) of the Health and Safety Code.

Note that CID land use categories may include different industry types. For example, firms in the transportation, communications, or utilities industries may be classified in up to five (5) of the six (6) land use categories shown above. Similarly, retail firms may also occupy office or industrial space (e.g., for corporate headquarters or warehousing) and manufacturing firms may occupy retail space (e.g., factory retail outlets). In evaluating any given project, the School District should assign the project to whichever CID category is the predominant use within the project.

C. Linkage Impacts

Linkage impacts are estimated for "prototypical units" of 1,000 square feet of new commercial or industrial floor space. Separate impact estimates are made for each of the CID categories shown above, based primarily on differences in employment generation among these commercial/industrial uses.

As noted above, major linkage impacts include employment impacts, household formation impacts, student generation impacts, school facilities cost impacts, and residential revenues. The nature and components of these impacts are summarized below, along with the key assumptions and data sources used in their estimation.

C.1 Employment Impacts

Employment impacts for each land use category are represented by the estimated number of employees generated per 1,000 square feet of CID floor space. These impacts include potential on-site employees only.

Assumptions and Data Sources

Employment impact estimates are based on employment generation factors which indicate occupied building square footage per employee. Pursuant to Section 17621(e)(1)(B) of the Education Code, employment generation factors were derived from the report entitled "San Diego Traffic Generators" prepared by SANDAG.

C.2 Household Impacts

Household impacts are represented by the estimated number of households associated with each category of employment impacts per 1,000 square feet of CID floor space. Household impacts include the following components.

- Total household impacts (i.e., the estimated number of households established by on-site employees, wherever these households may be located, per 1,000 square feet of CID floor space);
- School district household impacts (i.e., the estimated number of total households that will be located within the School District per 1,000 square feet of CID floor space); and
- Net school district household impacts (i.e., the estimated number of school district households that will occupy new housing within the School District per 1,000 square feet of CID floor space).

Please note that net school district household impacts are a component of school district household impacts, which are in turn a component of total household impacts. Also note that only net school district households are assumed to generate potential new students, thereby increasing school facilities costs for the School District. This is the case because only net school district households reside in new housing units--which may create a net demand for new school facilities and generate potential fee revenues--compared to existing housing units, whose previous occupants may have already had school-age children and which generate no potential fee revenues.

Assumptions and Data Sources

Total household impact estimates are based on the average number of employed persons per household. This average was calculated by dividing the total number of employed persons in the School District as provided by EDD and the total number of occupied households in the School District as provided by DOF.

School district household impact estimates are based on the propensity of employed persons to live and work within the School District. Information gathered by the Census was used in this calculation.

Net school district household impacts are based on the propensity to occupy new housing units (i.e., the ratio of new home sales to total home sales in the School District's region). This ratio is estimated based on home sales data provided by Dataquick.

C.3 Student Generation Impacts

Student generation impacts are calculated based on the estimated number of the School District's students associated with each category of net school district household impacts per 1,000 square feet of CID floor space. Separate student generation impacts are estimated for each school level (i.e., elementary school, middle school, and high school).

Inter-district transfer impacts are also calculated based on current employment within the School District and the current number of inter-district transfer students.

Assumptions and Data Sources

Student generation impacts are based on estimates of students per residential unit calculated by Dolinka Group. Student generation factors ("SGFs") are discussed in greater detail in Section VI. Inter-district data was provided by the School District while employment estimates are based on data provided by the SCAG.

C.4 School Facilities Costs Impacts

School facilities cost impacts are represented by the estimated gross school facilities cost impacts associated with each category of CID. Impacts are estimated for school facilities at each school level. These facilities cost impacts are based on site acquisition costs and facility construction costs at the elementary, middle, and high school levels.

Assumptions and Data Sources

School facilities cost impacts were calculated by multiplying the additional school facilities needed to adequately house students generated from future residential units by estimated school facilities costs. School facilities costs are based on estimates prepared by Dolinka Group. For more information on school facilities costs, see the Residential Study.

