MPO 1

ITEM # _____
DATE: 09-25-07

AAMPO TRANSPORTATION POLICY COMMITTEE ACTION FORM

SUBJECT: TRANSIT APPLICATIONS FOR IOWA CLEAN AIR ATTAINMENT PROGRAM FUNDING

BACKGROUND:

Each fall, the Iowa Department of Transportation (IDOT) solicits applications for a program called Iowa Clean Air Attainment Program (ICAAP) for funding assistance. Grants provided from ICAAP funds assist local governments and transit systems in funding capital and operating projects that help reduce congestion and improve air quality around the state. Typical transit projects include operation of new routes, purchase of capital that support new services, construction of park and ride lots, and outreach programs that inform the public about transit system services. This year, CyRide staff has developed three applications for support of transit services in next year's budget year (2008/09). The following briefly details each application.

Gray Route Addition

Last fall, CyRide began operating the "Gray Route" generally along S. 16th to Dayton Road providing four morning and four afternoon trips Monday through Friday. ICAAP guidelines allow for funding to pay for the first three years of a new service. Since this service was started in 2006, deadlines for financial assistance for the first two years have passed; an application was not made the first year of service, and the application was not funded the second year. However, staff has developed an application to pay for the third year of the service along with the purchase of an additional bus to support this service expansion. The specific budget is detailed below:

Activity	Total Cost	Federal Request	Local Share
Bus Purchase	$335,000	$268,000	$67,000
Gray Route Operating – Yr. 3	$63,962	$51,170	$12,792
TOTAL	**$398,962**	**$319,170**	**$79,792**

New Alternative Fueled Bus

CyRide proposes replacing a 1973 model GMC bus with a bus built in 2007 under the new emissions standards. Details of the specific bus to be replaced are as follows:

Bus #: 941
Accumulated Mileage: 781,520
Model: GMC
Year of Manufacture: 1973
Current Age: 34 yrs.

The Federal Transit Administration (FTA) recognizes a bus' useful life to be 12 years; therefore, bus #941, proposed under this application for replacement, is 22 years beyond

this federal standard. CyRide's current fleet age exceeds an average of 12 years where the national average is seven years. The implications for improved air quality in Ames and Central Iowa are significant when CyRide's older fleet is modernized with new, cleaner technology. The budget proposed for this project is as follows:

Activity	Total Cost	Federal Request	Local Share
Bus Purchase	$335,000	$268,000	$67,000

Public Information Program

The new Transit Intensive Cities program provides funding for cities under 200,000 population who meet or exceed the average of at least one of six criteria when compared to cities over 200,000 population. For the current year, CyRide met five of the six criteria; however, if current ridership levels do not continue in the future, ridership may cause us to only meet four of the six criteria next year, with a corresponding reduction of federal funds of about $120,000. CyRide needs to carry about 4.2 to 4.4 million passengers per year to continue to meet five of the six criteria and receive maximum funding. Therefore, it is imperative that CyRide services be marketed to the community to encourage Ames residents/students to use CyRide for more of their transportation needs. This is especially important as student enrollment varies each year.

Staff has developed a two-year marketing plan that targets three markets:

- Residents Living in Apartment Complexes
- ISU Students
- Business Community

Six strategies have been identified to address the target markets discussed above:

- Work with the university to put CyRide information in the hands of each student
- Attend all new student orientation/welcome back events
- Establish working relationship with university staff that will provide transit usage with the university
- Work with five to ten apartment complexes each year to promote CyRide services
- Work with five businesses per year to develop a program specific to their business that will educate and promote transit services within the organization
- Develop radio and print media to promote the economics and environmental benefits of CyRide

The budget developed for this two-year initiative is as follows:

Activity	Total Cost	Federal Request	Local Share
Year 1 Program	$31,300	$25,040	$6,260
Year 2 Program	$31,300	$25,040	$6,260
TOTAL	**$62,600**	**$50,080**	**$12,520**

Grant applications for ICAAP funding must be submitted through the Ames Area Metropolitan Planning Organization (AAMPO) in the month of September and then submitted by the MPO to the IDOT by October 1, 2007. The application process requires that projects requesting ICAAP funding be reflected in MPO Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP) documents to be considered for approval by the IDOT Commission in early 2008. Local share for all these projects will come from CyRide's budget.

