Staff Report

University Avenue and Airport Road Roundabout

March 3, 2015

BACKGROUND

At the February 27, 2015 meeting, City Council requested additional information related to meetings, comments, and discussions with the Ames Bicycle Coalition (ABC) regarding their requests for the University Avenue and Airport Road roundabout. This report is intended to clarify this issue.

Staff originally held a project informational meeting attended by approximately twenty individuals representing area businesses, property owners, and residents on January 15, 2015 at the ISU Research Park Office to discuss the project and receive input on the project concept. Members of the ABC at the meeting expressed concerns regarding speed, layout, and both bike/pedestrian and bike/vehicle interaction. There was also discussion about incorporating additional facilities not specifically related to the project. These included extending on-street bike facilities east on Airport Road from University and north on University from Airport Road, adding a shared use path connection west along Oakwood Road to State Avenue, and paving the current gravel path from Airport Road north to Grand Avenue.

Staff exchanged emails with multiple ABC members, after which ABC asked the project team to hold a separate meeting with ABC members to hear their project concerns in more detail and to discuss ideas and options as to what alternatives might be implemented. The three individuals who attended the February 2, 2015 meeting were ABC's President, Vice President and Public Relations person, who gave a brief presentation of their concerns related to the project. There was a good exchange of information at the meeting and staff followed up the meeting by asking for a copy of the presentation in order to ensure that the questions raised were being addressed. The questions and responses are in Attachment A.

The main point of the ABC's requests is to have separate off-street, bike-only facilities in this area to accommodate commuters and other cyclists. The concept proposed by ABC is called a "cycle track," and would be somewhat similar to what is currently utilized on the west side of Ash Avenue next to the Cyclone Sports Complex. According to ABC, "It's very common for cyclists to be going 20-25 mph or even faster on [the University Avenue] route", thus leading to the justification for separate bike-only facilities.

DESIGN CHANGES AS RESULT OF ABC INPUT

- The design team has adjusted the initial concept of five-foot sidewalks through the roundabout to 10' foot shared use paths in order to accommodate pedestrians and cyclists more easily.

- The radius at the intersections of the shared use paths street crossings were increased to 6' in order to more easily accommodate the turning movements of cyclists. As a reference point, the standard radius on a typical residential street is 15'.

- The "splitter island" in the northeast corner was extended to provide a 6-foot pedestrian/cyclist refuge and reduce the need to cross two lanes of traffic at one time.

- Speed will be reduced in the area to 35 mph ahead of the roundabout and further reduced to 15mph through the roundabout. The current posted speeds are 45mph on University Avenue and Airport Road and 40mph on Oakwood Road.

- Vehicles will be required to yield to pedestrians and cyclists on the shared use path at all crosswalk locations. There will be significant signage and pavement markings to delineate these areas.

- With on-street bike lanes south of Airport Road along University Avenue, careful consideration was given to designing the addition of the transition ramps from the on-street lanes to the shared-use paths for those cyclists who are not comfortable navigating through the roundabouts with vehicles.

  Attachment B1 shows the plan as currently designed. Attachment B2 shows the ABC cycle track concept.

  STAFF COMMENTS

  After extensive discussions with ABC representatives and further exploration with the design consultant, staff does not believe the use of cycle tracks is advisable for the following reasons:

  - The City's current approach has been to focus on shared use path facilities to accommodate multiple modes of transportation, including cyclists and pedestrians. Incorporation of bike lanes is also evaluated. Under the current design for this roundabout, experienced cyclists may use on-street facilities, including existing vehicular travel lanes and the proposed bike lanes extending south of the roundabout. **ABC's request would be a significant change from the current practice by requiring separate, off-street facilities for cyclists and pedestrians (i.e., cycle track *and* sidewalk/shared use path).**

  - The Ames Area MPO is currently in the process of developing an update to the Long Range Transportation Plan (LRTP). As a part of that process, bicycle and pedestrian facilities are being evaluated. The updated plan should be able to identify needs and make suggestions to meet the modal requirements of the plan on a city-wide basis. As a part of the LRTP update, MPO's Policy Committee (including the City Council) will have the opportunity to guide these priorities and make policy decisions regarding which

new/upgraded facilities are most appropriate across the City.

- If ABC's requests are implemented, it will be quite challenging to create an effective transition to and from current shared use facilities to the new, separate dedicated facilities in all directions within the roundabout.

- It would not be safe for cyclists to navigate the cycle track along the roundabout at the speeds noted by above by ABC, because the posted speed limit through the roundabout will be 15 mph. The design of the cycle track would also need to slow a cyclist approaching the roundabout to allow time for the user to safely yield at conflict points. This is because cycle tracks are for transportation purposes only and do not have a recreational component, are are thus treated similarly to another lane of traffic.

