ITEM # AAMPO 2
DATE: 9-24-19

AMES AREA METROPOLITAN PLANNING ORGANIZATION (AAMPO)
TRANSPORTATION POLICY COMMITTEE ACTION FORM

SUBJECT: FY 2021 IOWA'S CLEAN AIR ATTAINMENT PROGRAM (ICAAP)

BACKGROUND:

The Iowa's Clean Air Attainment Program (ICAAP) helps to fund transportation projects and programs that result in attaining or maintaining the national ambient air quality standards (NAAQS). The AAMPO is in attainment of the NAAQS, however, ICAAP funds are available for projects in the area which result in reductions in vehicle emissions and traffic congestion.

The AAMPO must review all potential ICAAP applications within the area for the following three items: 1) completeness; 2) financial feasibility; 3) conformity with AAMPO transportation planning processes and plans. If these three criteria are met, the AAMPO is to adopt formal resolutions stating that the proposed projects conform to the regional transportation plan. These resolutions are needed to submit the applications to the Iowa Department of Transportation (IDOT) by the State deadline of October 1, 2019.

The following projects have been submitted for a resolution to the Ames Area MPO for the 2019 ICAAP grant cycle:

Project Sponsor	Sponsor Priority	Project Name	ICAAP Request	Total Cost Project
City of Ames	1	Ames Traffic Network – Phase 1 (Fiber Network & Adaptive Control) *	$1,176,518	$1,470,648
CyRide	1	West Ames Changes (New Route: #12 Lilac; Added Frequency of Service: #1 Red, #7 Purple & #11 Cherry	$339,965	$424,957
CyRide	2	Cherry (Night Service)	$32,562	$40,703
CyRide	3	Lilac (Midday Service)	$30,728	$38,411
CyRide	4	Brown (Night Service)	$29,108	$36,385

*see attached map of phase 1 of the traffic network implementation.

Awards are made by the Iowa Transportation Commission in early 2020. Funds will become available in FY 2021, which begins on October 1, 2020.

ALTERNATIVES:

1. Certify that the projects shown in the Iowa Clean Air Attainment Program grant application conform to the MPO's regional transportation planning process.

2. Do not move forward with approving either of both grant applications.

ADMINISTRATOR'S RECOMMENDED ACTION:

The Ames Area MPO Transportation Technical Committee has reviewed the proposed grant applications and unanimously recommended approval. The work accomplished under this grant could lead to future ICAAP funding that will free up local funds to be reprioritized for other local regional projects.

Therefore, it is the recommendation of the Administrator that the Transportation Policy Committee adopt Alternative No. 1, as described above.

City of Ames

First Phase Deployment– September 2019

IOWA CLEAN AIR ATTAINMENT PROGRAM

Form 230017 (08-18)

IOWADOT

PROJECT APPLICATION
IOWA CLEAN AIR ATTAINMENT PROGRAM (ICAAP)

General Information:

Applicant Agency: City of Ames (Public Agency (required)) E-mail: dpregitzer@city.ames.ia.us

Contact Person (*Name and Title*): Damion Pregitzer, Traffic Engineer

Complete Mailing Address: City Hall, 515 Clark Avenue (Street Address and/or Box Number)

Ames (City) | IA (State) | 50010 (ZIP Code) | 515-239-5160 (Daytime Phone)

If more than one agency or organization is involved in this project, please state the name, contact person, mailing address, and telephone number of the second agency. *(Attach an additional page if more than two agencies are involved.)*

Co-Applicant Agency: _____ (Public Agency, Non-Profit Organization[1], For-Profit Organization[1], or Individual[1]) E-mail: _____

Contact Person (*Name and Title*): _____

Complete Mailing Address: _____ (Street Address and/or Box Number)

_____ (City) | _____ (State) | _____ (ZIP Code) | _____ (Daytime Phone)

Project Information:

Project Title[2]: First Phase Deployment Ames Traffic Signal Master Plan

Project Description (including length, if applicable):
Install fiber optic cable and network switching equipment, traffic signal cabinets, Advanced Traffic Controllers, Advanced Traffic Management System, and software to provide communication and traffic management capabilities for the Duff Avenue Corridor. This will include fiber optic cable from the Public Works Building on Edison Street to Dayton. Up Dayton to 13th Street. Across 13th Street to Duff Avenue. Out Duff Avenue to Crystal. This fiber will be terminated to allow access to each traffic signal cabinet along that Duff Avenue Corridor. Advanced Traffic Controllers, network switches, and Traffic Adaptive programming will be installed at 14 intersections along the corridor and connected back to the Public Works Building.

*Project priority (1 = highest priority): 1 (a sponsor submitting multiple applications in this funding cycle must assign a numerical rank or priority to each application.)[3]

*Assign the proposed project to one or more of the following categories (check one or more):

- ☐ Transportation-Related Project in the State Implementation Plan (SIP)
- ☐ Transportation Control Measure (TCM)
- ☒ Traffic Flow Improvement (Intersection, Signalization, Other)
- ☒ Planning and Project Development
- ☐ Travel Demand Management (TDM)
- ☒ Transit-Related Improvement
- ☐ Shared-Ride
- ☐ Bicycle or ☐ Pedestrian Facility or Program (select one)
- ☐ Intermodal Freight
- ☐ Passenger
- ☐ Alternative Fuels
- ☐ Vehicle Inspection and Maintenance Program
- ☐ Outreach Activity (Education, Advertising, or Technical Assistance)

*Is the project consistent with the State Implementation Plan for air quality for non-attainment areas? ☐ Yes ☐ No ☒ Not Applicable

*Is the project consistent with the MPO's local congestion management plan? ☒ Yes ☐ No ☐ Not Applicable

*Is the project consistent with the ☐ MPO ☐ RPA ☐ Statewide Long-Range Transportation Plan? ☒ Yes ☐ No ☐ Not Applicable

Notes: [1]Requires public agency as co-sponsor of application.
[2]The term "project" means any ICAAP infrastructure or program proposal.
[3]The Iowa Department of Transportation will use the priority ratings to reflect the sponsor.

Project Costs *(an itemized breakdown must be included on an attached sheet)*:

Total Cost:	$ $1,470,648.00
Iowa Clean Air Attainment Program Fund Request:	$ $1,176,518.00
Applicant Match	$ $294,130.00

Projects with a private for-profit co-applicant require a minimum 50 percent applicant match; all other projects require a minimum 20 percent applicant match.

	List All Applicant Match Sources	Amount	Assured or Anticipated (Date Anticipated)
1.	City of Ames	$294,130.00	July 2020
2.			
3.			

Are any state funds involved in this project? ☐ Yes ☒ No

If Yes, please explain the source and conditions:

Are any other federal funds involved in this project? ☐ Yes ☒ No

If Yes, please explain the source and conditions:

Estimated Project Development Schedule:

Design:	Start Date:		Completion Date:	
Land Acquisition:	Start Date:		Completion Date:	
Construction:	Start Date:	July 2020	Completion Date:	July 2021

Has any part of this project been started? ☒ Yes ☐ No

If Yes, please explain:

Ames Traffic Signal Master Plan

How do you plan to measure the success of this project?

The completion of the construction of the fiber optic connection from the Public Works Building connected to the Duff Avenue Corridor and the implementation of an Advanced Traffic Management System along the Duff Avenue Corridor.

Required Documentation and Narrative Information

The following documents and narratives must be submitted with this application. In the upper right corner of each document or narrative write the corresponding letter shown below.

☒ A. A NARRATIVE assessing existing congestions/air quality conditions, outlining the concept of the proposed project, and providing adequate project justification. How will this project reduce congestion, reduce travel or single occupant vehicle usage, and/or improve air quality? Which transportation-related pollutant(s) are being addressed: carbon monoxide, ozone, or particulate matter (PM)?

☒ B. A DETAILED MAP identifying the location of the project and clearly differentiating the subject project from any past or future project phases.

☒ C. An ITEMIZED BREAKDOWN of the total project costs. This documentation does not need to be a detailed, line-item type of estimate. However, it must accomplish two objectives: First, it must show the method by which the cost estimate was prepared; and second, it must enable a reviewer to determine if the cost estimate is reasonable. The manner in which these objectives are achieved may vary widely depending on the type, scope, and complexity of the project. Absent a fully itemized list of costs, some general guidelines for possible methods of estimating each type of project cost are provided on Attachment A.

☒ D. A TIME SCHEDULE for the total project development.

☒ E. An OFFICIAL CERTIFICATION from the applicant's governing body (authority) that it shall:
(1) commit the necessary local matching funding for project implementation and
(2) upon project completion, be responsible for adequately maintaining and operating the project for public use during the project's useful life.

☒ F. An ADOPTED FORMAL RESOLUTION from the appropriate MPO or RPA declaring the sponsor's proposed project or program conforms to the MPO's or RPA's regional transportation planning process. (For MPOs, the project or program must be identified in the fiscally constrained transportation plan and, if applicable, the congestion management plan in TMAs.)

☒ G. CALCULATIONS for vehicle emission reductions and total project cost-effectiveness for the targeted pollutants. Project applicant must show through a quantitative analysis how many kilograms of pollutant will be reduced (CO, VOC, NOx, and, if applicable, PM). Project sponsor must calculate the cost-effectiveness of the project by: Dividing the total annualized project cost by the number of kilograms per year of pollutant reduced ($ per kg). Applicant must also show all assumptions and source of data used to calculate the estimates. The applicant must use the most current vehicle emission factors developed by the Iowa DNR and consistent with the U.S. EPA's MOBILE 6.2 air quality model. These emission factors are periodically updated and may be obtained from the Iowa DOT's ICAAP website at: https://www.iowadot.gov/systems_planning/icaap.htm.

☒ H. Completed MINORITY IMPCT STATEMENT attached to application.

The award of ICAAP funds; any subsequent funding or letting of contracts for design, construction, reconstruction, improvement, or maintenance; and the furnishing of materials for this project shall not involve direct or indirect interest of any state, county, or city official, elective or appointive. All of the above are prohibited by Iowa Code 314.2, 362.5, or 331.342. Any award of funding or any letting of a contract in violation of the foregoing provisions shall invalidate the award of ICAAP funding and authorize a complete recovery of any funds previously disbursed.

Certification

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating local authority. I understand the attached **official endorsement(s)** binds the participating local governments to assume responsibility for adequate maintenance of any new or improved facilities.

If ICAAP funding assistance is approved for the project described in this application, I understand that an executed contract between the applicant and the Iowa DOT is required before such funding assistance can be authorized for use in implementing the project.

Representing the City of Ames
(Name of Applicant's Governing Authority)

Signature — Date: 9-19-19

John C. Joiner, Public Works Director — Date: 9-19-2019
Typed Name and Title (Governing Authority Official)

IOWADOT
Form 105101 (3-18)

Minority Impact Statement

Pursuant to 2008 Iowa Acts, HF 2393, Iowa Code 8.11, all grant applications submitted to the State of Iowa that are due beginning Jan. 1, 2009, shall include a Minority Impact Statement. This is the state's mechanism for requiring grant applications to consider the potential impact of the grant project's proposed programs or policies on minority groups.

Please choose the statement(s) that pertains to this grant application. Complete all the information requested for the chosen statement(s). Submit additional pages as necessary.

☐ The proposed grant project programs or policies could have a disproportionate or unique **positive** impact on minority persons.

Describe the positive impact expected from this project.

Indicate which groups are impacted.

☐ Women ☐ Persons with a disability ☐ Blacks ☐ Latinos ☐ Asians

☐ Pacific Islanders ☐ American Indians ☐ Alaskan Native Americans ☐ Other_____

☐ The proposed grant project programs or policies could have a disproportionate or unique **negative** impact on minority persons.

Describe the negative impact expected from this project.

Present the rationale for the existence of the proposed program or policy.

Provide evidence of consultation with representatives of the minority groups impacted.

Indicate which groups are impacted.

☐ Women ☐ Persons with a disability ☐ Blacks ☐ Latinos ☐ Asians
☐ Pacific Islanders ☐ American Indians ☐ Alaskan Native Americans ☐ Other _____

☒ The proposed grant project programs or policies are **not expected to have** a disproportionate or unique impact on minority persons.

Present the rationale for determining no impact.
The area of travel encompassed by this project is used bu the general public and does not contain any ares where minorities would be a prevalent population.

I hereby certify that the information on this form is complete and accurate, to the best of my knowledge.

Name _____

Title John C. Joiner, Public Works Director

Definitions

"Minority Persons," as defined in Iowa Code 8.11, means individuals who are women, persons with a disability, Blacks, Latinos, Asians or Pacific Islanders, American Indians, and Alaskan Native Americans.

"Disability," as defined in Iowa Code 15.102, subsection 7, paragraph "b," subparagraph (1):
b. As used in this subsection:
(1) *"Disability"* means, with respect to an individual, a physical or mental impairment that substantially limits one or more of the major life activities of the individual, a record of physical or mental impairment that substantially limits one or more of the major life activities of the individual, or being regarded as an individual with a physical or mental impairment that substantially limits one or more of the major life activities of the individual.

"Disability" does not include any of the following:
(a) Homosexuality or bisexuality.
(b) Transvestism, transsexualism, pedophilia, exhibitionism, voyeurism, gender identity disorders not resulting from physical impairments or other sexual behavior disorders.
(c) Compulsive gambling, kleptomania, or pyromania.
(d) Psychoactive substance abuse disorders resulting from current illegal use of drugs.

"State Agency," as defined in Iowa Code 8.11, means a department, board, bureau, commission, or other agency or authority of the State of Iowa.

REQUEST FOR IOWA'S CLEAN AIR ATTAINMENT PROGRAM (ICAAP)

ATTACHMENT A

Itemized breakdown of total project costs guidelines.

Construction costs
These may be based on historical averages for entire projects of similar size and scope. Examples include:

- Typical cost per mile of trail (e.g., $200,000 per mile for moderate terrain and limited number of structures).
- Typical cost per square foot of bridge deck.
- Typical cost per square foot of fiber optic traffic signal interconnect cable (i.e., $178,000 per mile).
- Typical cost per traffic signal upgrade (i.e., $163,000 per lump sum signal bid item).

Design/Inspection costs
These may be estimated based on the following typical percentages of construction costs, such as:

- 8 to 10 percent for preliminary up through final design and letting activities.
- 12 to 15 percent for construction inspection activities.

Right of way acquisition costs
These may be estimated based on:

- Impact and description of impact.
- Typical cost per square foot for permanent right of way.
- Typical cost per square foot for temporary easements.

Utility and railroad costs
These may be estimated based on:

- Impact and description of impact.
- Typical cost per linear foot of relocated or reconstructed facility (i.e., track, pipe, electrical lines).
- Typical cost per installation (i.e., railroad switches, utility poles, transformers, control boxes).

Indirect costs
If indirect costs are involved (e.g., wages):

- Estimated hours.
- Estimated hourly rate, salary.
- Estimated fringe, direct.
- Other direct cost estimate.
- Other indirect cost estimate.

Ames Traffic Signal System Upgrade
Budget Level Project Estimate
Total for Project - $1,470,648 +/-

Item 1: Fiber Cost: $625,000
144 strand Single Mode Fiber Optic Cable
Hand Holes and Conduit
Installation
$25 @ foot at approximately 25,000 ft. (Edison Street Public Works Building to Dayton up Dayton to 13th Street across 13th Street to Duff out Duff to past Highway 30)

Item 2: Fiber Terminations Cost at Cabinets: $46,900
30 terminations per cabinet at 14 cabinets at $45 @ termination - $18,900
Miscellaneous patch cords and splice panels - $28,000

Item 3: Traffic Cabinet and Controller Cost: $443,198
Traffic Signal Cabinet with Controller at 14 cabinets at $29,657 @ cabinet - $415,198
Installation cost at 14 cabinets at $2000 @ cabinet - $28,000

Item 4: Network Switches Cost: $87,000
2 Layer 3 Network Switches @ $12,500 - $25,000
31 Layer 2 Network Switches @ $2000 - $62,000

Item 5: Traffic Operations Center Costs: $143,550
Central Office Software (ATMS)/ and Server for 14 intersections - $32,500
Traffic Adaptive Modules and Intersection Implementation at $4418 @ - $61,850
Public Works Building Implementation – (2 laptops and Adaptive Configuration) – $21,000
Training 2 trips 2 days each trip - $13,800
One Year Maintenance and Support - $14,400

Item 6: Consultant Costs: $125,000
Infrastructure Design - $50,000
Network Design and Programming - $75,000

A – Introduction

This grant application is for the deployment of the First Phase of the Traffic Network Master Plan for the City of Ames, utilizing the ITS Systems Engineering Process and the Ames Area Metropolitan Planning Organization (AAMPO) Regional Intelligent Transportation Systems (ITS) Architecture, to provide communication, coordination, and management of the traffic signals systems along the Duff Avenue Corridor. This project will initiate the program for the City of Ames to improve their ability to monitor, manage, and change traffic signal timings along major arterials in real time to provide optimum traffic signal operations and promote efficient traffic flows. Detailed literature reviews and engineering evaluations have been completed by gbaSI for the City to provide technical information for this grant application.

The majority of transportation related air pollution and emissions occur when traffic is stopped, during initial acceleration after stopping, and during stop and go traffic operations. The First Phase Deployment will offer opportunities to improve air quality by providing monitoring and management capabilities to City staff for the implementation of optimized signal coordination, reducing congestion, eliminating unnecessary vehicle stops, encouraging uniform traffic flows, and reducing the amount of time traffic waits at signals. This First Phase Deployment will provide the fiber optic communication backbone that will facilitate the expansion of the Advanced Traffic Management System (ATMS) to other corridors with future projects.

These improvements will also fall directly in line with the City's existing EcoSmart strategy, which strives to reduce energy consumption and decrease the City's carbon footprint. This strategy involves several programs including, Smart Ride, which focuses on efforts to reduce carbon emissions through increasing efficiency in transportation services both in city operations and in public services. The City of Ames has already moved to purchasing fuel-efficient vehicles including sub-compacts, hybrids, and an all-electric Zenn vehicle for fuel-efficient driving and carbon footprint reduction.

Another benefit of improving the City's overall Traffic Network and allowing them to remotely manage and monitor their network systems is providing more consistent, reliable, shorter travel times along a corridor for their existing and already thriving city-wide bus transit system (CyRide).

B – Background

The City of Ames has an on-going initiative to create a city-wide high-speed fiber optic (FO) communication network that will link existing city traffic signals, school crossing signals and flashers, pedestrian crossings, and traffic data collection devices to allow remote monitoring,

communication, and control. Additionally, this fiber network could provide communication to other public facilities, such as Police, Fire and Maintenance buildings, other city government building, schools, and libraries.

Planning, design, and implementation of a city-wide high speed fiber optic network would enable City to more efficiently and responsively manage the City's traffic network and to implement optimized signal coordination, reduce congestion, eliminate unnecessary vehicle stops, encourage uniform traffic flows, and reduce the amount of time traffic waits at signals.

The First Phase of the Ames Traffic upgrade project will provide the backbone of the communication network needed to enhance and improve the Traffic Department's ability to manage traffic flow and respond to events. This phase also affords upgrades to the traffic management devices and software that will provide the ability institute the latest in traffic management protocols and practices. This will result in improved traffic flow on a regular basis and the capacity to adjust traffic plans to match increased demands created by special events, incidents, or construction. Real time monitoring of traffic flow and improved management practices, such as traffic adaptive programs, will combine to ease congestion and provide management capabilities that will boost the capacity of the current roadways, ease congestion and the resulting air pollution, and reduce fuel consumption. The most noticeable improvement, to the general public, will be the reduction in time spent driving to their destination or sitting in traffic. 28% of the intersections included in the First Phase Deployment were found to be below grade on their utilization scores in the Ames Mobility 2040 Final Report (Table 19 - Existing Conditions Intersection Capacity Utilization Analysis Results).

PROJECT DETAILS

This First Phase will provide a fiber optic connection from Highway 30 down Duff Avenue to 13th Street, then across 13th Street to Dayton Avenue, down Dayton Avenue to Edison Street, and finally over to the Public Works Building. This basic fiber network will provide the backbone for the communication network necessary to expand the traffic network in future phases to improve the entire traffic operations for the city of Ames. The connection from the Public Works Building to Duff Avenue and 13th Street provides the initial route for communication and management protocol but also offers a junction (Lincoln Way and Duff) to connect to the next phase of the upgrade of the entire traffic network. This first phase will provide the communication bridge to further expansion projects along Lincoln Way out to the University and Grand corridors. These four corridors (Duff, Lincoln Way, University, and Grand) will be the majority of the traffic management system and will be linked together and managed by a central office traffic management system. This will allow for the advanced Traffic Adaptive traffic management program to interoperate the corridors and coordinate the traffic operations along the corridors

to maximize traffic flow and reduce congestion. By coordinating the flow along the individual corridors with the adjoining corridors the Traffic Department will have the ability to further reduce congestion and pollution.

As these projects expand and encompass the four corridors previously noted, there will be ancillary benefits to the city besides the improved traffic management ability. Here are a few examples of possible uses:

- The CCTV capacity can be shared with Police, Fire, Dispatch, and Emergency Services to allow for monitoring of the corridors.
- The dark fiber that is not used by the Traffic Department could be allocated for use by other city departments or governmental agencies. This could eliminate the need to use commercially available fiber and be subjected to future increased cost and limited availability as the demand for fiber increases.
- With the onset of "Smart City" and "Connected Vehicle" technology the dark fiber from this project could be valuable to both governmental entities (City, IDOT, ISU, County, USDA, as examples) and commercial interests.
- The ability to test "Connected Car" technology with a modern traffic system that includes Advanced Traffic Controller capacity could be of great value to Iowa State University in attracting research grants for their Engineering Department.
- The ability to monitor the areas around events (football and basketball games, concerts, and special events) would allow the timely implementation of traffic management measures to expedite the exit of the vehicles associated with these events.

In reality, with the availability of technology today and the explosion of technology that will soon be coming, one of the constant requirements will be a robust fiber optic network. In the vast majority of cases, regardless of the technology, it requires a high capacity communication medium. The fiber optic backbone that will begin with this project will be a big step in providing that solution for the City of Ames.

Figure 1 - First Phase Fiber Routing
(shown in Yellow)

This First Phase also encompasses the necessary traffic control devices on the Duff Corridor and software to establish a Traffic Operations Center at the Public Works Building. The TOC at the Public Works Building will provide the basic foundation of the advanced traffic management system proposed for the Traffic Network Master Plan for the City of Ames. This will give the City of Ames the capability of managing traffic flow on a “real time” basis through Traffic Adaptive Programs or by using the VPN function and communication capacities to monitor and adjust timing plans at the individual intersections to meet the traffic demands. The First Phase will provide the “Proof of Concept” information necessary to develop the remaining corridors and intersections, throughout the City of Ames, in future projects.

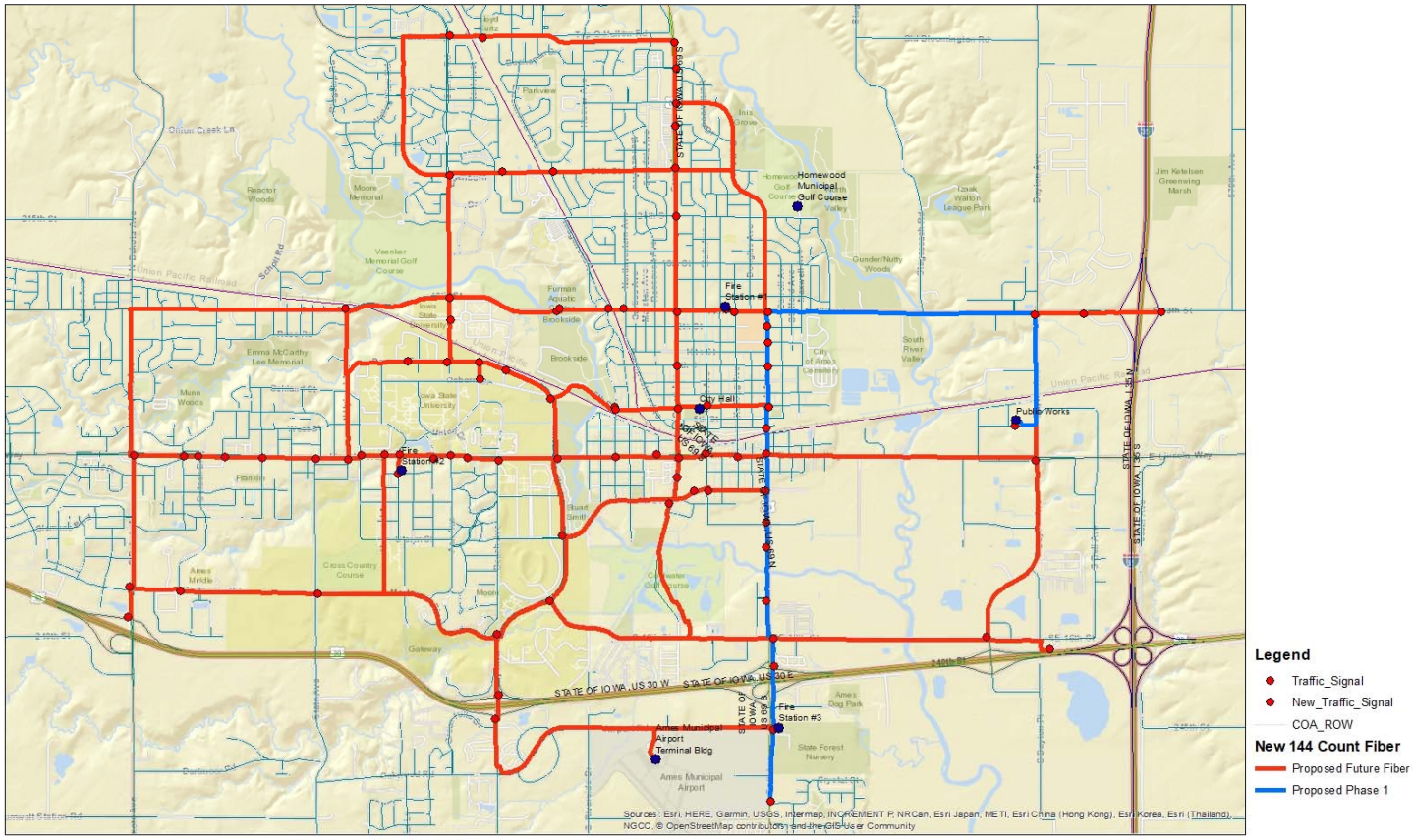


Figure 2 - Future Fiber Buildout
(Phase 1 denoted in Blue)

First Phase Deployment

The First Phase Deployment of the Traffic Network Master Plan will create a management corridor along one of the busiest and most congested traffic corridors in the City of Ames while also providing the core fiber optic communication and traffic management components and software that will be the basis for future expansion of the traffic management system. This phase affords the ability to connect to the Lincoln Way Corridor which will provide a communication pathway to the Grand Avenue Corridor, and the University Boulevard Corridor. When completed, the First Phase will allow for communication all the way back to the Public Works Building on Edison Street and through already established communication routes, back to City Hall and the Traffic Engineering Department.

This communication system will permit the Traffic Department to connect to individual intersections on a “real time” basis which will permit traffic monitoring and changes to the timing of the intersection, if necessary, from the central office location without traveling to the actual intersection. This will provide a much more efficient and accurate method of traffic management

and will reduce stops and delays along the corridor. By being able to remotely monitor and adjust the traffic timing plans the personnel from the Traffic Department will reduce the need to travel to the individual intersections which will save the City time and fuel.

