Colorado State University
Alternative Transportation Fee Advisory Board
2020-2021 Project Proposal Form

Project Name/Location: _Pitkin Street - Green Trail Intersection Roundabout

Estimated Initial Cost: $35,577.00_ Estimated Recurring Cost (if applicable): _____

Funding Request from ATFAB: $35,577.00__ Matching Funds (if applicable): _____

Please Attach the Full Budget: Include total cost, amount requested from ATFAB, breakdown of all expenses, funding from other sources, etc. Please be thorough and specific.

Submitting Unit: Facilities Management

Name: David Hansen Telephone: 970.567.0031

Email Address: david.hansen@colostate.edu Department: Facilities Managment

College or Division: University Operations

Approvals (Signatures):

Provost/VP: Lynn Johnson Signature/Date: Lynn Johnson Jan 15, 2021

Department Head/Director *

Name: T A Satterly, P.E. Signature/Date: T A Satterly Jan 15, 2021

*Whomever oversees the areas affected by the proposed project. For example, if the proposal was to add covered bike parking near the LSC, you need to contact the Director/Department Head in charge of the LSC. Please contact ATFAB with any questions.

Facilities Management Approval of Estimated Budget/Schedule

Name: _ David Hansen _Signature/Date: __01/14/2021_____

Fill out and return proposal documents via email to ATFAB_CSU@colostate.edu and Aaron.Fodge@colostate.edu Deadline – Wednesday January 20, 2021

If project involves infrastructure construction, CSU Facilities must review cost estimates and proposal schedule. Facilities Deadline – Friday December 18, 2020 Please email to David Hansen at David.Hansen@colostate.edu

If accepted, you will be asked to give a 30-minute formal presentation to the ATFAB.

As an attached document, please answer the following questions:

1. **Description of the project (limit to ½ page):**

In 2019 the Transportation Safety Task Force was initiated by the President's office after the unfortunate death of a student on Campus in a traffic accident. The task force took considerable time to analyze campus transportation infrastructure with the help of CSUPD and reported crash data that they had collected over several years on campus. A specialized transportation engineering firm was hired to help the task force look at several intersections on campus to determine how they could be rebuilt to provide a safer campus environment. One specific intersection that rose to the top of the list is located at Pitkin Street and the Green Trail. This intersection has the potential for many unpredictable crossing movements by both pedestrians and cyclists. Counting movements generated by cordon studies and physical counted data provided insight as to how users move through the intersection. Pre-COVID, a bike north of the intersection counted as many as 7000 trips in a single day moving along the trail with most users encountering this intersection. The engineering team developed 2 design schemes for the intersection, a "quick-build" plan as well as a fully developed engineered design. In either scheme a roundabout solution was determined to be the safest way to reconstruct the intersection. This proposal is requesting funding for the "quick-build" plan which would provide the opportunity to consider a bicycle roundabout on campus as a pilot project. Before incurring several hundred thousand dollars worth of modifications to the intersection, the task force would like to see if the roundabout design will work and be respected by users. The design creates the physical sense of the roundabout through the use of modified striping, signage, vertical delineators and bolt down low-profile rollover curbs in the existing street. These elements will deter users from moving through the intersection in an unpredictable manner. The investment to implement these elements is far less costly than reconstructing the fully engineered plan but still provides the safe, separated, infrastructure needed to allow users to move through the intersection. Given that CSU has no other bicycle roundabouts on campus the task force would very much like to see how these are used and accepted on campus in a pilot project. It is anticipated that educational assistance will be needed from Rambassadors to aid in educating users on how to properly navigate through the intersection.

2. **Approximate timeline for the project (have you contacted Facilities for a bid and proposed schedule, if applicable?):** CSU Facilities Management proposes the following schedule

Scenario 1: If this project was awarded funding and allocated in two installments (typical):

- Project Design development Fall/ Winter 2021
- Project installation Spring/ Summer 2022
    - Purchase and installation time: allow 1 month

Scenario 2: If this project was awarded funding and allocated in one installment (Optimal):

- Project could be designed, purchased, ordered and installed in less than 2 months being completed in the Fall of 2021.

