TO: JUDY ROSS, ASSISTANT DIRECTOR, MINETA SAN JOSÉ INTERNATIONAL AIRPORT
FROM: LANDRUM & BROWN, INC. AND JONES LANG LASALLE
DATE: MARCH 6, 2019
RE: DOWNTOWN AIRSPACE AND DEVELOPMENT CAPACITY STUDY (PROJECT DADCS)
REAL ESTATE IMPACTS ASSESSMENT SUMMARY

DRAFT WORK PRODUCT

This memorandum presents the assumptions, methodology and findings of the aviation and real estate related impacts associated with the airspace protection scenarios under consideration as part of the Downtown Airspace and Development Capacity Study (DADCS).

For reference, the following airspace protection scenarios were evaluated as part of this study:

- Scenario 1: Existing airspace protection
- Scenario 4: No OEI protection/TERPS Only
- Scenario 7: Straight-out OEI protection without West OEI Corridor
- Scenario 9: No OEI protection, increased FAA height limits
- Scenario 10: Modified West OEI Corridor at defined development heights

Since airports and aviation services provide a wide range of economic benefits, this study approaches the assessment of economic contribution from four different perspectives:

- Direct aviation economic impacts
- Induced aviation economic impacts
- Real estate density impacts
- Real estate economic impacts

The aviation economic impacts assessment led by Landrum & Brown (L&B) evaluates the direct and indirect costs to Mineta San José International Airport (SJC or Airport) and the airlines related to the One-Engine Inoperative (OEI) weight/lost passengers (PAX) penalties calculated for each of the airspace protection scenarios considered in the study.

The real estate density impacts assessment conducted by Jones Lang LaSalle (JLL) evaluated the economic development impacts of changing the height limits imposed by each of the proposed airspace protection scenarios. JLL identified potential development sites in both the Downtown Core and Diridon Station Area potentially impacted by each scenario, estimated the increase in new development density due to airspace protection scenarios, and used this analysis to provide inputs for an IMPLAN economic

analysis conducted by L&B. IMPLAN is the regional economic forecasting software used by L&B to forecast the future total economic impact of estimated new development under each airspace protection scenario.

Two types of economic impacts were assessed in this study, direct and induced impacts. Direct impacts result from new development, such as new office and residential construction and permanent employment by occupants of newly constructed commercial spaces. They include local purchases by construction contractors for items such as materials and supplies, professional services, equipment and salaries and wages. They also include similar local expenditures by businesses that occupy new commercial spaces resulting from increased development density.

Induced impacts are those derived from construction activities spending and office employment that result from increased development density. They are the result of local purchases made by businesses and their employees that supply construction contractors and tenants of the commercial space created as a result of the increased development capacity.

**Direct Aviation Economic Impacts:**

In 2024 which is assumed to be the first year of impact to aviation, the number of lost passengers due to weight penalties exceeds the number of available empty seats for Scenario 4 and Scenario 9. Therefore, these are the only scenarios with actual direct impacts. Scenario 4 would result in a loss of $1.5 million to the airlines and Scenario 9 would result in a loss of $9.8 million to the airlines. The loss is calculated by taking the average load factor for impacted flights, by season, and determining the number of additional seats that must be vacated due to achieve the necessary aircraft takeoff weight.

**Induced Aviation Economic Impacts:**

L&B estimates that measurable airline and Airport related impacts exceeding the typical number of unsold seats on a route (accounting for the average load factors per specific markets) occur only with regard to passenger penalties for Scenarios 4 and 9 and do not occur at all for cargo penalties under any scenario.

**Real Estate Density Impacts:**

JLL has estimated that the Diridon Station Area, under existing height limitations, can support 10.7 million square feet of existing density. Based on historical absorption rates in the Diridon Station Area it will take 13 years until the aggregate development capacity reaches a point where today's available density is absorbed, and the additional density afforded by each scenario is realized. This assessment does not account for the impact of increased square foot on a specific project.

For the Diridon Station Area, the maximum additional square feet in density afforded by each scenario is depicted in the following table.

**Maximum Additional Density in the Diridon Station Area**

| Scenario | Net New Square Feet |
|---|---|
| **4: No OEI** | 8,600,000 |
| **7: Straight-Out OEI** | 8,500,000 |
| **9: No OEI, incr. height limits** | 10,000,000 |
| **10A: Straight-Out OEI w/ West OEI Alts.** | 1,100,000 |
| **10B: Straight-Out OEI w/ West OEI Alts.** | 3,100,000 |
| **10C: Straight-Out OEI w/ West OEI Alts.** | 4,900,000 |
| **10D: Straight-Out OEI w/ West OEI Alts.** | 6,800,000 |

A similar analysis was conducted for the Downtown Core. The Downtown Core is considerably larger than the Diridon Station Area and contains a greater number of underutilized parcels. The Downtown Core can support between 34.8 million and 32.9 million in additional density under existing conditions, depending on if development is 100% commercial or 100% residential. As development is not likely to be 100% of either land use, the development potential of the Downtown Core under current conditions will be somewhere in between.

