

Appendix Ic

Lafayette Street Logistics Facility Alternatives Assessment

Prepared by

URBAN CROSSROADS

November 17, 2022

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SUBJECT: LAFAYETTE STREET LOGISTICS FACILITY ALTERNATIVES ASSESSMENT

Dear Nicole Sauviat Criste:

Urban Crossroads, Inc. is pleased to provide the following assessment of site land use alternatives for the Lafayette Street Logistics Facility (referred to as “Project”), which is located south of Lafayette Street and east of Dale Evans Parkway in the Town of Apple Valley.

PROJECT ALTERNATIVES

The proposed Project evaluated consists of 1,207,544 square feet (sf) of high cube warehouse/distribution use which is estimated to include 1,026,412 square of high cube warehouse floor area (85% of total), and 181,132 square feet of cold storage (15% of total). This review of Project alternatives addresses changes in trip generation, access, and roadway / intersection lane needs for three potential land use alternatives. The Project alternatives include:

1. No Project/No Development
2. All Warehouse (High Cube)
3. Reduced Warehouse – 25% reduction in square footage, to 900,000 SF (High Cube)

PROJECT ALTERNATIVES TRIP GENERATION

For Alternative 1 - No Project / No Development, the vacant site would not generate any peak hour or daily trips.

Alternative 2 - All Warehouse (High Cube) trip generation is shown on Table 1 for actual vehicles and Table 2 for passenger car equivalent (PCE). As indicated on Table 1, Alternative 2 - All Warehouse (High Cube) is anticipated to generate a total of 2,555 actual vehicle trip-ends per day with 147 AM peak hour trips and 198 PM peak hour trips. This alternative is anticipated to generate a total of 4,091 PCE trip-ends per day with 234 AM peak PCE trips and 318 PM peak PCE trips, as shown on Table 2.

Alternative 3 - Reduced Warehouse (High Cube) trip generation is shown on Table 3 for actual vehicles and Table 4 for passenger car equivalent (PCE). As indicated on Table 3,

Alternative 3 - Reduced Warehouse (High Cube) is anticipated to generate a total of 1,916 actual vehicle trip-ends per day with 109 AM peak hour trips and 148 PM peak hour trips. This alternative is anticipated to generate a total of 3,068 PCE trip-ends per day with 176 AM peak PCE trips and 238 PM peak PCE trips, as shown on Table 4.

Table 5 presents the trip generation comparison for actual vehicles. For Alternative 2 - All Warehouse (High Cube), there is a trip generation reduction of 14 vehicles per day in comparison to the proposed Project. The AM peak hour experiences a reduction of 1 vehicle and the PM peak hour experiences an increase of 6 vehicles.

For Alternative 3 - Reduced Warehouse (High Cube), there is a trip generation reduction of 653 vehicles per day in comparison to the proposed Project. The AM peak hour experiences a reduction of 39 vehicles and the PM peak hour experiences a reduction of 44 vehicles.

Table 6 presents the trip generation comparison for PCEs. For Alternative 2 - All Warehouse (High Cube), there is a PCE trip generation increase of 39 PCE vehicles per day in comparison to the proposed Project. The AM peak hour experiences an increase of 5 AM peak PCE trips and the PM peak hour experiences an increase of 17 PM peak PCE trips.

For Alternative 3 - Reduced Warehouse (High Cube), there is a PCE trip generation reduction of 984 vehicles per day in comparison to the proposed Project. The AM peak hour experiences a reduction of 53 AM peak PCE trips and the PM peak hour experiences a reduction of 63 PM peak PCE trips.

ALTERNATIVE 1 - NO PROJECT / NO DEVELOPMENT

For the No Project / No Development alternative, a different source of construction of the project-adjacent General Plan roadways would need to be found. The roadway improvements that would no longer occur in conjunction with the Project include:

Widening of Dale Evans at its ultimate easterly half-section width as a Major Divided Parkway (142-foot right-of-way) with the Town's standard, from Lafayette Street to Burbank Street.