The First Phase Deployment communication network will allow the Traffic Department to install Advanced Traffic Controllers (ATC), along the Duff Avenue Corridor, and have access to the latest traffic management programs and systems. Advanced traffic management programs such as Traffic Adaptive Systems require fast robust communication abilities to function effectively as an exchange of detection information and platoon numbers are passed up and down the corridor. This exchange of detection information and platoon numbers provides the basis for the amount of time allotted to a direction of travel within the intersection and allows the Traffic Adaptive System to adjust traffic plans according to the demands of the traffic flow. Traffic Adaptive Systems operate on a "real time" basis and can provide an efficient and effective traffic management protocol that reduces delays and stops along the traffic corridor. The deployment of ATCs and a fiber optic communications network with connections to the Public Works Building and City Hall will facilitate the collection of data from the corridor on a live basis, video feed to Police and Fire Departments, and monitoring of traffic flow from areas where congestion or accidents could occur.

The First Phase Deployment will create the backbone of the full city-wide traffic management system.

C – Implementation Plan

The Ames Traffic Network Master Plan project is made up of several separate components and items that together create an integrated signal communication and coordinated traffic operations system. The key components of the system are:

- Fiber optic cable and conduit system along arterials
- Communication hardware and switches located within new signal cabinets
- Evaluation and procurement of ATMS management hardware and software for arterial traffic signal control and CCTV system control

AMES FIRST PHASE DEPLOYMENT

Estimate of Project Implementation Costs – <u>Total for Project - $1,470,648 +/-</u>

Item 1: Fiber Cost: $625,000

144 strand Single Mode Fiber Optic Cable
Hand Holes and Conduit
Installation
$25 @ foot at approximately 25,000 ft. (Edison Street Public Works Building to Dayton up Dayton to 13th Street across 13th Street to Duff out Duff to past Highway 30)

Item 2: Fiber Terminations Cost at Cabinets: $46,900

30 terminations per cabinet at 14 cabinets at $45 @ termination - $18,900
Miscellaneous patch cords and splice panels - $28,000

Item 3: Traffic Cabinet and Controller Cost: $443,198

Traffic Signal Cabinet with Controller at 14 cabinets at $29,657 @ cabinet - $415,198
Installation cost at 14 cabinets at $2000 @ cabinet - $28,000

Item 4: Network Switches Cost: $87,000

2 Layer 3 Network Switches @ $12,500 - $25,000
31 Layer 2 Network Switches @ $2000 - $62,000

Item 5: Traffic Operations Center Costs: $143,550

Central Office Software (ATMS)/ and Server for 14 intersections - $32,500
Traffic Adaptive Modules and Intersection Implementation at $4418 @ - $61,850
Public Works Building Implementation –
(2 laptops and Adaptive Configuration) – $21,000
Training 2 trips 2 days each trip - $13,800
One Year Maintenance and Support - $14,400

Item 6: Consultant Costs: $125,000

Infrastructure Design - $50,000
Network Design and Programming - $75,000

First Phase Deployment Cost Estimate

Items	Description	Quantity	Items	Cost	ICAAP Grant (80%)	City Contribution (20%)	Total Cost
1-6	First Phase Deployment	1	6	$1,470,648	$1,176,518	$294,130	$1,470,648

D – PROJECT TIMELINE

The Ames First Phase Deployment will commence in the summer of 2020 upon award of a grant from the ICAAP program. It is anticipated that the First Phase Deployment will be finalized in the Fall of 2021. Future ICAAP grant applications for fiber optic infrastructure, traffic signal upgrades, ATMS software, and TOC improvements are expected to be requested based upon the completion of the First Phase Deployment.

PROJECT SUMMARY

The First Phase Deployment of the Traffic Network Master Plan will create a management corridor along one of the busiest and most congested traffic corridors in the City of Ames while also providing the core fiber optic communication and traffic management components and software that will be the basis for future expansion of the traffic management system. This communication system will permit the Traffic Department to connect to individual intersections on a "real time" basis which will permit traffic monitoring and changes to the timing of the intersection, if necessary, from the central office location without traveling to the actual intersection. This will provide a much more efficient and accurate method of traffic management and will reduce stops and delays along the corridor.

E – TRAFFIC SYSTEM OPERATION AND MANAGEMENT

The Traffic Network Master Plan outlines and defines the communication network that would become a critical component of a responsive and efficient traffic management system. The First Phase Deployment will be the beginning of the process to create a city-wide traffic network and provides value as a stand-alone project because of the reduction in congestion and the accompanying fuel consumption and air pollution. This system would be supervised, maintained, and controlled by the Traffic Operations Department for the City of Ames. The additional capabilities provided by the network will allow the city personnel to upgrade their traffic management practices to include central office abilities. This will allow them to more effectively implement management practices in each of the corridors that will reduce congestion and delays. By allowing communication and control capacities to each intersection the efficiency of both the personnel and the intersection will be vastly improved. The ability of city personnel to monitor intersections from a central office location will save time and money and will more than offset the expenditure of funds from the Traffic Department Budget to match the ICAAP funding.

F - INTEGRATION WITH AMES MOBILITY 2040

The concept of an efficient traffic control system that is connected to a communication network that allows for a more flexible and adaptive approach is a concept that is consistent with the goals put forth by the Ames Area Metropolitan Planning Organization in their Ames Mobility 2040 Long Range Transportation Plan. As noted in the minutes for the September 22, 2015 meeting of the AAMPO Transportation Policy Committee:

Traffic Adaptive Signal Systems are included in the Ames Mobility 2040 Long Range Transportation Plan as a short term, high priority under the Roadway portion of the plan.

This statement recognizes the importance of the need for a Traffic Adaptive System to help manage the traffic flow within the City of Ames. This First Phase Deployment is the initial step in reaching that goal by including the 14 intersections in the Duff Avenue Corridor in a signal system with Traffic Adaptive capabilities and the necessary fiber optic communications infrastructure.

Of the 14 intersections included in the First Phase Deployment 3 were graded at a D/E level and 1 at an F level in the Ames Mobility 2040 Final Report (Table 19 Existing Conditions Intersection Capacity Utilization Analysis Results). The Duff Avenue intersections with Lincoln Way, 3rd Street, and South 16th Street received the D/E level and Duff Avenue and 5th Street got the F level. In essence, 28% of the intersections included in the First Phase Deployment were found to be below grade on their utilization scores.

In that report 8 intersections that are part of the Traffic Network Master Plan had a "D" rating or lower and two had "F" ratings (5). The ability to monitor, adjust, and improve the capabilities of the traffic control system provides a key component towards attaining a more efficient and responsive transportation system. That, in essence, is the overall objective of the Ames Mobility 2040 Plan. This can be accomplished by reducing the congestion along the Lincoln Way, Grand Avenue, Duff Avenue, and University Boulevard through coordination based on communication. The capacity to communicate between the traffic control mechanisms at the intersections in those corridors and a central traffic management system will provide the city with control and management abilities that will optimize the intersections' capabilities to handle traffic demands more effectively. As a result, Ames will be able to mitigate some of the corresponding pollutants associated with vehicles dealing with congestion and delays.

The Duff Avenue Corridor has 8 intersections that rank in the top 25 intersections for crash frequency according to the Ames Mobility 2040 Long Range Transportation Plan (Table 11 Intersection Crash Frequency 2009-2013). The First Phase Deployment will include 14 intersections and 57% of those intersections will be ranked in the top 25 intersections for crash frequency in the City of Ames. With an improved traffic flow and better usage of the existing

roadway infrastructure provided by a Traffic Adaptive Traffic Management System the frequency of crashes would be expected to be reduced.

Location	City Ranking	Number of Crashes 2009-2013
2	68	S 16th / Duff
5	49	Airport Road/ Duff
6	44	Lincoln Way/ Duff
7	41	SE 3rd / Duff
13	37	Chestnut/Duff
17	33	SE 5th/Duff
20	33	HW30 Ramp Terminal/Duff
25	26	HW30 Off Ramp/Duff

G – AIR QUALITY IMPROVEMENT

The Ames Traffic Network Master Plan defines the requirements and steps necessary to create an integrated traffic control system made up of traffic signals, ITS devices and systems, and other traffic management assets. This central control system will greatly enhance and expand the abilities of the City to quickly understand and respond to traffic operational and safety concerns. The Traffic Network Master Plan will improve the ability of the City of Ames to monitor, manage, and change traffic signal timings along in real time to provide optimum traffic signal operations and promote efficient traffic flows. As the first step in fulfilling the Ames Traffic Network Master Plan, this First Phase Deployment project will begin the necessary improvements in the traffic and communications systems to facilitate the technology and innovations that will allow for the mitigation of air quality issues as they relate to traffic congestion.

Numerous studies and reports have been completed in the recent past which documents the benefits and effectiveness of advanced signal control systems and TOC management centers. Some studies have shown that delays can be reduces by up to 42% (1). Others noted reduced stops by between 18 – 29% (2). In Tysons Corner, Virginia, system enhancements and management activities decreased total annual emissions VO, CO, VOC, and NOx by 134,600 kilograms (3). A study using ITS Deployment Analysis Software (IDAS) was conducted by Eugene, Oregon to evaluate the potential benefits of a hypothetical adaptive signal control system along one corridor with 8 signalized intersections resulted in a 5:1 benefit-to-cost ratio (4).

In general, most studies have shown an 8-13% decrease in fuel consumption, a 7-14% decrease in emissions, 20-40% reduction in vehicle stops, 10-20% reduction in travel times, 10-15% increases in average speed, and a 20-40% decrease in average delay. While no detailed calculations for potential air quality improvement have been completed for the addition of a TOC and ATMS in Ames, it is inarguable that the implementation of traffic management technologies and procedures will significantly improve traffic operations and decrease vehicle emissions.

Below are the results of emissions calculations and summaries completed for Duff Ave in Ames. This shows the emission reductions that the Duff Avenue corridor could be expected to experience with the implementation of coordinated signal control of intersections on this route. With the addition of overall signal system management and control practices through the implantation of a citywide ATMS, additional savings will be recognized.

The analysis of the traffic signal operations along this corridor used SYNCHRO models that were developed using historic (2006) peak hour traffic volumes and signal timings provided by the City of Ames, along with the existing lane configurations at each intersection. To determine the impacts of the traffic signal interconnection and coordination projects the following assumptions were used:

- Peak hour traffic volumes, plus or minus 2% exist for six hours per weekday and for two hours on Saturdays and Sundays, for a total of 34 hours per week.
- The traffic volumes warrant coordination during 14 hours on weekdays and 10 hours on weekend days. During the other hours of the days, signals would operate more efficiently as free, non-coordinated intersections and no benefits would be expected from signal interconnection.

Analysis of the Duff Avenue corridor determined that the implementation of the managed and coordinated traffic signal system would immediately create a nearly 9% estimated decrease in VOC, CO, and NOx.

Table 2 – Duff Avenue Corridor summarizes the total kilogram amounts and percent improvements expected per peak hour, per off-peak hour, per day, and per year.

Table 2 – Duff Avenue Corridor

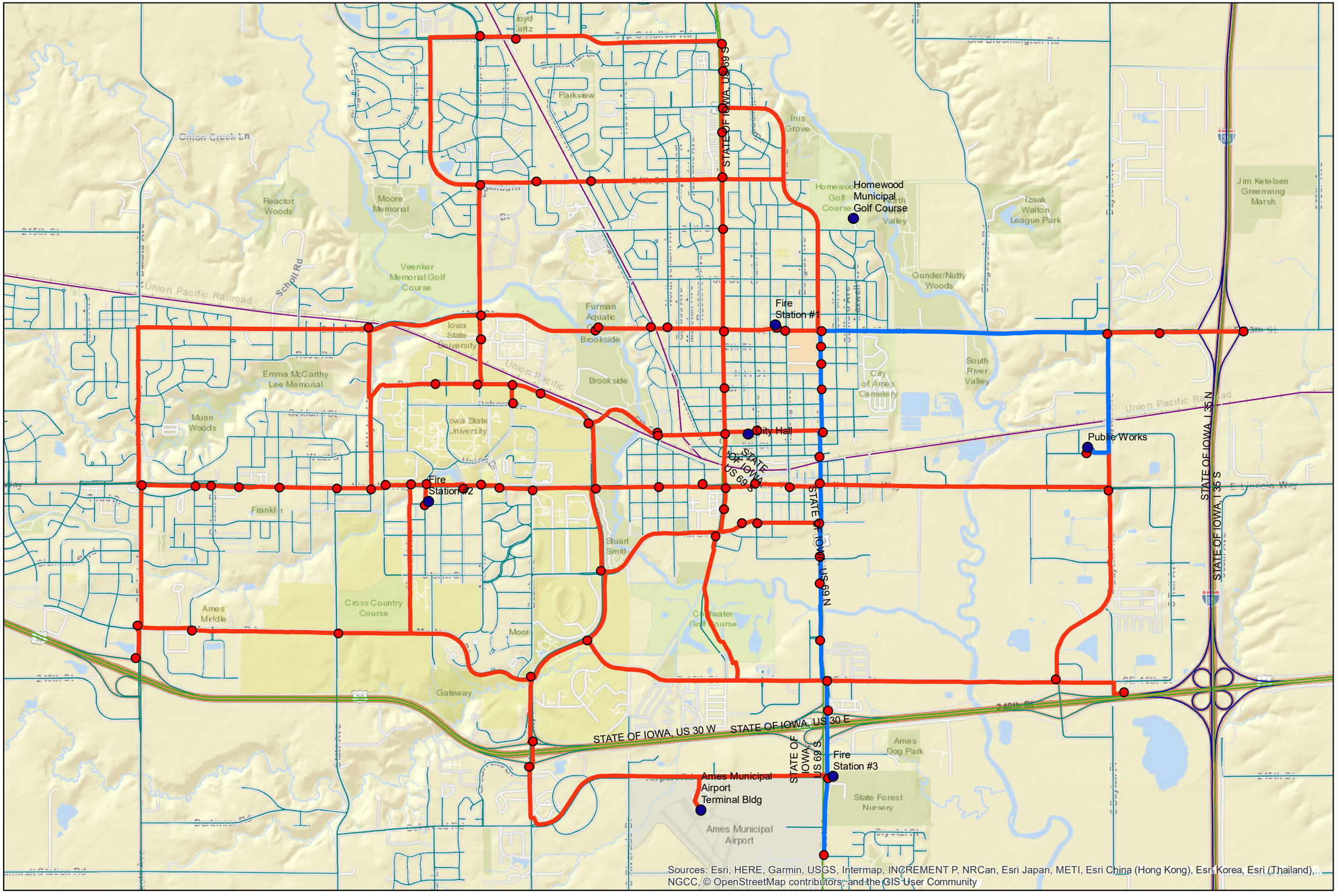
Peak Hour Emissions				
	No Build	Build	Difference	% Improvement
VOC (kg)	4.74	4.32	0.42	8.86%
CO (kg)	20.45	18.64	1.81	8.85%
NOx (kg)	3.98	3.63	0.35	8.79%
Off-peak Hour Emissions				
	No Build	Build	Difference	% Improvement
VOC (kg)	3.65	3.33	0.32	8.86%
CO (kg)	15.75	14.35	1.39	8.85%
NOx (kg)	3.06	2.80	0.27	8.79%
Daily Emissions				
	No Build	Build	Difference	% Improvement
VOC (kg)	46.40	42.28	4.11	8.86%
CO (kg)	20.16	182.45	17.72	8.85%
NOx (kg)	38.96	35.53	3.43	8.79%
Yearly Emissions				
	No Build	Build	Difference	% Improvement
VOC (kg)	16,934	15,434	1,500	8.86%
CO (kg)	73,060	66,594	6,466	8.85%
NOx (kg)	14,219	12,969	1,250	8.79%

REFERENCES

1. *Gresham/Multnomah County Phase 3: Traffic Signal System Optimization.* November 2004, DKS Associate Transportation Solutions, and Siemens Intelligent Transportation Systems.
2. Greenough and Kelman, *ITS Technology Meeting Municipal Need – the Toronto Experience*, in 6th World Congress Conference on ITS, 1999, Toronto, Canada
3. White, J., *Traffic Signal Optimization for Tyson's Corner Network Volume I: Evaluation and Summary*, March 2000, Virginia, DOT
4. *Regional ITS Operation & Implementation Plan for the Eugene-Springfield Metropolitan Area*, November 2002, Oregon Department of Transportation, Prepared by DKS Associates.
5. *Ames Area MPO 2015-2040 Long Range Transportation Plan* September 2015, HDR, page 102,table 19

City of Ames - Phase 1 Fiber Interconnect

Date: 9/13/2019



Legend

- Traffic_Signal
- New_Traffic_Signal
- COA_ROW

New 144 Count Fiber

- Proposed Future Fiber
- Proposed Phase 1

Iowa Department of Transportation
Clean Air Attainment Funds Application

West Ames Changes
New Route Expansion (#12 Lilac - Peak Only)
Added Frequency (#1 Red, #11 Cherry, #7 Purple)

Submitted to:

IOWA DOT

By:

AMES TRANSIT AGENCY (CYRIDE)
601 N. University Blvd.
Ames, Iowa 50010

October 1, 2019

Form 230017 (2-18)

PROJECT APPLICATION
IOWA'S CLEAN AIR ATTAINMENT PROGRAM (ICAAP)

General information

Applicant agency Ames Transit Agency

Contact person
(name and title) Barb Neal, Interim Transit Director

Street address and/or
box number 601 N. University Blvd.

City Ames State IA ZIP code 50010

Telephone number 515-239-5563 Email bneal@cyride.com

If more than one agency or organization is involved in this project, please state the name, contact person, mailing address, and telephone number of the second agency. *(Attach an additional page if more than two agencies are involved.)*

Applicant agency

Contact person
(name and title)

Street address and/or
box number

City State ZIP code

Telephone number Email

Project information

Project title West Ames Changes: (New Expansion Route #12 Lilac; Added Frequency (#1 Red, #11 Cherry, #7 Purple)

Project description (including length, if applicable).
In August 2018, CyRide redesigned and implemented new bus services traveling in west Ames area including a new #12 Lilac route and added frequency of service and changed route alignments to three existing routes (#1 Red, #11 Cherry & #7 Purple). West Ames residents demanded this higher frequency of service between west Ames and campus during the system redesign study completed in May 2017. This ICAAP request is for services on the four routes (one new route & 3 routes with additional frequency/days of service). This is the second year for an ICAAP request for these four services.

*Project priority (1 = highest priority: 1 (a sponsor submitting multiple applications in this funding cycle must assign a numerical rank or priority to each application.)[3]

*Assign the proposed project to one or more of the following categories (check one or more).

- ☐ Transportation-related project in the State Implementation Plan (SIP)
- ☐ Transportation control measure (TCM)
- ☐ Traffic flow improvement (intersection, signalization, other)
- ☐ Planning and project development
- ☐ Travel demand management (TDM)
- ☒ Transit-related improvement
- ☐ Shared-ride
- ☐ Bicycle pedestrian facility or program
- ☐ Pedestrian facility or program
- ☐ Intermodal freight
- ☐ Passenger
- ☐ Alternative fuels
- ☐ Vehicle inspection and maintenance program
- ☐ Outreach activity (education, advertising, or technical assistance)

*Is the project consistent with the State Implementation Plan for air quality and nonattainment areas? ☐ Yes ☐ No ☒ Not applicable

*Is the project consistent with the metropolitan planning organization's (MPO) local congestion management plan? ☐ Yes ☐ No ☒ Not applicable

*Is the project consistent with the ☒ MPO ☐ regional planning affiliation (RPA) ☐ statewide long-range transportation plan? ☒ Yes ☐ No ☐ Not applicable

Notes: [1]Requires public agency as co-sponsor of application.
[2]The term "project" means any ICAAP infrastructure or program proposal.
[3]The Iowa Department of Transportation will use the priority ratings to reflect the sponsor.

Project cost (an itemized breakdown must be included on an attached sheet)

Total cost $424,957.00

ICAAP Fund request $339,965.00

Applicant match (25 percent minimum) $84,992.00

	List of all applicant match sources	Amount	Assured or anticipated (date anticipated)
1.	CyRide Operating Budget	$84,992.00	Assured - Beginning 7/1/2020
2.	Passenger Fares	$1,717.00	Anticipated - Beginning 10/2020
3.			

Are any state funds involved in this project? ☐ Yes ☒ No

If yes, please explain the source and conditions.

Are any other federal funds involved in this project? ☐ Yes ☒ No

If yes, please explain the source and conditions.

Estimated project development schedule

Design Start date _____ Completion date _____

Land acquisition Start date _____ Completion date _____

Construction Start date _____ Completion date _____

Has any part of this project been started? ☒ Yes ☐ No

If yes, please explain.

CyRide began the first year of service in August 2018 with 100% local funding from CyRide. ICAAP funded the second year of service that began in August 2019. If funded, this ICAAP expansion would fund the third year of services from October 2020 through September 2021.

How do you plan to measure the success of this project?

Four evalutation methods will be used: 1) Passenger Ridership 2) Customer Comments 3) Passengers per hour and 4) Total Emissions saved

Required documentation and narrative information

The following documents and narratives must be submitted with this application. In the upper right corner of each document or narrative write the corresponding letter shown below.

☒ A. A **narrative** assessing existing congestions/air quality conditions, outlining the concept of the proposed project, and providing adequate project justification. How will this project reduce congestion, reduce travel or single occupant vehicle usage, and/or improve air quality? Which transportation-related pollutant(s) are being addressed: carbon monoxide, ozone, or particulate matter?

☒ B. A **detailed map** identifying the location of the project and clearly differentiating the subject project from any past or future project phases.

☒ C. An **itemized breakdown** of the total project costs. This documentation does not need to be a detailed, line-item type of estimate. However, it must accomplish two objectives: First, it must show the method by which the cost estimate was prepared; and second, it must enable a reviewer to determine if the cost estimate is reasonable. The manner in which these objectives are achieved may vary widely depending on the type, scope, and complexity of the project. Absent a fully itemized list of costs, some general guidelines for possible methods of estimating each type of project cost are provided on Attachment A.

☒ D. A **time schedule** for the total project development.

☒ E. An **official endorsement** of the project from the authority to be responsible for the project's maintenance and operation. The authority must provide written assurance it will adequately maintain the completed project for its intended public use following project completion. For most construction projects, this will be a minimum of 20 years. The endorsement must also acknowledge the intent of the authority to provide the required matching funds. For cities, counties, or other political subdivisions, this should be in the form of a fully executed resolution by the elected body or board, as applicable.

☒ F. An **adopted formal resolution** from the appropriate metropolitan planning organization (MPO) or regional planning affiliation declaring the sponsor's proposed project or program conforms to the MPO's or RPA's regional transportation planning process. (For MPOs, the project or program must be identified in the fiscally constrained transportation plan and, if applicable, the congestion management plan in transportation management areas.)

☒ G. **Calculations** for vehicle emission reductions and total project cost-effectiveness for the targeted pollutants. Project applicant must show through a quantitative analysis how many kilograms of pollutant will be reduced (carbon monoxide, volatile organic compounds, oxides of nitrogen as nitrogen dioxide, and, if applicable, particulate matter). Project sponsor must calculate the cost-effectiveness of the project by: Dividing the total annualized project cost by the number of kilograms per year of pollutant reduced ($ per kg). Applicant must also show all assumptions and source of data used to calculate the estimates. The applicant must use the most current vehicle emission factors developed by the Iowa Department of Natural Resources and consistent with the U.S. Environmental Protection Agency's MOBILE 6.2 air quality model. These emission factors are periodically updated and may be obtained from the Iowa DOT's ICAAP website at: **https://www.iowadot.gov/systems_planning/icaap.htm**.

☒ H. Completed **Minority Impact Statement** attached to application.

The award of ICAAP funds; any subsequent funding or letting of contracts for design, construction, reconstruction, improvement, or maintenance; and the furnishing of materials for this project shall not involve direct or indirect interest of any state, county, or city official, elective or appointive. All of the above are prohibited by Iowa Code 314.2, 362.5, or 331.342. Any award of funding or any letting of a contract in violation of the foregoing provisions shall invalidate the award of ICAAP funding and authorize a complete recovery of any funds previously disbursed.

Certification

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating local authority. I understand the attached **official endorsement(s)** binds the participating local governments to assume responsibility for adequate maintenance of any new or improved facilities.

If ICAAP funding assistance is approved for the project described in this application, I understand that an executed contract between the applicant and the Iowa DOT is required before such funding assistance can be authorized for use in implementing the project.

Representing the Ames Transit Agency

Name of applicant's governing authority

Signature — Aug 30, 2019 — Date

Barb Neal, Interim Transit Director — Aug 30, 2019

Typed name and title, Governing authority official — Date

CyRide
West Ames Routes Modifications
New Route Expansion (#12 Lilac)
Added Frequency (#1 Red, #11 Cherry, #7 Purple)
Narrative

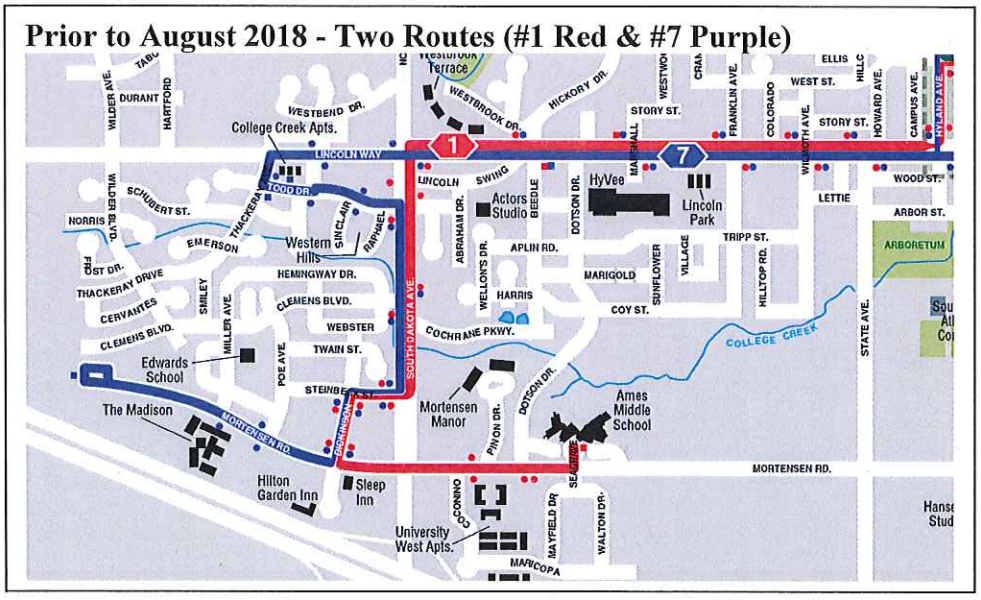
Background

Ames Transit Agency (d.b.a CyRide) directly operates fixed route services that are open to the general public within the Ames community including Iowa State University (ISU). The amount of transit service in this small community, of approximately 65,000 is unusually high as a result of the intensive use by university students. To accommodate this high transit demand, CyRide operates 18 hours a day with service frequencies between 2 – 60 minutes. **However in the last six years, ISU enrollment has grown by 22% from 28,682 students to approximately 35,000! During this same timeframe, CyRide's ridership has grown by over 1.6 million passengers.**

High density apartment complexes are rapidly being built on-campus and off-campus, wherever there is ample room to build, but where CyRide's routes may provide limited or virtually no transit service. **The result of this growth has been an overwhelming demand for student housing followed by an immediate reactionary demand for additional transit service wherever these apartment complexes are established.** In a community where riding transit is now part of the city's culture, the residents living in these high-density apartment complexes expect frequent and quality transit services to an even greater degree than they did six years ago.

