| **Traffic Mitigation Measures from OAB SCA/MMRP** |
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|  | **Implementation Year** | **Environmental Impact** |  **Mitigation Measures** | **Mitigation Monitoring** | **Mitigation Status**  | **Completion Status** |
| **On-Site Traffic Mitigations Measures Completed During Horizontal Infrastructure** |
| 1 | 2019 | The project would directly or indirectly cause or expose roadway users to a permanent and substantial transportation hazard due to a new or existing physical design feature or incompatible uses | **Mitigation Measures 3.16-5 to 3.16-14 - *Locations for these mitigation measures are on Maritime Street and Burma Road: between West Grand & 7th Street and between Gateway Park and West Grand Avenue respectfully.***Mitigation measures 3.16-5 to 3.16-14 require improvements to existing streets in the Port of Oakland and to the new streets shown in the OAB master site plan. MM 3.16-5 to 3.16-14 identified specific improvements such as widened shoulders, new sidewalks, bicycle lanes, etc. The components of these mitigation measures were constructed by the joint venture (JV) contractor during the installation of the horizontal infrastructure from 2015-2019. Refer to Horizontal Infrastructure Compliance Report for more detail.  | Prior to approval of the PUD | See 2019 compliance memo - [Project level traffic mitigation measure closeout memo](https://cao-94612.s3.us-west-2.amazonaws.com/documents/Project-Level-Traffic-MMs-Final-Compliance-Memo.pdf) | **Mitigation responsibility is completed.** |
| **Off-Site Project-Level Traffic Mitigation Measures** |
| 2 | At issuance of first Certificate of Occupancy | At a study, signalized intersection which is located outside the Downtown area, the Project would cause the level of service (LOS) to degrade to worse than LOS D (i.e., LOS E) | **Mitigation Measure 3.16-1: *7th Street & I-880 Northbound Off-Ramp* -** • Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the AM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. To implement this measure, the project sponsor shall submit the following to City of Oakland’s Transportation Engineering Division and Caltrans for review and approval: Plans, Specifications, and Estimates (PS&E) to modify the intersection. All elements shall be designed to City standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. **City standards:**  2070L controller, GPS communication clock, Accessible pedestrian crosswalks according to Federal and State Access Board guidelines, ADA ramps, full actuation (ped push buttons, bike detection), audible and tactile ped signals, countdown ped signals, signal interconnect to City’s traffic Mgt. Center in identified corridors, for 600 feet, signal time plans for the signals in the coordination group, upgrade all existing vehicular heads to 12" LED head, ethernet edge switch for all non-I-880 intersections.   | At issuance of first Certificate of Occupancy | See 2019 compliance memo - [Project level traffic mitigation measure closeout memo](https://cao-94612.s3.us-west-2.amazonaws.com/documents/Project-Level-Traffic-MMs-Final-Compliance-Memo.pdf) | **Mitigation responsibility is completed.** |
| 3 | At issuance of first Certificate of Occupancy | At a study, signalized intersection which is located outside the Downtown area, the Project would cause the level of service (LOS) to degrade to worse than LOS D (i.e., LOS E) | **Mitigation Measure 3.16-2: *San Pablo Avenue & Ashby Avenue -*** To implement this measure, the Project Sponsor shall coordinate with City of Berkeley and Caltrans, and shall fund, prepare, and install the improvements consistent with City of Berkeley and/or Caltrans standards.**•** Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. | At issuance of first Certificate of Occupancy | See 2019 compliance memo - [Project level traffic mitigation measure closeout memo](https://cao-94612.s3.us-west-2.amazonaws.com/documents/Project-Level-Traffic-MMs-Final-Compliance-Memo.pdf) | **Mitigation responsibility is completed.** |
| 4 | At issuance of first Certificate of Occupancy | At two intersections, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity (“V/C”) ratio exceeds 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable).  | **Mitigation Measure 3-16-3: *7th Street & Harrison Street -*** To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.• Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | At issuance of first Certificate of Occupancy | See 2019 compliance memo - [Project level traffic mitigation measure closeout memo](https://cao-94612.s3.us-west-2.amazonaws.com/documents/Project-Level-Traffic-MMs-Final-Compliance-Memo.pdf) | **Mitigation responsibility is completed.** |