Widening of Lafayette Street at its ultimate southerly half-section width as a Secondary Road (88-foot right-of-way) with the Town's standard, from Dale Evans Parkway to Dachshund Avenue.

Construction of Burbank Street at its ultimate northerly half-section plus one lane as an Industrial & Commercial Local Street (66-foot right-of-way) with the Town's standard, from Dale Evans Parkway to Dachshund Avenue.

Construction of Dachshund Avenue at its ultimate westerly half-section plus one lane as a Secondary Road (88-foot right-of-way) with the Town's standard, from Lafayette Street to Burbank Street.

Provision of a 200' westbound left turn pocket on Lafayette Street approaching Dale Evans Parkway.

Provision of a 150' northbound left turn lane on Dachshund Avenue approaching Lafayette Street.

ALTERNATIVE 2 - ALL WAREHOUSE (HIGH CUBE)

Although the Alternative 2 - All Warehouse (High Cube) trip generation is slightly increased from the proposed Project, the magnitude of change in peak hour activity (less than 10 PCE trip increase in the AM peak hour and less than 20 PCE trip increase in the PM peak hour) is not anticipated to cause a worsening in LOS at study area intersections.

ALTERNATIVE 3 - REDUCED WAREHOUSE (HIGH CUBE)

The Alternative 3 - Reduced Warehouse (High Cube) reduces trip generation in comparison to the proposed Project. The magnitude of change in peak hour activity (53 PCE trip decrease in the AM peak hour and 63 PCE trip decrease in the PM peak hour) potentially improves peak hour LOS for future cumulative “with project” scenarios. With a 25% to 30% reduction in peak hour activity, combined with a reduction in the building footprint, more flexibility occurs in regards to site access driveway locations and on-site parking circulation.

Regarding off-site improvements, the Alternative 3 - Reduced Warehouse (High Cube) alternative would result in decreased fair share participation in cumulative off-site improvements needed without or with the Project. Adjacent roadway half-section improvements would remain the same.

CONCLUSION

This assessment of the Project land use alternatives for the Lafayette Street Logistics site indicates that for Alternative 1 - No Project/No Development, General Plan roadway improvements adjacent to the Project site would ultimately need to be constructed by other sources.

The Alternative 2 - All Warehouse (High Cube) alternative would have very similar LOS results to the proposed Project. General Plan improvements adjacent to the Project would be provided.

The Alternative 3 - Reduced Warehouse – (High Cube) alternative could potentially provide increased flexibility in the configuration of site access and on-site circulation while slightly reducing fair share contributions to cumulative off-site intersection improvements needed without or with the Project. General Plan improvements adjacent to the Project would be provided.

Due to the location of the Project and the nature of warehousing travel patterns, a VMT impact per service population is likely to occur regardless of the type and size of warehousing land uses at this location.

If you have any questions, please contact Marlie at (714) 585-0574 or John at (949) 375-2435.

Respectfully submitted,

URBAN CROSSROADS, INC.



John Kain, AICP
Principal

Attachments



Marlie Whiteman, P.E.
Senior Associate

**TABLE 1: LAFAYETTE ALTERNATIVE 2 PROJECT TRIP GENERATION SUMMARY
ACTUAL VEHICLES**

Alternative 2 Project Trip Generation Rates¹

| Land Use | ITE LU Code | Quantity ² | AM Peak Hour | | | PM Peak Hour | | | Daily |
|----------------------------------|-------------|-----------------------|--------------|-------|-------|--------------|-------|-------|-------|
| | | | In | Out | Total | In | Out | Total | |
| High-Cube Warehouse ³ | - | 1,200.000 TSF | 0.094 | 0.028 | 0.122 | 0.046 | 0.119 | 0.165 | 2.129 |
| Passenger Cars | | | 0.066 | 0.020 | 0.086 | 0.033 | 0.082 | 0.115 | 1.489 |
| 2 to 4-Axle+ Trucks | | | 0.028 | 0.008 | 0.036 | 0.014 | 0.036 | 0.050 | 0.640 |