Prior to August 2018, the #1 Red and #7 Purple routes, shown connecting with other routes traveling throughout the community accommodated all transit rides between west Ames and Iowa State University (ISU) campus with over 1.5 million riders annually on just these two routes. **The #1 Red could be best described as the "workhorse of west Ames" providing transit service from 6:30am until 12:30am the following day and accommodated the majority of the west Ames residents.**

Prior to August 2018 - Two Routes (#1 Red & #7 Purple)



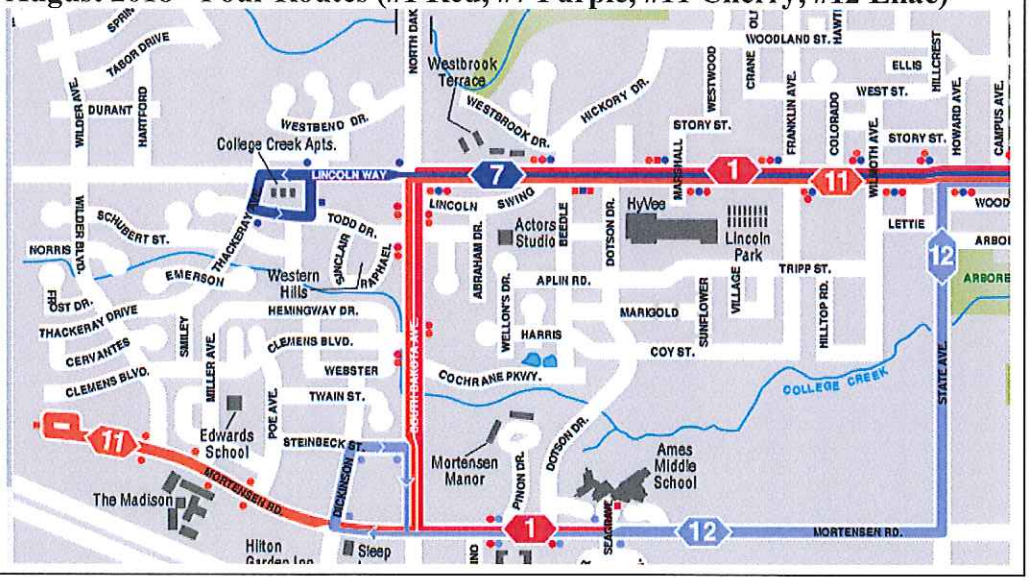
The **#7 Purple Route** provided **"minimal service with only six published trips"** (3 morning/3 afternoon) during the peak hours and

was utilized mainly to provide additional capacity for Red route riders between west Ames and university campus during the peak hours.

There were often capacity issues along the corridors for #1 Red and #7 Purple and CyRide deployed "extra" buses to the #1 Red Route to ensure every person desiring a ride along Mortensen, Dickenson, Steinbeck, South Dakota, and Lincoln Way received a ride to and from campus. The end result was a platoon of buses from west Ames into campus for the start of ISU classes and then back again as classes dispersed throughout the day, with rushes for buses typically just before and after class. For highly desired class times, trips could operate with as many as 8 extra buses trailing a scheduled bus into campus to accommodate the demand for transit service along the corridors. The #1 Red route had grown to the point that passengers weren't being accommodated along Lincoln Way due to being full by the time the bus reached Steinbeck. Lincoln Way passengers would watch as bus after bus went by with no capacity for any passengers. Additionally, new high-density apartment developments were being built along the west end of Mortensen and along Maricopa which compounded the reality of providing high level transit with virtually only one frequent bus route. A complete system redesign of transit routes in west Ames was needed to accommodate the demand and growth not only in far west Ames, but also along the west Lincoln Way corridor.

In May 2017, CyRide completed its first ever transit system redesign study (https://www.cyride.com/system-redesign) for their entire transit service and residents located in west Ames demanded additional transit service operating along Mortensen, Steinbeck, Dickenson, S. Dakota and Lincoln Way into campus. CyRide hired an outside consultant to provide expertise in how to operate a transit system originally developed for 4 million riders and adapt it for a system currently carrying over 6.5 million passengers. **CyRide essentially approved the redesign completed in the study in west Ames by offering 4 different bus routes along these modified corridors thereby breaking up the #1 Red's "workhorse duties" into four different high-frequency service routes (#1 Red, #7 Purple, #11 Cherry & #12 Lilac), which began in August 2018. (see routes below)**

August 2018 - Four Routes (#1 Red, #7 Purple, #11 Cherry, #12 Lilac)



Project Description/Justification

Grant Request
New Route - #12 Lilac
Added Frequency #1 Red, #7 Purple & #11 Cherry (Rebranded 1A)

The second year of ICAAP operational funding request below is for a new transit route for the **#12 Lilac** route implemented in west Ames during Iowa State University class days and for added frequency of service for the **#1 Red**, **#11 Cherry** and **#7 Purple** routes.

These services were initially implemented in August 2018 with ICAAP funding the second year of service in 2019-2020. ICAAP guidelines allow transit agencies to fund three years of services within the first five years of service. The Board's initial approval for this additional service was in January 2018 for the FY2018 budget after the ICAAP's October 2017 grant application deadline. Therefore, CyRide's first year ICAAP request was requested and funded for the W. Ames routes for its second year of operation (2019-2020). This ICAAP request is for these services' third year of operation (2nd Year ICAAP) is for a new route for the #12 Lilac and additional frequency for the #1 Red, #7 Purple and #11 Cherry routes for service beginning October 2020 through September 2021.

The information below describes CyRide's full request for the new #12 Lilac route and added frequency for #1 Red, #11 Cherry and#7 Purple.

Operating (#12 Lilac, #11 Cherry, #1 Red and #7 Purple)

New Route - #12 Lilac (ISU School Weekdays) – Year 1

CyRide proposes to provide a new #12 Lilac route, by operating a bus every 20 minutes during peak hours from 7:00-10:13 a.m. and 2:35–5:43 p.m. between Steinbeck-Dickenson-Mortensen into Iowa State University (ISU) campus. This route will operate only when Iowa State University holds school-year classes or approximately 160 weekdays out of the year.

CyRide anticipates that this route will generate 900 daily riders on this new service given that it serves apartments in high-density areas along Mortensen, Steinbeck and Dickenson.

CyRide anticipates a healthy ridership over

#12 Lilac (Weekday Service) ISU Class Days and Finals Days Only		
Mortensen / Dickinson	Student Services	Mortensen / Dickinson
7:05	7:18	7:33
7:25	7:38	7:53
7:45	7:58	8:13
8:05	8:18	8:33
8:25	8:38	8:53
8:45	8:58	9:13
9:05	9:18	9:33
9:25	9:38	9:53
9:45	9:58	10:13
2:35	**2:48**	**3:03**
2:55	**3:08**	**3:23**
3:15	**3:28**	**3:43**
3:35	**3:48**	**4:03**
3:55	**4:08**	**4:23**
4:15	**4:28**	**4:43**
4:35	**4:48**	**5:03**
4:55	**5:08**	**5:23**
5:15	**5:28**	**5:43**

ISU class days as residents become more and more aware of the new route and how it serves them. (See Exhibit B – Lilac Route for route alignment details.)

The following information provides operation-specific data for this new route:

#12 Lilac Weekday (Peak Only)
Hours of Service: 11.4
Number of New Trips: 18
Avg. Passengers/Trip (Year 1): 50
Miles/Trip: 5.9
Miles: 106.2
Days of Operation/Year: 160 (ISU Class & Finals days only)
Ridership: 900 daily rides (50 pass/trip* 18 trips)

This route will serve the following commercial, residential and University destinations as illustrated within Exhibit B:

- **#12 Lilac (New Route):** West Towne Pub, All Iowa Attack Basketball Fieldhouse, Ames-Fitness Center-West, Hilton Garden Inn Ames, Kum & Go, Sleep Inn & Suites, Hilton Garden Inn Ames, The Rose of Ames, The Waterford at Ames, West Village Apartments, Perfect Games, Westown Courts, Sukup Basketball Complex, University West Apartments, Ames Middle School, Southwest Athletic Complex, Dunkin Donuts, US Bank ATM, Ames Intermodal Facility, Collegiate United Methodist Church, ISU Campustown Businesses (86 total); http://www.amescampustown.com/, Student Services, Iowa State University west campus.

Added Frequency - #11 Cherry (Rebranded 1A Red – Weekday Service During ISU Class Days Only) – Year 1

CyRide proposes to provide additional frequency of service to the #11 Cherry route beyond the service previously provided by the #1A Red. The #11 Cherry now provides 7-minute service between west Ames and campus. The #11 Cherry serves west Mortensen area that the #7 Purple previously operated to (only 6 trips) but at a much higher frequency level and more total trips (52 total) throughout the morning, mid-day and afternoon. This request is only asking for the additional service added beyond previous trips provided by the #1A Red or 9 trips. (See Exhibit B – Cherry Route for route alignment details.)

The following information provides operation-specific data for this additional frequency ICAAP request:

#11 Cherry Weekday (Improved Service Frequency over 1A Red)
Hours of Service: 4.5
Number of Trips: 9
Avg. Passengers/Trip (Year 1): 50
Miles/Trip: 6.6
Miles: 59.4
Days of Operation/Year: 160 (ISU Class & Finals days only)
Ridership: 450 daily rides (50 pass/trip* 9 trips)

This route will serve the following commercial, residential and university destinations as illustrated within Exhibit B:

- **#11 Cherry(Added Frequency):** Mortensen Heights, The Madison, Creative Spirits Ames, Café Milo, Haverkamp Properties Apartments, West Towne Pub, All Iowa Attack Basketball Fieldhouse, Ames-Fitness Center-West, Hilton Garden Inn Ames, Kum & Go, Sleep Inn & Suites, Hilton Garden Inn Ames, West Village Apartments, Perfect Games, Westown Courts, Sukup Basketball Complex, , Israel Family Hospice House, Christopher Gartner Park, Formative Years Growing and Learning, Kum & Go, Ames Woman's Club, Hickory Ridge Apartments, Hy-Vee Gas, Kwik Connection, Wells Fargo Bank, Hy-Vee West, Ames Driver's License Station, McFarland Express Care, McDonalds, Alpha Copies and Print Center, Szechuan House, Central Iowa Vapors, Erbert and Gerberts, Family Video, Uni-Mart, Papa John's, Pammell Grocery & Grill, First National Bank, Apen Ames, Community of Christ, Dunkin Donuts, US Bank ATM, Ames Intermodal Facility, Collegiate United Methodist Church, ISU Campustown Businesses (86 total); http://www.amescampustown.com/, Student Services, Iowa State University west campus.

Added Frequency - #1 Red (Weekdays) – Year 1

CyRide proposes to provide additional frequency of service to the #1 Red route along its full alignment from Ames Middle school to North Grand Mall. This route will provide these added trips during the weekdays only or 255 weekdays out of the year. (See Red Route in Exhibit B.) The #1 Red now consistently operates a bus every 15 minutes from 6am – 9pm. Prior to CyRide 2.0, the Red Route only provided 30 minute service before noon. CyRide anticipates that this route will generate 600 daily riders on this new service given that it serves apartments in high-density areas along Mortensen, Steinbeck and Dickenson. (See Exhibit B – Red Route for route alignment details.)

The following information provides operation-specific data for this additional frequency ICAAP request:

#1 Red (Improved Frequency)
Hours of Service: 15.5
Number of Trips: 12
Avg. Passengers/Trip (Year 1): 50
Miles/Trip: 14.625
Miles: 175.5
Days of Operation/Year: 255 (All weekdays)
Ridership: 600 daily rides (50 pass/trip* 12 trips)

This route will serve the following commercial, residential and University destinations as illustrated within Exhibit B:

- **#1 Red (Added Frequency):** West Towne Pub, All Iowa Attack Basketball Fieldhouse, Ames-Fitness Center-West, Hilton Garden Inn Ames, Kum & Go, The Rose of Ames, The Waterford at Ames, West Village Apartments, Perfect Games, Westtown Courts, Sukup Basketball Complex, University West Apartments, Ames Middle School, Israel Family Hospice House, Christopher Gartner Park, Formative Years Growing and Learning, Kum & Go, Ames Woman's Club, Hickory Ridge Apartments, Hy-Vee Gas, Kwik Connection, Wells Fargo Bank, Hy-Vee West, Ames Driver's License Station, McFarland Express Care, McDonalds, Alpha Copies and Print Center, Szechuan House, Central Iowa Vapors, Erbert and Gerberts, Family Video, Uni-Mart, Papa John's, Pammell Grocery & Grill, First National Bank, Apen Ames, Community of Christ, Dunkin Donuts, US Bank ATM, Ames Intermodal Facility, Collegiate United Methodist Church, ISU Campustown Businesses (86 total); http://www.amescampustown.com/, Student Services, Iowa State University west campus.

Added Frequency - #7 Purple (Weekdays) – Year 1

CyRide proposes to provide additional frequency of service to the #7 Purple route. The #7 Purple now consistently operates a bus every 15 minutes from 7-10 AM (on ISU class days; 30 minutes on non-ISU class days) and every 30 minutes from 2:30-5:20pm. Prior to CyRide 2.0, the Purple route only operated 6 trips (3am/3pm). **For this ICAAP request, I prorated the average number of "additional" trips (9.7647 trips) throughout the year based on the days operated to provide an average daily trip.** CyRide anticipates that this route will generate 342 daily riders on these additional trips given that it serves apartments in high-density areas along Todd, Alcott and Lincoln Way. (See Exhibit B – Red Route for route alignment details.)

The following information provides operation-specific data for this additional frequency ICAAP request:

#7 Purple (Improved Frequency)
Hours of Service: 2.8
Number of Trips: 9.7647 (Avg. daily trips over 255 weekdays: 6 trips operate 95 days/year on non-ISU class days; 12 trips operate 160 days/year on ISU class days)
Avg. Passengers/Trip (Year 1): 35
Miles/Trip: 4.1
Miles: 40
Days of Operation/Year: 255
Ridership: 342 daily rides (35 pass/trip* 9.7647 trips)

This route will serve the following commercial, residential and University destinations as illustrated within Exhibit B:

- **#7 Purple (Added Frequency):** College Creek Apartments, Kum & Go, Ames Woman's Club, Hickory Ridge Apartments, Hy-Vee Gas, Kwik Connection, Wells Fargo Bank, Hy-Vee West, Ames Driver's License Station, McFarland Express Care,

McDonalds, Alpha Copies and Print Center, Szechuan House, Central Iowa Vapors, Erbert and Gerberts, Family Video, Uni-Mart, Papa John's, Pammell Grocery & Grill, First National Bank, Apen Ames, Community of Christ, Dunkin Donuts, US Bank ATM, Ames Intermodal Facility, Collegiate United Methodist Church, ISU Campustown Businesses (86 total - http://www.amescampustown.com/), Student Services, Iowa State University west campus.

Added Emissions Factors

The project emissions in Exhibit G are calculated based on the required Iowa DNR's current vehicle emission factors data posted on the Iowa DOT's ICAAP website

Conclusion

The advantages of supporting this grant application can provide numerous benefits to the City of Ames/Iowa State University/Story County through:

- Increased transit service coverage
- Improved transit frequency of service
- Improved air quality with fewer single-occupant cars and technologically-improved bus engines

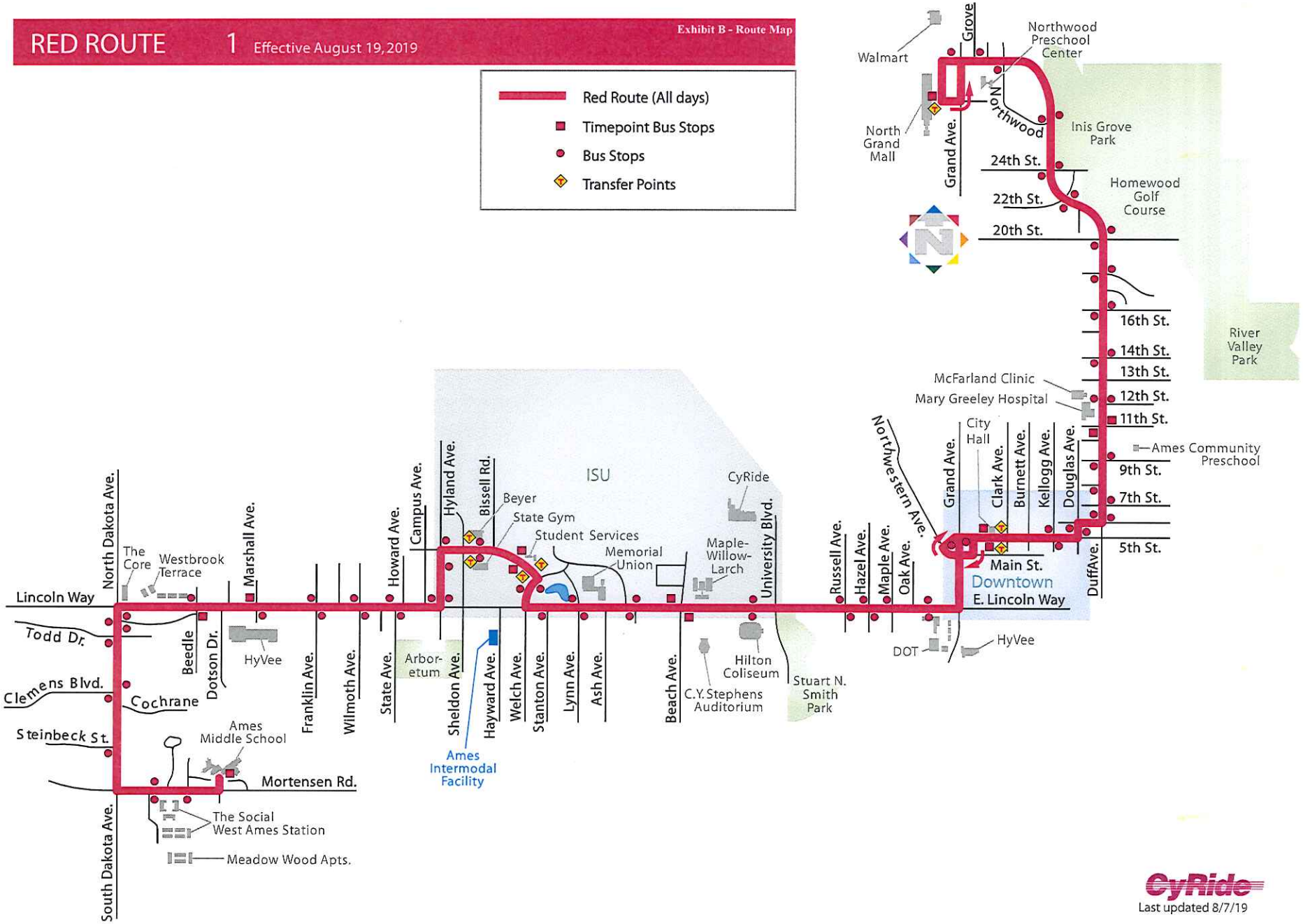
While students are committed to paying for the improved services required to meet their higher transit demands, unanticipated financial increases in the double-digits would be needed to support this new frequency of service. Unanticipated ridership and financial increases occur when reliable enrollment numbers are not available until only a few weeks after the fall semester begins. ICAAP funding will allow student fees to increase more gradually, so that at the end of the three year allowance, funding will be sufficient to continue these services into the future. For example, instead of a 12% immediate impact, an increase of 3-5% per year for three years will generate the funds to successfully continue these improvements long into the future.

Without funding for this service enhancement, CyRide may need to leave passengers at the bus stops as capacity on the buses is already at its maximum along these corridors. Additional frequency is needed on all four routes – the #1 Red, #7 Purple #11 Cherry and #12 Lilac to provide the service that is demanded to not leave residents at the bus stops. This demand cannot be accommodated with only one service and collectively, the four services are needed in tandem to handle demand in west Ames. CyRide estimates that approximately 450,000 new rides would be generated from these extra trips provided between west Ames and campus throughout a single year.

CyRide encourages the Iowa DOT to provide support for these routes for expanded days of service (second year request for ICAAP funding) along these high-density corridors.

RED ROUTE 1 Effective August 19, 2019

Exhibit B - Route Map

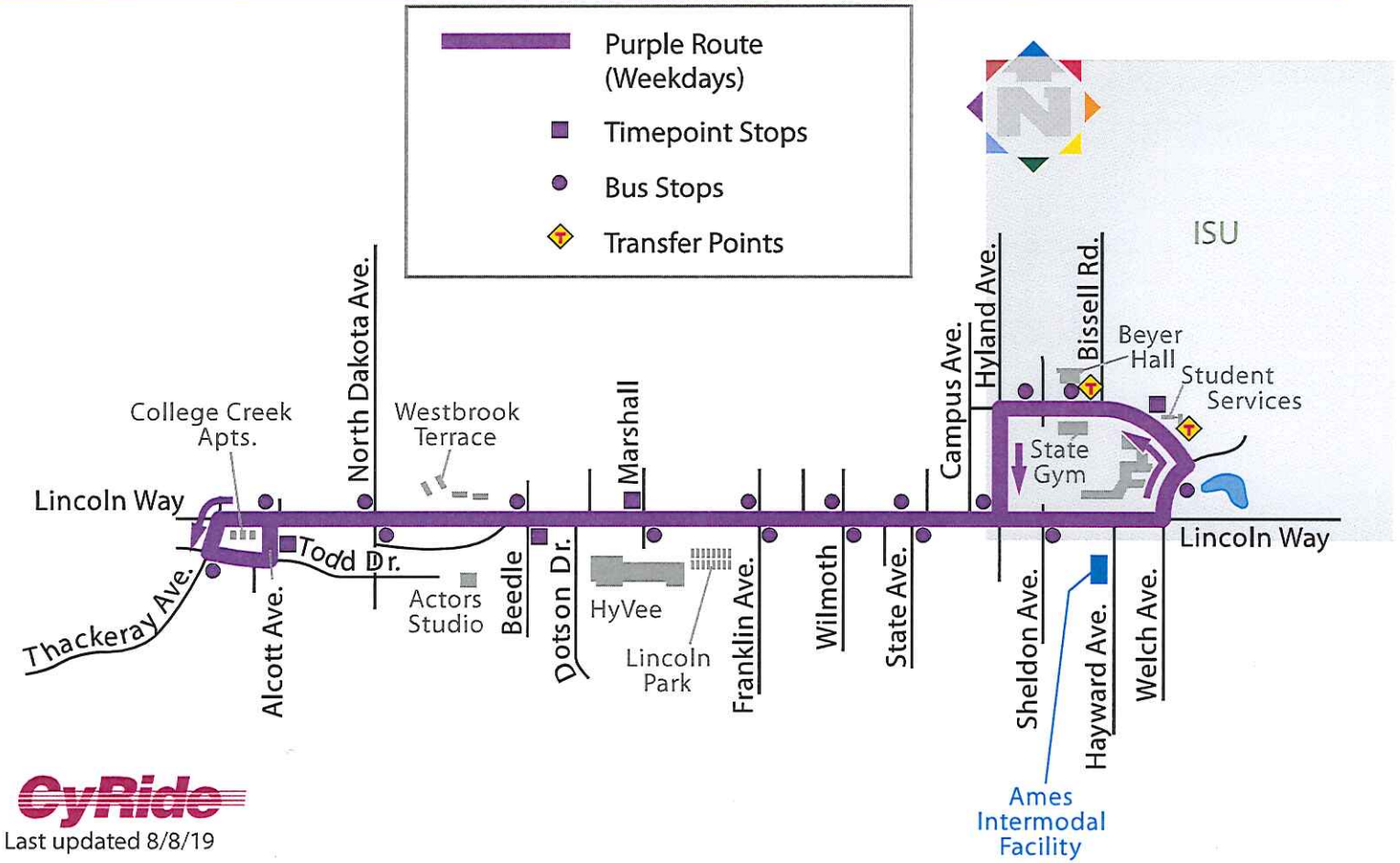


CyRide

Last updated 8/7/19

Exhibit B - Route Map

PURPLE ROUTE 7 Effective August 19,2019

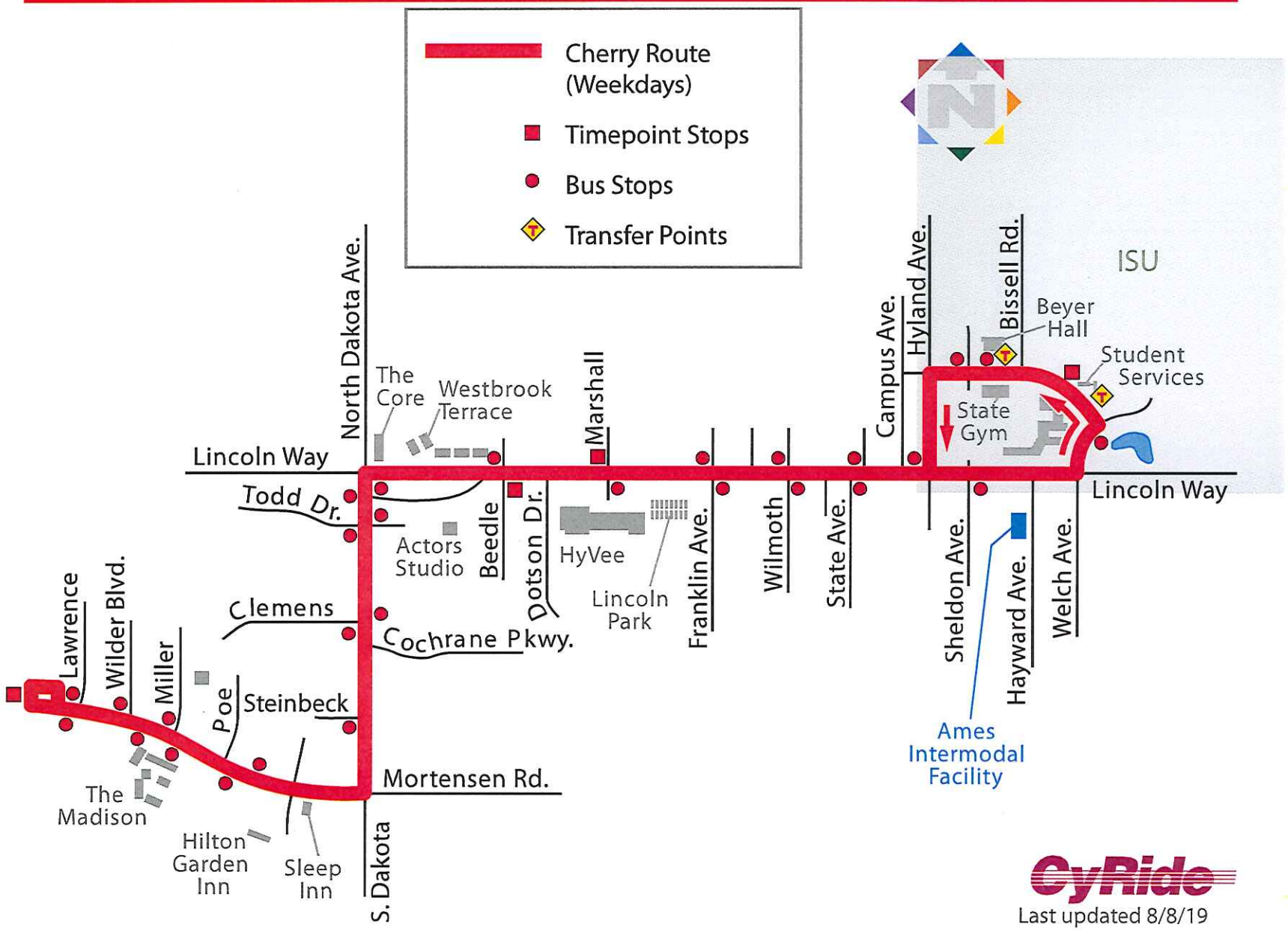


CyRide

Last updated 8/8/19

Exhibit B - Route Map

CHERRY ROUTE 11 Effective August 19, 2019

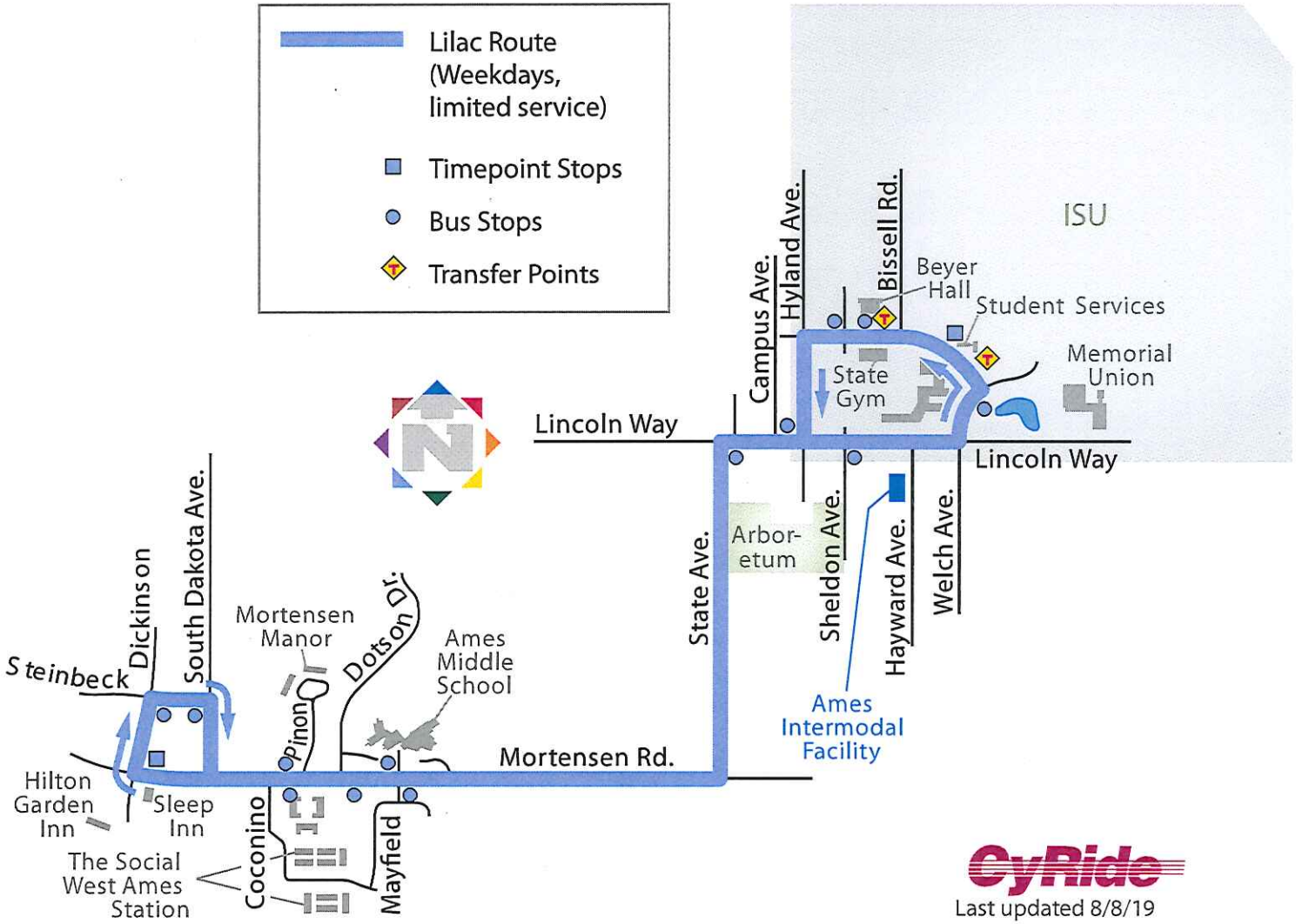


CyRide

Last updated 8/8/19

Exhibit B - Route Map

LILAC ROUTE 12 Effective August 26, 2019



CyRide

Last updated 8/8/19

CyRide
New Route Expansion (#12 Lilac)
Added Frequency (#1 Red, #11 Cherry, #7 Purple)
Budget

