



March 13, 2020

Heather Lamboy
City of Aurora, Planning Supervisor
1515 E. Alameda Parkway, Suite 2300
Aurora, CO 80012

RE: Aurora Mall Fieldhouse USA – Site Plan Amendment

Dear Ms. Lamboy:

Thank you for the comments on March 2nd, 2020 for the above-mentioned project. In an effort to address your comments concisely and simplify your review of the site plan, we have summarized your comments and our responses below.

GENERAL COMMENTS FROM ALL DEPARTMENTS

1. Traffic and Aurora Water comments are forthcoming. They were not available as of the date of this letter.
 - *Response: Traffic comments were received. We never received comments from Aurora Water.*
2. EIFS is not a permitted building material in the City of Aurora. Please refer to the table included below and change the materials on the building.
 - *Response: We are requesting a Major Adjustment to include EIFS as part of our building exterior design.*
3. Please clearly indicate phasing on the site, with notes stating the improvements planned with each phase.
 - *Response: The Fieldhouse project is Phase I of proposed improvements at the north end of the Aurora Town Center. Due to owner obligations it is anticipated that the Fieldhouse will be constructed first and open prior to the end of the year. Additional site improvements including restaurant pads and a potential hotel will make up Phase II of the proposed improvements at Aurora Town Center. Ownership would like to ensure the Fieldhouse is completed first and address all vehicular and pedestrian site circulation/connectivity during Phase II to ensure a harmonious plan is implemented. Phase II is anticipated to begin soon after the opening of the Aurora Fieldhouse project. The accessible route to the light rail at the southeast portion of the site will be built within 18 months of the Fieldhouse opening.*

PLANNING DEPARTMENT

HEATHER LAMBOY / PLANNING SUPERVISOR / (303) 739-7184

1. Community Questions, Comments and Concerns
 - A. No written comments were submitted. There were several phone calls inquiring about the projects, but no concerns once the project scope was explained.

- *Response: Noted. Thank you.*
 - B. When sending the notice for the public hearing, please do not send it via certified mail. Please use a certificate of mailing, where the Post Office certifies that you mailed the letters first class mail.
 - *Response: Noted. Thank you.*
 - C. The neighborhood meeting will be held on Thursday, March 5. Additional comments may be forthcoming.
 - *Response: The neighborhood meeting was held on Thursday, March 5, 2020. Four members of the public came and there were no concerns to discuss.*
2. Zoning and Land Use Comments
- A. Since there is a subsequent phase planned on the west side of the building, please note on the western elevation that a future addition is planned (as a justification for the blank nature of that wall).
 - *Response: A note for a future development phase has been added to the Site Plan*
 - B. Since there may be improvements associated with a future phase, be sure to illustrate it on the site plan as well as address it in your Introduction Letter.
 - *Response: The future phase is illustrated in the introduction letter. Only minor future phase improvements, including the new accessible route to the light rail station is being shown on the site plan.*
3. Streets and Pedestrian Issues
- A. Safe pedestrian circulation is important, especially with the expected large number of children at the site. Protected walkways will be important.
 - *Response: Ownership has plans to ensure a safe protected pedestrian connection throughout the mall property.*
 - B. Public Works has indicated that all walks, including the one connecting to the light rail station to the east, should be constructed concurrent with the Fieldhouse development.
 - *Response: The Fieldhouse project is Phase I of proposed improvements at the north end of the Aurora Town Center. Due to owner obligations it is anticipated that the Fieldhouse will be constructed first and open prior to the end of the year. Additional site improvements including restaurant pads and a potential hotel will make up Phase II of the proposed improvements at Aurora Town Center. Ownership would like to ensure the Fieldhouse is completed first and address all vehicular and pedestrian site circulation/connectivity during Phase II to ensure a harmonious plan is implemented. Phase II is anticipated to begin soon after the opening of the Aurora Fieldhouse project. The accessible route to the light rail at the southeast portion of the site will be built within 18 months of the Fieldhouse opening. The connection to the north to Chick-fil-a will be included in Phase I.*
 - C. Crosswalks shall be utilized at all internal drive crossings where there is a stop sign, specifically at the 4-way stop at the intersection with Crystal Street.