C.5 Fee Revenues

Fee revenues for each land use category include the following components:

- Residential revenues associated with CID (i.e., residential revenues associated with each category of net school district household impacts per 1,000 square feet of commercial/industrial floor space); and
- Potential CID School Fee revenues (i.e., maximum CID School Fee revenues per 1,000 square feet of floor space).

Subtracting residential revenues from gross school facilities cost impacts for each CID category results in net school facilities cost impacts per 1,000 square feet of commercial/industrial floor space. These are the net school facilities costs that may have to be funded by CID School Fees.

Dividing net school facilities cost impacts by potential CID School Fee revenues for each CID category results in the percentage of the maximum CID School Fee that may be justifiably levied.

Assumptions and Data Sources

Residential revenue estimates of \$7,106 per unit are based on a weighted average of (i) the School District's proposed Alternative No.2 Fee of \$5.09 per square foot multiplied by (ii) the School District's weighted average square footage of 1,396 square feet per residential unit.

IV. Facilities Capacity and Cost Estimates

In order to determine whether the School District's existing school facilities contain excess capacity to house students generated by future CID, Dolinka Group evaluated school facilities capacity and student enrollment for school year 2009/2010. In addition, Dolinka Group utilized information contained in the Residential Study to estimate the school facilities costs per student.

A. School Facilities Capacity

Collectively, the School District's school facilities in school year 2009/2010 have a capacity of 81,505 students per section 17071.10(a) of the Education Code. Of these 81,505 seats, 44,779 are at the elementary school level, 13,776 are at the junior high school level, and 22,950 are at the high school level. These capacities include seats from all new school facility construction projects funded by the State and teaching stations purchased by the School District without State funding. Furthermore, the school level configuration of the School District has been altered to be consistent with the SAB Form 50-02. Based on enrollment data from CBEDS, the School District's fall enrollment for school year 2009/2010 is 85,179 students. As shown in Table 1 below, the School District's student enrollment exceeds facilities capacity at the elementary and high school levels, while facilities capacity exceeds student enrollment at the junior high school level in school year 2009/2010. The excess seats identified in Table 1, therefore, will be used to reduce the impact of students generated from future residential development.

**Table 1
Existing School Facilities Capacity and Student Enrollment**

School Level ^[1]	2009/2010 Facilities Capacity ^[2]	2009/2010 Student Enrollment ^[3]	Excess / (Shortage) Capacity
Elementary School (Grades K-6)	44,779	45,097	(318)
Junior High School (Grades 7-8)	13,776	13,375	401
High School (Grades 9-12)	22,950	26,707	(3,757)
Total	81,505	85,179	(3,674)

[1] Please note that the School District's school level configuration has been altered to be consistent with the SAB Form 50-02.

[2] SAB Form 50-02 plus State funded capacity and teaching stations purchased by the School District.

[3] 2009 CBEDS.

B. School Facilities Costs per Student

In order to calculate the total school facilities cost impacts per student generated by future residential units less the estimated number of units to be demolished ("Net Future Units"), Dolinka Group first determined the School District's school facilities needs required by future residential units. The school facilities needs for future residential units were determined by projecting student enrollment and analyzing existing school facilities. Based on the calculations included in the Residential Study, the School District will need to construct new elementary school, middle school, high school, and central administrative and support facilities. Dolinka Group then utilized the estimated cost of constructing new elementary school, middle school, high school, and central administrative and support facilities contained in the Residential Study.

As shown in Table 13 of the Residential Study, the total school facilities cost impacts are \$115,317,280 at the elementary school level, \$32,356,085 at the middle school level, and \$145,506,971 at the high school level. Table 2 shows the total school facilities cost impacts for future residential development, the projected number of students to be generated from Net Future Units, and the school facilities costs per student by school level.