Activity **Cost**

OPERATING:

#12 Lilac Weekday Route (PEAK HOUR – ISU School Days Only)
YEAR 2 – (Request for service beginning October 2020); Service Began 10/1/2018-9/30/2019 (100% funded by CyRide); 1st year ICAAP funded 10/1/2019-9/30/2020)
Costs calculated below by inflating first year costs by 3% for 2019 and 3% again for 2020 request.

Driver Wages – **$69,786 (Yr. 1*)** x 1.03 x 1.03 (Yr. 3) =	$74,036
Consumables – **$24,808 (Yr. 1*)** x 1.03 x 1.03 (Yr. 3) =	$26,318
SUBTOTAL	$100,354
Less Fares	
0.2 riders/trip x 18 trips x 160 days x *$0.87 average resident fare =	($501)
49.8 riders/trip x 18 trips x 160 days x $0.00 fare (Free ISU ID card) =	($0)
YEAR 1 SUBTOTAL LILAC- Weekday Peak (less fares) =	**$99,853**

#1 Red Weekday Route (Added Frequency - All Days)
YEAR 2 – (Request for service beginning October 2020); Service Began 10/1/2018-9/30/2019 (100% funded by CyRide); 1st year ICAAP funded 10/1/2019-9/30/2020)
Costs calculated below by inflating first year costs by 3% for 2019 and 3% again for 2020 request.

Driver Wages – **$151,222 (Yr. 1*)** x 1.03 x 1.03 (Yr. 2) =	$160,431
Consumables – **$65,338 (Yr. 1*)** x 1.03 x 1.03 (Yr. 2) =	$69,317
SUBTOTAL	$229,748
Less Fares	
0.2 riders/trip x 12 trips x 255 days x *$0.87 average resident fare =	($532)
49.8 riders/trip x 12 trips x 160 days x $0.00 fare (Free ISU ID card) =	($0)
YEAR 1 SUBTOTAL RED (less fares) =	**$229,216**

#11 Cherry Weekday Route (Added Frequency- ISU School Days Only)
YEAR 2 – (Request for service beginning October 2020); Service Began 10/1/2018-9/30/2019 (100% funded by CyRide); 1st year ICAAP funded 10/1/2019-9/30/2020)
Costs calculated below by inflating first year costs by 3% for 2019 and 3% again for 2020 request.

Driver Wages – **$27,547 (Yr. 1*)** x 1.03 x 1.03 (Yr. 2) =	$29,225
Consumables – **$13,875 (Yr. 1*)** x 1.03 x 1.03 (Yr. 2) =	$14,720
SUBTOTAL	$43,945
Less Fares	
0.2 riders/trip x 9 trips x 160 days x *$0.87 average resident fare =	($251)
49.8 riders/trip x 9 trips x 160 days x $0.00 fare (Free ISU ID card) =	($0)
YEAR 1 SUBTOTAL CHERRY (less fares) =	**$43,694**

#7 Purple Weekday Route (Added Frequency)
YEAR 2 – (Request for service beginning October 2020); Service Began 10/1/2018-9/30/2019 (100% funded by CyRide); 1st year ICAAP funded 10/1/2019-9/30/2020)
Costs calculated below by inflating first year costs by 3% for 2019 and 3% again for 2020 request.

Driver Wages – **$34,701 (Yr. 1*)** x 1.03 x 1.03 (Yr. 2) =	$36,814
Consumables – **$14,906 (Yr. 1*)** x 1.03 x 1.03 (Yr. 2) =	$15,813
SUBTOTAL	$52,627

Less Fares

0.2 riders/trip x 9.7647 trips x 255 days x *$0.87 average resident fare = ($433)
34.8 riders/trip x 9.7647 trips x 255 days x $0.00 fare (Free ISU ID card) = ($0)

YEAR 1 SUBTOTAL PURPLE (less fares) = $52,194

SUBTOTAL OPERATING	**424,957**
TOTAL COST	**$424,957**
ICAAP Share	**$339,965**
CyRide Share (assured)	**$84,992**

NOTES:

* **Year 1 LILAC Costs: #12 LilacWeekday-NEW Route (Began in 8/2018 via 100% local funding)**
Driver Wages – 11.4 hrs./day x 160 days x $38.26/hr = $69,786
Consumables –5.9 miles/trip x 18 trips/day x 160 days x $1.46/mile = $24,808

* **Year 1 RED Costs: #1 RED Weekday Added Frequency Costs (Began in 8/2018 via 100% local funding)**
Driver Wages – 15.5 hrs./day x 255 days x $38.26/hr = $151,222
Consumables –14.625 miles/trip x 12 trips/day x 255 days x $1.46/mile = $65,338

* **Year 1 CHERRY Costs: #1 CHERRY Added Frequency Costs (Began in 8/2018 via 100% local funding)**
Driver Wages – 4.5 hrs./day x 160 days x $38.26/hr = $27,547
Consumables –6.6 miles/trip x 9 trips/day x 160 days x $1.46/mile = $13,875

* **Year 1 PURPLE Costs: #7 PURPLE: Added Frequency ISU DAYS (Began in 8/2018 via 100% local funding)**
Driver Wages – 2.8 hrs./day x 160 days x $38.26/hr = $17,140
Consumables –4.1 miles/trip x 6 trips/day x 160 days x $1.46/mile = $5,747

* **Year 1 PURPLE Costs: #7 PURPLE Added Frequency ALL DAYS (Began in 8/2018 via 100% local funding)**
Driver Wages – 1.8 hrs./day x 255 days x $38.26/hr = $17,561
Consumables –4.1 miles/trip x 6 trips/day x 255 days x $1.46/mile = $9,159

** **Average Resident Fare** = Average Cash Deposits/Average Residents Boarding Paying Cash = $4,040/4,738 = $0.87 (See "Comparison of Cash/Deposits and Use of Tickets FY2019 Avg." with calculations highlighted in yellow) CyRide decreased its fares in May 2018 from $1.25 to $1.00 and its half fares from $.60 to $.50. Therefore, the FY2019 average fares are more representative for upcoming services in FY2020. CyRide's full fare was increased to $1.25 between January 2012 and May 2018.

Please note: CyRide does not bill for indirect costs.

Comparison of Cash/Deposits and Use of Tickets
FY2019

Account # 550-1100-345.42-00
Fixed Route Fares

From:	To:	Deposit	Cash Fares	Rides/ Day	Avg. Fare	Cash/ Day	RF Ticket	FF Ticket	RF Percent	FF Percent	RF/ Day	FF/ Day
7/6/18	7/24/2018	$ 3,607.78	5,261	277	$ 0.69	$ 189.88	1801	441	80.3%	19.7%	94.8	23.2
7/25/18	8/7/18	$ 3,029.41	3,956	283	$ 0.77	$ 216.39	1208	328	78.6%	21.4%	86.3	23.4
8/8/18	8/21/18	$ 5,525.75	4,605	329	$ 1.20	$ 394.70	801	367	68.6%	31.4%	57.2	26.2
8/22/18	9/5/18	$ 4,836.26	5,055	337	$ 0.96	$ 322.42	716	391	64.7%	35.3%	47.7	26.1
9/6/18	9/18/18	$ 4,119.32	4,770	367	$ 0.86	$ 316.87	915	322	74.0%	26.0%	70.4	24.8
9/19/18	10/2/18	$ 4,039.31	4,719	337	$ 0.86	$ 288.52	962	310	75.6%	24.4%	68.7	22.1
10/3/18	10/16/18	$ 4,863.76	4,976	355	$ 0.98	$ 347.41	924	288	76.2%	23.8%	66.0	20.6
10/17/18	10/30/18	$ 4,411.83	4,949	354	$ 0.89	$ 315.13	893	256	77.7%	22.3%	63.8	18.3
10/31/18	11/14/18	$ 3,411.21	5,170	345	$ 0.66	$ 227.41	822	284	74.3%	25.7%	54.8	18.9
11/15/18	11/27/18	$ 3,396.23	3,318	255	$ 1.02	$ 261.25	478	162	74.7%	25.3%	36.8	12.5
11/28/18	12/11/18	$ 4,196.11	4,531	324	$ 0.93	$ 299.72	852	287	74.8%	25.2%	60.9	20.5
12/12/18	1/8/19	$ 5,168.96	7,008	250	$ 0.74	$ 184.61	1054	336	75.8%	24.2%	37.6	12.0
1/9/19	1/22/19	$ 4,119.89	4,218	301	$ 0.98	$ 294.28	590	284	67.5%	32.5%	42.1	20.3
1/23/19	2/5/19	$ 3,898.84	3,925	280	$ 0.99	$ 278.49	509	314	61.8%	38.2%	36.4	22.4
2/6/19	2/19/19	$ 4,240.94	4,737	338	$ 0.90	$ 302.92	687	371	64.9%	35.1%	49.1	26.5
2/20/19	3/5/19	$ 4,382.58	4,793	342	$ 0.91	$ 313.04	624	376	62.4%	37.6%	44.6	26.9
3/6/19	3/19/19	$ 4,211.23	4,579	327	$ 0.92	$ 300.80	647	203	76.1%	23.9%	46.2	14.5
3/20/19	4/2/19	$ 3,438.35	4,948	353	$ 0.69	$ 245.60	1010	272	78.8%	21.2%	72.1	19.4
4/3/19	4/16/19	$ 4,332.65	5,103	365	$ 0.85	$ 309.48	767	228	77.1%	22.9%	54.8	16.3
4/17/19	4/30/19	$ 3,771.30	4,379	313	$ 0.86	$ 269.38	779	241	76.4%	23.6%	55.6	17.2
5/1/19	5/14/19	$ 3,583.64	4,941	353	$ 0.73	$ 255.97	766	239	76.2%	23.8%	54.7	17.1
5/15/19	6/4/19	$ 3,867.25	6,354	303	$ 0.61	$ 184.15	949	328	74.3%	25.7%	45.2	15.6
6/5/19	6/20/19	$ 3,119.40	5,404	338	$ 0.58	$ 194.96	1134	279	80.3%	19.7%	70.9	17.4
6/21/19	7/2/19	$ 5,110.24	3,496	291	$ 1.46	$ 425.85	992	249	79.9%	20.1%	82.7	20.8
7/3/19	7/17/19	$ 3,576.47	4,090	273	$ 0.87	$ 238.43	872	244	78.1%	21.9%	58.1	16.3
7/18/19	7/30/19	$ 2,791.00	3,894	300	$ 0.72	$ 214.69	1125	188	85.7%	14.3%	86.5	14.5
7/31/19	8/13/19	$ 2,040.47	4,163	297	$ 0.49	$ 145.75	870	257	77.2%	22.8%	62.1	18.4
8/14/19												
1/1/00												
Avg. before 1/2012		$ 3,763	4,398	486	$ 0.86	$ 399.60	508	245	67.5%	32.5%	54	27
Avg. after 1/2012		$ 4,626	4,569	318	$ 1.01	$ 324.64	944	489	65.9%	34.1%	65	34
Average FY2014		$ 5,176	4857	343	$ 1.06	$ 365.50	825	557	59.5%	40.5%	59	39
Average FY2015		$ 4,501	4402	305	$ 1.03	$ 315.22	973	541	63.5%	36.5%	68	38
Average FY2016		$ 4,089	3877	282	$ 1.06	$ 300.73	931	501	64.8%	35.2%	67	36
Average FY2017		$ 4,464	4317	283	$ 1.05	$ 296.32	1085	564	63.6%	36.4%	70	37
Average FY2018		$ 3,914	3796	270	$ 1.04	$ 283.48	997	454	67.8%	32.2%	68	32
Average FY2019		$ 4,040	4738	319	$ 0.87	$ 276.63	880	292	74.4%	25.6%	59	20

New Route Expansion (#12 Lilac)
Added Frequency (#1 Red, #11 Cherry, #7 Purple)
Schedule

Activity	Completion Date
Service Begins (2nd year ICAAP*)	October 1, 2020
Service Ends (2nd year ICAAP*)	September 30, 2021

* This is Year 2 request for ICAAP funding for new Lilac weekday peak hour service and added frequency for Red, Cherry, and Purple routes. The Iowa DOT previous funded Year-1 for the operation of W. Ames transit routes.

* If approved for Year 2 ICAAP funding, CyRide anticipates requesting one more additional year of ICAAP funding for these services for FFY2021 through FFY2022.

CyRide
New Route Expansion (#12 Lilac)
Added Frequency (#1 Red, #11 Cherry, #7 Purple)
Official Certification

The Ames Transit Agency (CyRide) Board of Trustees certifies that it shall:

(1) commit the necessary local matching funding for project implementation and

(2) upon project completion, be responsible for adequately maintaining and operating the project for public use during the project's useful life.

Juan Bibiloni-Rivera, Ames Transit Agency President

8/8/2019
Date

CyRide
New Route Expansion (#12 Lilac)
Added Frequency (#1 Red, #11 Cherry, #7 Purple)
MPO Resolution DRAFT

The Ames Area Metropolitan Planning Organization (AAMPO) approved and endorsed this project on September 24, 2019 with a resolution approving this grant. The resolution is attached.

The ICAAP application form (Form 230017; page 3 or 6) requires that the project or program be identified in the fiscally constrained transportation plan (TIP) and requires the document to be submitted with the application. However, the ICAAP handbook has been revised to state that "Awarded projects" must be added to approved MPO TIP's and STIP's (See below).

> ***https://iowadot.gov/systems_planning/pdf/ICAAP_Application_Handbook.pdf (page 5):***
> ***Awarded projects*** *must be added to approved MPO or RPA transportation improvement programs (TIPs) and Iowa's Statewide Transportation Improvement Program (STIP).*

Therefore, once this ICAAP project has been formally approved by the Iowa DOT Commission (early January 2020), the funding will be amended and approved by the MPO in the AAMPO's FY2020 Transportation Improvement Program in order to begin transferring the federal funding from FHWA to FTA and gain formal grant approval from the Federal Transit Administration.

New Route Expansion (#12 Lilac)
Added Frequency (#1 Red, #11 Cherry, #7 Purple)
Emissions Calculation

Calculation/Assumption	Factors	CO	VOC (HC)	NOx
Net Project Cost (ALL FOUR ROUTES BELOW)	**$424,957**			
Lilac Net Operating Cost	$99,853			
Red Net Operating Cost	$229,216			
Cherry Net Operating Cost	$43,694			
Purple Net Operating Cost	$52,194			
Operating for One Year - $424,957				
Number of Years In Project - Operating	1			
#12 Lilac Route Service Assumptions				
Number of days/Yr. in Project (ISU Classdays & Finals Days)	160			
Avg. Rd-Trip Commute (Miles*)	5.9			
# Daily Trips	18			
# Riders/Trip	50			
Number of Daily Miles for Lilac	106.2			
Total Estimated Avg. Daily Ridership (Lilac)	900			
Total Cars Taken From Roadway Weekdays (1.2/car)	750			
#1 Red Route Service Assumptions				
Number of days/Yr. in Project (ISU Classdays & Finals Days)	255			
Avg. Commute (Miles*)	7			
Daily Round Trip Bus Miles	14.625			
# Daily Trips	12			
# Riders/Trip	50			
Number of Daily Miles for Red Bus	175.5			
Total Estimated Avg. Daily Ridership (Red)	600			
Total Cars Taken From Roadway Weekdays (1.2/car)	500			
#11 Cherry Route Service Assumptions				
Number of days/Yr. in Project (ISU Classdays & Finals Days)	160			
Avg. Rd-Trip Commute (Miles*)	6.6			
# Daily Trips	9			
# Riders/Trip	50			
Number of Daily Miles for Cherry	59.4			
Total Estimated Avg. Daily Ridership (Cherry)	450			
Total Cars Taken From Roadway Weekdays (1.2/car)	375			
#7 Purple Route Service Assumptions				
Number of days/Yr. in Project	255			
Avg. Rd-Trip Commute (Miles*)	4.1			
# Daily Trips (6 trips operate 95 days/year on non ISU class days; 12 trips 160 days/yr on ISU class days)	9.7647			
# Riders/Trip	35			
Number of Daily Miles for Purple	40.0			
Total Estimated Avg. Daily Ridership (Purple)	342			
Total Cars Taken From Roadway Weekdays (1.2/car)	285			

New Route Expansion (#12 Lilac)
Added Frequency (#1 Red, #11 Cherry, #7 Purple)
Emissions Calculation

Calculation/Assumption	Factors	CO	VOC (HC)	NOx
Emission Reduction By Riders Taking LILAC				
Emission Factor (30 mph) - LDGV		13.84	2.063	1.032
Emission Factor x Avg. Commute Length*		81.66	12.1717	6.0888
#12 Lilac: Gross Red. x 160 days x Cars From Roadway x 1 year		9,798,720	1,460,604	730,656
Total LDGV Emissions Reduced (#12 Lilac Route)		9,798,720	1,460,604	730,656
Emission Increase For Standard Buses:				
Emission Factor (10 mph) - HDDV		5.544	0.915	10.176
(40' Bus) HDDV #12 Lilac Emissions x 106.2 miles/day x 160 days x 1 year		94,204	15,548	172,911
TOTAL (40' Bus) HDDV Emissions		94,204	15,548	172,911
Net Reduction for LILAC ROUTE :		9,704,516	1,445,056	557,745
Cost Effectiveness for LILAC		$ 10.29	$ 69.10	$ 179.03
Emission Reduction By Riders Taking RED				
Emission Factor (30 mph) - LDGV		13.84	2.063	1.032
Emission Factor x Avg. Commute Length (7 miles/trip)		96.88	14.441	7.224
#1 Red: Gross Red. x 255 days x Cars From Roadway x 1 year		12,352,200	1,841,228	921,060
Total LDGV Emissions Reduced (#1 Red Route)		12,352,200	1,841,228	921,060
Emission Increase For Standard Buses:				
Emission Factor (10 mph) - HDDV		5.544	0.915	10.176
(40' Bus) HDDV #1 Red Emissions x 14.625 miles/day x 255 days x 1 year		20,676	3,412	37,950
TOTAL (40' Bus) HDDV Emissions		20,676	3,412	37,950
Net Reduction for RED ROUTE :		12,331,524	1,837,815	883,110
Cost Effectiveness for RED		$ 18.59	$ 124.72	$ 259.56
Emission Reduction By Riders Taking LILAC				
Emission Factor (30 mph) - LDGV		13.84	2.063	1.032
Emission Factor x Avg. Commute Length*		91.34	13.62	6.81
#11 Cherry: Gross Red. x 160 days x Cars From Roadway x 1 year		5,480,640	816,948	408,672
Total LDGV Emissions Reduced (#11 Cherry Route)		5,480,640	816,948	408,672
Emission Increase For Standard Buses:				
Emission Factor (10 mph) - HDDV		5.544	0.915	10.176
(40' Bus) HDDV #11 Cherry Emissions x 59.4 miles/day x 160 days x 1 year		52,690	8,696	96,713
TOTAL (40' Bus) HDDV Emissions		52,690	8,696	96,713
Net Reduction for CHERRY ROUTE :		5,427,950	808,252	311,959
Cost Effectiveness for CHERRY		$ 8.05	$ 54.06	$ 140.06
Emission Reduction By Riders Taking PURPLE				
Emission Factor (30 mph) - LDGV		13.84	2.063	1.032
Emission Factor x Avg. Commute Length*		56.74	8.4583	4.2312
#7 Purple Gross Red. x 255 days x Cars From Roadway x 1 year		4,121,031	614,284	307,291
Total LDGV Emissions Reduced (#7 Purple Route)		4,121,031	614,284	307,291
Emission Increase For Standard Buses:				
Emission Factor (10 mph) - HDDV		5.544	0.915	10.176
(40' Bus) HDDV #7 Purple Emissions x 40 miles/day x 255 days x 1 year		56,599	9,341	103,887
TOTAL (40' Bus) HDDV Emissions		56,599	9,341	103,887
Net Reduction for PURPLE ROUTE :		4,064,432	604,942	203,404
Cost Effectiveness for PURPLE		$ 12.84	$ 86.28	$ 256.60

New Route Expansion (#12 Lilac)
Added Frequency (#1 Red, #11 Cherry, #7 Purple)
Emissions Calculation

Calculation/Assumption	Factors	CO	VOC (HC)	NOx
Net Reduction for Project :		31,528,422	4,696,066	1,956,219
Total Reduction for Project - kg/project		31,528.4	4,696.1	1,956.2
Net Reduction Per Year:		31,528,422	4,696,066	1,956,219
Total Reduction Per Year - kg/year		31,528.4	4,696.1	1,956.2
Cost Effectivness:				
Total Project Cost		$424,957		
One Yr. Project Total Cost= ($412517/1)		$424,957		
CO		$13.48		
VOC		$90.49		
NOx		$217.23		

* Based on statistics, riders are riding the entire Lilac, Cherry and Purple routes to reach their destination

IOWADOT
Form 105101 (3-18)

Minority Impact Statement

Pursuant to 2008 Iowa Acts, HF 2393, Iowa Code 8.11, all grant applications submitted to the State of Iowa that are due beginning Jan. 1, 2009, shall include a Minority Impact Statement. This is the state's mechanism for requiring grant applications to consider the potential impact of the grant project's proposed programs or policies on minority groups.

Please choose the statement(s) that pertains to this grant application. Complete all the information requested for the chosen statement(s). Submit additional pages as necessary.

☒ The proposed grant project programs or policies could have a disproportionate or unique **positive** impact on minority persons.

Describe the positive impact expected from this project.
The City of Ames has an 10.24% Asian population and any new route expansion on high capacity corridors will certainly have a positive impact on this minority and LEP group living within the Ames community. Specifically, the routes in west Ames travels along the Mortensen, Steinbeck, Dickensen, South Dakota and Lincoln Way corridors in west Ames which have developed into a high capacity corridors where a majority of university students reside in high residential apartment complexes. The residents living in these apartments along these corridors will be provided transportation directly to central ISU campus. While this service is designed to serve the general public, Ames residents of all races and genders living within the community will benefit from this grant application and service.

Indicate which groups are impacted.

☐ Women ☐ Persons with a disability ☐ Blacks ☐ Latinos ☒ Asians
☐ Pacific Islanders ☐ American Indians ☐ Alaskan Native Americans ☐ Other_____

☐ The proposed grant project programs or policies could have a disproportionate or unique **negative** impact on minority persons.

Describe the negative impact expected from this project.

Present the rationale for the existence of the proposed program or policy.

Provide evidence of consultation with representatives of the minority groups impacted.

Indicate which groups are impacted.

☐ Women ☐ Persons with a disability ☐ Blacks ☐ Latinos ☐ Asians
☐ Pacific Islanders ☐ American Indians ☐ Alaskan Native Americans ☐ Other _____

☐ The proposed grant project programs or policies are **not expected to have** a disproportionate or unique impact on minority persons.

Present the rationale for determining no impact.

I hereby certify that the information on this form is complete and accurate, to the best of my knowledge.

Name Barb Neal

Title Interim Transit Director

Definitions

"Minority Persons," as defined in Iowa Code 8.11, means individuals who are women, persons with a disability, Blacks, Latinos, Asians or Pacific Islanders, American Indians, and Alaskan Native Americans.

"Disability," as defined in Iowa Code 15.102, subsection 7, paragraph "b," subparagraph (1):
b. As used in this subsection:
(1) *"Disability"* means, with respect to an individual, a physical or mental impairment that substantially limits one or more of the major life activities of the individual, a record of physical or mental impairment that substantially limits one or more of the major life activities of the individual, or being regarded as an individual with a physical or mental impairment that substantially limits one or more of the major life activities of the individual.