At their August 24, 2007, meeting, the Ames Transit Agency Board of Trustees approved the three projects for inclusion in ICAAP applications.

ALTERNATIVES:

1. Approve revisions to the TIP reflecting the **three** projects requesting ICAAP funding and submit these applications on behalf of CyRide.

2. Approve revisions to the TIP selecting **only one or two** projects for ICAAP funding and submit the application(s) on behalf of CyRide.

3. Do not approve the revisions, thereby not submitting projects for the 2007 round of ICAAP funding.

ADMINISTRATOR'S RECOMMENDATION:

It is the recommendation of the Administrator that the AAMPO Policy Committee adopt Alternative No. 1, thereby approving revisions to the TIP reflecting three CyRide projects requesting ICAAP funding and submitting the applications on behalf of CyRide.

CyRide
Gray Route Addition
Narrative

Introduction

A major initiative for the City of Ames is "Connecting the Community" to create a vibrant business, university and residential community. A key to the success of this initiative is a transit system that allows these connections to be made in established and new neighborhoods. CyRide's proposed project for ICAAP funding will connect the university, business and low-income areas of the city with new service thereby providing an important link to three important segments of the community. This will result in connections that are important to continue to grow the community while at the same time accomplishing this in an efficient manner that reduces congestion and emissions.

Background

CyRide operates fixed route service seven days a week providing transportation to the students of Iowa State University, employees of the University and Ames area residents. Service hours vary according to the day of the week, but generally provide service from 6:00 am until 10:00 pm with longer hours on Friday and Saturday night and shorter hours on Sunday.

Ridership on CyRide's system has grown from 200,000 rides annually to over 4.3 million when the students, university and City of Ames partnered to create an award winning transit system. CyRide has struggled to keep pace with new services needed by the students and Ames area residents as the community has grown into a small urbanized area of more than 50,000 population. The growing community, combined with student transportation needs in the proposed corridor, provides a unique opportunity to significantly manage travel demand within the community.

Proposed Service

The proposed route is the #4 Gray route and generally operates along an east-west corridor connecting the southeast section of the community with transfer points in the central portion of the city and ISU campus, thereby allowing resident to access services/businesses from within the entire community. The specific route is illustrated on in Exhibit B.

The route would operate hourly in the peak hour from approximately 7:30 until 11:00 am and from 2:00 to 5:30 pm providing 5 trips in the morning and 4 in the afternoon. The

specific schedule was modified slightly based on customer requests and operating efficiencies and is as follows:

DMACC	S. 16th & G. Aspen	ISC	Kildee Hall	ISC	S. 16th & G. Aspen	DMACC
-----	7:21	7:30	7:37	7:47	-----	-----
7:28	7:34	7:43	7:50	8:00	8:05	8:13
8:28	8:34	8:43	8:50	9:00	9:05	9:13
9:28	9:34	9:43	9:50	10:00	10:05	10:13
10:28	10:34	10:43	10:50	11:00	+	+
-----	-----	2:05	2:12	2:22	2:28	2:36
2:50	2:58	3:05	3:12	3:22	3:28	3:36
3:50	3:58	4:05	4:12	4:22	4:28	4:36
4:50	4:58	5:05	5:12	5:22	5:28	+

The shaded line operates on ISU class days only.
+ Continues on request

Based on community requests, this service begin during the fall of 2006. CyRide identified two years of funding to begin its implementation and has committed to continuing this service for three years if additional funding sources are secured. This three-year period will allow adequate time to quantify the need for this service and allow time for the DMACC to become firmly established in offering classes to the community. At the end of the three year period, the service will be assessed to determine if its cost is justified for the future. The CyRide Board of Transit Trustees has committed to continuing the service using funding local revenues if the need is found after the three year period. ICCAP funding for the third year will allow the service to be" built up" and the need for this service demonstrated to the community for future long-term commitment to the new route.

The addition of this route (Gray #4) increases the maximum peak hour bus requirement by one bus from 44 to 45 buses. CyRide is currently operating at a 20% spare bus ratio and is currently operating service on this route using a 1984 bus from its contingency fleet (#890) that is currently 23 years old, is less than reliable, uses less clean engine missions. While this can be maintained for a temporary period, new equipment is essential in the operation of a reliable, lower emissions, quality bus fleet and CyRide will need to expand its fleet in order to continue this service into the future.