Alternative 2 Project Trip Generation Results

| Land Use | ITE LU Code | Quantity ² | AM Peak Hour | | | PM Peak Hour | | | Daily |
|--|-------------|-----------------------|--------------|-----------|------------|--------------|------------|------------|--------------|
| | | | In | Out | Total | In | Out | Total | |
| High-Cube Warehouse | - | 1200.000 TSF | | | | | | | |
| - Passenger Cars | | | 79 | 24 | 103 | 39 | 99 | 138 | 1,787 |
| - Truck Trips (Actual) | | | 34 | 10 | 44 | 17 | 43 | 60 | 768 |
| ALTERNATIVE 2 PROJECT TOTAL TRIPS (ACTUAL VEHICLES)⁴ | | | 113 | 34 | 147 | 56 | 142 | 198 | 2,555 |

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).

² TSF = Thousand Square Feet

³ Source: *TUMF High-Cube Warehouse Trip Generation Study*. Prepared by WSP, January 2019.

Passenger and Truck AM/PM peak hour (in/out) splits are estimated from based on ITE peak-to-daily relationship

Truck Daily Rate Source: *Notice of Preparation of a Draft Environmental Impact Report for the Proposed Potrero Logistics Center*.

Prepared by South Coast Air Quality Management District (SCAQMD), June 2020.

⁴ Total Net Trips (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Trucks).

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**TABLE 2: LAFAYETTE ALTERNATIVE 2 PROJECT TRIP GENERATION SUMMARY
PASSENGER CAR EQUIVALENT (PCE)**

| Land Use | ITE LU Code | Quantity ² | Alternative 2 Project Trip Generation Rates ¹ | | | | | | |
|----------------------------------|-------------|---------------------------------|--|-------|-------|--------------|-------|-------|-------|
| | | | AM Peak Hour | | | PM Peak Hour | | | Daily |
| | | | In | Out | Total | In | Out | Total | |
| High-Cube Warehouse ³ | - | 1,200.000 TSF | 0.150 | 0.045 | 0.195 | 0.075 | 0.190 | 0.265 | 3.409 |
| | | Passenger Cars | 0.066 | 0.020 | 0.086 | 0.033 | 0.082 | 0.115 | 1.489 |
| | | 2 to 4-Axle+ Trucks (PCE = 3.0) | 0.084 | 0.025 | 0.109 | 0.042 | 0.108 | 0.150 | 1.920 |

| Land Use | ITE LU Code | Quantity ² | Alternative 2 Project Trip Generation Results | | | | | | |
|---|-------------|-----------------------|---|-----------|------------|--------------|------------|------------|--------------|
| | | | AM Peak Hour | | | PM Peak Hour | | | Daily |
| | | | In | Out | Total | In | Out | Total | |
| High-Cube Warehouse | - | 1,200.000 TSF | | | | | | | |
| - Passenger Cars | | | 79 | 24 | 103 | 39 | 99 | 138 | 1,787 |
| - Truck Trips (PCE = 3.0) | | | 101 | 30 | 131 | 50 | 130 | 180 | 2,304 |
| ALTERNATIVE 2 PROJECT TOTAL EXTERNAL TRIPS (PCE)⁴ | | | 180 | 54 | 234 | 89 | 229 | 318 | 4,091 |

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).

² TSF = Thousand Square Feet

³ Source: *TUMF High-Cube Warehouse Trip Generation Study*. Prepared by WSP, January 2019.

Passenger and Truck AM/PM peak hour (in/out) splits are estimated from based on ITE peak-to-daily relationship

Truck Daily Rate Source: *Notice of Preparation of a Draft Environmental Impact Report for the Proposed Potrero Logistics Center*.

Prepared by South Coast Air Quality Management District (SCAQMD), June 2020.

⁴ Total Net Trips (PCE) = Passenger Cars + Net Truck Trips (Passenger Car Equivalent).