"Disability" does not include any of the following:
(a) Homosexuality or bisexuality.
(b) Transvestism, transsexualism, pedophilia, exhibitionism, voyeurism, gender identity disorders not resulting from physical impairments or other sexual behavior disorders.
(c) Compulsive gambling, kleptomania, or pyromania.
(d) Psychoactive substance abuse disorders resulting from current illegal use of drugs.

"State Agency," as defined in Iowa Code 8.11, means a department, board, bureau, commission, or other agency or authority of the State of Iowa.

Iowa Department of Transportation
Clean Air Attainment Funds Application

Added Night Trips
(#11 Cherry - Night)

Submitted to:

IOWA DOT

By:

AMES TRANSIT AGENCY (CYRIDE)
601 N. University Blvd.
Ames, Iowa 50010

October 1, 2019

Form 230017 (2-18)

PROJECT APPLICATION
IOWA'S CLEAN AIR ATTAINMENT PROGRAM (ICAAP)

General information

Applicant agency Ames Transit Agency

Contact person
(name and title) Barb Neal, Interim Transit Director

Street address and/or
box number 601 N. University Blvd.

City Ames State IA ZIP code 50010

Telephone number 515-239-5563 Email bneal@cyride.com

If more than one agency or organization is involved in this project, please state the name, contact person, mailing address, and telephone number of the second agency. *(Attach an additional page if more than two agencies are involved.)*

Applicant agency

Contact person
(name and title)

Street address and/or
box number

City State ZIP code

Telephone number Email

Project information

Project title #11 Cherry - Night

Project description (including length, if applicable).
In August 2018, CyRide redesigned and implemented new bus services traveling in west Ames area including added frequency of trips on the #11 Cherry route that operated day service only. In August 2019, CyRide added night service trips to the #11 Cherry route due to additional demand from residents and to improve safety. Therefore, this ICAAP request is for this night service trips for service beginning in August 2020.

*Project priority (1 = highest priority: 2 (a sponsor submitting multiple applications in this funding cycle must assign a numerical rank or priority to each application.)[3]

*Assign the proposed project to one or more of the following categories (check one or more).

- ☐ Transportation-related project in the State Implementation Plan (SIP)
- ☐ Transportation control measure (TCM)
- ☐ Traffic flow improvement (intersection, signalization, other)
- ☐ Planning and project development
- ☐ Travel demand management (TDM)
- ☒ Transit-related improvement
- ☐ Shared-ride
- ☐ Bicycle pedestrian facility or program
- ☐ Pedestrian facility or program
- ☐ Intermodal freight
- ☐ Passenger
- ☐ Alternative fuels
- ☐ Vehicle inspection and maintenance program
- ☐ Outreach activity (education, advertising, or technical assistance)

*Is the project consistent with the State Implementation Plan for air quality and nonattainment areas? ☐ Yes ☐ No ☒ Not applicable

*Is the project consistent with the metropolitan planning organization's (MPO) local congestion management plan? ☐ Yes ☐ No ☒ Not applicable

*Is the project consistent with the ☒ MPO ☐ regional planning affiliation (RPA) ☐ statewide long-range transportation plan? ☒ Yes ☐ No ☐ Not applicable

Notes: [1]Requires public agency as co-sponsor of application.
[2]The term "project" means any ICAAP infrastructure or program proposal.
[3]The Iowa Department of Transportation will use the priority ratings to reflect the sponsor.

Project cost (an itemized breakdown must be included on an attached sheet)

Total cost $40,703.00

ICAAP Fund request $32,562.00

Applicant match (25 percent minimum) $8,141.00

	List of all applicant match sources	Amount	Assured or anticipated (date anticipated)
1.	CyRide Operating Budget	$8,141.00	Assured - Beginning 7/1/2020
2.	Passenger Fares	$194.00	Anticipated - Beginning 10/2020
3.			

Are any state funds involved in this project? ☐ Yes ☒ No

If yes, please explain the source and conditions.

Are any other federal funds involved in this project? ☐ Yes ☒ No

If yes, please explain the source and conditions.

Estimated project development schedule

Design Start date _____ Completion date _____

Land acquisition Start date _____ Completion date _____

Construction Start date _____ Completion date _____

Has any part of this project been started? ☒ Yes ☐ No

If yes, please explain.

CyRide began the first year of service in August 2019 with 100% local funding from CyRide. If funded, this ICAAP expansion would fund the second year of services from October 2020 through September 2021.

How do you plan to measure the success of this project?

Four evalutation methods will be used: 1) Passenger Ridership 2) Customer Comments 3) Passengers per hour and 4) Total Emissions saved

Required documentation and narrative information

The following documents and narratives must be submitted with this application. In the upper right corner of each document or narrative write the corresponding letter shown below.

☒ A. A **narrative** assessing existing congestions/air quality conditions, outlining the concept of the proposed project, and providing adequate project justification. How will this project reduce congestion, reduce travel or single occupant vehicle usage, and/or improve air quality? Which transportation-related pollutant(s) are being addressed: carbon monoxide, ozone, or particulate matter?

☒ B. A **detailed map** identifying the location of the project and clearly differentiating the subject project from any past or future project phases.

☒ C. An **itemized breakdown** of the total project costs. This documentation does not need to be a detailed, line-item type of estimate. However, it must accomplish two objectives: First, it must show the method by which the cost estimate was prepared; and second, it must enable a reviewer to determine if the cost estimate is reasonable. The manner in which these objectives are achieved may vary widely depending on the type, scope, and complexity of the project. Absent a fully itemized list of costs, some general guidelines for possible methods of estimating each type of project cost are provided on Attachment A.

☒ D. A **time schedule** for the total project development.

☒ E. An **official endorsement** of the project from the authority to be responsible for the project's maintenance and operation. The authority must provide written assurance it will adequately maintain the completed project for its intended public use following project completion. For most construction projects, this will be a minimum of 20 years. The endorsement must also acknowledge the intent of the authority to provide the required matching funds. For cities, counties, or other political subdivisions, this should be in the form of a fully executed resolution by the elected body or board, as applicable.

☒ F. An **adopted formal resolution** from the appropriate metropolitan planning organization (MPO) or regional planning affiliation declaring the sponsor's proposed project or program conforms to the MPO's or RPA's regional transportation planning process. (For MPOs, the project or program must be identified in the fiscally constrained transportation plan and, if applicable, the congestion management plan in transportation management areas.)

☒ G. **Calculations** for vehicle emission reductions and total project cost-effectiveness for the targeted pollutants. Project applicant must show through a quantitative analysis how many kilograms of pollutant will be reduced (carbon monoxide, volatile organic compounds, oxides of nitrogen as nitrogen dioxide, and, if applicable, particulate matter). Project sponsor must calculate the cost-effectiveness of the project by: Dividing the total annualized project cost by the number of kilograms per year of pollutant reduced ($ per kg). Applicant must also show all assumptions and source of data used to calculate the estimates. The applicant must use the most current vehicle emission factors developed by the Iowa Department of Natural Resources and consistent with the U.S. Environmental Protection Agency's MOBILE 6.2 air quality model. These emission factors are periodically updated and may be obtained from the Iowa DOT's ICAAP website at: **https://www.iowadot.gov/systems_planning/icaap.htm**.

☒ H. Completed **Minority Impact Statement** attached to application.

The award of ICAAP funds; any subsequent funding or letting of contracts for design, construction, reconstruction, improvement, or maintenance; and the furnishing of materials for this project shall not involve direct or indirect interest of any state, county, or city official, elective or appointive. All of the above are prohibited by Iowa Code 314.2, 362.5, or 331.342. Any award of funding or any letting of a contract in violation of the foregoing provisions shall invalidate the award of ICAAP funding and authorize a complete recovery of any funds previously disbursed.

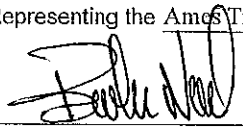
Certification

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating local authority. I understand the attached **official endorsement(s)** binds the participating local governments to assume responsibility for adequate maintenance of any new or improved facilities.

If ICAAP funding assistance is approved for the project described in this application, I understand that an executed contract between the applicant and the Iowa DOT is required before such funding assistance can be authorized for use in implementing the project.

Representing the Ames Transit Agency

Name of applicant's governing authority



Signature

Aug 30, 2019

Date

Barb Neal, Interim Transit Director

Typed name and title
Governing authority official

Aug 30, 2019

Date

CyRide
(#11 Cherry - Night)
Added Trips

Narrative

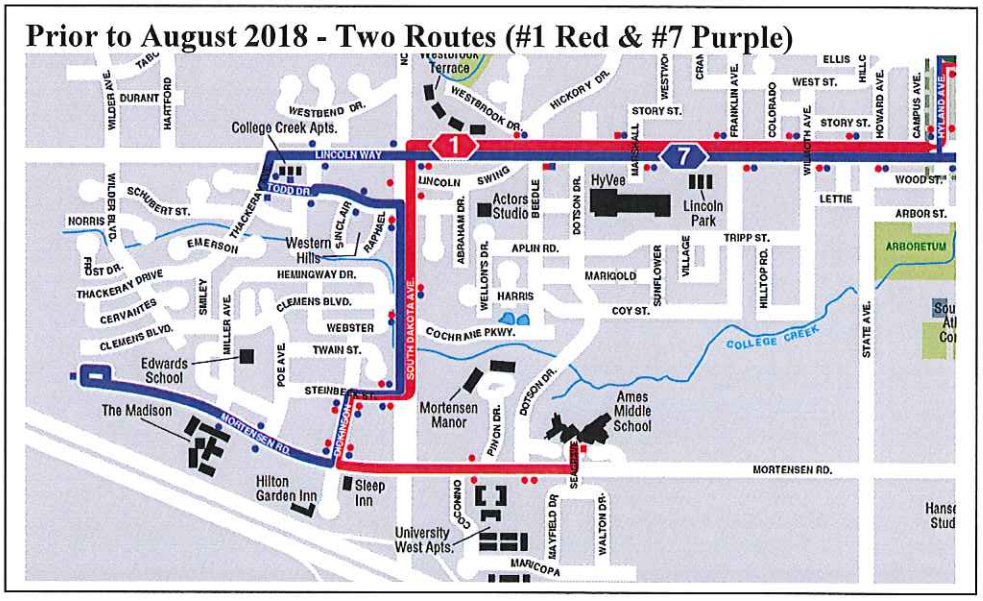
Background

Ames Transit Agency (d.b.a CyRide) directly operates fixed route services that are open to the general public within the Ames community including Iowa State University (ISU). The amount of transit service in this small community, of approximately 65,000 is unusually high as a result of the intensive use by university students. To accommodate this high transit demand, CyRide operates 18 hours a day with service frequencies between 4 – 40 minutes. **However in the last six years, ISU enrollment has grown by 22% from 28,682 students to approximately 35,000! During this same timeframe, CyRide's ridership has grown by over 1.6 million passengers.**

High density apartment complexes are rapidly being built off-campus, but where CyRide's routes may provide limited or virtually no transit service. **The result of this growth has been an overwhelming demand for student housing followed by an immediate reactionary demand for additional transit service wherever these apartment complexes are established.** In a community where riding transit is now part of the city's culture, the residents living in these high-density apartment complexes expect frequent and quality transit services to an even greater degree than they did in past years.

Prior to August 2018, the #1 Red and #7 Purple routes, shown connecting with other routes traveling throughout the community accommodated all transit rides between west Ames and Iowa State University (ISU) campus with over 1.5 million riders annually on just these two routes. **The #1 Red could be best described as the "workhorse of west Ames" providing transit service from 6:30am until 12:30am the following day and accommodated the majority of the west Ames residents.**

Prior to August 2018 - Two Routes (#1 Red & #7 Purple)

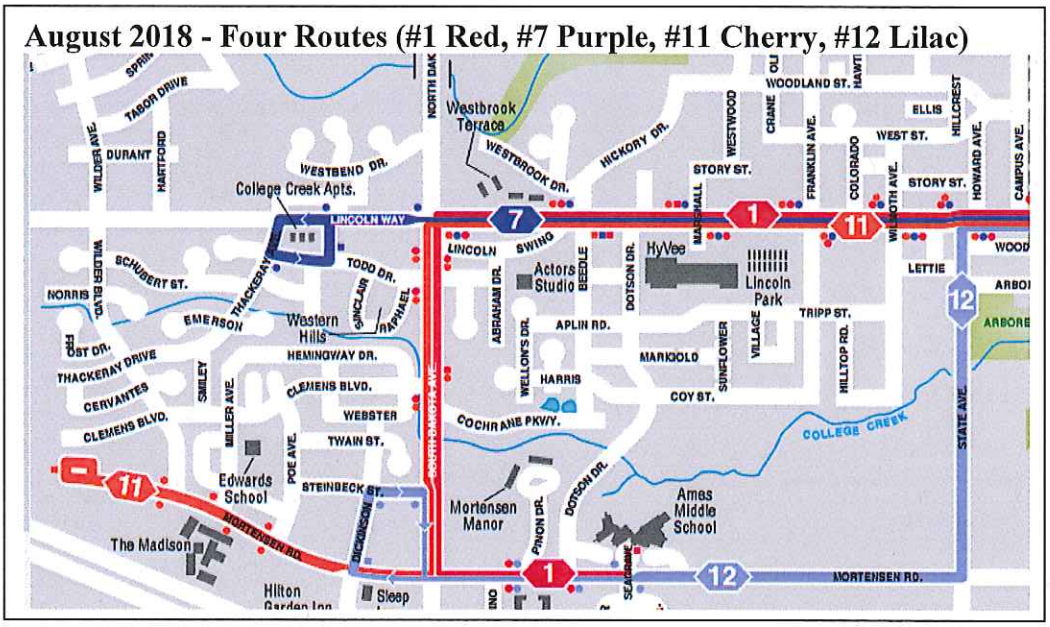


The **#7 Purple Route** provided **"minimal service with only six published trips"** (3 morning/3 afternoon) during the peak hours and

was utilized mainly to provide additional capacity for Red route riders between west Ames and university campus during the peak hours.

In May 2017, CyRide completed its first ever transit system redesign study (https://www.cyride.com/system-redesign) for their entire transit service and residents located in west Ames demanded additional transit service operating along Mortensen, Steinbeck, Dickenson, S. Dakota and Lincoln Way into campus. CyRide hired an outside consultant to provide expertise in how to operate a transit system originally developed for 4 million riders and adapt it for a system currently carrying over 6 million passengers. **CyRide essentially approved the redesign completed in the study in west Ames by offering 4 different bus routes along these modified corridors thereby breaking up the #1 Red's "workhorse duties" into four different high-frequency service routes (#1 Red, #7 Purple, #11 Cherry & #12 Lilac), which began in August 2018. (see routes below)**

August 2018 - Four Routes (#1 Red, #7 Purple, #11 Cherry, #12 Lilac)



Under the CyRide 2.0 service changes implemented in August 2018, the **#11 Cherry** route initially only offered service from 7:00am through 6:30pm. CyRide subsequently requested and received ICAAP funding to receive funding for the reimbursement for Cherry service for its second year of this routes operation that just began in August 2019. However due to overwhelming requests by the public, CyRide added night trips to this route that began in August 2019 funded at 100% with CyRide's local budget due to demand for these evening trips. Safety was also a factor in walking along Mortensen Rd. late at night in approving this service..

Therefore, this ICAAP application request is for new **#11 Cherry night trips** only for service beginning in August 2020.

Project Description/Justification

Grant Request
Added Trips - #11 Cherry - Night

The funding request below is for additional evening trips for the **#11 Cherry** route implemented in west Ames during Iowa State University class days. These services were initially implemented in August 2019 with 100% CyRide local funds. ICAAP guidelines allow transit agencies to fund three years of services within the first five years of service. The Board's initial approval for this additional service was in January 2019 for the FY2019 budget after the ICAAP's October 2018 grant application deadline.

This ICAAP request is for evening #11 Cherry's second year of operation (1st Year ICAAP) for service beginning October 2020 through September 2021.

The information below describes CyRide's full request for the operating of the **#11 Cherry – Night** service.

#11 Cherry - Night
(ISU School Weekdays) – Year 1

CyRide proposes to provide new evening trips, as highlighted in yellow, to the #11 Cherry route, by operating a bus every 40 minutes during the weekday evenings between 6:20 pm – 10:06 pm from Mortensen Turnaround into Iowa State University (ISU) campus. This route will operate only when Iowa State University holds school-year classes or approximately 160 weekdays out of the year.

#11 Cherry (Night Service)
ISU Class Days and Finals Days Only
Added Night trips shown below

Mortensen Turnaround	Lincoln Way & Beedle	Union Drive	Lincoln Way & Marshall	Mortensen Turnaround
6:20	6:27	6:33	6:38	6:46
7:00	7:07	7:13	7:18	7:26
7:40	7:47	7:53	7:58	8:06
8:20	8:27	8:33	8:38	8:46
9:00	9:07	9:13	9:18	9:26
9:40	9:47	9:53	9:58	10:06
10:20	10:27	10:33	10:38	10:46

CyRide anticipates that this route will generate 350 daily riders on this new evening service given that it serves apartments in high-density areas along Mortensen, Steinbeck and Dickenson.

CyRide anticipates a healthy ridership over ISU class days during the evenings as residents become more and more aware of the new trips and how they serves them. (See Exhibit B – Cherry Route for route alignment details.)

The following information provides operation-specific data for these additional trips:

#11 Cherry Weekday (Night Trips)
Hours of Service: 4.5
Number of Trips: 7
Avg. Passengers/Trip (Year 1): 50
Miles/Trip: 6.6
Miles: 46.2
Days of Operation/Year: 160 (ISU Class & Finals days only)
Ridership: 350 daily rides (50 pass/trip * 7 trips)
This route will serve the following commercial, residential and university destinations as illustrated within Exhibit B:

- **#11 Cherry(Added Frequency):** Mortensen Heights, The Madison, Creative Spirits Ames, Café Milo, Haverkamp Properties Apartments, West Towne Pub, All Iowa Attack Basketball Fieldhouse, Ames-Fitness Center-West, Hilton Garden Inn Ames, Kum & Go, Sleep Inn & Suites, Hilton Garden Inn Ames, West Village Apartments, Perfect Games, Westown Courts, Sukup Basketball Complex, , Israel Family Hospice House, Christopher Gartner Park, Formative Years Growing and Learning, Kum & Go, Ames Woman's Club, Hickory Ridge Apartments, Hy-Vee Gas, Kwik Connection, Wells Fargo Bank, Hy-Vee West, Ames Driver's License Station, McFarland Express Care, McDonalds, Alpha Copies and Print Center, Szechuan House, Central Iowa Vapors, Erbert and Gerberts, Family Video, Uni-Mart, Papa John's, Pammell Grocery & Grill, First National Bank, Apen Ames, Community of Christ, Dunkin Donuts, US Bank ATM, Ames Intermodal Facility, Collegiate United Methodist Church, ISU Campustown Businesses (86 total); http://www.amescampustown.com/, Student Services, Iowa State University west campus.

Added Emissions Factors

The project emissions in Exhibit G are calculated based on the required Iowa DNR's current vehicle emission factors data posted on the Iowa DOT's ICAAP website

Conclusion

The advantages of supporting this grant application can provide numerous benefits to the City of Ames/Iowa State University/Story County through:

- Increased transit service coverage
- Improved transit trips during the evening
- Improved air quality with fewer single-occupant cars and technologically-improved bus engines

While students are committed to paying for the improved services required to meet their higher transit demands, unanticipated financial increases in the double-digits would be needed to support these new evening trips. Unanticipated ridership and financial increases occur when

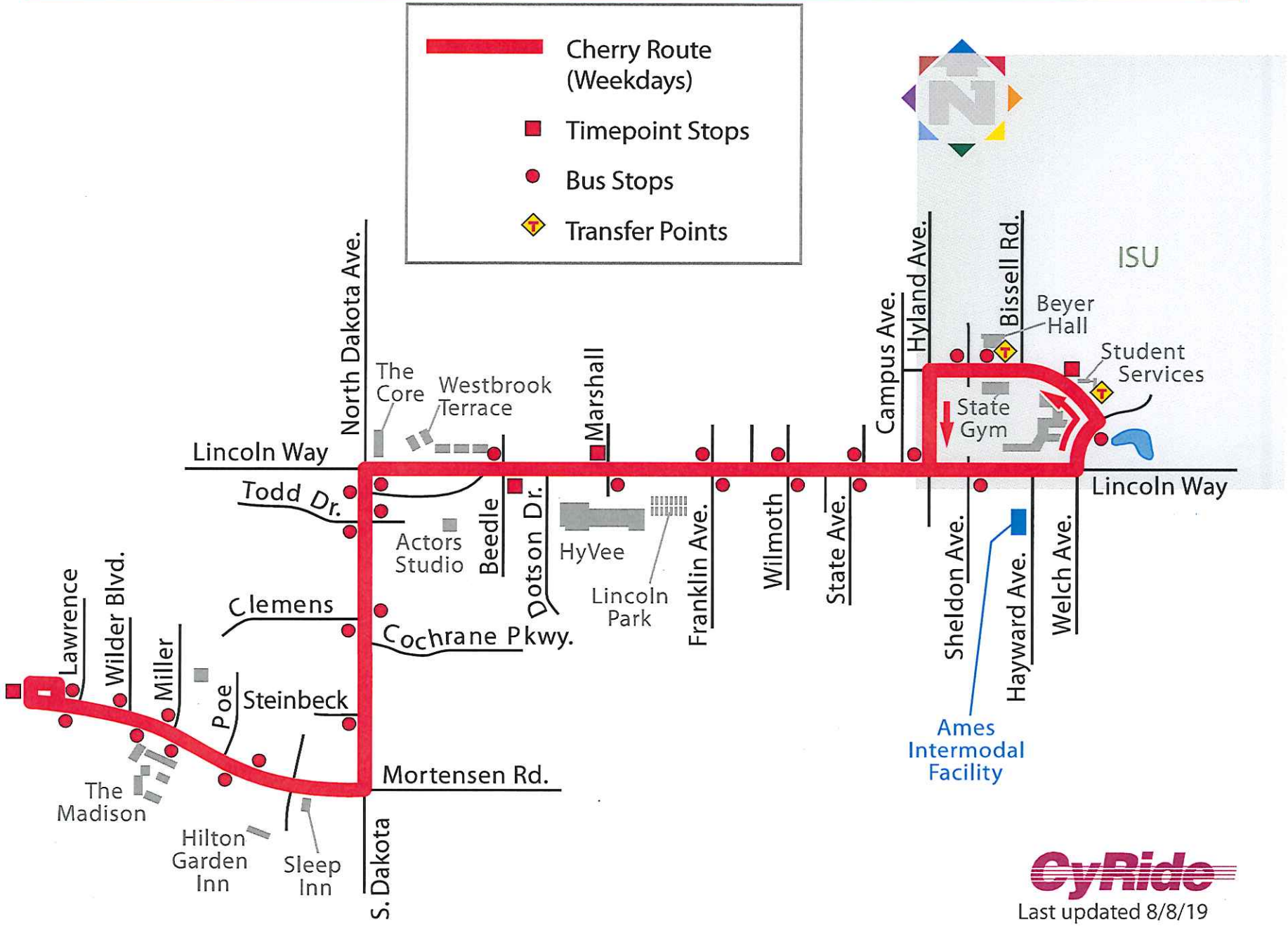
reliable enrollment numbers are not available until only a few weeks after the fall semester begins. ICAAP funding will allow student fees to increase more gradually, so that at the end of the three year allowance, funding will be sufficient to continue these services into the future.

Without funding for this service enhancement, CyRide would drop passengers along S. Dakota leaving residents with a long walk back to their homes. Additional evening trips were one of the most requested improvements during the initial implementation of service in 2018-2019. The evening service on Cherry should be added to work in tandem with #1 Red night service route to handle evening demand in this west Ames area. CyRide estimates that approximately 56,000 new rides would be generated from these extra trips provided between west Ames and campus throughout a single year.

CyRide encourages the Iowa DOT to provide support for this night route expansion (first year request for ICAAP funding) along these high-density corridors.

CHERRY ROUTE 11 Effective August 19, 2019

Exhibit B - Route Map



CyRide

Last updated 8/8/19

CyRide
Added Trips (#11 Cherry - Night)
Budget

Activity **Cost**

OPERATING:

#11 Cherry Weekday Route (NIGHT – ISU School Days Only)
YEAR 1 – (Request for service beginning October 2020); Service Began 8/2019 (100% funded by CyRide)
Costs calculated below by inflating first year costs by 3% for 2020.

Driver Wages – **$28,411 (Yr. 1*)** x 1.03 (Yr. 2) =	$29,263	
Consumables – **$11,295 (Yr. 1*)** x 1.03 (Yr. 2) =	$11,634	
SUBTOTAL	$40,897	
Less Fares		
0.2 riders/trip x 7 trips x 160 days x *$0.87 average resident fare =	($194)	
49.8 riders/trip x 7 trips x 160 days x $0.00 fare (Free ISU ID card) =	($0)	
YEAR 1 SUBTOTAL Cherry- Night (less fares) =		**$40,703**

SUBTOTAL OPERATING	**40,703**
TOTAL COST	**$40,703**
ICAAP Share	**$32,562**
CyRide Share (assured)	**$8,141**

NOTES:

* **Year 1 Cherry Night Costs: #11 Cherry Night – Added Trips (Began in 8/2019 via 100% local funding)**

Driver Wages – 4.5 hrs./day x 160 days x $39.46/hr =	$28,411
Consumables –6.6 miles/trip x 7 trips/day x 160 days x $1.528/mile =	$11,295

** **Average Resident Fare** = Average Cash Deposits/Average Residents Boarding Paying Cash = $4,040/4,738 = $0.87 (See "Comparison of Cash/Deposits and Use of Tickets FY2019 Avg." with calculations highlighted in yellow) CyRide decreased its fares in May 2018 from $1.25 to $1.00 and its half fares from $.60 to $.50. Therefore, the FY2019 average fares are more representative for upcoming services in FY2020. CyRide's full fare was increased to $1.25 between January 2012 and May 2018.

Please note: CyRide does not bill for indirect costs.