This proposal would fund the third year of the new service and the purchase of one vehicle to operate the service.

Project Justification

The southeast potion of the city is quickly developing into a major commercial and business center for the community. Currently, the businesses on the following page are located in the area where the proposed route for this application is located.

Businesses:

- Stotts & Associates
- Congressman Tom Latham's Office
- Iowa Games
- WHHS Co.
- Natural Resource Conservation Services
- Sygenta
- Terracom
- Moody Center
- Kum & Go
- Dairy Queen
- Subway
- El Azteca
- Shell Cyclone Plaza
- K-Mart
- Ames Christian School

Hotels:

- Country Inn
- American Inn
- Heartland Inn
- Comfort Inn
- Super 8
- Microtel

Residential Communities:

- Old Orchard Mobile Home Community

As indicated by the list of destination points along the route, the route will serve a varied customer base from low-wage employees in the hotel, service industry to students and to low-income residential communities.

In addition to the existing businesses, the Des Moines Area Community College is currently constructing a new educational facility to be completed in late 2006 or the spring of 2007. The additional demand for transit service from students attending the community college is anticipated to substantially increase ridership and fill a large gap in existing services within the community.

Conclusion

By allowing ICAAP funding for this route, the Iowa DOT and CyRide will be able to efficiently fill a significant transportation gap in a rapidly growing area of the city thereby reducing congestion and emissions. By funding two years of the service and the purchase of a bus, the Iowa DOT will allow the community to demonstrate the routes importance to the community and, consequently future commitments to it continued operation.

CyRide
Gray Route Addition
Budget

Activity	Cost
Capital:	**$335,000**
1 bus x $335,000/bus	
Operating:	
Yr. 3 School Year –	
Driver Wages – 6.9 hrs./day x 159 days x $25.08/hr	$27,515
Consumables – 72.8 miles x 159 days x $1.32/mile	$15,279
Yr. 3 Summer/School Breaks –	
Driver Wages – 6.1 hrs./day x 96 days x $25.08/hr	$14,687
Consumables – 63.7 miles x 96 days x $1.32/mile	$8,072
Subtotal Yr. 3	**$65,553**
Less Fares	
Year 1 – 8 rides x 255 days x $.78 average fare (residents paying a fare)	$1,591
- 12 rides x 159 days x $0.00 fare (students using free ISU ID card)	$0
Subtotal Fares	**$1,591**
TOTAL NET OPERATING COST	**$63,962**

TOTAL COST	**$398,962**
ICAAP Share	**$319,170**
CyRide Share	**$79,792**

CyRide
New Alternative Fueled Bus
Narrative

Background

The City of Ames and Iowa State University are committed to providing excellent service while maintaining a healthy environment. To this end, both organizations have programs that encourage departmental and resident/student energy resource conservation and reduction. Specifically, the City of Ames "Cool Cities" commitment to encourage sustainability of our natural resources has directed the city to investigate new ways to achieve these high standards of environmental preservation.

CyRide has implemented innovative ways to reduce consumption of our natural resources through a two-phased approach. The first phase concentrated on CyRide's building design by adding innovative techniques leading to a LEED (Leadership in Energy Efficiency in Design) certification. Elements of the building certification include: piping steam released from the adjacent ISU Cooling Towers to heat CyRide's bus storage area, using T-8 lighting with motion sensitive switches and constructing a rainwater run-off system to irrigate landscaping.

This second phase, of which this application is an integral piece, is to modernize CyRide's fleet to improve energy consumption and improve air quality. Most recently the transit system has implemented biodiesel into its fuel consumption and is rigorously identifying ways to replace older vehicles with significantly "dirtier" engines. This grant request will outline how the replacement of one of CyRide's oldest buses in the fleet can have a significant impact on air quality in Ames.

Project Description/Justification

Bus Replacement

CyRide proposes replacing a 1973 model GMC bus with a bus built in 2007 under the new emissions standards. Details of the specific bus to be replaced are as follows:

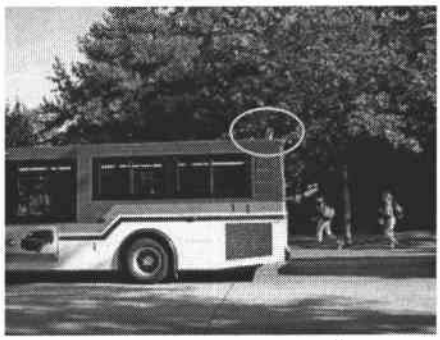
Bus #: 941
Accumulated Mileage: 781,520
Model: GMC
Year of Manufacture: 1973
Current Age: 34 yrs.