3. These islands are very large. Small 1-gallon bunny grasses will be non-existent during the winter months and provide little to no interest during most of the year given their growth time and size. Please include larger shrubs with color and structure.
 - *Response: Small 1-gallon bunny grass quantity reduced. Replaced with more substantial perennial and evergreen shrubs.*
4. There appear to be existing trees in a couple of the existing parking lot landscaped islands that are being removed. If this is the case, they need to be shown on their own plan/sheet and a tree mitigation chart shall be provided documenting the inches being removed. Coordinate with the Forestry Division on their requirements.
 - *Response: Tree mitigation plan provided*
5. Add additional parking lot islands where noted.
 - *Response: Civil has added parking lot islands where noted.*
6. The smaller parking lot islands shall have 6 shrubs per island.
 - *Response: Smaller parking lot islands now have 6 shrubs per island.*
7. Trees are required at a ratio of 1 tree per 30lf in the proposed linear parking block island. They may alternate along opposite sides of the sidewalk.
 - *Response: Trees added every 30 feet in planting area. 12 trees have been added.*
8. Increase the font size for the Plant Schedule and the notes.
 - *Response: Font size doubled, and planting schedule moved to sheet 13*
9. Update note 4. See comment on plan.
 - *Response: Note updated*
10. Provide the required lighting note.
 - *Response: Added note addressing proposed lighting bollards*
11. Add a note that addresses the mulch treatment. Material, depth etc.
 - *Response: Note added.*
12. There is an existing parking lot island that appears to be missing. Is this island being removed for some reason? If not, correctly show the parking lot end island and add the required two trees and understory plantings.
 - *Response: Existing parking lot added to plans. Island has been planted with two trees and understory planting.*

Sheet 12 of 16 Landscape Notes

1. Remove the General Landscape Specifications. The city does not review landscape construction drawings and therefore these should not be included.
 - *Response: General landscape specifications removed from sheets*

ADDRESSING

PHIL TURNER / 303-739-7357 / PCTURNER@AURORAGOV.ORG

1. Please provide a digital .shp or .dwg file for addressing and other GIS mapping purposes. Include the parcel, street line, easement and building footprint layers at a minimum. Please ensure that

the digital file provided in a NAD 83 feet, Stateplane, Central Colorado projection so it will display correctly within our GIS system. Please eliminate any line work outside of the target area. Please contact me if you need additional information about this digital file.

- *Response: A digital .dwg file is included in this resubmittal. Please let us know if any modifications are needed.*

REFERRAL COMMENTS FROM OTHER DEPARTMENTS AND AGENCIES

CIVIL ENGINEERING

KRISTIN TANABE / 303-739-7306 / KTANABE@AURORAGOV.ORG / COMMENTS IN GREEN

1. The Site Plan will not be approved by Public Works until the Preliminary Drainage Letter/Report is approved.
 - *Response: Noted. Our drainage letter/report has been updated to address all comments.*
2. Is there a reason why the sidewalk connections are noted as a "Phase 2?"
 - *Response: The sidewalk is being proposed as 'Phase 2' so that it does not have to be removed with Phase 2 improvements. Ownership is working to propose Phase 2 improvements that would include restaurants and a potential hotel. As part of this Phase 2 ownership will implement improved vehicular and pedestrian circulation/connectivity and want to ensure that the proposed improvements for Phase 1 would not need to be removed/altered. Phase 2 pedestrian improvements will be installed within 18 months from the Fieldhouse opening.*
3. A minimum 2% slope is required in landscape areas, typical.
 - *Response: Noted.*

TRAFFIC ENGINEERING

BRIANNA MEDEMA / 303-739-7336 / BMEDEMA@AURORAGOV.ORG / COMMENTS IN AMBER Site Plan

1. Comments on Traffic Impact Study may impact intersection of Crystal & Ring road.
 - *Response: Noted. The traffic study has been updated to address all comments.*
2. All way stop is problematic. Roundabout need to be analyzed. Alternative solutions may be proposed/evaluated.
 - *Response: Noted. The traffic study has been updated to address all comments. A roundabout evaluation is included. The all-way-stop condition provides a level of service B.*
3. Show sight distance triangles at all proposed access points to comply with COA STD TE-13.1, 25mph Design Speed.
 - *Response: Site triangles are included.*
4. Use straight pavement marking arrow instead of text.
 - *Response: Pavement markings have been updated.*
5. Show sight triangles for all access points to parking lot.
 - *Response: Site triangles for all access points to parking lot are being shown.*

Review Comments 03/02/2020 Traffic Study:

6. Existing traffic patterns based on actual traffic counts should be the underlying basis for this distribution, given the site is established and generating traffic currently. Provide detail on how the assumed trip distribution reflects existing traffic counts/patterns.
 - *Response: This is correct. This was used as the starting point of the trip distribution, but then it was modified from this point based on the differences of the Aurora Town Center being a more regional attraction and this facility being a more localized use to account for arrival and departure patterns from surrounding demographic areas. This further description was added to the revised traffic study.*

7. Queue lengths in the NB direction of Alameda Ave/Crystal St intersection are anticipated to exceed storage, as discussed in the executive summary and queue analysis. Please specify modifications for this intersection of signal timing improvements or other improvements as necessary.
 - *Response: This has been added to the revised study. A possible solution is to reallocate 12 seconds of green time from Alameda Avenue to the northbound Crystal Street approach of the Alameda Avenue and Crystal Street intersection. With this additional northbound green time, delays along Alameda Avenue are only slightly impacted. The northbound through/right turn vehicle queues can be reduced to 172 feet (instead of 200 feet to 225 feet) while the existing throat length currently extends approximately 160 feet. Of note, modifying signal timings with more than 12 seconds to Crystal Street to report 160 feet of northbound vehicle queues significantly impacts the vehicle delays along Alameda Avenue and is therefore not recommended.*

8. Roundabout analysis of the intersection on Crystal St & Ring road is required.
 - *Response: Roundabout analysis has been added to the revised study.*

9. See SEPAC added to end. Cycle length of PM peak existing does not match existing.
 - *Response: The cycle length from the In-N-Out Burger traffic study analysis was used at this intersection of the Mall Access along Abilene Street. It was assumed that this cycle length reported from the approved In-N-Out Burger traffic study was correct. However, learning that the In-N-Out Burger traffic study cycle length was incorrect, this has been modified to represent an 80 second cycle length as noted in the revised study.*

10. Add a statement indicating that based on the proximity of the different count dates that it is anticipated that traffic patterns had not shifted. No significant modification in mall occupancy was recorded during this time.
 - *Response: Good, a statement to this effect has been added to this revised study.*

11. Alameda thru traffic is less in 2021 than in 2019: is this assumed pass-by for the restaurant? Also turning movements do not seem to have grown by stated growth-rate for this period.
 - *Response: The In-N-Out Burger traffic study traffic volumes for 2021 Background Plus Project were used as the background condition for this analysis directly as requested. If there any possible traffic volume issues they would have to be related to that study as they also provided the existing counts. You are likely correct assuming that the reduction in through volumes along Alameda Avenue is due to pass-by traffic, but the In-N-Out Burger traffic study would need to be further evaluated.*

12. Shopping Center (820) is not the appropriate code to use for a large department store use when comparing. Department store (875)?
 - *Response: Agreed, this text has been updated with the Department Store use for trip generation comparison purposes in the revised study.*
13. Existing traffic patterns based on actual traffic counts should be the underlying basis for this distribution, given the site is established and generating traffic currently.
 - *Response: Repeat comment from #1. Existing counts were used as the starting point of the trip distribution, but then it was modified from this point based on the differences of the Aurora Town Center being a more regional attraction and this facility being a more localized use to account for arrival and departure patterns from surrounding demographic areas. This further description was added to the revised traffic study.*
14. There is a reduction of delay between Background and Background + Site models. If this is due to assumptions in signal timing changes, that is not considered a "No Modifications" scenario. Please specify.
 - *Response: The outputs have been updated in the revised study. Vehicle delays are longer during the total traffic volume scenario.*
15. As identified in the Traffic Impact Study Guidelines, if an all-way stop is warranted, a roundabout shall be analyzed and evaluated. Include a preliminary layout with lane assignments and anticipated construction envelope.
 - *Response: The all-way stop control works acceptably, but for purposes of the study a single lane roundabout level of service was provided.*
16. Exec. summary notes the need for signal timing improvements. Please demonstrate that signal timing can resolve queue storage issue at NB Alameda/Crystal.
 - *Response: This has been added to the revised study. A possible solution is to reallocate 12 seconds of green time from Alameda Avenue to the northbound Crystal Street approach of the Alameda Avenue and Crystal Street intersection. With this additional northbound green time, delays along Alameda Avenue are only slightly impacted. The northbound through/right turn vehicle queues can be reduced to 172 feet (instead of 200 feet to 225 feet) while the existing throat length currently extends approximately 160 feet. Of note, modifying signal timings with more than 12 seconds to Crystal Street to report 160 feet of northbound vehicle queues significantly impacts the vehicle delays along Alameda Avenue and is therefore not recommended.*
17. A model is needed to show that this resolves the concern without adverse effect on Alameda traffic.
 - *Response: This has been added to the revised study. A possible solution is to reallocate 12 seconds of green time from Alameda Avenue to the northbound Crystal Street approach of the Alameda Avenue and Crystal Street intersection. With this additional northbound green time, delays along Alameda Avenue are only slightly impacted. The northbound through/right turn vehicle queues can be reduced to 172 feet (instead of 200 feet to 225 feet) while the existing throat length currently extends approximately 160 feet. Of note, modifying signal timings with more than 12 seconds to Crystal Street to report 160 feet of northbound vehicle queues significantly impacts the vehicle delays along Alameda Avenue and is therefore not recommended.*