| 5 | At issuance of first Certificate of Occupancy | At two intersections, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity (“V/C”) ratio exceeds 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable).  | **Mitigation Measure 3-16-4: *12th Street and Castro Street -*** To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.• Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | At issuance of first Certificate of Occupancy | See 2019 compliance memo -[Project level traffic mitigation measure closeout memo](https://cao-94612.s3.us-west-2.amazonaws.com/documents/Project-Level-Traffic-MMs-Final-Compliance-Memo.pdf) | **Mitigation responsibility is completed.** |
| **Cumulative Traffic Impacts** |  |
| 6 | 2020 | Increased congestion at signalized intersection outside the downtown area causing the Level of Service to degrade to worse than LOS D (i.e., LOS E). | **Mitigation Measure 3.16-17: *West Grand Avenue & I-880 Frontage Road*. -** • Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the AM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | At issuance of first Certificate of Occupancy | See 2020 compliance memo – [Cumulative level traffic mitigation measure closeout memo](https://cao-94612.s3.us-west-2.amazonaws.com/documents/Final-Cumulative-Level-Traffic-MMs-2020-Compliance-Memo-with-Matrix.docx.pdf) | **Mitigation responsibility is completed.** |
| 7 | 2020 | One intersection located outside the downtown area, where the level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four (4) or more seconds, or degrade to worse than LOS E. (Year 2020) | **Mitigation Measure 3.16-18: *San Pablo Ave & Ashby Avenue -*** • Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall coordinate with the City of Berkeley and Caltrans, and shall fund, prepare, and install the approved plans and improvements. | At issuance of first Certificate of Occupancy | See 2020 compliance memo – [Cumulative level traffic mitigation measure closeout memo](https://cao-94612.s3.us-west-2.amazonaws.com/documents/Final-Cumulative-Level-Traffic-MMs-2020-Compliance-Memo-with-Matrix.docx.pdf) | **Mitigation responsibility is completed.** |
| 8 | 2021 | Eleven intersections where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity (“V/C”) ratioincreases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable). (Year 2035) | **Mitigation Measure 3.16-24: *West Grand Avenue & I-880 Frontage Road -*** • Optimize signal timing (i.e., increase the traffic signal cycle length and adjust the allocation of green time for each intersection approach) for the AM and PM peak hours.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination groupTo implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | Mitigation at this intersection may be required by Year 2021. Investigation of the need for this mitigation shall be studied in 2021 and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first. | This intersection is within Caltrans jurisdiction. Refer to 8/01/13 memorandum from Kittelson and Associates. OakDOT determined in March 2023 that the AM PM peaks had been optimized under current conditions.OakDOT also determined in March 2023 that signal timing changes were not coordinated with any adjacent intersections that are in the same signal coordination group and further determined signal coordination is not applicable and not needed. | **Mitigation responsibility is completed.** |
| 9 | 2021 | Eleven intersections where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity (“V/C”) ratioincreases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable). (Year 2035) | **Mitigation Measure 3.16-33: *Powell Street/Stanford Avenue & San Pablo Avenue -*** • Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the AM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | Mitigation at this intersection may be required by year 2021. Investigations of the need for this mitigation shall be studied in 2021 and every three years thereafter or until the mitigation measure is implemented whichever occurs first.  | The signal timing at this intersection was updated in April 2023 by AC Transit's San Pablo Avenue Corridor Project. This timing is optimized for current volumes and to prioritize transit users. This mitigation measure can be closed out.  | **Mitigation responsibility is completed** |
| 10 | 2022 | At two intersections located outside the Downtown area where the level of service is LOS E, would the project cause the total intersection average vehicle delay to increase by four (4) or more seconds, or degrade to worse than LOS E **(Year 2035)** | **Mitigation Measure 3.16-22: *5th Street & Union Street / I-880 North Ramps*** • Optimize signal timing (i.e., increase the traffic signal cycle length to 100 seconds and adjust the allocation of green time for each intersection approach) for the PM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements***.***  | Mitigation at this intersection may be required by year 2022. Investigations of the need for this mitigation shall be studied in 2022 and every three years thereafter or until the mitigation measure is implemented whichever occurs first.  | On March 18, 2024, OakDot confirmed that signal operations are nominal at this location, and no further work is required. | **Mitigation responsibility is completed.** |