- If a cycle track were to be installed, this concept should connect southward through the project corridor to the Hub Building. The estimated paving cost to implement this concept is $319,000. **This cost estimate does not include any additional grading, right of way, ADA facilities, or design costs.** The City's RISE grant agreement is very specific on the items that are eligible for reimbursement. RISE will cover the 5' bike lanes, but only 5' of the sidewalk/shared use paths. All costs associated with a cycle track would be considered non-participating RISE items. **Therefore, the City would be required to absorb the total additional cost if the cycle track is incorporated into the project design.**

  Estimated costs based on the current preliminary design are significantly over budget. The design team is in the process of refining the design elements and looking for project cost savings within the bid item unit costs, alternate project staging for construction, and reaching out to other communities to compare our estimated costs to their estimated and actual costs. Staff most recently sent an email to ABC regarding the funding constraints for the project. (Attachment C)

- It is anticipated that the project will be bid in April 2015 to be completed in coordination with the ISU Research Park Hub Building construction. Should the cycle track concept be chosen, the project will be delayed for a minimum of four weeks to implement the design changes.

- The City may also lose some competitiveness in the bidding process due to any delay in the design. The project is scheduled to be bid in the same time frame as the Grant Avenue paving project. Having two large paving projects bidding at the same time traditionally reduces costs on both projects by creating competition. There could also be increased project costs if the required contract completion is maintained as originally scoped. By reducing the window of completion, costs generally increase.

In brief, staff believes the incorporation of cycle tracks into this intersection should not occur at this time due to cost constraints and the potential to negatively affect progress on Phase III of the Research Park. However, if the

City Council/MPO Policy Committee determines that cycle tracks are desirable during development of the Long Range Transportation Plan, this location could be prioritized for adaptation at a later time.

Attachment A

February 2, 2015 ABC Meeting Responses

What design speed was used when developing this roundabout?

The design speed is 20mph. However, the design speed takes in to account all and geometric constraints and different users to be able to safely traverse the area. The fastest vehicles to move through the area would be emergency vehicles that would be traveling faster through the area without risking the time sensitive nature of their trip. The posted speed will be 15mph through the roundabout.

What are the speed limits of the incoming and outgoing streets?

The posted speeds on University and Airport will be reduced to 35mph ahead of the roundabouts to reduce speed and the geometry of the roundabout will also make the movements feel "tighter" to help reduce the speeds as motorists approach.

What is the speed through the right turn "turbos" and posted lane speeds?

The correct term is a "slip lane" to bypass the roundabout in a single movement. 15mph per the posted roundabout speed will be continued through the entire roundabout including the "turbo" lanes. This will be something that will continue to be monitored for effectiveness and doesn't prevent the City from additional calming measures in the future.

Will speed tables be used to slow cars?

This is something that the design team hadn't talked about previously. We will do some evaluation on this and see if it is something that we would want to install with the project. We will also be looking to see if there are other options that could work as well.

Proposed bike routes cross up to 7 lanes of motorist traffic to make the most typical crossing through the roundabout.

With a roundabout, the number of contact points for the north bound movement is either 4 (crossing at the south side of the intersection then on the west), same as today, or is reduced from 10 to 7 (crossing the east side of the intersection then the north side) as the revised concept shows. However, when a pedestrian or cyclist crosses a lane of traffic in a roundabout, the decision matrix is greatly reduced as they only have to check for traffic coming from one direction instead of two when crossing a typical street intersection.

Car speed at contact points higher then in a 4-Way stop condition

Potentially correct, depending on the acceleration of the vehicles from the full stop condition. The purpose of roundabouts is to bring all modes of transportation to similar, slower, speed that allow for more decision time with less decisions to allow safe entry in to and out of the roundabout. This continuous

motion all of the modes to keep moving through an intersection reducing road user costs and reduces the environmental impact of idle vehicles at full stop situations.

Bike routes cross "turbo" lanes – who yields?

Vehicles are required to yield to bikes and pedestrians at all crosswalks throughout the roundabout. Signage will be placed to notify motorists of the crossing locations as well as yield signs and pavement markings. A roundabout has the greatest number of signage requirements over a typical stop/go or signalized intersection. Bikes traveling on the street will be required to follow the yield requirements as well, just as a car.

Cyclists have to slow down significantly.

Cyclists will have to slow down to make the crossings should they choose to utilize the shared use path and crosswalk option through the intersection. However, should they choose to navigate the roundabout as a "vehicle" they would need to yield to bikes and pedestrians in crosswalks and adhere to the posted roundabout speeds.

During the meeting the question came up about the radii at the crossings. It has been determined that the radii of the path at the roundabout to be 6'. To put in perspective a local street intersection has a 15' radius.