Comparison of Cash/Deposits and Use of Tickets
FY2019

Account # 550-1100-345.42-00
Fixed Route Fares

From:	To:	Deposit	Cash Fares	Rides/ Day	Avg. Fare	Cash/ Day	RF Ticket	FF Ticket	RF Percent	FF Percent	RF/ Day	FF/ Day
7/6/18	7/24/2018	$ 3,607.78	5,261	277	$ 0.69	$ 189.88	1801	441	80.3%	19.7%	94.8	23.2
7/25/18	8/7/18	$ 3,029.41	3,956	283	$ 0.77	$ 216.39	1208	328	78.6%	21.4%	86.3	23.4
8/8/18	8/21/18	$ 5,525.75	4,605	329	$ 1.20	$ 394.70	801	367	68.6%	31.4%	57.2	26.2
8/22/18	9/5/18	$ 4,836.26	5,055	337	$ 0.96	$ 322.42	716	391	64.7%	35.3%	47.7	26.1
9/6/18	9/18/18	$ 4,119.32	4,770	367	$ 0.86	$ 316.87	915	322	74.0%	26.0%	70.4	24.8
9/19/18	10/2/18	$ 4,039.31	4,719	337	$ 0.86	$ 288.52	962	310	75.6%	24.4%	68.7	22.1
10/3/18	10/16/18	$ 4,863.76	4,976	355	$ 0.98	$ 347.41	924	288	76.2%	23.8%	66.0	20.6
10/17/18	10/30/18	$ 4,411.83	4,949	354	$ 0.89	$ 315.13	893	256	77.7%	22.3%	63.8	18.3
10/31/18	11/14/18	$ 3,411.21	5,170	345	$ 0.66	$ 227.41	822	284	74.3%	25.7%	54.8	18.9
11/15/18	11/27/18	$ 3,396.23	3,318	255	$ 1.02	$ 261.25	478	162	74.7%	25.3%	36.8	12.5
11/28/18	12/11/18	$ 4,196.11	4,531	324	$ 0.93	$ 299.72	852	287	74.8%	25.2%	60.9	20.5
12/12/18	1/8/19	$ 5,168.96	7,008	250	$ 0.74	$ 184.61	1054	336	75.8%	24.2%	37.6	12.0
1/9/19	1/22/19	$ 4,119.89	4,218	301	$ 0.98	$ 294.28	590	284	67.5%	32.5%	42.1	20.3
1/23/19	2/5/19	$ 3,898.84	3,925	280	$ 0.99	$ 278.49	509	314	61.8%	38.2%	36.4	22.4
2/6/19	2/19/19	$ 4,240.94	4,737	338	$ 0.90	$ 302.92	687	371	64.9%	35.1%	49.1	26.5
2/20/19	3/5/19	$ 4,382.58	4,793	342	$ 0.91	$ 313.04	624	376	62.4%	37.6%	44.6	26.9
3/6/19	3/19/19	$ 4,211.23	4,579	327	$ 0.92	$ 300.80	647	203	76.1%	23.9%	46.2	14.5
3/20/19	4/2/19	$ 3,438.35	4,948	353	$ 0.69	$ 245.60	1010	272	78.8%	21.2%	72.1	19.4
4/3/19	4/16/19	$ 4,332.65	5,103	365	$ 0.85	$ 309.48	767	228	77.1%	22.9%	54.8	16.3
4/17/19	4/30/19	$ 3,771.30	4,379	313	$ 0.86	$ 269.38	779	241	76.4%	23.6%	55.6	17.2
5/1/19	5/14/19	$ 3,583.64	4,941	353	$ 0.73	$ 255.97	766	239	76.2%	23.8%	54.7	17.1
5/15/19	6/4/19	$ 3,867.25	6,354	303	$ 0.61	$ 184.15	949	328	74.3%	25.7%	45.2	15.6
6/5/19	6/20/19	$ 3,119.40	5,404	338	$ 0.58	$ 194.96	1134	279	80.3%	19.7%	70.9	17.4
6/21/19	7/2/19	$ 5,110.24	3,496	291	$ 1.46	$ 425.85	992	249	79.9%	20.1%	82.7	20.8
7/3/19	7/17/19	$ 3,576.47	4,090	273	$ 0.87	$ 238.43	872	244	78.1%	21.9%	58.1	16.3
7/18/19	7/30/19	$ 2,791.00	3,894	300	$ 0.72	$ 214.69	1125	188	85.7%	14.3%	86.5	14.5
7/31/19	8/13/19	$ 2,040.47	4,163	297	$ 0.49	$ 145.75	870	257	77.2%	22.8%	62.1	18.4
8/14/19												
1/1/00												
Avg. before 1/2012		$ 3,763	4,398	486	$ 0.86	$ 399.60	508	245	67.5%	32.5%	54	27
Avg. after 1/2012		$ 4,626	4,569	318	$ 1.01	$ 324.64	944	489	65.9%	34.1%	65	34
Average FY2014		$ 5,176	4857	343	$ 1.06	$ 365.50	825	557	59.5%	40.5%	59	39
Average FY2015		$ 4,501	4402	305	$ 1.03	$ 315.22	973	541	63.5%	36.5%	68	38
Average FY2016		$ 4,089	3877	282	$ 1.06	$ 300.73	931	501	64.8%	35.2%	67	36
Average FY2017		$ 4,464	4317	283	$ 1.05	$ 296.32	1085	564	63.6%	36.4%	70	37
Average FY2018		$ 3,914	3796	270	$ 1.04	$ 283.48	997	454	67.8%	32.2%	68	32
Average FY2019		$ 4,040	4738	319	$ 0.87	$ 276.63	880	292	74.4%	25.6%	59	20

Added Trips
(#11 Cherry - Night)
Schedule

Activity	**Completion Date**
Service Begins (1st year ICAAP*)	October 1, 2020
Service Ends (1st year ICAAP*)	September 30, 2021

* This is Year 1 request for ICAAP funding for Cherry weekday night service.

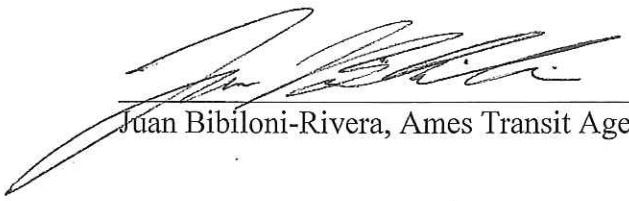
* If approved for Year 1 ICAAP funding, CyRide anticipates requesting two more additional years of ICAAP funding for this service.

CyRide
Added Trips (#11 Cherry - Night)
Official Certification

The Ames Transit Agency (CyRide) Board of Trustees certifies that it shall:

(1) commit the necessary local matching funding for project implementation and

(2) upon project completion, be responsible for adequately maintaining and operating the project for public use during the project's useful life.



Juan Bibiloni-Rivera, Ames Transit Agency President

8/8/2019
Date

CyRide
Added Trips (#11 Cherry - Night)
MPO Resolution DRAFT

The Ames Area Metropolitan Planning Organization (AAMPO) approved and endorsed this project on September 24, 2019 with a resolution approving this grant. The resolution is attached.

The ICAAP application form (Form 230017; page 3 or 6) requires that the project or program be identified in the fiscally constrained transportation plan (TIP) and requires the document to be submitted with the application. However, the ICAAP handbook has been revised to state that "Awarded projects" must be added to approved MPO TIP's and STIP's (See below).

> ***https://iowadot.gov/systems_planning/pdf/ICAAP_Application_Handbook.pdf (page 5):***
> ***Awarded projects*** *must be added to approved MPO or RPA transportation improvement programs (TIPs) and Iowa's Statewide Transportation Improvement Program (STIP).*

Therefore, once this ICAAP project has been formally approved by the Iowa DOT Commission (early January 2020), the funding will be amended and approved by the MPO in the AAMPO's FY2020 Transportation Improvement Program in order to begin transferring the federal funding from FHWA to FTA and gain formal grant approval from the Federal Transit Administration.

Added Trips (#11 Cherry - Night)
Emissions Calculation

Calculation/Assumption	Factors	CO	VOC (HC)	NOx
Net Project Cost	**$40,703**			
Cherry Night Net Operating Cost	$40,703			
Operating for One Year - $40,703				
Number of Years In Project - Operating	1			
#11 Cherry Route Service Assumptions				
Number of days/Yr. in Project (ISU Classdays & Finals Days)	160			
Avg. Rd-Trip Commute (Miles*)	6.6			
# Daily Trips	7			
# Riders/Trip	50			
Number of Daily Miles	46.2			
Total Estimated Avg. Daily Ridership	350			
Total Cars Taken From Roadway Weekdays (1.2/car)	292			
Emission Reduction By Riders Taking LILAC				
Emission Factor (30 mph) - LDGV		13.84	2.063	1.032
Emission Factor x Avg. Commute Length*		91.34	13.6158	6.8112
#11 Cherry: Gross Red. x 160 days x Cars From Roadway x 1 year		4,262,720	635,404	317,856
Total LDGV Emissions Reduced		4,262,720	635,404	317,856
Emission Increase For Standard Buses:				
Emission Factor (10 mph) - HDDV		5.544	0.915	10.176
(40' Bus) HDDV Emissions x 46.2 miles/day x 160 days x 1 year		40,981	6,764	75,221
TOTAL (40' Bus) HDDV Emissions		40,981	6,764	75,221
Net Reduction for Cherry Night:		**4,221,739**	**628,640**	**242,635**
Cost Effectiveness for Cherry Night		**$ 9.64**	**$ 64.75**	**$ 167.75**
Net Reduction for Project :		**4,221,739**	**628,640**	**242,635**
Total Reduction for Project - kg/project		**4,221.7**	**628.6**	**242.6**
Net Reduction Per Year:		**4,221,739**	**628,640**	**242,635**
Total Reduction Per Year - kg/year		**4,221.7**	**628.6**	**242.6**
Cost Effectivness:				
Total Project Cost		**$40,703**		
One Yr. Project Total Cost= ($40,703/1)		**$40,703**		
CO		**$9.64**		
VOC		**$64.75**		
NOx		**$167.75**		

* Based on statistics, riders are riding the entire Cherry routes to reach their destination

IOWA DOT
Form 105101 (3-18)

Minority Impact Statement

Pursuant to 2008 Iowa Acts, HF 2393, Iowa Code 8.11, all grant applications submitted to the State of Iowa that are due beginning Jan. 1, 2009, shall include a Minority Impact Statement. This is the state's mechanism for requiring grant applications to consider the potential impact of the grant project's proposed programs or policies on minority groups.

Please choose the statement(s) that pertains to this grant application. Complete all the information requested for the chosen statement(s). Submit additional pages as necessary.

☒ The proposed grant project programs or policies could have a disproportionate or unique **positive** impact on minority persons.

Describe the positive impact expected from this project.
The City of Ames has an 10.24% Asian population and any new route expansion on high capacity corridors will certainly have a positive impact on this minority and LEP group living within the Ames community. Specifically, the routes in west Ames travels along the Mortensen, Steinbeck and Dickensen corridors in west Ames which have developed into a high capacity corridors where a majority of university students reside in high residential apartment complexes. The residents living in these apartments along these corridors will be provided transportation directly to central ISU campus. While this service is designed to serve the general public, Ames residents of all races and genders living within the community will benefit from this grant application and service.

Indicate which groups are impacted.

☐ Women ☐ Persons with a disability ☐ Blacks ☐ Latinos ☒ Asians
☐ Pacific Islanders ☐ American Indians ☐ Alaskan Native Americans ☐ Other_____

☐ The proposed grant project programs or policies could have a disproportionate or unique **negative** impact on minority persons.

Describe the negative impact expected from this project.

Present the rationale for the existence of the proposed program or policy.

Provide evidence of consultation with representatives of the minority groups impacted.

Indicate which groups are impacted.

☐ Women ☐ Persons with a disability ☐ Blacks ☐ Latinos ☐ Asians
☐ Pacific Islanders ☐ American Indians ☐ Alaskan Native Americans ☐ Other _____

☐ The proposed grant project programs or policies are **not expected to have** a disproportionate or unique impact on minority persons.

Present the rationale for determining no impact.

I hereby certify that the information on this form is complete and accurate, to the best of my knowledge.

Name Barb Neal

Title Interim Transit Director

Definitions

"Minority Persons," as defined in Iowa Code 8.11, means individuals who are women, persons with a disability, Blacks, Latinos, Asians or Pacific Islanders, American Indians, and Alaskan Native Americans.

"Disability," as defined in Iowa Code 15.102, subsection 7, paragraph "b," subparagraph (1):
b. As used in this subsection:
(1) *"Disability"* means, with respect to an individual, a physical or mental impairment that substantially limits one or more of the major life activities of the individual, a record of physical or mental impairment that substantially limits one or more of the major life activities of the individual, or being regarded as an individual with a physical or mental impairment that substantially limits one or more of the major life activities of the individual.

"Disability" does not include any of the following:
(a) Homosexuality or bisexuality.
(b) Transvestism, transsexualism, pedophilia, exhibitionism, voyeurism, gender identity disorders not resulting from physical impairments or other sexual behavior disorders.
(c) Compulsive gambling, kleptomania, or pyromania.
(d) Psychoactive substance abuse disorders resulting from current illegal use of drugs.

"State Agency," as defined in Iowa Code 8.11, means a department, board, bureau, commission, or other agency or authority of the State of Iowa.

Iowa Department of Transportation
Clean Air Attainment Funds Application

Added Midday Trips
#12 Lilac - Midday

Submitted to:

IOWA DOT

By:

AMES TRANSIT AGENCY (CYRIDE)
601 N. University Blvd.
Ames, Iowa 50010

October 1, 2019

Form 230017 (2-18)

PROJECT APPLICATION
IOWA'S CLEAN AIR ATTAINMENT PROGRAM (ICAAP)

General information

Applicant agency Ames Transit Agency

Contact person
(name and title) Barb Neal, Interim Transit Director

Street address and/or
box number 601 N. University Blvd.

City Ames State IA ZIP code 50010

Telephone number 515-239-5563 Email bneal@cyride.com

If more than one agency or organization is involved in this project, please state the name, contact person, mailing address, and telephone number of the second agency. *(Attach an additional page if more than two agencies are involved.)*

Applicant agency

Contact person
(name and title)

Street address and/or
box number

City State ZIP code

Telephone number Email

Project information

Project title #12 Lilac - Midday

Project description (including length, if applicable).
In August 2018, CyRide redesigned and implemented new bus services traveling in west Ames area including a new #12 Lilac route that operated peak hour service only. In August 2019, CyRide added midday trips to the #12 Lilac route due to additional demand from residents. Therefore, this ICAAP request is for this mid-day service only for service beginning in August 2020.

*Project priority (1 = highest priority: 3 (a sponsor submitting multiple applications in this funding cycle must assign a numerical rank or priority to each application.)[3]

*Assign the proposed project to one or more of the following categories (check one or more).

- ☐ Transportation-related project in the State Implementation Plan (SIP)
- ☐ Transportation control measure (TCM)
- ☐ Traffic flow improvement (intersection, signalization, other)
- ☐ Planning and project development
- ☐ Travel demand management (TDM)
- ☒ Transit-related improvement
- ☐ Shared-ride
- ☐ Bicycle pedestrian facility or program
- ☐ Pedestrian facility or program
- ☐ Intermodal freight
- ☐ Passenger
- ☐ Alternative fuels
- ☐ Vehicle inspection and maintenance program
- ☐ Outreach activity (education, advertising, or technical assistance)

*Is the project consistent with the State Implementation Plan for air quality and nonattainment areas? ☐ Yes ☐ No ☒ Not applicable

*Is the project consistent with the metropolitan planning organization's (MPO) local congestion management plan? ☐ Yes ☐ No ☒ Not applicable

*Is the project consistent with the ☒ MPO ☐ regional planning affiliation (RPA) ☐ statewide long-range transportation plan? ☒ Yes ☐ No ☐ Not applicable

Notes: [1]Requires public agency as co-sponsor of application.
[2]The term "project" means any ICAAP infrastructure or program proposal.
[3]The Iowa Department of Transportation will use the priority ratings to reflect the sponsor.

Project cost (an itemized breakdown must be included on an attached sheet)

Total cost $38,411.00

ICAAP Fund request $30,728.00

Applicant match (25 percent minimum) $7,683.00

	List of all applicant match sources	Amount	Assured or anticipated (date anticipated)
1.	CyRide Operating Budget	$7,683.00	Assured - Beginning 7/1/2020
2.	Passenger Fares	$194.00	Anticipated - Beginning 10/2020
3.			

Are any state funds involved in this project? ☐ Yes ☒ No

If yes, please explain the source and conditions.

Are any other federal funds involved in this project? ☐ Yes ☒ No

If yes, please explain the source and conditions.

Estimated project development schedule

Design Start date _____ Completion date _____

Land acquisition Start date _____ Completion date _____

Construction Start date _____ Completion date _____

Has any part of this project been started? ☒ Yes ☐ No

If yes, please explain.

CyRide began the first year of service in August 2019 with 100% local funding from CyRide. If funded, this ICAAP expansion would fund the second year of services from October 2020 through September 2021.

How do you plan to measure the success of this project?

Four evalutation methods will be used: 1) Passenger Ridership 2) Customer Comments 3) Passengers per hour and 4) Total Emissions saved

Required documentation and narrative information

The following documents and narratives must be submitted with this application. In the upper right corner of each document or narrative write the corresponding letter shown below.

☒ A. A **narrative** assessing existing congestions/air quality conditions, outlining the concept of the proposed project, and providing adequate project justification. How will this project reduce congestion, reduce travel or single occupant vehicle usage, and/or improve air quality? Which transportation-related pollutant(s) are being addressed: carbon monoxide, ozone, or particulate matter?

☒ B. A **detailed map** identifying the location of the project and clearly differentiating the subject project from any past or future project phases.

☒ C. An **itemized breakdown** of the total project costs. This documentation does not need to be a detailed, line-item type of estimate. However, it must accomplish two objectives: First, it must show the method by which the cost estimate was prepared; and second, it must enable a reviewer to determine if the cost estimate is reasonable. The manner in which these objectives are achieved may vary widely depending on the type, scope, and complexity of the project. Absent a fully itemized list of costs, some general guidelines for possible methods of estimating each type of project cost are provided on Attachment A.

☒ D. A **time schedule** for the total project development.

☒ E. An **official endorsement** of the project from the authority to be responsible for the project's maintenance and operation. The authority must provide written assurance it will adequately maintain the completed project for its intended public use following project completion. For most construction projects, this will be a minimum of 20 years. The endorsement must also acknowledge the intent of the authority to provide the required matching funds. For cities, counties, or other political subdivisions, this should be in the form of a fully executed resolution by the elected body or board, as applicable.

☒ F. An **adopted formal resolution** from the appropriate metropolitan planning organization (MPO) or regional planning affiliation declaring the sponsor's proposed project or program conforms to the MPO's or RPA's regional transportation planning process. (For MPOs, the project or program must be identified in the fiscally constrained transportation plan and, if applicable, the congestion management plan in transportation management areas.)

☒ G. **Calculations** for vehicle emission reductions and total project cost-effectiveness for the targeted pollutants. Project applicant must show through a quantitative analysis how many kilograms of pollutant will be reduced (carbon monoxide, volatile organic compounds, oxides of nitrogen as nitrogen dioxide, and, if applicable, particulate matter). Project sponsor must calculate the cost-effectiveness of the project by: Dividing the total annualized project cost by the number of kilograms per year of pollutant reduced ($ per kg). Applicant must also show all assumptions and source of data used to calculate the estimates. The applicant must use the most current vehicle emission factors developed by the Iowa Department of Natural Resources and consistent with the U.S. Environmental Protection Agency's MOBILE 6.2 air quality model. These emission factors are periodically updated and may be obtained from the Iowa DOT's ICAAP website at: **https://www.iowadot.gov/systems_planning/icaap.htm**.

☒ H. Completed **Minority Impact Statement** attached to application.

The award of ICAAP funds; any subsequent funding or letting of contracts for design, construction, reconstruction, improvement, or maintenance; and the furnishing of materials for this project shall not involve direct or indirect interest of any state, county, or city official, elective or appointive. All of the above are prohibited by Iowa Code 314.2, 362.5, or 331.342. Any award of funding or any letting of a contract in violation of the foregoing provisions shall invalidate the award of ICAAP funding and authorize a complete recovery of any funds previously disbursed.

Certification

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating local authority. I understand the attached **official endorsement(s)** binds the participating local governments to assume responsibility for adequate maintenance of any new or improved facilities.

If ICAAP funding assistance is approved for the project described in this application, I understand that an executed contract between the applicant and the Iowa DOT is required before such funding assistance can be authorized for use in implementing the project.

Representing the Ames Transit Agency

Name of applicant's governing authority

Signature — Aug 30, 2019 — Date

Barb Neal, Interim Transit Director — Aug 30, 2019

Typed name and title, Governing authority official — Date

CyRide
#12 Lilac- Midday
Added Trips

Narrative

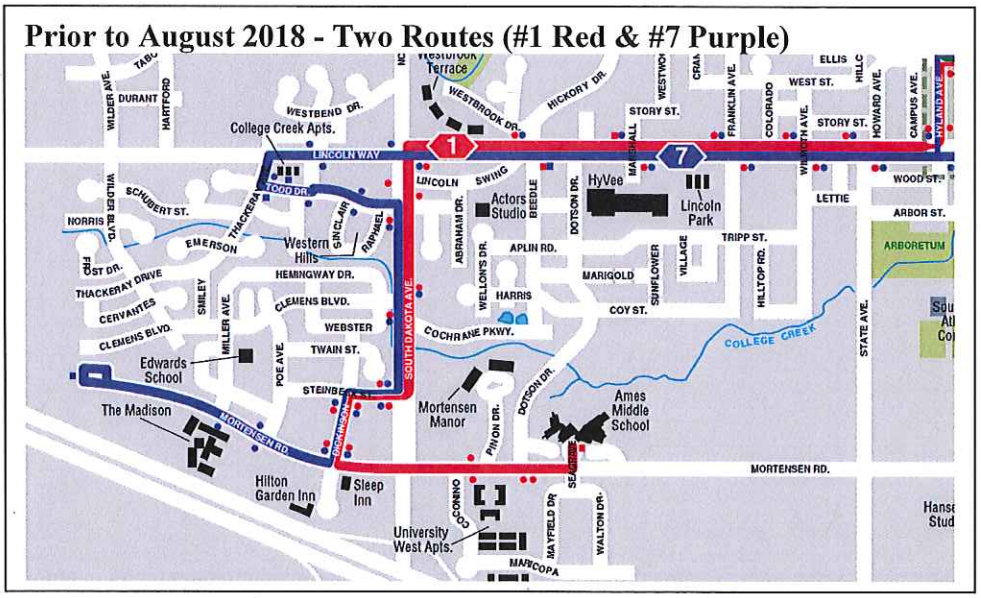
Background

Ames Transit Agency (d.b.a CyRide) directly operates fixed route services that are open to the general public within the Ames community including Iowa State University (ISU). The amount of transit service in this small community, of approximately 65,000 is unusually high as a result of the intensive use by university students. To accommodate this high transit demand, CyRide operates 18 hours a day with service frequencies between 4 – 40 minutes. **However in the last six years, ISU enrollment has grown by 22% from 28,682 students to approximately 35,000! During this same timeframe, CyRide's ridership has grown by over 1.6 million passengers.**

High density apartment complexes are rapidly being built off-campus, but where CyRide's routes may provide limited or virtually no transit service. **The result of this growth has been an overwhelming demand for student housing followed by an immediate reactionary demand for additional transit service wherever these apartment complexes are established.** In a community where riding transit is now part of the city's culture, the residents living in these high-density apartment complexes expect frequent and quality transit services to an even greater degree than they did in past years.

Prior to August 2018, the #1 Red and #7 Purple routes, shown connecting with other routes traveling throughout the community accommodated all transit rides between west Ames and Iowa State University (ISU) campus with over 1.5 million riders annually on just these two routes. **The #1 Red could be best described as the "workhorse of west Ames" providing transit service from 6:30am until 12:30am the following day and accommodated the majority of the west Ames residents.**

Prior to August 2018 - Two Routes (#1 Red & #7 Purple)

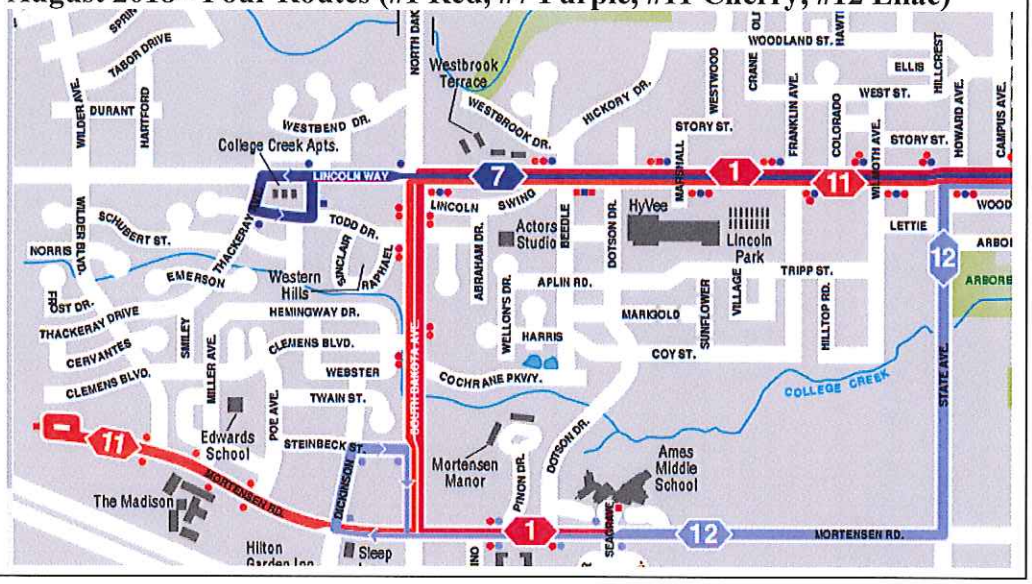


The **#7 Purple Route** provided **"minimal service with only six published trips"** (3 morning/3 afternoon) during the peak hours and

was utilized mainly to provide additional capacity for Red route riders between west Ames and university campus during the peak hours.

In May 2017, CyRide completed its first ever transit system redesign study (https://www.cyride.com/system-redesign) for their entire transit service and residents located in west Ames demanded additional transit service operating along Mortensen, Steinbeck, Dickenson, S. Dakota and Lincoln Way into campus. CyRide hired an outside consultant to provide expertise in how to operate a transit system originally developed for 4 million riders and adapt it for a system currently carrying over 6 million passengers. **CyRide essentially approved the redesign completed in the study in west Ames by offering 4 different bus routes along these modified corridors thereby breaking up the #1 Red's "workhorse duties" into four different high-frequency service routes (#1 Red, #7 Purple, #11 Cherry & #12 Lilac), which began in August 2018. (see routes below)**

August 2018 - Four Routes (#1 Red, #7 Purple, #11 Cherry, #12 Lilac)



Under the CyRide 2.0 service changes implemented in August 2018, the #12 Lilac route initially only offered peak hour service between the hours of 7:05am – 10:13am AND afternoon service from 2:35pm – 5:23pm. CyRide subsequently requested and received ICAAP funding to receive funding for the reimbursement for Lilac – peak hour reimbursement for the second year of this routes operation that just began in August 2019. However due to overwhelming requests by the public, CyRide added mid-day trips to this route that began in August 2019 funded at 100% with CyRide's local budget due to demand for these trips and overcrowding on #11 Cherry.

Therefore, this ICAAP application request is for new #12 Lilac mid-day trips only for service beginning in August 2020.

Project Description/Justification

Grant Request
Added Trips - #12 Lilac- Midday

The funding request below is for additional midday trips for the **#12 Lilac** route implemented in west Ames during Iowa State University class days. These services were initially implemented in August 2019 with 100% CyRide local funds. ICAAP guidelines allow transit agencies to fund three years of services within the first five years of service. The Board's initial approval for this additional service was in January 2019 for the FY2019 budget after the ICAAP's October 2018 grant application deadline.

This ICAAP request is for midday Lilac's second year of operation (1st Year ICAAP) for service beginning October 2020 through September 2021.

The information below describes CyRide's full request for the operating of the #12 Lilac – Midday service.

#12 Lilac – Midday
(ISU School Weekdays) – Year 1

CyRide proposes to provide new mid-day trips, as highlighted in yellow, to the #12 Lilac route, by operating a bus every 40 minutes during the weekday between 10:05am – 2:33pm from Steinbeck-Dickenson-Mortensen into Iowa State University (ISU) campus. This route will operate only when Iowa State University holds school-year classes or approximately 160 weekdays out of the year.

CyRide anticipates that this route will generate 350 daily riders on this new service given that it serves apartments in high-density areas along Mortensen, Steinbeck and Dickenson.

CyRide anticipates a healthy ridership over ISU class days as residents become more and more aware of the new route and how it serves them. (See Exhibit B – Lilac Route for route alignment details.)