3. Please provide a discussion of how users will be supported (limit to ¼ page):

Safety of all users is paramount when developing new infrastructure. Given the number of potential users as mentioned in question 4 below, our proven separated and delineated infrastructure is proposed as the best way to safely serve the campus community. Universal access was a key parameter of the safety task force and users with all means of mobility are served in a safer manner through the development of a roundabout in this intersection. Today, users cross through in many unpredictable and unsafe patterns. A roundabout will create clear delineation where different modes need to travel and considers the varying speeds that occur. Proposed in the design are our standard trail symbols and signage that users have become familiar with elsewhere on campus. These signs and symbols will also meet MUTCD standards that are recognized nationally.

4. Please describe the benefits to students in accordance with ATFAB By-Laws (see Article VII, Funding Rules). Website: https://atfab.colostate.edu/atfab-bylaws/

One of the main motivations to improve this intersection is based on safety concerns. This intersection is at a primary crossroads for students and the campus community on the "Mountainside Loop".

North-South intersection access: The Green Trail contributes to the campus bicycle network and is a direct connection for students to access the west side of the Academic Campus core.

East-West intersection access: Pitkin Street is a primary corridor for the South student housing district of campus and provides a direct connection for resident students to access the west side of the core of the Academic Campus. New off-campus student housing south of the stadium also contributes to the number of students accessing campus along this corridor. As Meridian Village is developed in the future, this intersection will likely see more students accessing campus via this corridor.

As we have demonstrated elsewhere on campus, developing separated infrastructure has made users feel safer and has potentially minimized accidents by clearly defining where different modes should be, based on their relative speed. Greater than 50% of the on-campus student residents will live along this corridor to the west. Presuming their mode of choice is to walk or bike, this intersection will be a part of their daily commute to campus.

5. Please provide any evidence that there is student support for the following proposal (i.e. petitioning, letters of support, requests for proposal by students, ASCSU Resolutions, College Council approvals, etc.) It is highly recommended that proposals reach out to students; the level of student support for your proposal will likely affect the board's decision to fund it.

ASCSU has student representation on the Safety Task Force, Physical Development Committee and the Campus Bicycle Advisory Committee. This project was reviewed and approved by these committees in recent months as well as by CSUPD.

As part of the input period for the bicycle masterplan document, the consultant team hosted events on the LSC plaza as well as an online wiki-map to obtain input from the campus community. Pitkin Street near the Education building is a location that was noted with comments to consider further study.

6. **Is your project mentioned in any of the CSU Campus Master Plan documents? Have any campus advisory committees discussed this project? It is recommended that you consult an applicable planning or advisory committee for letters of support and advice regarding your proposal. Please attach any documents if applicable.**

As mentioned in the previous question, the 2014 Campus bike master plan identified this block of Pitkin Street as a corridor needing improvements and calls for a "mini-circle" at this intersection (Appendix A, page 11). In 2019 this specific intersection was identified by the President's Safety Task force as one needing to be considered for improvements based on safety concerns. The specific intersection was included in presentations given to both the University Physical Development Committee and University Masterplan Committee. Approval was given by each committee to advance further design study, implementation and policies for infrastructure improvements throughout the campus.

The campus bicycle advisory committee was consulted for input on the design of each intersection and improvement identified in the Safety Task Force infrastructure planning document provided by Fehr and Peers – Traffic Engineers consulting team.