| 11 | 2022 | Eleven intersections where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity (“V/C”) ratioincreases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable). (Year 2035) | **Mitigation Measure 3.16-26*: West Grand Avenue & Market Street -*** • Provide split phasing for northbound and southbound movements.• Optimize signal timing (i.e., increase the traffic signal cycle length to 120 seconds and adjust the allocation of green time for each intersection approach) for both the AM and PM peak hours.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | Mitigation at this intersection may be required by year 2022. Investigations of the need for this mitigation shall be studied in 2022 and every three years thereafter or until the mitigation measure is implemented whichever occurs first. | The West Grand Avenue road diet at West Grand Avenue and Market Street as part of West Oakland Specific Plan (WOSP)- June 26th, 2014 – Council Resolution No. 85108 C.M.S. Paving scheduled for road diet. This mitigation measure to increase LOS therefore would be in conflict with the WOSP. | **Mitigation responsibility is completed.** |
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| 12 | 2023 |  Eleven intersections where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity (“V/C”) ratioincreases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable). (Year 2035) | **Mitigation Measure 3.16-31: *12th Street & Brush Street*** - • Optimize signal timing (i.e., increase the traffic signal cycle length to 120 seconds and adjust the allocation of green time for each intersection approach) for the AM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | Mitigation at this intersection may be required by year 2023. Investigations of the need for this mitigation shall be studied in 2023 and every three years thereafter or until the mitigation measure is implemented whichever occurs first.  | The Final Draft of the Downtown Oakland Specific Plan (DOSP) has identified this intersection as a freeway crossing and corridor improvements including street design and signal improvements that support slower vehicular speeds and prioritize pedestrians. Improvements would also reallocate excess space from traffic lanes to other uses. This mitigation measure to increase LOS would therefore conflict with the stated mobility goals of the proposed DOSP.  | **Mitigation responsibility is completed.** |
| 13 | 2025 | Eleven intersections where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity (“V/C”) ratioincreases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable). (Year 2035) | **Mitigation Measure 3.16-28: *West Grand Avenue & Harrison Street*** - • Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | Mitigation at this intersection may be required by year 2025. Investigations of the need for this mitigation shall be studied in 2025 and every three years thereafter or until the mitigation measure is implemented whichever occurs first.  | Track feasibility relative to AC Transit plans to install signal equipment to improve bus operations in dedicated travel lanes by prioritizing bus movement at this intersection and potentially decreasing the LOS of crossing traffic. Also bike and pedestrian lanes are planned to function independently from vehicular traffic with dedicated and separate from motor vehicles, further de-emphasizing vehicle LOS at this intersection. Need to monitor the progress of the 27th Street Complete Streets Project and the Lakeside Family Streets Projects. This mitigation measure to increase LOS may therefore be considered infeasible. Need to monitor. | **Pending** |
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| 14 | 2025 | Eleven intersections where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity (“V/C”) ratioincreases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable). (Year 2035) | **Mitigation Measure 3.16-30: *6th Street & Jackson Street* -** • Optimize signal timing (i.e., increase the traffic signal cycle length to 80 seconds and adjust the allocation of green time for each intersection approach) for the AM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements. | Mitigation at this intersection may be required by year 2025. Investigations of the need for this mitigation shall be studied in 2025 and every three years thereafter or until the mitigation measure is implemented whichever occurs first. | The intersection is within the jurisdiction of Caltrans. Track relative to jurisdiction and revised CEQA standards.  | **Pending** |