#12 Lilac (Weekday Service)
ISU Class Days and Finals Days Only
Added Mid-day Trips

Mortensen / Dickinson	Student Services	Mortensen / Dickinson
7:05	7:18	7:33
7:25	7:38	7:53
7:45	7:58	8:13
8:05	8:18	8:33
8:25	8:38	8:53
8:45	8:58	9:13
9:05	9:18	9:33
9:25	9:38	9:53
9:45	9:58	10:13
10:05	10:18	10:33
10:45	10:58	11:13
11:25	11:38	11:53
12:05	12:18	12:33
12:45	12:58	1:13
1:25	1:38	1:53
2:05	2:18	2:33
2:35	2:48	3:03
2:55	3:08	3:23
3:15	3:28	3:43
3:35	3:48	4:03
3:55	4:08	4:23
4:15	4:28	4:43
4:35	4:48	5:03
4:55	5:08	5:23

The following information provides operation-specific data for this new route:

#12 Lilac Weekday (Peak Only)
Hours of Service: 4.5
Number of New Trips: 7
Avg. Passengers/Trip (Year 1): 50
Miles/Trip: 5.3
Miles: 37.1
Days of Operation/Year: 160 (ISU Class & Finals days only)
Ridership: 350 daily rides (50 pass/trip* 7 trips)

This route will serve the following commercial, residential and University destinations as illustrated within Exhibit B:

- **#12 Lilac (New Route):** West Towne Pub, All Iowa Attack Basketball Fieldhouse, Ames-Fitness Center-West, Hilton Garden Inn Ames, Kum & Go, Sleep Inn & Suites, Hilton Garden Inn Ames, The Rose of Ames, The Waterford at Ames, West Village Apartments, Perfect Games, Westown Courts, Sukup Basketball Complex, University West Apartments, Ames Middle School, Southwest Athletic Complex, Dunkin Donuts, US Bank ATM, Ames Intermodal Facility, Collegiate United Methodist Church, ISU Campustown Businesses (86 total); http://www.amescampustown.com/, Student Services, Iowa State University west campus.

Added Emissions Factors

The project emissions in Exhibit G are calculated based on the required Iowa DNR's current vehicle emission factors data posted on the Iowa DOT's ICAAP website

Conclusion

The advantages of supporting this grant application can provide numerous benefits to the City of Ames/Iowa State University/Story County through:

- Increased transit service coverage
- Improved transit trips during the midday
- Improved air quality with fewer single-occupant cars and technologically-improved bus engines

While students are committed to paying for the improved services required to meet their higher transit demands, unanticipated financial increases in the double-digits would be needed to support these new midday trips. Unanticipated ridership and financial increases occur when reliable enrollment numbers are not available until only a few weeks after the fall semester begins. ICAAP funding will allow student fees to increase more gradually, so that at the end of the three year allowance, funding will be sufficient to continue these services into the future.

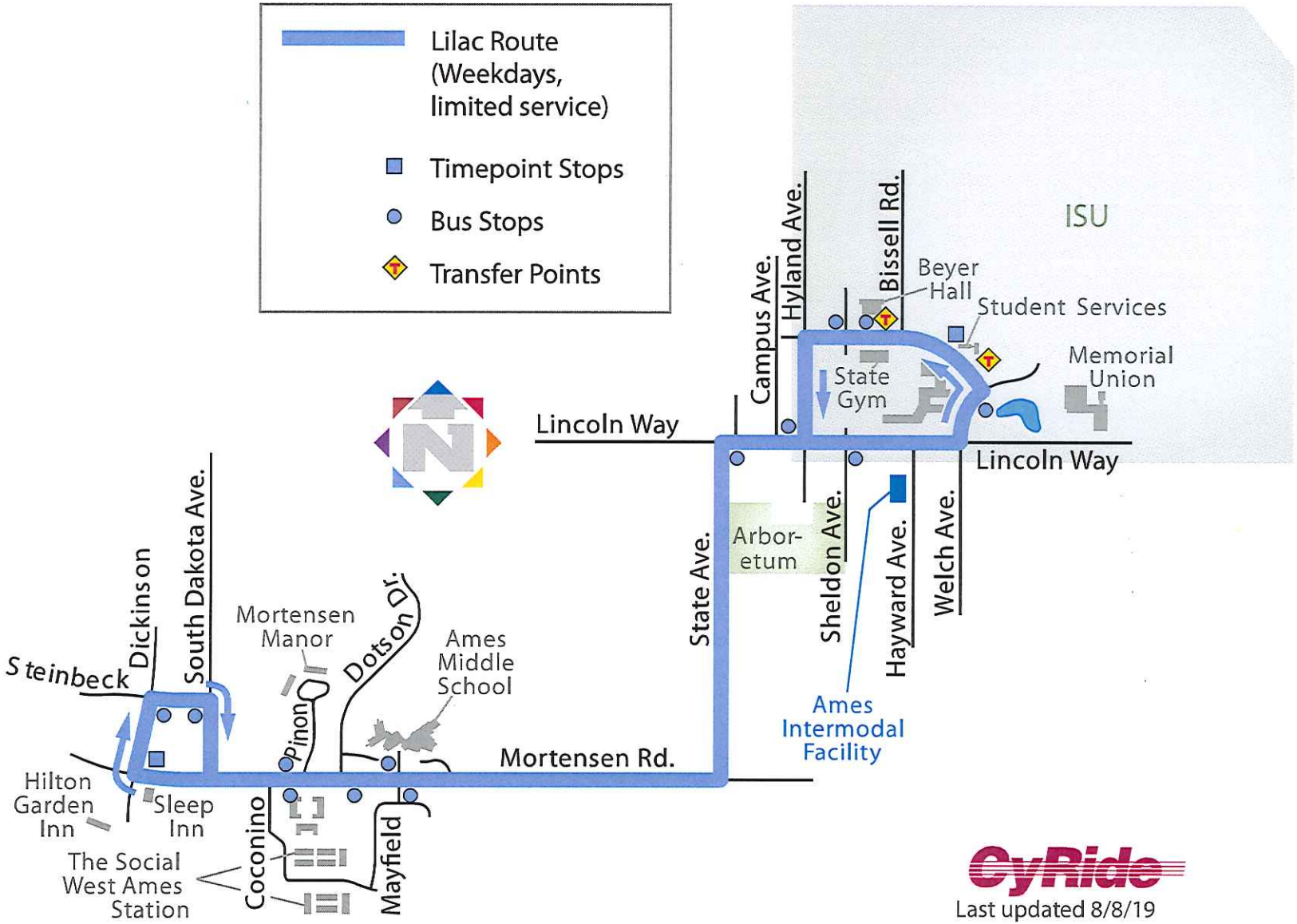
Without funding for this service enhancement, CyRide may need to leave passengers at the bus stops as capacity on the buses is already at its maximum along these corridors. Additional mid-

day trips were one of the most requested improvements during the initial implementation of service in 2018-2019. The mid-day service on Lilac should be added to work in tandem with #1 Red and #11 Cherry routes to handle mid-day demand in this area. CyRide estimates that approximately 56,000 new rides would be generated from these extra trips provided between west Ames and campus throughout a single year.

CyRide encourages the Iowa DOT to provide support for this mid-day route expansion (first year request for ICAAP funding) along these high-density corridors.

Exhibit B - Route Map

LILAC ROUTE 12 Effective August 26, 2019



CyRide

Last updated 8/8/19

CyRide
Added Trips (#12 Lilac - Midday)
Budget

Activity	Cost
OPERATING:	
#12 Lilac Weekday Route (MID-DAY – ISU School Days Only)	
YEAR 1 – (Request for service beginning October 2020);	
Service Began 10/1/2019-9/30/2020 (100% funded by CyRide)	
Costs calculated below by inflating first year costs by 3%.	
Driver Wages – **$28,411 (Yr. 1*)** x 1.03 (Yr. 2) =	$29,263
Consumables – **$9,070 (Yr. 1*)** x 1.03 (Yr. 2) =	$9,342
SUBTOTAL	$38,605
Less Fares	
0.2 riders/trip x 7 trips x 160 days x *$0.87 average resident fare =	($194)
49.8 riders/trip x 7 trips x 160 days x $0.00 fare (Free ISU ID card) =	($0)
YEAR 1 SUBTOTAL LILAC- Midday (less fares) =	**$38,411**
SUBTOTAL OPERATING	**38,411**
TOTAL COST	**$38,411**
ICAAP Share	**$30,728**
CyRide Share (assured)	**$7,683**

NOTES:

* **Year 1 LILAC Costs: #12 Lilac Midday-Additional Mid-day Trips (Began in 8/2019 via 100% local funding)**

Driver Wages – 4.5 hrs./day x 160 days x $39.46/hr =	$28,411
Consumables –5.3 miles/trip x 7 trips/day x 160 days x $1.528/mile =	$9,070

** **Average Resident Fare** = Average Cash Deposits/Average Residents Boarding Paying Cash = $4,040/4,738 = $0.87 (See "Comparison of Cash/Deposits and Use of Tickets FY2019 Avg." with calculations highlighted in yellow) CyRide decreased its fares in May 2018 from $1.25 to $1.00 and its half fares from $.60 to $.50. Therefore, the FY2019 average fares are more representative for upcoming services in FY2020. CyRide's full fare was increased to $1.25 between January 2012 and May 2018.

Please note: CyRide does not bill for indirect costs.

Comparison of Cash/Deposits and Use of Tickets
FY2019

Account # 550-1100-345.42-00
Fixed Route Fares

From:	To:	Deposit	Cash Fares	Rides/ Day	Avg. Fare	Cash/ Day	RF Ticket	FF Ticket	RF Percent	FF Percent	RF/ Day	FF/ Day
7/6/18	7/24/2018	$ 3,607.78	5,261	277	$ 0.69	$ 189.88	1801	441	80.3%	19.7%	94.8	23.2
7/25/18	8/7/18	$ 3,029.41	3,956	283	$ 0.77	$ 216.39	1208	328	78.6%	21.4%	86.3	23.4
8/8/18	8/21/18	$ 5,525.75	4,605	329	$ 1.20	$ 394.70	801	367	68.6%	31.4%	57.2	26.2
8/22/18	9/5/18	$ 4,836.26	5,055	337	$ 0.96	$ 322.42	716	391	64.7%	35.3%	47.7	26.1
9/6/18	9/18/18	$ 4,119.32	4,770	367	$ 0.86	$ 316.87	915	322	74.0%	26.0%	70.4	24.8
9/19/18	10/2/18	$ 4,039.31	4,719	337	$ 0.86	$ 288.52	962	310	75.6%	24.4%	68.7	22.1
10/3/18	10/16/18	$ 4,863.76	4,976	355	$ 0.98	$ 347.41	924	288	76.2%	23.8%	66.0	20.6
10/17/18	10/30/18	$ 4,411.83	4,949	354	$ 0.89	$ 315.13	893	256	77.7%	22.3%	63.8	18.3
10/31/18	11/14/18	$ 3,411.21	5,170	345	$ 0.66	$ 227.41	822	284	74.3%	25.7%	54.8	18.9
11/15/18	11/27/18	$ 3,396.23	3,318	255	$ 1.02	$ 261.25	478	162	74.7%	25.3%	36.8	12.5
11/28/18	12/11/18	$ 4,196.11	4,531	324	$ 0.93	$ 299.72	852	287	74.8%	25.2%	60.9	20.5
12/12/18	1/8/19	$ 5,168.96	7,008	250	$ 0.74	$ 184.61	1054	336	75.8%	24.2%	37.6	12.0
1/9/19	1/22/19	$ 4,119.89	4,218	301	$ 0.98	$ 294.28	590	284	67.5%	32.5%	42.1	20.3
1/23/19	2/5/19	$ 3,898.84	3,925	280	$ 0.99	$ 278.49	509	314	61.8%	38.2%	36.4	22.4
2/6/19	2/19/19	$ 4,240.94	4,737	338	$ 0.90	$ 302.92	687	371	64.9%	35.1%	49.1	26.5
2/20/19	3/5/19	$ 4,382.58	4,793	342	$ 0.91	$ 313.04	624	376	62.4%	37.6%	44.6	26.9
3/6/19	3/19/19	$ 4,211.23	4,579	327	$ 0.92	$ 300.80	647	203	76.1%	23.9%	46.2	14.5
3/20/19	4/2/19	$ 3,438.35	4,948	353	$ 0.69	$ 245.60	1010	272	78.8%	21.2%	72.1	19.4
4/3/19	4/16/19	$ 4,332.65	5,103	365	$ 0.85	$ 309.48	767	228	77.1%	22.9%	54.8	16.3
4/17/19	4/30/19	$ 3,771.30	4,379	313	$ 0.86	$ 269.38	779	241	76.4%	23.6%	55.6	17.2
5/1/19	5/14/19	$ 3,583.64	4,941	353	$ 0.73	$ 255.97	766	239	76.2%	23.8%	54.7	17.1
5/15/19	6/4/19	$ 3,867.25	6,354	303	$ 0.61	$ 184.15	949	328	74.3%	25.7%	45.2	15.6
6/5/19	6/20/19	$ 3,119.40	5,404	338	$ 0.58	$ 194.96	1134	279	80.3%	19.7%	70.9	17.4
6/21/19	7/2/19	$ 5,110.24	3,496	291	$ 1.46	$ 425.85	992	249	79.9%	20.1%	82.7	20.8
7/3/19	7/17/19	$ 3,576.47	4,090	273	$ 0.87	$ 238.43	872	244	78.1%	21.9%	58.1	16.3
7/18/19	7/30/19	$ 2,791.00	3,894	300	$ 0.72	$ 214.69	1125	188	85.7%	14.3%	86.5	14.5
7/31/19	8/13/19	$ 2,040.47	4,163	297	$ 0.49	$ 145.75	870	257	77.2%	22.8%	62.1	18.4
8/14/19												
1/1/00												
Avg. before 1/2012		$ 3,763	4,398	486	$ 0.86	$ 399.60	508	245	67.5%	32.5%	54	27
Avg. after 1/2012		$ 4,626	4,569	318	$ 1.01	$ 324.64	944	489	65.9%	34.1%	65	34
Average FY2014		$ 5,176	4857	343	$ 1.06	$ 365.50	825	557	59.5%	40.5%	59	39
Average FY2015		$ 4,501	4402	305	$ 1.03	$ 315.22	973	541	63.5%	36.5%	68	38
Average FY2016		$ 4,089	3877	282	$ 1.06	$ 300.73	931	501	64.8%	35.2%	67	36
Average FY2017		$ 4,464	4317	283	$ 1.05	$ 296.32	1085	564	63.6%	36.4%	70	37
Average FY2018		$ 3,914	3796	270	$ 1.04	$ 283.48	997	454	67.8%	32.2%	68	32
Average FY2019		$ 4,040	4738	319	$ 0.87	$ 276.63	880	292	74.4%	25.6%	59	20

Added Trips
(#12 Lilac - Midday)
Schedule

Activity	**Completion Date**
Service Begins (1st year ICAAP*)	October 1, 2020
Service Ends (1st year ICAAP*)	September 30, 2021

* This is Year 1 request for ICAAP funding for Lilac weekday mid-day service.

* If approved for Year 1 ICAAP funding, CyRide anticipates requesting two more additional years of ICAAP funding for this service.

CyRide
Added Trips (#12 Lilac - Midday)
Official Certification

The Ames Transit Agency (CyRide) Board of Trustees certifies that it shall:

(1) commit the necessary local matching funding for project implementation and

(2) upon project completion, be responsible for adequately maintaining and operating the project for public use during the project's useful life.

Juan Bibiloni-Rivera, Ames Transit Agency President

8/8/2019
Date

CyRide
Added Trips (#12 Lilac - Midday)
MPO Resolution DRAFT

The Ames Area Metropolitan Planning Organization (AAMPO) approved and endorsed this project on September 24, 2019 with a resolution approving this grant. The resolution is attached.

The ICAAP application form (Form 230017; page 3 or 6) requires that the project or program be identified in the fiscally constrained transportation plan (TIP) and requires the document to be submitted with the application. However, the ICAAP handbook has been revised to state that "Awarded projects" must be added to approved MPO TIP's and STIP's (See below).

> ***https://iowadot.gov/systems_planning/pdf/ICAAP_Application_Handbook.pdf (page 5):***
> ***Awarded projects*** *must be added to approved MPO or RPA transportation improvement programs (TIPs) and Iowa's Statewide Transportation Improvement Program (STIP).*

Therefore, once this ICAAP project has been formally approved by the Iowa DOT Commission (early January 2020), the funding will be amended and approved by the MPO in the AAMPO's FY2020 Transportation Improvement Program in order to begin transferring the federal funding from FHWA to FTA and gain formal grant approval from the Federal Transit Administration.

Added Trips (#12 Lilac - Midday)
Emissions Calculation

Calculation/Assumption	Factors	CO	VOC (HC)	NOx
Net Project Cost	**$38,411**			
Lilac Midday Net Operating Cost	$38,411			
Operating for One Year - $38,411				
Number of Years In Project - Operating	1			
#12 Lilac Midday Route Service Assumptions				
Number of days/Yr. in Project (ISU Classdays & Finals Days)	160			
Avg. Rd-Trip Commute (Miles*)	5.3			
# Daily Trips	7			
# Riders/Trip	50			
Number of Daily Miles for Lilac	37.1			
Total Estimated Avg. Daily Ridership	350			
Total Cars Taken From Roadway Weekdays (1.2/car)	292			
Emission Reduction By Riders Taking LILAC - Midday				
Emission Factor (30 mph) - LDGV		13.84	2.063	1.032
Emission Factor x Avg. Commute Length*		73.35	10.9339	5.4696
#12 Lilac Midday: Gross Red. x 160 days x Cars From Roadway x 1 year		3,423,093	510,249	255,248
Total LDGV Emissions Reduced (#12 Lilac Route)		3,423,093	510,249	255,248
Emission Increase For Standard Buses:				
Emission Factor (10 mph) - HDDV		5.544	0.915	10.176
(40' Bus) HDDV #12 Lilac Emissions x 37.1 miles/day x 160 days x 1 year		32,909	5,431	60,405
TOTAL (40' Bus) HDDV Emissions		32,909	5,431	60,405
Net Reduction for LILAC Midday ROUTE :		3,390,184	504,817	194,843
Cost Effectiveness for LILAC - Midday		$ 11.33	$ 76.09	$ 197.14
Net Reduction for Project :		**3,390,184**	**504,817**	**194,843**
Total Reduction for Project - kg/project		**3,390.2**	**504.8**	**194.8**
Net Reduction Per Year:		**3,390,184**	**504,817**	**194,843**
Total Reduction Per Year - kg/year		**3,390.2**	**504.8**	**194.8**
Cost Effectivness:				
Total Project Cost		**$38,411**		
One Yr. Project Total Cost= ($38,411/1)		**$38,411**		
CO		**$11.33**		
VOC		**$76.09**		
NOx		**$197.14**		

* Based on statistics, riders are riding the entire Lilac Mid-day route to reach their destination

IOWADOT
Form 105101 (3-18)

Minority Impact Statement

Pursuant to 2008 Iowa Acts, HF 2393, Iowa Code 8.11, all grant applications submitted to the State of Iowa that are due beginning Jan. 1, 2009, shall include a Minority Impact Statement. This is the state's mechanism for requiring grant applications to consider the potential impact of the grant project's proposed programs or policies on minority groups.

Please choose the statement(s) that pertains to this grant application. Complete all the information requested for the chosen statement(s). Submit additional pages as necessary.

☒ The proposed grant project programs or policies could have a disproportionate or unique **positive** impact on minority persons.

Describe the positive impact expected from this project.
The City of Ames has an 10.24% Asian population and any new route expansion on high capacity corridors will certainly have a positive impact on this minority and LEP group living within the Ames community. Specifically, the routes in west Ames travels along the Mortensen, Steinbeck and Dickensen corridors in west Ames which have developed into a high capacity corridors where a majority of university students reside in high residential apartment complexes. The residents living in these apartments along these corridors will be provided transportation directly to central ISU campus. While this service is designed to serve the general public, Ames residents of all races and genders living within the community will benefit from this grant application and service.

Indicate which groups are impacted.

☐ Women ☐ Persons with a disability ☐ Blacks ☐ Latinos ☒ Asians
☐ Pacific Islanders ☐ American Indians ☐ Alaskan Native Americans ☐ Other_____

☐ The proposed grant project programs or policies could have a disproportionate or unique **negative** impact on minority persons.

Describe the negative impact expected from this project.

Present the rationale for the existence of the proposed program or policy.

Provide evidence of consultation with representatives of the minority groups impacted.

Indicate which groups are impacted.

☐ Women ☐ Persons with a disability ☐ Blacks ☐ Latinos ☐ Asians
☐ Pacific Islanders ☐ American Indians ☐ Alaskan Native Americans ☐ Other _____

☐ The proposed grant project programs or policies are **not expected to have** a disproportionate or unique impact on minority persons.

Present the rationale for determining no impact.

I hereby certify that the information on this form is complete and accurate, to the best of my knowledge.

Name Barb Neal

Title Interim Transit Director

Definitions

"Minority Persons," as defined in Iowa Code 8.11, means individuals who are women, persons with a disability, Blacks, Latinos, Asians or Pacific Islanders, American Indians, and Alaskan Native Americans.

"Disability," as defined in Iowa Code 15.102, subsection 7, paragraph "b," subparagraph (1):
b. As used in this subsection:
(1) *"Disability"* means, with respect to an individual, a physical or mental impairment that substantially limits one or more of the major life activities of the individual, a record of physical or mental impairment that substantially limits one or more of the major life activities of the individual, or being regarded as an individual with a physical or mental impairment that substantially limits one or more of the major life activities of the individual.

"Disability" does not include any of the following:
(a) Homosexuality or bisexuality.
(b) Transvestism, transsexualism, pedophilia, exhibitionism, voyeurism, gender identity disorders not resulting from physical impairments or other sexual behavior disorders.
(c) Compulsive gambling, kleptomania, or pyromania.
(d) Psychoactive substance abuse disorders resulting from current illegal use of drugs.

"State Agency," as defined in Iowa Code 8.11, means a department, board, bureau, commission, or other agency or authority of the State of Iowa.

Iowa Department of Transportation
Clean Air Attainment Funds Application

Added Night Trips
(#6 Brown - Night)

Submitted to:

IOWA DOT

By:

AMES TRANSIT AGENCY (CYRIDE)
601 N. University Blvd.
Ames, Iowa 50010

October 1, 2019

Form 230017 (2-18)

PROJECT APPLICATION
IOWA'S CLEAN AIR ATTAINMENT PROGRAM (ICAAP)

General information

Applicant agency Ames Transit Agency

Contact person
(name and title) Barb Neal, Interim Transit Director

Street address and/or
box number 601 N. University Blvd.

City Ames State IA ZIP code 50010

Telephone number 515-239-5563 Email bneal@cyride.com

If more than one agency or organization is involved in this project, please state the name, contact person, mailing address, and telephone number of the second agency. *(Attach an additional page if more than two agencies are involved.)*

Applicant agency

Contact person
(name and title)

Street address and/or
box number

City State ZIP code

Telephone number Email

Project information

Project title #11 Cherry - Night

Project description (including length, if applicable).
In August 2018, CyRide redesigned its bus services throughout Ames area which included adding service until 8:00pm on the #6 Brown route. However, the community desired even later trips along this route due to evening university evening classes and meetings. As a result, CyRide added additional night service trips in August 2019 to the #6 Brown route due to additional demand from residents between North Grand Mall and Towers residence halls (partial segment of the full route). Therefore, this ICAAP request is for these additional night service trips for service beginning in August 2020 for this portion of the route.

*Project priority (1 = highest priority: 4 (a sponsor submitting multiple applications in this funding cycle must assign a numerical rank or priority to each application.)[3]

*Assign the proposed project to one or more of the following categories (check one or more).

- ☐ Transportation-related project in the State Implementation Plan (SIP)
- ☐ Transportation control measure (TCM)
- ☐ Traffic flow improvement (intersection, signalization, other)
- ☐ Planning and project development
- ☐ Travel demand management (TDM)
- ☒ Transit-related improvement
- ☐ Shared-ride
- ☐ Bicycle pedestrian facility or program
- ☐ Pedestrian facility or program
- ☐ Intermodal freight
- ☐ Passenger
- ☐ Alternative fuels
- ☐ Vehicle inspection and maintenance program
- ☐ Outreach activity (education, advertising, or technical assistance)

*Is the project consistent with the State Implementation Plan for air quality and nonattainment areas? ☐ Yes ☐ No ☒ Not applicable

*Is the project consistent with the metropolitan planning organization's (MPO) local congestion management plan? ☐ Yes ☐ No ☒ Not applicable

*Is the project consistent with the ☒ MPO ☐ regional planning affiliation (RPA) ☐ statewide long-range transportation plan? ☒ Yes ☐ No ☐ Not applicable

Notes: [1]Requires public agency as co-sponsor of application.
[2]The term "project" means any ICAAP infrastructure or program proposal.
[3]The Iowa Department of Transportation will use the priority ratings to reflect the sponsor.

Project cost (an itemized breakdown must be included on an attached sheet)

Total cost $36,385.00

ICAAP Fund request $29,108.00

Applicant match (25 percent minimum) $7,277.00

	List of all applicant match sources	Amount	Assured or anticipated (date anticipated)
1.	CyRide Operating Budget	$7,277.00	Assured - Beginning 7/1/2020
2.	Passenger Fares	$111.00	Anticipated - Beginning 10/2020
3.			

Are any state funds involved in this project? ☐ Yes ☒ No

If yes, please explain the source and conditions.

Are any other federal funds involved in this project? ☐ Yes ☒ No

If yes, please explain the source and conditions.

Estimated project development schedule

Design Start date _____ Completion date _____

Land acquisition Start date _____ Completion date _____

Construction Start date _____ Completion date _____

Has any part of this project been started? ☒ Yes ☐ No

If yes, please explain.

CyRide began the first year of service in August 2019 with 100% local funding from CyRide. If funded, this ICAAP expansion would fund the second year of services from October 2020 through September 2021.

How do you plan to measure the success of this project?

Four evalutation methods will be used: 1) Passenger Ridership 2) Customer Comments 3) Passengers per hour and 4) Total Emissions saved

Required documentation and narrative information

The following documents and narratives must be submitted with this application. In the upper right corner of each document or narrative write the corresponding letter shown below.

☒ A. A **narrative** assessing existing congestions/air quality conditions, outlining the concept of the proposed project, and providing adequate project justification. How will this project reduce congestion, reduce travel or single occupant vehicle usage, and/or improve air quality? Which transportation-related pollutant(s) are being addressed: carbon monoxide, ozone, or particulate matter?

☒ B. A **detailed map** identifying the location of the project and clearly differentiating the subject project from any past or future project phases.

☒ C. An **itemized breakdown** of the total project costs. This documentation does not need to be a detailed, line-item type of estimate. However, it must accomplish two objectives: First, it must show the method by which the cost estimate was prepared; and second, it must enable a reviewer to determine if the cost estimate is reasonable. The manner in which these objectives are achieved may vary widely depending on the type, scope, and complexity of the project. Absent a fully itemized list of costs, some general guidelines for possible methods of estimating each type of project cost are provided on Attachment A.

☒ D. A **time schedule** for the total project development.

☒ E. An **official endorsement** of the project from the authority to be responsible for the project's maintenance and operation. The authority must provide written assurance it will adequately maintain the completed project for its intended public use following project completion. For most construction projects, this will be a minimum of 20 years. The endorsement must also acknowledge the intent of the authority to provide the required matching funds. For cities, counties, or other political subdivisions, this should be in the form of a fully executed resolution by the elected body or board, as applicable.

☒ F. An **adopted formal resolution** from the appropriate metropolitan planning organization (MPO) or regional planning affiliation declaring the sponsor's proposed project or program conforms to the MPO's or RPA's regional transportation planning process. (For MPOs, the project or program must be identified in the fiscally constrained transportation plan and, if applicable, the congestion management plan in transportation management areas.)