**Table 2
Estimated School Facilities Cost Impacts per Student (2010\$)**

School Level	Total School Facilities Cost Impacts	Projected Students Generated from Net Future Units	School Facilities Costs per Student
Elementary School (Grades K-5)	\$115,317,280	1,598	\$72,164
Middle School (Grades 6-8)	\$32,356,085	798	\$40,546
High School (Grades 9-12)	\$145,506,971	1,126	\$129,225

V. New Residential Housing Opportunities within the School District

To satisfy the nexus requirements, the Study must examine the extent to which new residential development can house a net increase in students generated by employment opportunities within the School District. This is because families of new employees within the School District who move into existing homes are assumed to be displacing families with identical numbers of students, thereby resulting in no net change in the School District's student enrollment. Only families moving into new homes, or families moving into existing homes where the displaced families are moving into new homes, can lead to an increase in the School District enrollment.

Projections of the number of future residential units to be built within the School District's boundaries were obtained from information provided by the planning departments of the Cities in June 2010. Based on this data, 10,343 new residential units are projected to be developed within the School District through calendar year 2030. Table 3 below shows the number of future residential units by land use.

**Table 3
Future Residential Units**

Land Use	Future Residential Units
Single Family Detached	1,793
Multi-Family Attached	8,550
Total	10,343

Furthermore, based on information from the DOF for the Cities and County, Dolinka Group estimates approximately 730 SFD units and 750 MFA units could be demolished to make room for Reconstruction. For more information on Reconstruction, please see the Residential Study.

VI. Findings of Commercial/Industrial Impact Analysis

This section presents the quantitative findings of the commercial/industrial nexus analysis summarized in Section III. In particular, this section presents estimates of the following:

- All "linkage impacts" discussed in Section III, by CID land use category.
- Gross school facilities cost impacts per 1,000 square feet of commercial/industrial floor space.
- Net school facilities cost impacts (i.e., gross school facility cost impacts minus residential revenues) per 1,000 square feet of commercial/industrial floor space.
- The percentage of the maximum CID School Fee per square foot allowed by law that can be justified to pay for new school facilities.

A. Employment Impacts

As indicated in Section III, employment impacts for different CID categories equal the estimated number of on-site employees generated per 1,000 square feet of commercial/industrial floor space. Consistent with the provisions of Section 17621(e)(1)(B) of the Education Code, employment impacts for each category are based on data from SANDAG. Employment factors utilized in the analysis are shown below:

- » Retail and Services--447 square feet per employee
- » Office--286 square feet per employee
- » Research and Development--329 square feet per employee
- » Industrial/Warehouse/Manufacturing--371 square feet per employee
- » Hospital--360 square feet per employee
- » Hotel/Motel--883 square feet per employee

The reciprocals of these factors indicate numbers of employees per square foot. Multiplying the reciprocals by 1,000 square feet results in employees per 1,000 square feet, or the employment impacts shown in Table 4.

**Table 4
Employment Impacts per 1,000 Square Feet**

CID Land Use Category	Employees per 1,000 Square Feet
Retail and Services	2.2371
Office	3.4965
Research and Development	3.0395
Industrial/Warehouse/Manufacturing	2.6954
Hospital	2.7778
Hotel/Motel	1.1325
Source: SANDAG	

B. Household Impacts

As noted in Section III, household impacts equal the estimated number of households associated with each category of employment impacts, per 1,000 square feet of commercial/industrial floor space. Household impacts include the following components:

- Total Household Impacts
- School District Household Impacts
- Net School District Household Impacts

B.1 Total Household Impacts

Total household impacts equal the number of households per 1,000 square feet of commercial/industrial floor space established by on-site employees, wherever these households may be located, and include households residing outside of the School District. These impacts are estimated based on an average of 1.2603 employed persons per household.

This estimate was calculated by dividing the total number of employed people in the School District as provided by EDD, by the total number of households in the School District as provided by DOF.