7. **Please provide any additional information below.**

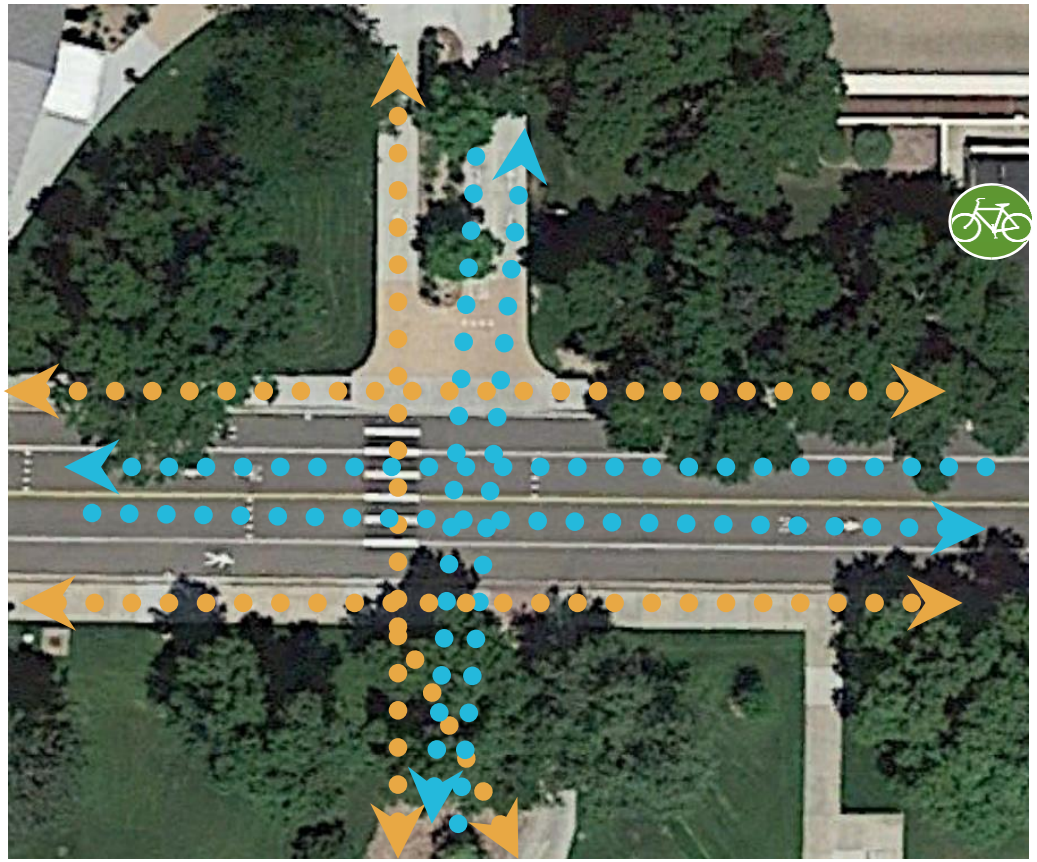
Please see attached cost opinion and graphics for additional information.