☒ G. **Calculations** for vehicle emission reductions and total project cost-effectiveness for the targeted pollutants. Project applicant must show through a quantitative analysis how many kilograms of pollutant will be reduced (carbon monoxide, volatile organic compounds, oxides of nitrogen as nitrogen dioxide, and, if applicable, particulate matter). Project sponsor must calculate the cost-effectiveness of the project by: Dividing the total annualized project cost by the number of kilograms per year of pollutant reduced ($ per kg). Applicant must also show all assumptions and source of data used to calculate the estimates. The applicant must use the most current vehicle emission factors developed by the Iowa Department of Natural Resources and consistent with the U.S. Environmental Protection Agency's MOBILE 6.2 air quality model. These emission factors are periodically updated and may be obtained from the Iowa DOT's ICAAP website at: **https://www.iowadot.gov/systems_planning/icaap.htm**.

☒ H. Completed **Minority Impact Statement** attached to application.

The award of ICAAP funds; any subsequent funding or letting of contracts for design, construction, reconstruction, improvement, or maintenance; and the furnishing of materials for this project shall not involve direct or indirect interest of any state, county, or city official, elective or appointive. All of the above are prohibited by Iowa Code 314.2, 362.5, or 331.342. Any award of funding or any letting of a contract in violation of the foregoing provisions shall invalidate the award of ICAAP funding and authorize a complete recovery of any funds previously disbursed.

Certification

To the best of my knowledge and belief, all information included in this application is true and accurate, including the commitment of all physical and financial resources. This application has been duly authorized by the participating local authority. I understand the attached **official endorsement(s)** binds the participating local governments to assume responsibility for adequate maintenance of any new or improved facilities.

If ICAAP funding assistance is approved for the project described in this application, I understand that an executed contract between the applicant and the Iowa DOT is required before such funding assistance can be authorized for use in implementing the project.

Representing the Ames Transit Agency

Name of applicant's governing authority

Signature

Aug 30, 2019

Date

Barb Neal, Interim Transit Director

Typed name and title
Governing authority official

Aug 30, 2019

Date

CyRide
(#6 Brown - Night)
Added Trips

Narrative

Background

Ames Transit Agency (d.b.a CyRide) directly operates fixed route services that are open to the general public within the Ames community including Iowa State University (ISU). The amount of transit service in this small community, of approximately 65,000 is unusually high as a result of the intensive use by university students. To accommodate this high transit demand, CyRide operates 18 hours a day with service frequencies between 4 – 40 minutes. **However in the last six years, ISU enrollment has grown by 22% from 28,682 students to approximately 35,000! During this same timeframe, CyRide's ridership has grown by over 1.6 million passengers.**

In May 2017, CyRide completed its first ever system redesign study (https://www.cyride.com/system-redesign) and residents along the #6 Brown route demanded later evening transit service along these corridors through the public input process. As a result of the entire service modifications, CyRide offered later evening service until 8:00 p.m. on the entire #6 Brown route to the ISU Research Park. This allowed employees to work in this area later at night as well as served major apartment complexes in the University Blvd. corridor. However, Iowa State University had expanded its evening classes as late as 10:00 pm and the campus Library remained open until midnight. Thus, there still remained gaps in service and residents were still complaining that they couldn't travel via bus back home in the evening from campus.

Due to overwhelming requests by the public, CyRide added additional night trips to this route, between Towers – Campus – North Grand Mall - that began in August 2019 funded at 100% with CyRide's local budget due to demand for these evening trips until 10:00 p.m. While the service does not serve the ISU Research Park area, the LEP community is served that live along Stange and Bloomington north of campus.

Therefore, this ICAAP application request is only for **#6 Brown night trips** between Towers and North Grand Mall beginning in August 2020.

Project Description/Justification

Grant Request
Added Trips - #6 Brown - Night

The funding request below is for additional evening trips for the **#6 Brown** route implemented between Towers residence halls – ISU campus - North Grand Mall during Iowa State University class days. This service was initially implemented in August 2019 with 100% CyRide local funds. ICAAP guidelines allow transit agencies to fund three years of services within the first five years of service. The Board's initial approval for this additional service was in January 2019 for the FY2019 budget after the ICAAP's October 2018 grant application deadline.

This ICAAP request is for **evening #6 Brown's** second year of operation (1st Year ICAAP) for service beginning October 2020 through September 2021.

The information below describes CyRide's full request for the operating of the **#6 Brown – Night** service.

#6 Brown – Night
(ISU School Weekdays) – Year 1

CyRide proposes to provide new evening trips for the #6 Brown route, by operating a bus every 30 minutes during the weekday evenings between 8:00 pm – 10:30 pm operating between Towers residence halls – Iowa State University (ISU) campus – North Grand Mall. (This route will not travel the route segment between Towers and the ISU Research Park after 8:00 p.m.) **Additionally, this route will operate only when Iowa State University holds school-year classes or approximately 160 weekdays out of the year.**

Below is the additional trips that were added for Brown North and Brown South services.

#6 Brown South (Night Service)
ISU Class Days and Finals Days Only
(Added Night trips shown below)

North Grand Mall	Aspen & Stange	Kildee Hall	Friley Hall	Lynn & Knapp	Towers Turnaround
8:00	8:08	8:15	8:20	8:22	8:25
8:30	8:38	8:45	8:50	8:52	8:55
9:00	9:08	9:15	9:20	9:22	9:25
9:30	9:38	9:45	9:50	9:52	9:55

#6 Brown North (Night Service)
ISU Class Days and Finals Days Only
(Added Night trips shown below)

Towers Turnaround	Lynn & Knapp	Student Services	Bessey Hall	Aspen & Stange	North Grand Mall
8:30	8:32	8:34	8:39	8:45	8:53
9:00	9:02	9:04	9:09	9:15	9:23
9:30	9:32	9:34	9:39	9:45	+
10:00	10:02	10:04	10:09	10:15	+

CyRide anticipates that this route will generate 180 daily riders on this added evening service given that it serves apartments and university housing in high-density areas along Bloomington, Stange, and Welch. Specifically, there is a large limited English proficient group living in the Schilletter Village and University Village university housing complexes along Stange. This has a high concentration of Mandarin Chinese speaking residents that would benefit from additional service on the #6 Brown route. Specifically, they noted that evening connections to the Walmart and North Grand Mall areas were essential for their shopping needs.

CyRide anticipates a healthy ridership over ISU class days during the evenings as residents become more and more aware of the new trips and how they serves them. (See Exhibit B – Brown Route for route alignment details.)

The following information provides operation-specific data for these additional trips:

#6 Brown Weekday (Night Trips)
Hours of Service: 3.8
Number of Trips: 4
Avg. Passengers/Trip (Year 1): 45
Miles/Trip: 11.7
Miles: 46.8
Days of Operation/Year: 160 (ISU Class & Finals days only)
Ridership: 180 daily rides (45 pass/trip * 4 trips)
This route will serve the following commercial, residential and university destinations as illustrated within Exhibit B:

- **#6 Brown (Added Night Trips):** Towers Residence Halls, Welch Road apartments, ISU Campustown Businesses (86 total); http://www.amescampustown.com/, Greek Housing, Memorial Union, ISU Campus (Student Services, Union Drive Association, Kildee/Bessey Halls), Fredrickson Court (high residential housing), University Village (high residential housing), Schilletter Village (high residential housing, Ames Fitness Center North, Somerset Veterinary Hospital, Wallaby's Bar & Grille, El Azteca, Mainstream Living, Dentistry at Somerset, Brick City Grill, Fareway Grocery, Somerset Village (high residential housing), WalMart, JCPenney, Kohl's, TJ Maxx, North Grand Mall (https://northgrandmall.com/) businesses.

Added Emissions Factors

The project emissions in Exhibit G are calculated based on the required Iowa DNR's current vehicle emission factors data posted on the Iowa DOT's ICAAP website

Conclusion

The advantages of supporting this grant application can provide numerous benefits to the City of Ames/Iowa State University/Story County through:

- Increased transit service coverage
- Improved transit trips during the evening
- Improved air quality with fewer single-occupant cars and technologically-improved bus engines

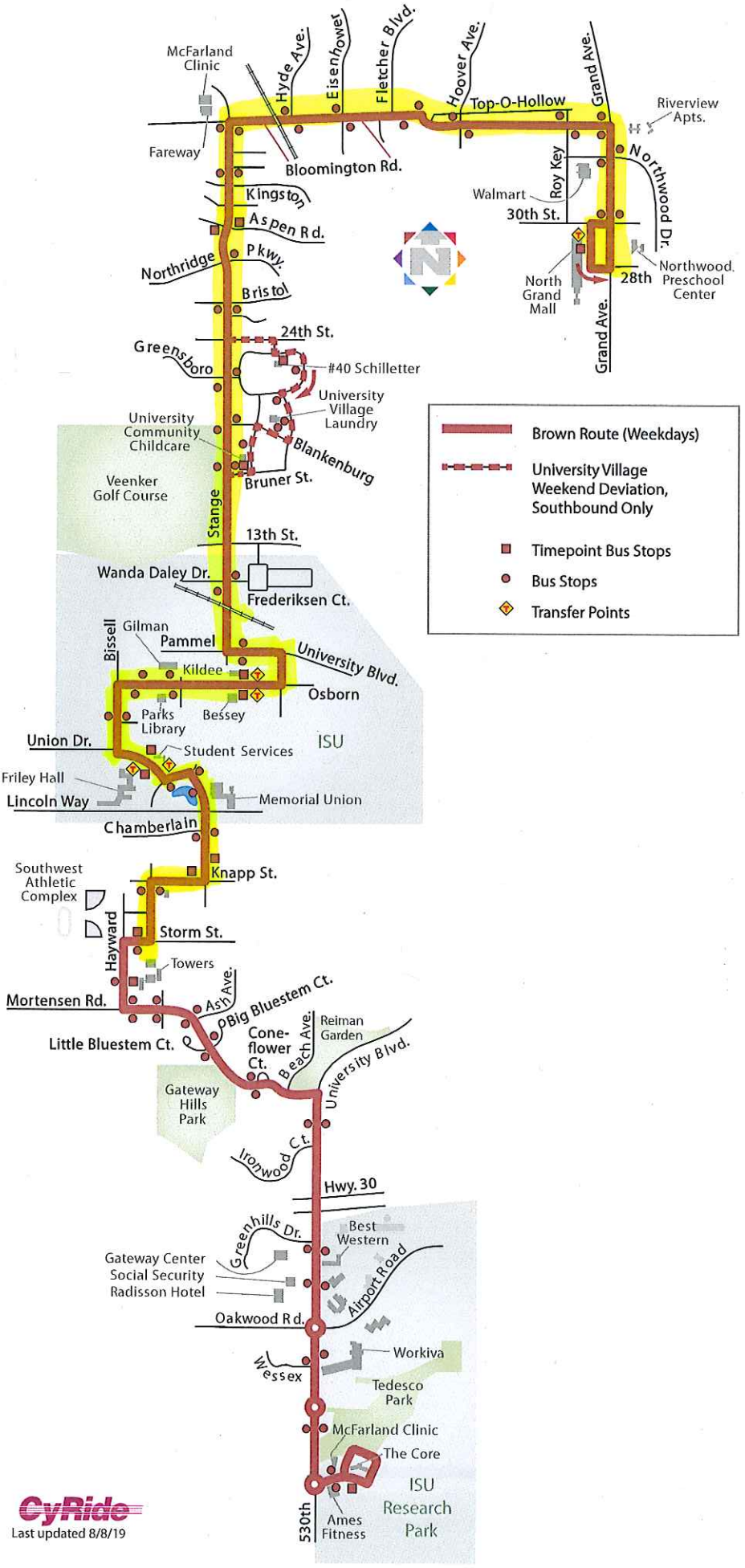
While students are committed to paying for the improved services required to meet their higher transit demands, unanticipated financial increases in the double-digits would be needed to support these new evening trips. Unanticipated ridership and financial increases occur when reliable enrollment numbers are not available until only a few weeks after the fall semester begins. ICAAP funding will allow student fees to increase more gradually, so that at the end of the three year allowance, funding will be sufficient to continue these services into the future.

Without funding for this service enhancement, passengers would either need to walk home after evening classes or find a ride from a friend. Additional evening trips were one of the most requested improvements during the initial implementation of service in 2018-2019. The evening service on Brown should be added to allow later evening services to these areas of the LEP community. CyRide estimates that approximately 28,800 new rides would be generated from these extra trips provided along the Brown route corridors throughout a single year.

CyRide encourages the Iowa DOT to provide support for this night route expansion (first year request for ICAAP funding) along these high-density corridors and LEP community living in Schilletter/University Villages.

BROWN ROUTE 6 Effective August 19, 2019

Exhibit B - Route Map



CyRide

Last updated 8/8/19

CyRide
Added Trips (#6 Brown - Night)
Budget

Activity **Cost**

OPERATING:

#6 Brown Weekday Route (NIGHT – ISU School Days Only)
YEAR 1 – (Request for service beginning October 2020); Service Began 8/2019 (100% funded by CyRide)
Costs calculated below by inflating first year costs by 3% for 2020.

Driver Wages – **$23,992 (Yr. 1*)** x 1.03 (Yr. 2) =	$24,711	
Consumables – **$11,442 (Yr. 1*)** x 1.03 (Yr. 2) =	$11,785	
SUBTOTAL	$36,496	
Less Fares		
0.2 riders/trip x 4 trips x 160 days x *$0.87 average resident fare =	($111)	
49.8 riders/trip x 4 trips x 160 days x $0.00 fare (Free ISU ID card) =	($0)	
YEAR 1 SUBTOTAL Brown - Night (less fares) =		**$36,385**

SUBTOTAL OPERATING	**36,385**
TOTAL COST	**$36,385**
ICAAP Share	**$29,108**
CyRide Share (assured)	**$7,277**

NOTES:

* **Year 1 Brown Night Costs: #6 Brown Night – Added Trips (Began in 8/2019 via 100% local funding)**

Driver Wages – 3.8 hrs./day x 160 days x $39.46/hr =	$23,992
Consumables –11.7 miles/trip x 4 trips/day x 160 days x $1.528/mile =	$11,442

** **Average Resident Fare =** Average Cash Deposits/Average Residents Boarding Paying Cash = $4,040/4,738 = $0.87 (See "Comparison of Cash/Deposits and Use of Tickets FY2019 Avg." with calculations highlighted in yellow) CyRide decreased its fares in May 2018 from $1.25 to $1.00 and its half fares from $.60 to $.50. Therefore, the FY2019 average fares are more representative for upcoming services in FY2020. CyRide's full fare was increased to $1.25 between January 2012 and May 2018.

Please note: CyRide does not bill for indirect costs.

Comparison of Cash/Deposits and Use of Tickets
FY2019

Account # 550-1100-345.42-00
Fixed Route Fares

From:	To:	Deposit	Cash Fares	Rides/ Day	Avg. Fare	Cash/ Day	RF Ticket	FF Ticket	RF Percent	FF Percent	RF/ Day	FF/ Day
7/6/18	7/24/2018	$ 3,607.78	5,261	277	$ 0.69	$ 189.88	1801	441	80.3%	19.7%	94.8	23.2
7/25/18	8/7/18	$ 3,029.41	3,956	283	$ 0.77	$ 216.39	1208	328	78.6%	21.4%	86.3	23.4
8/8/18	8/21/18	$ 5,525.75	4,605	329	$ 1.20	$ 394.70	801	367	68.6%	31.4%	57.2	26.2
8/22/18	9/5/18	$ 4,836.26	5,055	337	$ 0.96	$ 322.42	716	391	64.7%	35.3%	47.7	26.1
9/6/18	9/18/18	$ 4,119.32	4,770	367	$ 0.86	$ 316.87	915	322	74.0%	26.0%	70.4	24.8
9/19/18	10/2/18	$ 4,039.31	4,719	337	$ 0.86	$ 288.52	962	310	75.6%	24.4%	68.7	22.1
10/3/18	10/16/18	$ 4,863.76	4,976	355	$ 0.98	$ 347.41	924	288	76.2%	23.8%	66.0	20.6
10/17/18	10/30/18	$ 4,411.83	4,949	354	$ 0.89	$ 315.13	893	256	77.7%	22.3%	63.8	18.3
10/31/18	11/14/18	$ 3,411.21	5,170	345	$ 0.66	$ 227.41	822	284	74.3%	25.7%	54.8	18.9
11/15/18	11/27/18	$ 3,396.23	3,318	255	$ 1.02	$ 261.25	478	162	74.7%	25.3%	36.8	12.5
11/28/18	12/11/18	$ 4,196.11	4,531	324	$ 0.93	$ 299.72	852	287	74.8%	25.2%	60.9	20.5
12/12/18	1/8/19	$ 5,168.96	7,008	250	$ 0.74	$ 184.61	1054	336	75.8%	24.2%	37.6	12.0
1/9/19	1/22/19	$ 4,119.89	4,218	301	$ 0.98	$ 294.28	590	284	67.5%	32.5%	42.1	20.3
1/23/19	2/5/19	$ 3,898.84	3,925	280	$ 0.99	$ 278.49	509	314	61.8%	38.2%	36.4	22.4
2/6/19	2/19/19	$ 4,240.94	4,737	338	$ 0.90	$ 302.92	687	371	64.9%	35.1%	49.1	26.5
2/20/19	3/5/19	$ 4,382.58	4,793	342	$ 0.91	$ 313.04	624	376	62.4%	37.6%	44.6	26.9
3/6/19	3/19/19	$ 4,211.23	4,579	327	$ 0.92	$ 300.80	647	203	76.1%	23.9%	46.2	14.5
3/20/19	4/2/19	$ 3,438.35	4,948	353	$ 0.69	$ 245.60	1010	272	78.8%	21.2%	72.1	19.4
4/3/19	4/16/19	$ 4,332.65	5,103	365	$ 0.85	$ 309.48	767	228	77.1%	22.9%	54.8	16.3
4/17/19	4/30/19	$ 3,771.30	4,379	313	$ 0.86	$ 269.38	779	241	76.4%	23.6%	55.6	17.2
5/1/19	5/14/19	$ 3,583.64	4,941	353	$ 0.73	$ 255.97	766	239	76.2%	23.8%	54.7	17.1
5/15/19	6/4/19	$ 3,867.25	6,354	303	$ 0.61	$ 184.15	949	328	74.3%	25.7%	45.2	15.6
6/5/19	6/20/19	$ 3,119.40	5,404	338	$ 0.58	$ 194.96	1134	279	80.3%	19.7%	70.9	17.4
6/21/19	7/2/19	$ 5,110.24	3,496	291	$ 1.46	$ 425.85	992	249	79.9%	20.1%	82.7	20.8
7/3/19	7/17/19	$ 3,576.47	4,090	273	$ 0.87	$ 238.43	872	244	78.1%	21.9%	58.1	16.3
7/18/19	7/30/19	$ 2,791.00	3,894	300	$ 0.72	$ 214.69	1125	188	85.7%	14.3%	86.5	14.5
7/31/19	8/13/19	$ 2,040.47	4,163	297	$ 0.49	$ 145.75	870	257	77.2%	22.8%	62.1	18.4
8/14/19												
1/1/00												
Avg. before 1/2012		$ 3,763	4,398	486	$ 0.86	$ 399.60	508	245	67.5%	32.5%	54	27
Avg. after 1/2012		$ 4,626	4,569	318	$ 1.01	$ 324.64	944	489	65.9%	34.1%	65	34
Average FY2014		$ 5,176	4857	343	$ 1.06	$ 365.50	825	557	59.5%	40.5%	59	39
Average FY2015		$ 4,501	4402	305	$ 1.03	$ 315.22	973	541	63.5%	36.5%	68	38
Average FY2016		$ 4,089	3877	282	$ 1.06	$ 300.73	931	501	64.8%	35.2%	67	36
Average FY2017		$ 4,464	4317	283	$ 1.05	$ 296.32	1085	564	63.6%	36.4%	70	37
Average FY2018		$ 3,914	3796	270	$ 1.04	$ 283.48	997	454	67.8%	32.2%	68	32
Average FY2019		$ 4,040	4738	319	$ 0.87	$ 276.63	880	292	74.4%	25.6%	59	20

Added Trips
(#6 Brown - Night)
Schedule

Activity	**Completion Date**
Service Begins (1st year ICAAP*)	October 1, 2020
Service Ends (1st year ICAAP*)	September 30, 2021

* This is Year 1 request for ICAAP funding for Brown weekday night service.

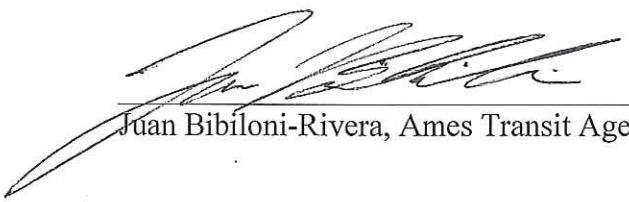
* If approved for Year 1 ICAAP funding, CyRide anticipates requesting two more additional years of ICAAP funding for this service.

CyRide
Added Trips (#6 Brown - Night)
Official Certification

The Ames Transit Agency (CyRide) Board of Trustees certifies that it shall:

(1) commit the necessary local matching funding for project implementation and

(2) upon project completion, be responsible for adequately maintaining and operating the project for public use during the project's useful life.



Juan Bibiloni-Rivera, Ames Transit Agency President

8/8/2019
Date

CyRide
Added Trips (#6 Brown - Night)
MPO Resolution DRAFT

The Ames Area Metropolitan Planning Organization (AAMPO) approved and endorsed this project on September 24, 2019 with a resolution approving this grant. The resolution is attached.

The ICAAP application form (Form 230017; page 3 or 6) requires that the project or program be identified in the fiscally constrained transportation plan (TIP) and requires the document to be submitted with the application. However, the ICAAP handbook has been revised to state that "Awarded projects" must be added to approved MPO TIP's and STIP's (See below).

> ***https://iowadot.gov/systems_planning/pdf/ICAAP_Application_Handbook.pdf (page 5):***
> ***Awarded projects*** *must be added to approved MPO or RPA transportation improvement programs (TIPs) and Iowa's Statewide Transportation Improvement Program (STIP).*

Therefore, once this ICAAP project has been formally approved by the Iowa DOT Commission (early January 2020), the funding will be amended and approved by the MPO in the AAMPO's FY2020 Transportation Improvement Program in order to begin transferring the federal funding from FHWA to FTA and gain formal grant approval from the Federal Transit Administration.

Added Trips (#6 Brown- Night
Emissions Calculation

Calculation/Assumption	Factors	CO	VOC (HC)	NOx
Net Project Cost	**$36,385**			
Brown Night Net Operating Cost	$36,385			
Operating for One Year - $40,703				
Number of Years In Project - Operating	1			
#6 Brown Route Service Assumptions				
Number of days/Yr. in Project (ISU Classdays & Finals Days)	160			
Avg. Rd-Trip Commute (Miles*)	11.7			
# Daily Trips	4			
# Riders/Trip	45			
Number of Daily Miles	46.8			
Total Estimated Avg. Daily Ridership	180			
Total Cars Taken From Roadway Weekdays (1.2/car)	150			
Emission Reduction By Riders Taking LILAC				
Emission Factor (30 mph) - LDGV		13.84	2.063	1.032
Emission Factor x Avg. Commute Length*		161.93	24.1371	12.0744
#6 Brown: Gross Red. x 160 days x Cars From Roadway x 1 year		3,886,272	579,290	289,786
Total LDGV Emissions Reduced		3,886,272	579,290	289,786
Emission Increase For Standard Buses:				
Emission Factor (10 mph) - HDDV		5.544	0.915	10.176
(40' Bus) HDDV Emissions x 46.8 miles/day x 160 days x 1 year		41,513	6,852	76,198
TOTAL (40' Bus) HDDV Emissions		41,513	6,852	76,198
Net Reduction for Brown Night:		**3,844,759**	**572,439**	**213,588**
Cost Effectiveness for Brown Night		**$ 9.46**	**$ 63.56**	**$ 170.35**
Net Reduction for Project :		**3,844,759**	**572,439**	**213,588**
Total Reduction for Project - kg/project		**3,844.8**	**572.4**	**213.6**
Net Reduction Per Year:		**3,844,759**	**572,439**	**213,588**
Total Reduction Per Year - kg/year		**3,844.8**	**572.4**	**213.6**
Cost Effectivness:				
Total Project Cost		**$36,385**		
One Yr. Project Total Cost= ($40,703/1)		**$36,385**		
CO		**$9.46**		
VOC		**$63.56**		
NOx		**$170.35**		

* Based on statistics, riders are riding the entire Brown route to reach their destination

IOWADOT
Form 105101 (3-18)

Minority Impact Statement

Pursuant to 2008 Iowa Acts, HF 2393, Iowa Code 8.11, all grant applications submitted to the State of Iowa that are due beginning Jan. 1, 2009, shall include a Minority Impact Statement. This is the state's mechanism for requiring grant applications to consider the potential impact of the grant project's proposed programs or policies on minority groups.

Please choose the statement(s) that pertains to this grant application. Complete all the information requested for the chosen statement(s). Submit additional pages as necessary.

☒ The proposed grant project programs or policies could have a disproportionate or unique **positive** impact on minority persons.

Describe the positive impact expected from this project.
The City of Ames has an 10.24% Asian population and any new route expansion on high capacity corridors will certainly have a positive impact on this minority and LEP group living within the Ames community. Specifically, the Brown route directly serves LEP community living along Stange Road in Schilletter/ University Villages. The residents living in these areas will be provided transportation directly to central ISU campus, campustown and shopping area along the route later in the evening providing a positive impact on this transit dependent population. While this service is designed to serve the general public, Ames residents of all races and genders living within the community will benefit from this grant application and service.

Indicate which groups are impacted.

☐ Women ☐ Persons with a disability ☐ Blacks ☐ Latinos ☒ Asians
☐ Pacific Islanders ☐ American Indians ☐ Alaskan Native Americans ☐ Other_____

☐ The proposed grant project programs or policies could have a disproportionate or unique **negative** impact on minority persons.

Describe the negative impact expected from this project.

Present the rationale for the existence of the proposed program or policy.

Provide evidence of consultation with representatives of the minority groups impacted.

Indicate which groups are impacted.

☐ Women ☐ Persons with a disability ☐ Blacks ☐ Latinos ☐ Asians
☐ Pacific Islanders ☐ American Indians ☐ Alaskan Native Americans ☐ Other _____

☐ The proposed grant project programs or policies are **not expected to have** a disproportionate or unique impact on minority persons.

Present the rationale for determining no impact.

I hereby certify that the information on this form is complete and accurate, to the best of my knowledge.

Name Barb Neal

Title Interim Transit Director

Definitions

"Minority Persons," as defined in Iowa Code 8.11, means individuals who are women, persons with a disability, Blacks, Latinos, Asians or Pacific Islanders, American Indians, and Alaskan Native Americans.

"Disability," as defined in Iowa Code 15.102, subsection 7, paragraph "b," subparagraph (1):
b. As used in this subsection:
(1) *"Disability"* means, with respect to an individual, a physical or mental impairment that substantially limits one or more of the major life activities of the individual, a record of physical or mental impairment that substantially limits one or more of the major life activities of the individual, or being regarded as an individual with a physical or mental impairment that substantially limits one or more of the major life activities of the individual.

"Disability" does not include any of the following:
(a) Homosexuality or bisexuality.
(b) Transvestism, transsexualism, pedophilia, exhibitionism, voyeurism, gender identity disorders not resulting from physical impairments or other sexual behavior disorders.
(c) Compulsive gambling, kleptomania, or pyromania.
(d) Psychoactive substance abuse disorders resulting from current illegal use of drugs.

"State Agency," as defined in Iowa Code 8.11, means a department, board, bureau, commission, or other agency or authority of the State of Iowa.