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**TABLE 3: LAFAYETTE ALTERNATIVE 3 PROJECT TRIP GENERATION SUMMARY
ACTUAL VEHICLES**

Alternative 3 Project Trip Generation Rates¹

| Land Use | ITE LU Code | Quantity ² | AM Peak Hour | | | PM Peak Hour | | | Daily |
|----------------------------------|-------------|-----------------------|--------------|-------|-------|--------------|-------|-------|-------|
| | | | In | Out | Total | In | Out | Total | |
| High-Cube Warehouse ³ | - | 900.000 TSF | 0.094 | 0.028 | 0.122 | 0.046 | 0.119 | 0.165 | 2.129 |
| Passenger Cars | | | 0.066 | 0.020 | 0.086 | 0.033 | 0.082 | 0.115 | 1.489 |
| 2 to 4-Axle+ Trucks | | | 0.028 | 0.008 | 0.036 | 0.014 | 0.036 | 0.050 | 0.640 |

Alternative 3 Project Trip Generation Results

| Land Use | ITE LU Code | Quantity ² | AM Peak Hour | | | PM Peak Hour | | | Daily |
|--|-------------|-----------------------|--------------|-----------|------------|--------------|------------|------------|--------------|
| | | | In | Out | Total | In | Out | Total | |
| High-Cube Warehouse | - | 900.000 TSF | | | | | | | |
| - Passenger Cars | | | 59 | 18 | 77 | 29 | 74 | 103 | 1,340 |
| - Truck Trips (Actual) | | | 25 | 7 | 32 | 13 | 32 | 45 | 576 |
| ALTERNATIVE 3 PROJECT TOTAL TRIPS (ACTUAL VEHICLES)⁴ | | | 84 | 25 | 109 | 42 | 106 | 148 | 1,916 |

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).

² TSF = Thousand Square Feet

³ Source: *TUMF High-Cube Warehouse Trip Generation Study*. Prepared by WSP, January 2019.

Passenger and Truck AM/PM peak hour (in/out) splits are estimated from based on ITE peak-to-daily relationship

Truck Daily Rate Source: *Notice of Preparation of a Draft Environmental Impact Report for the Proposed Potrero Logistics Center*.

Prepared by South Coast Air Quality Management District (SCAQMD), June 2020.

⁴ Total Net Trips (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Trucks).

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**TABLE 4: LAFAYETTE ALTERNATIVE 3 PROJECT TRIP GENERATION SUMMARY
PASSENGER CAR EQUIVALENT (PCE)**

| Land Use | Alternative 3 Project Trip Generation Rates ¹ | | | | | | | | |
|----------------------------------|--|---------------------------------|--------------|-------|-------|--------------|-------|-------|-------|
| | ITE LU Code | Quantity ² | AM Peak Hour | | | PM Peak Hour | | | Daily |
| | | | In | Out | Total | In | Out | Total | |
| High-Cube Warehouse ³ | - | 900.000 TSF | 0.150 | 0.045 | 0.195 | 0.075 | 0.190 | 0.265 | 3.409 |
| | | Passenger Cars | 0.066 | 0.020 | 0.086 | 0.033 | 0.082 | 0.115 | 1.489 |
| | | 2 to 4-Axle+ Trucks (PCE = 3.0) | 0.084 | 0.025 | 0.109 | 0.042 | 0.108 | 0.150 | 1.920 |

| Land Use | Alternative 3 Project Trip Generation Results | | | | | | | | |
|---|---|-----------------------|--------------|-----------|------------|--------------|------------|------------|--------------|
| | ITE LU Code | Quantity ² | AM Peak Hour | | | PM Peak Hour | | | Daily |
| | | | In | Out | Total | In | Out | Total | |
| High-Cube Warehouse | - | 900.000 TSF | | | | | | | |
| - Passenger Cars | | | 59 | 18 | 77 | 29 | 74 | 103 | 1,340 |
| - Truck Trips (PCE = 3.0) | | | 76 | 23 | 99 | 38 | 97 | 135 | 1,728 |
| ALTERNATIVE 3 PROJECT TOTAL EXTERNAL TRIPS (PCE)⁴ | | | 135 | 41 | 176 | 67 | 171 | 238 | 3,068 |

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).

² TSF = Thousand Square Feet

³ Source: *TUMF High-Cube Warehouse Trip Generation Study*. Prepared by WSP, January 2019.