FIRE / LIFE SAFETY

JEFF GOORMAN / JGOORMAN@AURORAGOV.ORG / (303) 739-7464 / PDF COMMENTS IN BLUE

SHEET 1 OF 16 Cover Sheet:

1. Note 3 and 23 are duplicate notes. Remove note 3.
 - *Response: Note 3 has been removed.*
2. Note 18 and 25 duplicate notes remove note 18.
 - *Response: Request completed.*
3. If no gates or barriers are to be installed on the site remove note 19.
 - *Response: Request completed.*
4. Site is not located in LDN area. Remove note 22.
 - *Response: Request completed.*
5. Remove note 22 it is a duplicate to note 5.
 - *Response: Request completed.*
6. Duplicate to note 1. Remove note 26.
 - *Response: Request completed.*
7. 14 accessible parking spaces required 2015 IBC 1106. 3 must be Accessible van spaces. Verify count of accessible parking spaces and van parking spaces.
 - *Response: 14 ADA parking spaces have been provided to serve the building. 10 on the north and the existing 4 on the west.*

SHEET 2 OF 16 Overall Site Plan:

1. Show locations of existing and proposed fire lane signs to include fire lane signs.
 - *Response: Fire lane signs are clearly identified on the plans.*

SHEET 3 OF 16 Site Plan (SE):

1. Square off the fire lane. Note minimum turning Radii for 26' fire lane is 26 and 49.
 - *Response: Request completed.*
2. Show location of accessible curb ramp for loading zone.
 - *Response: Request completed.*
3. Show locations of proposed fire lane signs. TYP
 - *Response: Request completed.*
4. Replace ADA and HANDICAP with Accessible TYP.
 - *Response: Request completed.*

SHEET 4 OF 16 Site Plan (NW):

1. Replace HANDICAP with Accessible TYP all sheets.
 - *Response: Request completed.*

2. Show locations of additional accessible parking.
 - *Response: Request completed.*
3. Show location of cement parking stops.
 - *Response: Cement parking stops are not provided. Sign post bollards will be used instead to remove a potential trip hazard.*
4. Show location of accessible curb ramp.
 - *Response: Accessible curb ramps labeled.*
5. Show curb ramp location and detail.
 - *Response: Request completed.*
6. Relabel accessible route.
 - *Response: Accessible route labeled.*

SHEET 8 OF 16 Utility Plan:

1. Show location and label of fire service. Example 8" dip.
 - *Response: Fire service is labeled.*
2. Show location of riser/sprinkler room and FDC with Knox hardware. Note FDC to be located near the main entrance within 100' of a hydrant.
 - *Response: The location of the riser/sprinkler room is in the southeast corner of the building. A floor plan can be provided if necessary. The FDC is located on the front of the building west of the main entry.*
3. Include only applicable symbols in the legend.
 - *Response: Noted. Legend updated.*
4. Show location of KNOX box.
 - *Response: The location of the KNOX box is identified on the front of the building.*

SHEET 9 OF 16 Site Details:

1. Update sign detail.
 - *Response: The sign detail is updated.*

SHEET 14 OF 16 Exterior Building Elevations:

1. Show the location of the FDC and Knox Boxes where applicable.
 - *Response: The FDC and the Knox box is located on the front of the building. Refer to the Elevation Sheet for exact location.*