There is significant aggregate capacity for new development in the Downtown Core without making any adjustments to allowable building heights. Based on historical absorption and construction rates (10% office/90% residential), it may be 70 years until the current available density is realized for office construction under existing conditions, and 55 years until residential density is realized under existing conditions. However, increasing developable building heights in the Downtown Core will effect some specific project sites and could determine whether or not those sites are developed at all.

Scenario 4 and 9 provide additional developable height on project sites in the Downtown Core. In Scenario 4 the range is from 5’ to 35’ depending on the location of the site.

**Real Estate Economic Impacts**

2032 is projected to be the first-year in which there is net new square footage development in the Diridon Station Area greater than what could be achieved in existing conditions.

In 2032, annual construction expenditures related to developing new Diridon Station Area density are estimated to be $355.9 million with an associated increase of 230 permanently employed office workers. By 2036, economic impacts under each scenario is different. For example, there is no annual construction under scenario 10A and less under scenario 10B ($143.5 million) than under the remaining Scenarios 4, 7, 9, 10C and 10D. As construction of commercial real estate is completed and buildings are occupied, it is assumed that 1,150 permanent jobs will be created under each scenario, with the exception of Scenario 10A, which creates 540 jobs.

In 2032, under all Scenarios, $355.9 million in construction expenditures and 230 permanent jobs translate into $188.3 million in direct economic impacts in terms of local GDP. By the year 2038, direct impacts on City GDP for Scenarios 4, 7, 9 and 10D of $511.6 million are equivalent to $355.9 million in construction expenditures plus an increase of 1,610 jobs.

In 2038 construction will continue to contribute $355.9 million in local construction expenditures under Scenarios 4, 7, 9 and 10D and none under Scenario 10A. Only office related construction expenditures occur under Scenario 10B ($10 million). Construction under Scenario 10C decreases to $309.3 million. Permanent employment increases under all scenarios with the exception of Scenario 10A (540 jobs), increasing to 1,540 jobs under scenario 10B and to 1,610 jobs under Scenarios 4, 7, 9, 10C and 10D.

Regional gross domestic product (GDP) impacts driven by new Diridon Station Area development are illustrated in Total Economic Impact Summary 2038 table below. Direct GDP reductions have been adjusted to reflect the extent to which reductions in passenger and visitor expenditures occur within the boundaries of the City of San José. By observation aviation impacts are relatively small when compared to real estate impacts. This is due primarily to the fact that aviation impacts do not result in changes in the existing airport service market under any air space protection scenario. At the same time, real estate assessments under each of the scenarios include an assumption of a relatively significant increases in permanent employment associated with new Diridon Station Area development.

**Total Economic Impact Summary 2038**

| Airspace | Aviation Impact | | Real Estate Impact | |
|---|---|---|---|---|
| **Scenario** | Employment | GDP Gain/Loss | Employment | GDP Gain/Loss |
| **10A** | - | - | 1,000 | $184,000,000 |
| **10B** | - | - | 2,400 | $438,000,000 |
| **10C** | - | - | 4,300 | $700,000,000 |
| **4, 7, 9, 10D** | (27) | ($2,000,000) | 4,900 | $747,000,000 |

*Source: Landrum & Brown, IMPLAN*

The table below summarizes the estimated City of San José local sales tax implications associated with each of the airspace protection scenarios and is broken down further by airlines/airport and real estate tax impacts.

**Estimated City of San José Local Sales Tax**

| Airspace Scenario | 2024 | | 2028 | | 2032 | | 2036 | | 2038 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Airline /Airport | Real Estate | Airline /Airport | Real Estate | Airline /Airport | Real Estate | Airline /Airport | Real Estate | Airline /Airport | Real Estate |
| **4** | ($2,100) | - | ($2,873) | - | ($3,200) | $110,000 | ($3,500) | $206,800 | ($3,700) | $253,400 |
| **7** | - | - | - | - | - | $110,000 | - | $206,800 | - | $253,400 |
| **9** | ($13,700) | - | ($16,002) | - | ($17,800) | $110,000 | ($19,600) | $206,800 | ($20,500) | $253,400 |
| **10A** | - | - | - | - | - | $110,000 | - | $57,700 | - | $57,700 |
| **10B** | - | - | - | - | - | $110,000 | - | $141,100 | - | $137,400 |
| **10C** | - | - | - | - | - | $110,000 | - | $206,800 | - | $226,800 |
| **10D** | - | - | - | - | - | $110,000 | - | $206,800 | - | $253,400 |

*Source: Landrum & Brown, IMPLAN*