No on-street bike lanes at 3 entry/exit points prevents safe bike flow in traffic

With no existing on street facilities available to tie in to, the slip lane concept allows for future expansion within the system should the long range plan and policy dictate the expansion. Bikes are not prohibited from utilizing Airport Road, University Avenue or Oakwood Road at this time.

Shared use trails are on wrong side of street if going North or East

Additional facilities for both sides of these streets will be analyzed as a part of the long range plan and will be a policy discussion for Council to prioritize based on the plan and funding availability.

No bicycle infrastructure on Oakwood

This is being addressed with a shared use path connection to be installed in 2015 to connect Christofferson Park to the widened shoulders on State Avenue.

University and Airport high speed limit (45 MPH)

See note above, the speed will be reduced to 35mph ahead of the roundabout and again reduced to 15mph through the roundabout.

Routing on/off street lanes via sidewalks

This is actually an approved method of allowing bikes to enter/exit roundabouts and has been done in other projects and not just unique to the proposed Ames roundabout.

Future Thoughts

Vet Med "Backdoor" Bypass of University roundabout

This would be a good connection, however, the City has no control over the construction of infrastructure on ISU property. If you would like to pursue the topic further, you can reach out to Cathy Brown in Facilities, Planning and Management at ISU. Her number is 294-6001

RP to Main St. Ames

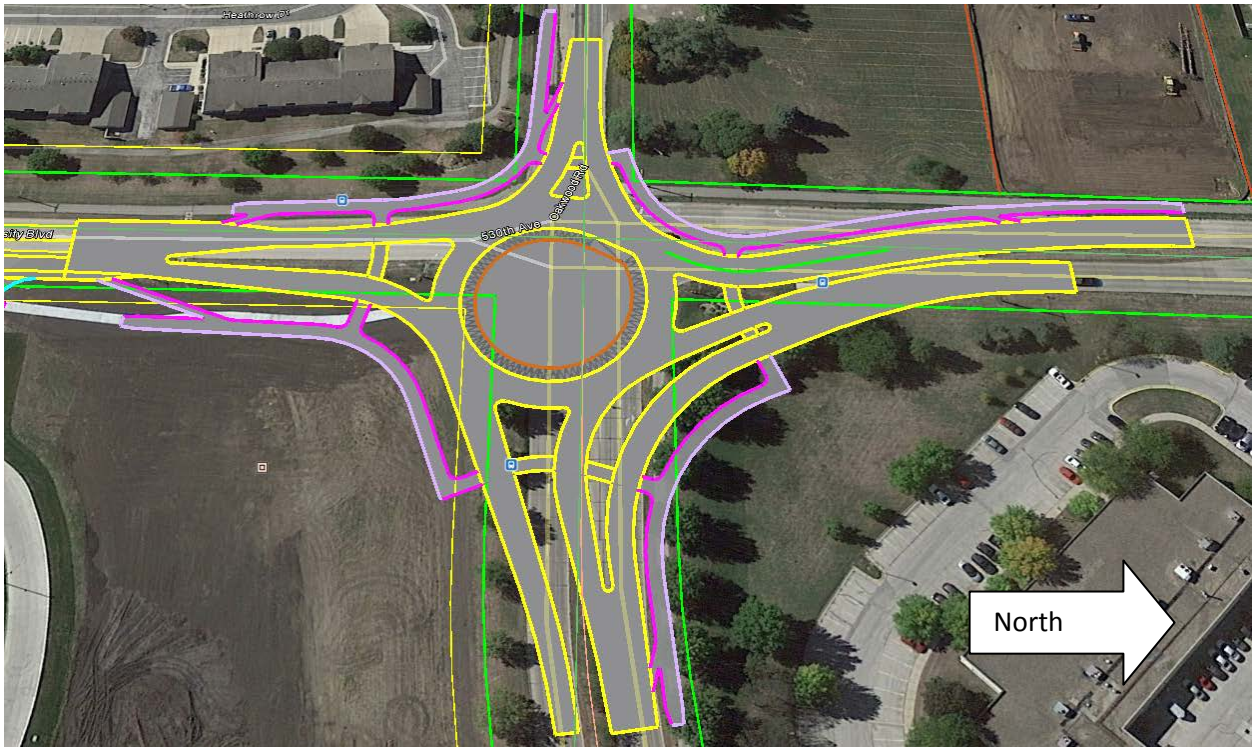
This may become a project that shows up in the new long range transportation plan, but the plan is not yet completed.