AURORA WATER

DAVID PERSHING / (303) 326-8088/ DPERSHIN@AURORAGOV.ORG / COMMENTS IN RED

1. No additional comments.
 - *Response: Noted. Thank you.*

REAL PROPERTY

DARREN AKRIE / 303-739-7331 / DAKRIE@AURORAGOV.ORG / COMMENTS IN MAGENTA

1. Correct Note 7 to state, "All crossings or encroachments into easements and rights-of-way owned by the City of Aurora ("City") identified as being privately-owned and maintained herein are acknowledged by the undersigned as being subject to City's use and occupancy of said easements or rights-of-way. The undersigned, its successors and assigns, further agrees to remove, repair, replace, relocate, modify, or otherwise adjust said crossings or encroachments upon request from the City and at no expense to the City. The City reserves the right to make full use of the easements and rights-of-way as may be necessary or convenient and the City retains all rights to operate, maintain, install, repair, remove or relocate any City facilities located within said easements and rights-of-way at any time and in such a manner as it deems necessary or convenient."
 - *Response: Acknowledged.*

2. Begin the easement releases and dedications by separate documents. Contact Andy Niquette to start the processes for these easement documents. There will be associated accompanying documents need to be submitted at the same time for these separate documents.
 - *Response: Easement releases and dedications will be completed by separate documents. Applications and packages will be submitted to Andy Niquette.*

FORESTRY

REBECCA LAMPHEAR / 303-739-7139 / RLAMPHEA@AURORAGOV.ORG

1. There could be trees affected by development. It looks as though two Honey Locust trees located in parking lot will require removal. In addition, the trees located next to ring road on the north side of project look as though they may be impacted as well. Please indicate whether these trees will be preserved or mitigated. Due to the location, size and condition of trees on the site, relocation is not an option. The use of tree equivalents is not permitted to mitigate for tree loss. And tree mitigation is always above and beyond the Landscape Code requirements. Any tree that is removed from this site will either require replacement within the landscape or be mitigated through payment to the Community Tree Fund.
 - *Response: The two Honey Locust in the parking lot will be removed and 6 trees are proposed to meet the City's tree mitigation requirements. TPF proposed around tree located next to the Ring Road.*

2. When the site plan is submitted, please show and label all existing trees on a separate sheet called Tree Mitigation Plan and indicate which existing trees will be preserved or removed. Please include grading on this sheet as well. Forestry Division staff will conduct a tree assessment after the initial submittal, which includes species, size, condition, and location factors. If there is interest in determining mitigation requirements before your submittal, there is the option of hiring a consulting arborist; a list can be obtained from Forestry upon request. Forestry would require a meeting with the arborist selected to make sure that we agree on the appraisal.
 - *Response: Tree mitigation plan provided. The plan includes grading.*

3. Any trees that are preserved on the site during construction activities shall follow the standard details for Tree Protection per the current Parks, Recreation & Open Space Dedication and Development Criteria manual. Parks, Recreation & Open Space Dedication and Development Criteria manual. These notes shall be added to the plan.

- *Response: Tree protection note from the Parks, Recreation & Open Space Dedication and Development Criteria manual. Tree protection fencing shown around all tree being preserved around the building area.*
- 4. Please show a tree mitigation chart on the landscape plan taken from the Landscape Manual page 29. If payment will be made into the Tree Planting Fund, add another column to the chart indicating the payment amount that will be made. If trees will be planted on the site, please show a symbol indicating trees that are specific to tree mitigation
 - *Response: Tree mitigation chart shown on page 15. No payment will be made to the Tree Planting Fund, all required mitigation inches have been accounted for by the addition of 7 2" caliper trees. A symbol (M) has been added next to the plant label to mark which proposed trees are specific to tree mitigation.*
- 5. The caliper inches that will be lost are 34", but only 14" would be required for planting back onto the site. The mitigation value is \$3,590.00.

TREE #	SPECIES	DIAMETER	MITIGATION VALUE	COMMENTS	MITIGATION INCHES
1	Honey locust	18	\$2,004.01		7
2	Honey locust	16	\$1,587.44		6
Total		34	\$3,591.45		14

NOTE: Mitigation values based on International Society of Arboriculture's Guide to Plant Appraisal. Species, diameter, condition, and location factors were included in the assessment.