Dividing employment impacts listed in Table 4 by this 1.2603 factor results in the total household impacts per 1,000 square feet of commercial/industrial floor space shown in Table 5.

**Table 5
Total Household Impacts per 1,000 Square Feet CID**

CID Land Use Category	Total Household Impacts
Retail and Services	1.7751
Office	2.7743
Research and Development	2.4117
Industrial/Warehouse/Manufacturing	2.1387
Hospital	2.2041
Hotel/Motel	0.8986

B.2 School District Household Impacts

School district household impacts equal the number of total households that locate within the School District per 1,000 square feet of CID floor space. To determine these impacts, Dolinka Group utilized data from the Census. Based on this data, approximately 33.44 percent of the employed persons within the School District are estimated to live within the School District. This trend is expected to increase as new residential and CID projects are approved and additional homes and jobs are created within the School District.

Multiplying total household impacts shown in Table 5 by the estimated propensity to live and work within the School District factor of 33.44 percent results in the school district household impacts per 1,000 square feet of CID. These are shown in Table 6.

**Table 6
School District Household
Impacts per 1,000 Square Feet CID**

CID Land Use Category	School District Household Impacts
Retail and Services	0.5936
Office	0.9277
Research and Development	0.8065
Industrial/Warehouse/Manufacturing	0.7152
Hospital	0.7371
Hotel/Motel	0.3005

B.3 Net School District Household Impacts

Net school district household impacts equal the number of school district household impacts by CID category per 1,000 square feet of commercial/industrial floor space that will occupy new housing units within the School District. These impacts are based on the propensity to occupy new housing within the general area of the School District.

Data on recent resales and new home sales was obtained from Dataquick. Based on this data, new home sales in the School District were estimated to equal 7.86 percent of the total housing units which experienced occupant turnover during that period.

Multiplying school district household impacts shown in Table 6 by 7.86 percent results in the net school district household impacts per 1,000 square feet of CID shown in Table 7. As noted in Section III, only net school district households are assumed to generate potential new students, thereby increasing school facilities costs to the School District.

Table 7
Net School District Household
Impacts per 1,000 Square Feet CID

CID Land Use Category	Net School District Household Impacts
Retail and Services	0.0467
Office	0.0729
Research and Development	0.0634
Industrial/Warehouse/Manufacturing	0.0562
Hospital	0.0579
Hotel/Motel	0.0236

C. Student Generation Impacts

As noted in Section III, student generation impacts equal the number of the School District's students associated with each category of CID space. Separate student generation impacts are estimated for each CID category and school level.

C.1 Residential Student Generation Impacts

In order to analyze the impact on the School District's student enrollment from future residential units, Dolinka Group calculated SGFs for SFD units and MFA units which include condominiums, townhomes, duplexes, triplexes, and apartments. The process of determining SGFs involved cross-referencing the School District's enrollment data against the County Assessor's residential data (see the Residential Study for more information). The resulting SGFs are shown in Table 8.

**Table 8
Student Generation Factors**

School Level	Single Family Detached Units	Multi-family Attached Units
Elementary School	0.2287	0.1737
Middle School	0.1263	0.0852
High School	0.1871	0.1189
Total	0.5421	0.3778

To blend the SGFs of the two (2) land uses into a single SGF for each school level, the land uses were weighted in proportion to each type's percentage of the future residential units to be constructed within the School District. Applying these weighting factors yields the following blended SGFs.

**Table 9
Blended Student Generation Factors**

School Level	Student Generation Factors
Elementary School	0.1832
Middle School	0.0923
High School	0.1307
Total	0.4062

C.2 Total Student Generation Impacts

Multiplying net school district household impacts shown in Table 7 by the blended SGFs shown in Table 9 results in the average student generation impacts per 1,000 square feet of CID. These average student generation impacts are shown by school level in Table 10.