PITKIN STREET & GREEN TRAIL

PITKIN STREET & GREEN TRAIL FIELD OBSERVATIONS

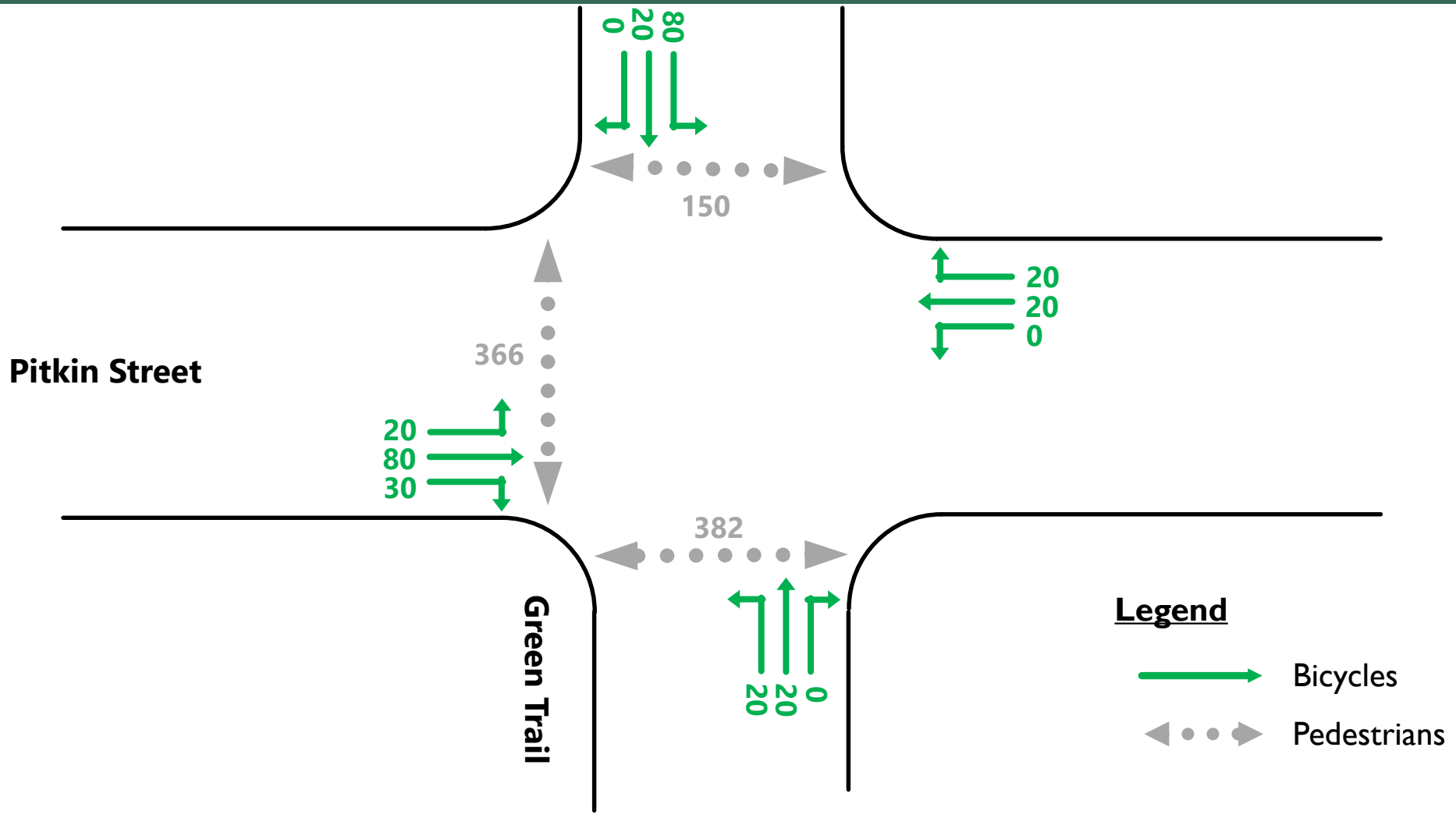
PITKIN STREET & GREEN TRAIL FIELD OBSERVATIONS

PITKIN & GREEN TRAIL



- Bikes have yield sign north/south crossing Pitkin. They are not usually stopping.
- Conflict between left turning bikes and thru bikes, thru/thru bikes.
- Conflicts between turning and thru bikes with pedestrians traveling along Pitkin.
- Bikes traveling on sidewalk at northeast corner to reach the bike parking.