- *Response: Noted. 14" of caliper provided to meet mitigation requirement.*

XCEL ENERGY

DONNA GEORGE / 303-571-3306 / DONNA.L.GEORGE@XCELENERGY.COM

- 1. Public Service Company of Colorado's (PSCO) Right of Way & Permits Referral Desk has determined there is a conflict with the above captioned project in that the existing switch cabinet and associated electric lines on the south/southeast side of the building are not shown on the plans. Will these facilities be relocated? (For additional detail, please see attached letter)
 - *Response: It is anticipated that the existing electrical transformer and gas services will remain. New electrical secondary service and meter will be required as well as a new gas meter for this project. We will work with Xcel to engage an updated service design.*

ARAPAHOE COUNTY PUBLIC WORKS

SARAH WHITE / 720-874-6541 / SWHITE@ARAPAHOEGOV.COM

- 1. Arapahoe County Engineering thanks you for giving us the opportunity to review the AURORA MALL - FIELDHOUSE USA - SITE PLAN AMENDMENT. Engineering Staff has reviewed the proposed Site Plan and use. The Engineering Division has no comments regarding the referral at this time based on the information submitted. (Letter attached)
 - *Response: Thank you.*

ARAPAHOE COUNTY PLANNING DIVISION

TERRI MAULIK / 720-874-6650 / TMAULIK@ARAPAHOEGOV.COM

1. Thank you for the opportunity to review and comment on this project. The Arapahoe County Planning Division has no comments; however, other Divisions and/or Departments in Arapahoe County may submit comments.
 - *Response: Thank you.*

REGIONAL TRANSPORTATION DISTRICT (RTD)

SCOTT WOODRUFF / 303-299-2943 / CLAYTON.WOODRUFF@RTD-DENVER.COM

1. RTD has no comments.
 - *Response: Thank you.*

CITY OF AURORA TRAFFIC COMMENTS

Site Plan:

1. Comments on Traffic Impact Study may impact intersection of Crystal & Ring road.
 - *Response: All traffic comments have been addressed and a revised traffic study is included.*
2. All way stop is problematic. Roundabout need to be analyzed. Alternative solutions may be proposed/evaluated.
 - *Response: A roundabout study is included in the updated traffic study. While a roundabout does increase the LOS from B to A, an all-way stop condition still functions adequately. It appears that the eastbound left maneuver is the most problematic, but it is a result of the In-N-Out traffic movements, not the Fieldhouse.*
3. Show sight distance triangles at all proposed access points to comply with COA STD TE-13.1, 25mph Design Speed.
 - *Response: Sight distance triangles are being shown at all access points where proposed improvements are being made. .*
4. Use straight pavement marking arrow instead of text.
 - *Response: Straight pavement marking arrows have been implemented.*
5. Show sight triangles for all access points to parking lot.
 - *Response: Site triangles have been added.*

Review Comments 03/02/2020 Traffic Study:

1. Existing traffic patterns based on actual traffic counts should be the underlying basis for this distribution, given the site is established and generating traffic currently. Provide detail on how the assumed trip distribution reflects existing traffic counts/patterns.
 - *Response: This is correct. This was used as the starting point of the trip distribution, but then it was modified from this point based on the differences of the Aurora Town Center being a more regional attraction and this facility being a more localized use to account for arrival and departure patterns from surrounding demographic areas. This further description was added to the revised traffic study.*
2. Queue lengths in the NB direction of Alameda Ave/Crystal St intersection are anticipated to exceed storage, as discussed in the executive summary and queue analysis. Please specify modifications for this intersection of signal timing improvements or other improvements as necessary.

9. There is a reduction of delay between Background and Background + Site models. If this is due to assumptions in signal timing changes, that is not considered a "No Modifications" scenario. Please specify.
 - *Response: The outputs have been updated in the revised study. Vehicle delays are longer during the total traffic volume scenario.*

10. As identified in the Traffic Impact Study Guidelines, if an all-way stop is warranted, a roundabout shall be analyzed and evaluated. Include a preliminary layout with lane assignments and anticipated construction envelope.
 - *Response: Roundabout analysis has been added to the revised study. It was found that a single lane roundabout with single lane approaches would accommodate future traffic volumes successfully.*

11. Exec. summary notes the need for signal timing improvements. Please demonstrate that signal timing can resolve queue storage issue at NB Alameda/Crystal.
 - *Response: This has been added to the revised study. A possible solution is to reallocate 12 seconds of green time from Alameda Avenue to the northbound Crystal Street approach of the Alameda Avenue and Crystal Street intersection. With this additional northbound green time, delays along Alameda Avenue are only slightly impacted. The northbound through/right turn vehicle queues can be reduced to 172 feet (instead of 200 feet to 225 feet) while the existing throat length currently extends approximately 160 feet. Of note, modifying signal timings with more than 12 seconds to Crystal Street to report 160 feet of northbound vehicle queues significantly impacts the vehicle delays along Alameda Avenue and is therefore not recommended.*