Table 10
Average Student Generation Impacts per 1,000 Square Feet CID

CID Land Use Category	Elementary School Impacts	Middle School Impacts	High School Impacts	Total Student Generation Impacts^[1]
Retail and Services	0.0086	0.0043	0.0061	0.0190
Office	0.0134	0.0067	0.0095	0.0296
Research and Development	0.0116	0.0059	0.0083	0.0258
Industrial/Warehouse/Manufacturing	0.0103	0.0052	0.0073	0.0228
Hospital	0.0106	0.0053	0.0076	0.0235
Hotel/Motel	0.0043	0.0022	0.0031	0.0096

[1] Numbers may not sum due to rounding.

C.3 Inter- District Transfer Impacts

The inter-district transfer rate is determined by calculating the ratio of student transfers into the School District's schools by the number of persons employed within its boundaries. Based on information provided by the School District, total student transfers into the School District's schools for school year 2009/2010 total 605 at the elementary school level, 346 at the middle school level, and 657 at the high school level. Employment within the School District's area is estimated at 150,640 persons based on employment estimates provided by SCAG. Table 11 shows the inter-district transfer rate by school level.

Table 11
Inter- District Transfer Rates

School Level	Inter- District Transfer Rate
Elementary School	0.0040
Middle School	0.0023
High School	0.0044
Total	0.0107

In order to calculate total inter-district transfer impacts per 1,000 square feet of CID space, the inter-district transfer rate by school level in Table 11 must first be multiplied by the employment impact factors by CID land use category in Table 4. The resulting inter-district transfer impacts are displayed in Table 12.

**Table 12
Inter- District Transfer Impacts per 1,000 Square Feet CID**

CID Land Use Category	Elementary School Inter- District Impacts	Middle School Inter- District Impacts	High School Inter- District Impacts	Total Inter- District Impacts
Retail and Services	0.0089	0.0051	0.0098	0.0238
Office	0.0140	0.0080	0.0154	0.0374
Research and Development	0.0122	0.0070	0.0134	0.0326
Industrial/Warehouse/Manufacturing	0.0108	0.0062	0.0119	0.0289
Hospital	0.0111	0.0064	0.0122	0.0297
Hotel/Motel	0.0045	0.0026	0.0050	0.0121

C.4 Total Student Generation Impacts

To determine the total student generation impacts of CID on the School District, the average student generation impacts from Table 10 are added to the inter-district transfer impacts from Table 12. The resulting total student generation impacts are displayed in Table 13.

**Table 13
Total Student Generation Impacts per 1,000 Square Feet CID**

CID Land Use Category	Total Elementary School Impacts	Total Middle School Impacts	Total High School Impacts	Total Student Generation Impacts^[1]
Retail and Services	0.0175	0.0094	0.0159	0.0428
Office	0.0274	0.0147	0.0249	0.0670
Research and Development	0.0238	0.0129	0.0217	0.0584
Industrial/Warehouse/Manufacturing	0.0211	0.0114	0.0192	0.0517
Hospital	0.0217	0.0117	0.0198	0.0532
Hotel/Motel	0.0088	0.0048	0.0081	0.0217

[1] Numbers may not sum due to rounding.

D. Gross School Facilities Cost Impacts

As noted in Section III, school facilities cost impacts equal the gross school facilities cost impacts (exclusive of residential revenues) associated with the total student generation impact of each CID category. These impact estimates are derived from the school facilities costs per student shown in Table 2 and the total student generation impacts shown in Table 13. Multiplying the total student generation impacts by the costs per student results in the gross school facilities cost impacts per 1,000 square feet shown in Table 14.

**Table 14
Gross School Facilities Cost Impacts per 1,000 Square Feet CID (2010\$)**

CID Land Use Category	Elementary School Impacts	Middle School Impacts	High School Impacts	Gross School Facilities Cost Impacts^[1]
Retail and Services	\$1,263	\$381	\$2,055	\$3,699
Office	\$1,977	\$596	\$3,218	\$5,791
Research and Development	\$1,718	\$523	\$2,804	\$5,045
Industrial/Warehouse/Manufacturing	\$1,523	\$462	\$2,481	\$4,466
Hospital	\$1,566	\$474	\$2,559	\$4,599
Hotel/Motel	\$635	\$195	\$1,047	\$1,877

[1] Numbers may not sum due to rounding.