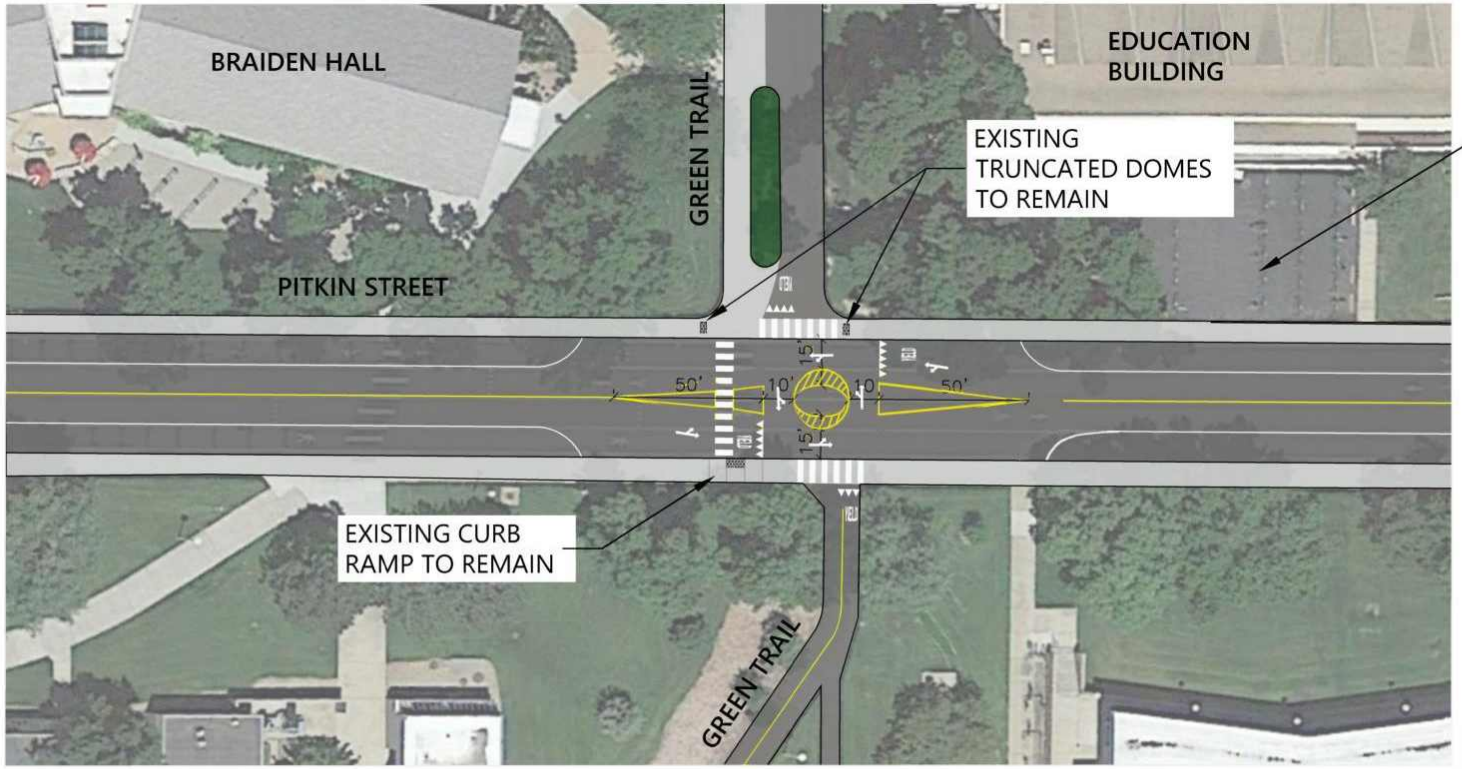
PITKIN STREET & GREEN TRAIL
VEHICLE, PEDESTRIAN, & BICYCLE COUNTS



PITKIN STREET & GREEN TRAIL CRASH DATA

2014-September 2017	September 2017-October 2019
1 – bike vs ped (injury) 1 – bike vs object (injury)	No crashes

PITKIN STREET & GREEN TRAIL POTENTIAL DESIGN SOLUTIONS



NOTES:

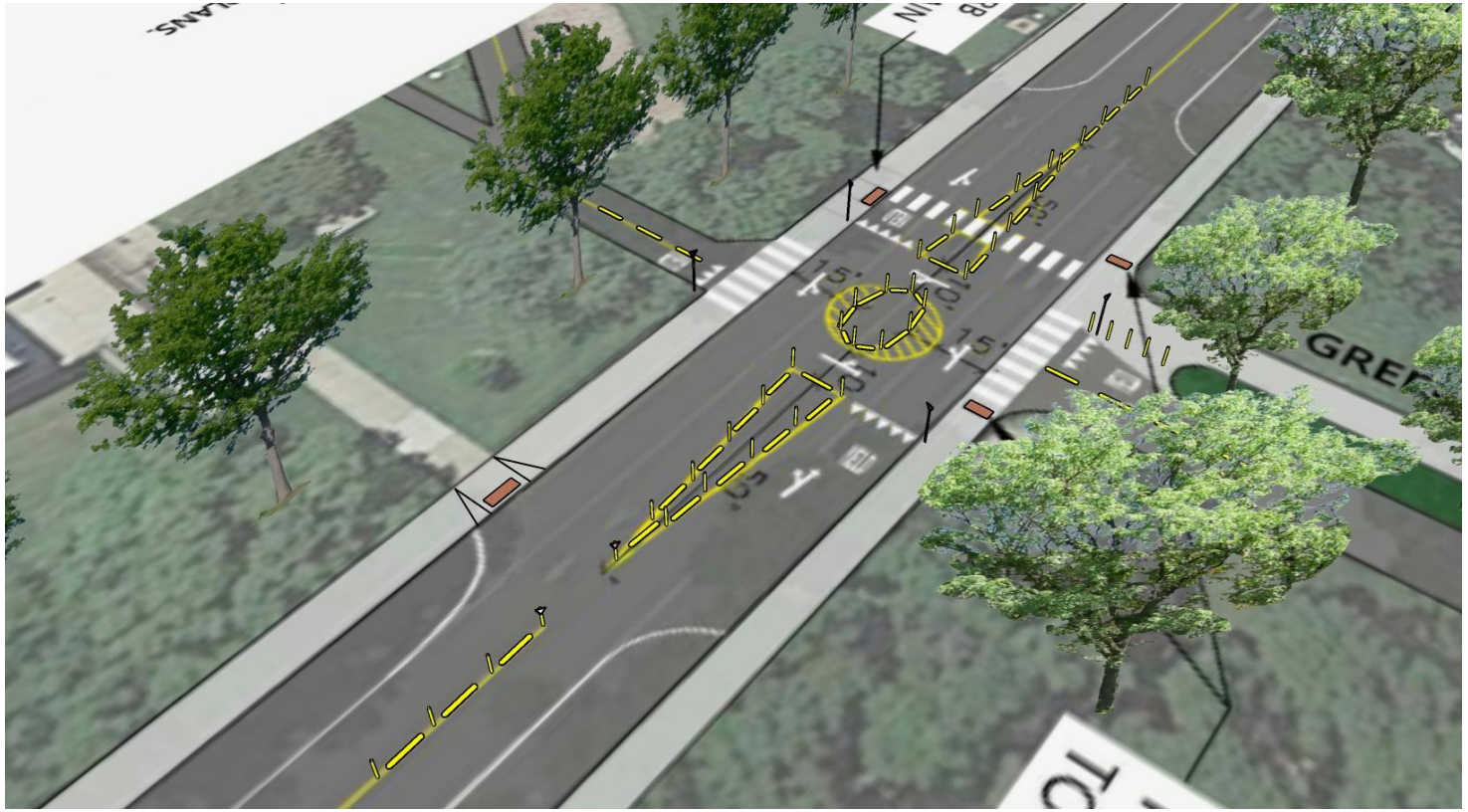
1. MEDIAN STRIPING AND VERTICAL ELEMENTS TO BE DETERMINED BY CSU.
2. REMOVE ALL EXISTING STRIPING AT THE INTERSECTION NOT SHOWN ON PLANS.