| 15 | 2026 | Eleven intersections where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity (“V/C”) ratioincreases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable). (Year 2035) | **Mitigation Measure 3.16-27: *West Grand Avenue & San Pablo Avenue -***  *•* Remove approximately seven (7) parking spaces on the south side of West Grand Avenue; add an eastbound through lane between San Pablo Avenue and Martin Luther King Jr. Way; and convert the eastbound right turn lane to a through-right combination lane.• Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | Mitigation at this intersection may be required by year 2026. Investigations of the need for this mitigation shall be studied in 2026 and every three years thereafter or until the mitigation measure is implemented whichever occurs first.  | Track feasibility relative to AC Transit plans to install a Signal Transit Priority (TSP) system at this intersection to improve bus operations in dedicated travel lanes by prioritizing bus movement at this intersection and potentially decreasing the LOS of crossing traffic. Also, a road diet at this location may also be implemented as part of the West Grand Mobility Plan. This mitigation measure to increase LOS may therefore be considered infeasible. Need to monitor future AC Transit implementation of this system. | **Pending** |
| 16 | 2028 | Three intersections located outside the Downtown area, which the project would cause the level of service (LOS) to degrade to worse than LOS D. (Year 2035) | **Mitigation Measure 3.16-19: *West Grand Avenue & Maritime Street*** - • Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the PM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | Mitigation at this intersection may be required by year 2028. Investigations of the need for this mitigation shall be studied in 2028 and every three years thereafter or until the mitigation measure is implemented whichever occurs first.  | Track feasibility relative to the Gateway Park Project, which was studied in 2018. No significant impact, based on LOS, due to the Gateway Park Project was found to exist so no mitigations are proposed. By 2028, a significant increase in bikes and pedestrians at this intersection is expected occur. This mitigation measure to upgrade LOS may be therefore be considered infeasible. Further monitoring of plan implementation is necessary to determine if it remains reasonably assumed an increase in bike and pedestrian activity would occur.  | **Pending** |
| 17 | 2028 | Eleven intersections where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity (“V/C”) ratio increases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable). (Year 2035) | **Mitigation Measure 3.16-32: *Powell Street & Hollis Street*** - • Provide protected plus permitted traffic signal phasing for the northbound and southbound Hollis Street movements.• Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for both the AM and PM peak hours.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Emeryville’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | Mitigation at this intersection may be required by year 2028. Investigations of the need for this mitigation shall be studied in 2028 and every three years thereafter or until the mitigation measure is implemented whichever occurs first. | The intersection is within the City of Emeryville. Track relative to jurisdiction and revised CEQA standards. | **Pending** |
| 18 | 2030 | At one intersection located within the Downtown area, the project would cause the LOS to degrade to worse than LOS E (Year 2035) | **Mitigation Measure 3.16-21: *West Grand Avenue & Northgate Avenue* -** .• Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the AM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | Mitigation at this intersection may be required by year 2030. Investigations of the need for this mitigation shall be studied in 2030 and every three years thereafter or until the mitigation measure is implemented whichever occurs first.  | Track feasibility relative to the AC Transit plans to install a Signal Transit Priority (TSP) system at this intersection to improve transit systems by prioritizing bus movement at this intersection and potentially decreasing the LOS of crossing traffic. Need to monitor future AC Transit implementation of this system. | **Pending** |