E. Fee Revenues

As noted in Section III, fee revenues include two (2) components: residential revenues and potential CID School Fee revenues.

E.1 Residential Revenues and Net School Facility Costs

Residential revenues equal the maximum revenues from residential development associated with each category of net school district households per 1,000 square feet of CID floor space. These revenues are derived from the School District's proposed Alternative No. 2 Fee of \$5.09 per square foot multiplied by the School District's weighted average square footage for residential units of 1,396 square feet per unit. Based on this calculation, the residential revenues per unit in the School District are estimated to be \$7,106.

Multiplying net school district household impacts shown in Table 7 by residential revenues results in the residential revenues per 1,000 square feet of CID floor space shown in Table 15.

Table 15
Residential Revenues per 1,000 Square Feet CID (2010\$)

CID Land Use Category	Net School District Household Impacts	Average Residential Revenues	Residential Revenues
Retail and Services	0.0467	\$7,106	\$332
Office	0.0729	\$7,106	\$518
Research and Development	0.0634	\$7,106	\$451
Industrial/Warehouse/Manufacturing	0.0562	\$7,106	\$399
Hospital	0.0579	\$7,106	\$411
Hotel/Motel	0.0236	\$7,106	\$168

E.2 Net School Facilities Cost Impacts

In order to calculate the net school facilities cost impacts per 1,000 square feet of CID, the residential revenues shown in Table 15 were subtracted from the gross school facilities cost impacts shown in Table 14. The results are the net school facilities cost impacts that must be funded by CID School Fees. The net school facilities cost impacts are shown in Table 16.

Table 16
Net School Facilities Cost Impacts per 1,000 Square Feet of CID (2010\$)

CID Land Use Category	Gross School Facilities Cost Impacts	Residential Revenues	Net School Facilities Cost Impacts^[1]
Retail and Services	\$3,699	\$332	\$3,367
Office	\$5,791	\$518	\$5,273
Research and Development	\$5,045	\$451	\$4,594
Industrial/Warehouse/Manufacturing	\$4,466	\$399	\$4,067
Hospital	\$4,599	\$411	\$4,188
Hotel/Motel	\$1,877	\$168	\$1,709

[1] Numbers may not sum due to rounding.

E.3 Potential Commercial/Industrial School Fee Revenues

Potential commercial/industrial School Fee revenues equal \$470 per 1,000 square feet of commercial/industrial development. This School Fee is based on the current maximum commercial/industrial School Fee of \$0.47 per square foot.

F. Justification of Commercial/Industrial School Fees

Dividing net school facilities cost impacts shown in Table 16 by \$470 for each land use category results in the cost-revenue ratios shown in Table 17. The cost-revenue ratios determine whether the maximum CID School Fee can be justified. In calculating the ratios, only net school facilities cost impacts are considered in comparison to the CID School Fee revenues.

**Table 17
Cost Revenue Ratios**

CID Land Use Category	Cost-Revenue Ratio
Retail and Services	7.1638
Office	11.2191
Research and Development	9.7745
Industrial/Warehouse/Manufacturing	8.6532
Hospital	8.9106
Hotel/Motel	3.6362

On January 27, 2010, the SAB maintained the maximum CID School Fee authorized by Section 17620 of the Education Code at \$0.47 per square foot. Justification of the CID School Fee is based on a comparison of net school facilities cost impacts with the maximum CID School Fee revenues of \$470 per 1,000 square feet. As shown in Table 17, the School District is justified in levying the maximum School Fee on future CID of \$0.47 per square foot, or \$470 per 1,000 square feet of CID, for all land use categories.

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