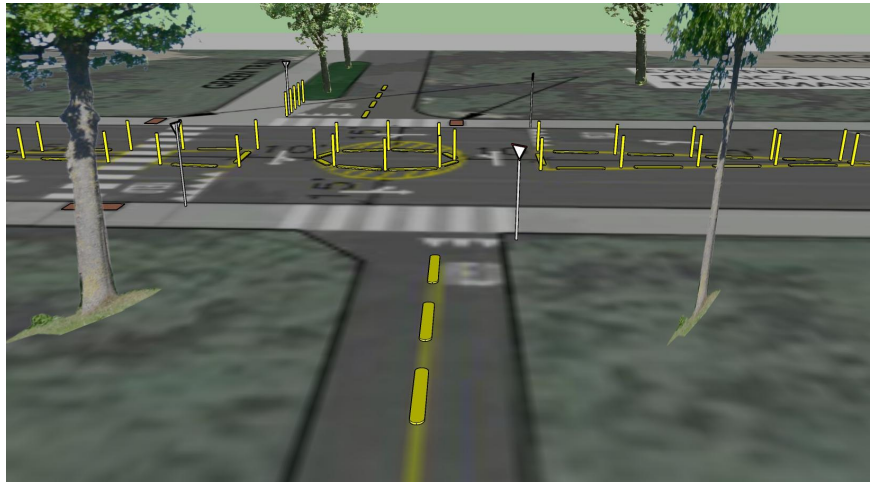
N

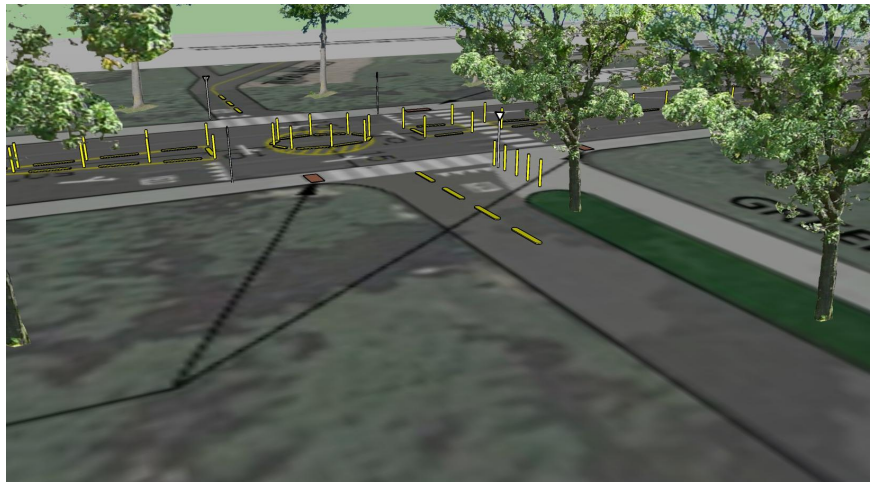
40 0 40 80
1" = 40' GRAPHIC SCALE

Pitkin Street & Green Trail
Quick Build Improvement

PITKIN STREET & GREEN TRAIL POTENTIAL DESIGN SOLUTIONS







CSU Pitkin & Green Trail Roundabout

PROJECT COST ESTIMATE - Revised 1/13/2021

Quick Build Option

FACILITIES MANAGEMENT
AT COLORADO STATE UNIVERSITY

Item No.	Description	Quantity	Unit	Unit Cost	Total Proj.
1	ADA Ramp concrete	1	ALLOW	$ 5,500.00	$ 5,500.00
2	Vertical Delineators	45	ea	$ 190.00	$ 8,550.00
3	Rollover Delineators	40	ea	$ 90.00	$ 3,600.00
4	Delineator Installation	1	ea	$ 2,500.00	$ 2,500.00
5	Grinding of existing striping	1	ALLOW	$ 3,500.00	$ 3,500.00
6	New Signage/ Striping/ Thermoplastics	1	ALLOW	$ 6,500.00	$ 6,500.00
	TOTAL COSTS				**$ 30,150.00**
	Project Contingency 10%				**$ 3,015.00**
	CSU Project Management 8%				**$ 2,412.00**
	PROJECT TOTAL				**$ 35,577.00**

ATFAB-2020-2021-Proposal- Pitkin Roundabout

Final Audit Report 2021-01-15

Created:	2021-01-15
By:	Karin Rees (karin.rees@colostate.edu)
Status:	Signed
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Adobe Sign

Signature: Tammy Hunt
Tammy Hunt (Jan 20, 2021 10:47 MST)

Email: vpuo_university_operations@mail.colostate.edu

Signature: David Hansen
David Hansen (Jan 20, 2021 11:10 MST)

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