| 19 | 2032 | Three intersections located outside the Downtown area, which the project would cause the level of service (LOS) to degrade to worse than LOS D. (Year 2035) | **Mitigation Measure 3.16-20: *7th Street & Union Street* -** • Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the AM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | Mitigation at this intersection may be required by year 2032. Investigations of the need for this mitigation shall be studied in 2032 and every three years thereafter or until the mitigation measure is implemented whichever occurs first.  | Track feasibility relative to a major residential development at 500 Kirkham Street, which is currently under planning review. Plans show proposed street improvements that changes a 6 lane road where 2 lanes are curbside parking, 2 lanes are shared car bus and bike lanes and 2 dedicated vehicle lanes to a 6 lane road where parking lanes are replaced with bike lanes and a bulb out is planned on curbside vehicular travel lane for bus stops. These improvements will prioritize bike and bus travel and will likely decrease LOS for automobiles and trucks. This mitigation therefore may be infeasible due to currently proposed development plan to improve multi-modal transportation. Need to monitor.  | **Pending** |
| 20 | 2032 | At two intersections located outside the Downtown area where the level of service is LOS E, would the project cause the total intersection average vehicle delay to increase by four (4) or more seconds, or degrade to worse than LOS E(Year 2035) | **Mitigation Measure 3.16-23: *MacArthur Boulevard & Market Street*** - •Optimize signal timing (i.e., adjust the allocation of green time for each intersection approach) for the AM peak hour.•Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements. | Track feasibility relative to City Council – approved road diet work at this intersection that would conflict with this mitigation measure potentially making implementation of this measure infeasible. Need to monitor with OakDOT. | **Pending** |
| 21 | 2032 | Eleven intersections where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity (“V/C”) ratio increases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable). (Year 2035) | **Mitigation Measure 3.16-25: *West Grand Avenue & Adeline Street* -** • Optimize signal timing (i.e., increase the traffic signal cycle length to 90 seconds and adjust the allocation of green time for each intersection approach) for the PM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | Mitigation at this intersection may be required by year 2032. Investigations of the need for this mitigation shall be studied in 2032 and every three years thereafter or until the mitigation measure is implemented whichever occurs first.  | Track feasibility relative to the West Grand road diet from Mandela to Market as part of West Oakland Specific Plan- June 26th, 2014 – Council Resolution No. 85108 C.M.S. Paving scheduled for road diet by converting traffic travel lanes to bike lanes. Implementation of this mitigation measure may therefore be considered infeasible as a result of the City Council approved plan to reduce the width of the intersection.  | **Pending**  |
| 22 | 2035 | Eleven intersections where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity (“V/C”) ratio increases 0.03 or more (but only if the delay values are greater than 120 seconds of average intersection delay as delay values over 120 seconds tend to increase exponentially and are then generally considered unreliable). (Year 2035) | **Mitigation Measure 3.16-29: *7th Street & Harrison Street -*** • Optimize signal timing (i.e., increase the traffic signal cycle length to 80 seconds and adjust the allocation of green time for each intersection approach) for the PM peak hour.• Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.To implement this measure, the project sponsor shall submit plans specifications and estimates (PS&E) as detailed in Mitigation Measure 3.16-1 that are consistent with the City’s standards to City of Oakland’s Transportation Engineering Division for review and approval.The project sponsor shall fund, prepare, and install the approved plans and improvements.  | Mitigation at this intersection may be required by year 2035. Investigations of the need for this mitigation shall be studied in 2035 and every three years thereafter or until the mitigation measure is implemented whichever occurs first.  |  Memo from Kittleson dated August 1, 2013 concluded that signal timing adjustments are proposed at this intersection since mitigations were required and signal coordination is required to be maintained. [Evaluation signal improv 7th & Harrison, 12th & Castro 08-01-13.pdf](https://oaklandca-my.sharepoint.com/personal/calvin_oaklandca_gov/Documents/05_SCA-MMRP%20Implementation/Traffic%20Mitigation%20Measures/Evaluation%20signal%20improv%207th%20%26%20Harrison%2C%2012th%20%26%20Castro%2008-01-13.pdf) | **Pending** |