Passenger and Truck AM/PM peak hour (in/out) splits are estimated from based on ITE peak-to-daily relationship

Truck Daily Rate Source: *Notice of Preparation of a Draft Environmental Impact Report for the Proposed Potrero Logistics Center*.

Prepared by South Coast Air Quality Management District (SCAQMD), June 2020.

⁴ Total Net Trips (PCE) = Passenger Cars + Net Truck Trips (Passenger Car Equivalent).

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**TABLE 5: TRIP GENERATION COMPARISON SUMMARY
ACTUAL VEHICLES**

Alternative 2 (High-Cube Warehouse - 1,200 TSF)

| Land Use | Quantity ¹ | AM Peak Hour | | | PM Peak Hour | | | Daily |
|---|-----------------------|--------------|-----|-------|--------------|-----|-------|-------|
| | | In | Out | Total | In | Out | Total | |
| Alternative 2 | 1,200.00 TSF | 113 | 34 | 147 | 56 | 142 | 198 | 2,555 |
| Proposed Project ² | 1,207.544 TSF | 113 | 35 | 148 | 55 | 137 | 192 | 2,569 |
| <i>Delta (Alternative 2 - Proposed)</i> | | 0 | -1 | -1 | 1 | 5 | 6 | -14 |

Alternative 3 (High-Cube Warehouse - 900 TSF)

| Land Use | Quantity ¹ | AM Peak Hour | | | PM Peak Hour | | | Daily |
|---|-----------------------|--------------|-----|-------|--------------|-----|-------|-------|
| | | In | Out | Total | In | Out | Total | |
| Alternative 3 | 900.00 TSF | 84 | 25 | 109 | 42 | 106 | 148 | 1,916 |
| Proposed Project ² | 1,207.544 TSF | 113 | 35 | 148 | 55 | 137 | 192 | 2,569 |
| <i>Delta (Alternative 3 - Proposed)</i> | | -29 | -10 | -39 | -13 | -31 | -44 | -653 |

¹ TSF = Thousand Square Feet

² Source: Lafayette Street Logistics Facility Traffic Analysis. Prepared by Urban Crossroads, Inc., November 15, 2022.

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**TABLE 6: TRIP GENERATION COMPARISON SUMMARY
PASSENGER CAR EQUIVALENT (PCE)**

| Alternative 2 (High-Cube Warehouse - 1,200 TSF) | | | | | | | | | |
|---|-----------------------|--------------|-----|-------|--------------|-----|-------|-------|--|
| Land Use | Quantity ¹ | AM Peak Hour | | | PM Peak Hour | | | Daily | |
| | | In | Out | Total | In | Out | Total | | |
| Alternative 2 | 1,200.00 TSF | 180 | 54 | 234 | 89 | 229 | 318 | 4,091 | |
| Proposed Project ² | 1,207.544 TSF | 176 | 53 | 229 | 85 | 216 | 301 | 4,052 | |
| <i>Delta (Alternative 2 - Proposed)</i> | | 4 | 1 | 5 | 4 | 13 | 17 | 39 | |

| Alternative 3 (High-Cube Warehouse - 900 TSF) | | | | | | | | | |
|---|-----------------------|--------------|-----|-------|--------------|-----|-------|-------|--|
| Land Use | Quantity ¹ | AM Peak Hour | | | PM Peak Hour | | | Daily | |
| | | In | Out | Total | In | Out | Total | | |
| Alternative 3 | 900.00 TSF | 135 | 41 | 176 | 67 | 171 | 238 | 3,068 | |
| Proposed Project ² | 1,207.544 TSF | 176 | 53 | 229 | 85 | 216 | 301 | 4,052 | |
| <i>Delta (Alternative 3 - Proposed)</i> | | -41 | -12 | -53 | -18 | -45 | -63 | -984 | |

¹ TSF = Thousand Square Feet

² Source: Lafayette Street Logistics Facility Traffic Analysis. Prepared by Urban Crossroads, Inc., November 15, 2022.

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