Connect to 6th Street & Campus

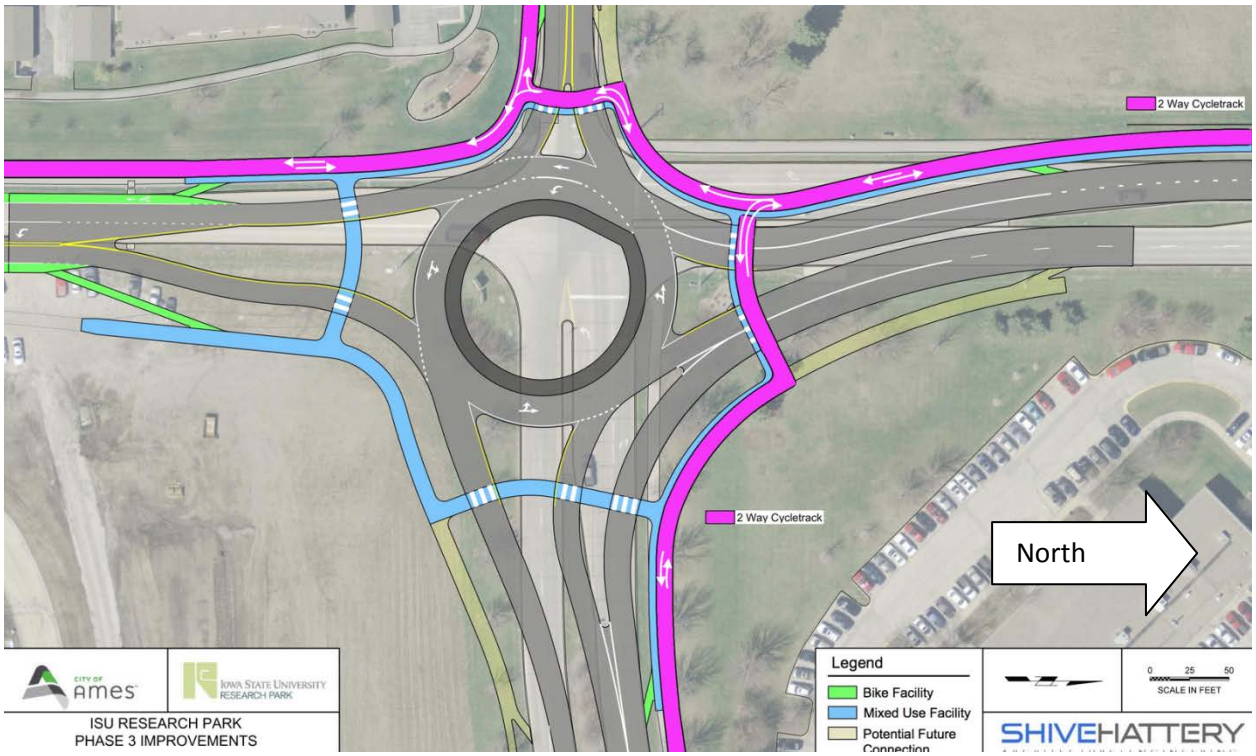
Please see the attached concept for the project.

The bike lanes are to be extended west on 6th Street and end just east of the existing entrance to Brookside Park. West of the entrance the street is limited on width due to the RR underpass. Any additional improvements in the area would need to be coordinated with ISU as they have jurisdiction west from the 6th Street bridge.

Attachment B1, Project Design



Attachment B2, Cycle Track Option by ABC



Re: ABC Meeting Follow Up

Eric Cowles to: Ames Bicycle Coalition 02/23/2015 04:16 PM

Cc: John C Joiner, Tracy Warner, mflattery, aquartell, bwillham, Damion Pregitzer

Bcc: Bob Kindred, Steve Schainker, neaster

Dan,

The design speed for the roundabouts is 20mph and the posted speed through them will be 15mph. Typically, although not always, the design speed is 5mph greater than the posted speed in a roadway project.

With regards to the cycle track concept, I would like to thank you and the other members of ABC for providing input on the project and expressing your concerns. I feel that there has been an excellent exchange of information and ideas and our team really appreciates your position and passion for creating better, community wide cycling opportunities.

We had a team budget meeting last week to go over cost impacts and in looking at things so far, we are going to be very tight on funding and it does not look like we will be able to accommodate the cycle track option with the project. The RISE agreement was also very specific in what is an eligible and not eligible project cost. I think that we discussed some of RISE items briefly at one of our meetings.

I think that we have set up things such that, if the Long Range Plan and other policy decisions line up, we could retrofit the area in a future budgeted project.

Thank you for being a part of our discussion and although it is disappointing to not be able to accommodate your concept at this particular time, I think that we, as a community, are making progress.

As always if you have any additional questions, let me know.

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Civil Engineer II

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Ames Bicycle Coalition Hi Eric, At the meeting on Monday we talke... 02/06/2015 10:22:03 AM

From: Ames Bicycle Coalition <amesbicyclecoalition@gmail.com>
To: Eric Cowles <ecowles@city.ames.ia.us>
Date: 02/06/2015 10:22 AM
Subject: Re: ABC Meeting Follow Up