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CITY OF AURORA TRAFFIC COMMENTS – REDLINES

PAGE 1

1. Existing traffic patterns based on actual traffic counts should be the underlying basis for this distribution, given the site is established and generating traffic currently. Provide detail on how the assumed trip distribution reflects existing traffic counts/patterns.
 - *Response: This is correct. This was used as the starting point of the trip distribution, but then it was modified from this point based on the differences of the Aurora Town Center being a more regional attraction and this facility being a more localized use to account for*

arrival and departure patterns from surrounding demographic areas. This further description was added to the revised traffic study.

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5. Add a statement indicating that based on the proximity of the different count dates that it is anticipated that traffic patterns had not shifted. No significant modification in mall occupancy was recorded during this time.
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PAGE 17

6. Alameda thru traffic is less in 2021 than in 2019: is this assumed pass-by for the restaurant? Also turning movements do not seem to have grown by stated growth-rate for this period.
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7. Shopping Center (820) is not the appropriate code to use for a large department store use when comparing. Department store (875)?
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PAGE 29

9. Queue lengths in the NB direction are anticipated to exceed storage, as discussed also in the executive summary.
 - *Response: This has been added to the revised study. A possible solution is to reallocate 12 seconds of green time from Alameda Avenue to the northbound Crystal Street approach of the Alameda Avenue and Crystal Street intersection. With this additional northbound green time, delays along Alameda Avenue are only slightly impacted. The northbound through/right turn vehicle queues can be reduced to 172 feet (instead of 200 feet to 225 feet) while the existing throat length currently extends approximately 160 feet. Of note, modifying signal timings with more than 12 seconds to Crystal Street to report 160 feet of northbound vehicle queues significantly impacts the vehicle delays along Alameda Avenue and is therefore not recommended.*
10. Please specify modifications for signal timing improvements or other improvements as necessary.
 - *Response: Please refer to the updated traffic study.*

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11. There is a reduction of delay between Background and Background + Site models. If this is due to assumptions in signal timing changes, that is not considered a "No Modifications" scenario. Please specify.
 - *Response: The outputs have been updated in the revised study. Vehicle delays are longer during the total traffic volume scenario.*

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12. As identified in the Traffic Impact Study Guidelines, if an all-way stop is warranted, a roundabout shall be analyzed and evaluated. Include a preliminary layout with lane assignments and anticipated construction envelope.
 - *Response: The all-way stop control works acceptably, but for purposes of the study a single lane roundabout level of service was provided.*

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13. Exec. summary notes the need for signal timing improvements. Please demonstrate that signal timing can resolve queue storage issue at NB Alameda/Crystal.
 - *Response: This has been added to the revised study. A possible solution is to reallocate 12 seconds of green time from Alameda Avenue to the northbound Crystal Street approach of the Alameda Avenue and Crystal Street intersection. With this additional northbound green time, delays along Alameda Avenue are only slightly impacted. The northbound through/right turn vehicle queues can be reduced to 172 feet (instead of 200 feet to 225 feet) while the existing throat length currently extends approximately 160 feet.*

Of note, modifying signal timings with more than 12 seconds to Crystal Street to report 160 feet of northbound vehicle queues significantly impacts the vehicle delays along Alameda Avenue and is therefore not recommended.

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14. Need model to show that this resolves the concern without adverse effect on Alameda traffic
- *Response: This has been added to the revised study. A possible solution is to reallocate 12 seconds of green time from Alameda Avenue to the northbound Crystal Street approach of the Alameda Avenue and Crystal Street intersection. With this additional northbound green time, delays along Alameda Avenue are only slightly impacted. The northbound through/right turn vehicle queues can be reduced to 172 feet (instead of 200 feet to 225 feet) while the existing throat length currently extends approximately 160 feet. Of note, modifying signal timings with more than 12 seconds to Crystal Street to report 160 feet of northbound vehicle queues significantly impacts the vehicle delays along Alameda Avenue and is therefore not recommended.*

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15. See SEPAC at end of this document. This shall be at 80 sec for PM.
- *Response: Thank you.*

With Kimley-Horn, you should expect more and will experience better. Please contact me at 303-228-2339 or Bryce.Christensen@kimley-horn.com should you have any questions.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Bryce Christensen, PE
Project Manager