The Federal Transit Administration (FTA) recognizes a bus' useful life to be 12 years; therefore, bus #941, proposed under this application for replacement, is 22

years beyond this federal standard. CyRide's current fleet age exceeds an average of 12 years where the national average is 7 years. The implications for improved air quality in Ames and Central Iowa are significant when CyRide's older fleet is modernized with new, cleaner technology.

The emissions released from the GMC bus to be replaced are significantly higher than newer model vehicles as demonstrated on the next page by the picture of bus #941 and compared to CyRide's newest bus, a 2006 Orion VII.

1973 GMC Bus # 941



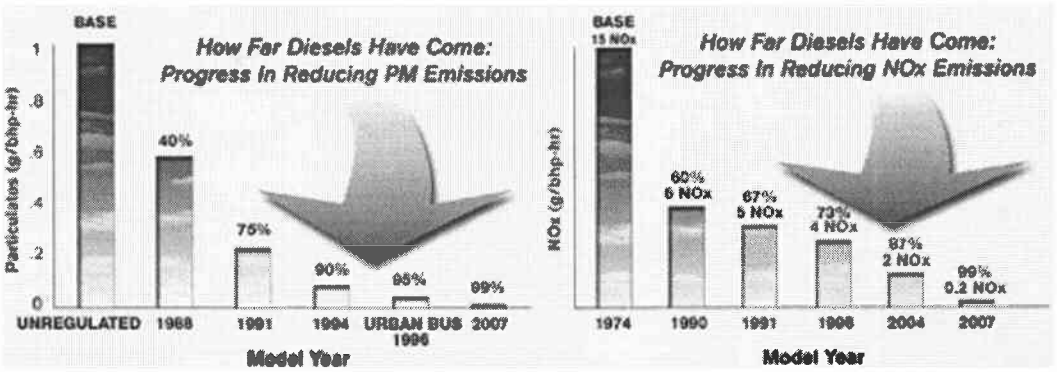
2006 Orion VII Bus # 1

To further demonstrate the emissions reduction of replacing this late model bus, the following table details the NOx and PM2.5 emissions of a newer, 1980's style bus with cleaner engine technology, and shows the dramatic reduction in pollutants emitted into the air. The bus in this application has even dirtier emissions than these statistics demonstrate, but this table shows the enormous impact replacing the bus in this application could have on air quality. CyRide was unable to find the exact emission reduction for a 1973 age bus; however, a publication by the **Clean Air Task Force** (see attached article – Exhibit G-3) indicates that a bus with 2007 standards will operate more than 90% cleaner for NOx and HC's and more than 60 times lower for PM than for late model buses.

Year	NOx	PM2.5
1984	10.7	0.60
2007	0.2	0.01
Reduction	**-10.5**	**-0.59**

This enormous reduction in air pollution by a bus operated in daily service will significantly impact air quality in Ames and the Central Iowa area. The chart on the following page visually illustrates this large percentage reduction in PM and NOx over the years.

Clean Diesel Keeps Getting Cleaner



Source: International Truck and Engine Corporation – "The Diesel Advantage – Looking Ahead to Federal Rules and New Clean Diesel Vehicles".

To further compound the problem of extremely high emissions level, the GMC bus' tailpipe is underneath the bus, placing the emissions at street-level directly in the path of pedestrians; whereas, new buses have the tailpipe at roof-level of the bus above pedestrians. This fact is significant for CyRide as it operates on campus alongside sidewalks congested with ISU students and faculty.

Currently the bus in this application is 17th on CyRide's list of buses to be replaced, and at its current rate of replacement of 2 – 3 buses per year through its formula and possible discretionary funds, it will be year 2015 (8 more years) before it can be replaced. During this time, significantly cleaner air can be realized by its earlier replacement as is documented in Exhibit G.

Ames situation has been unique in the state as the opportunity for ISU students to ride CyRide fare-free, beginning in 2003, more than doubled ridership in a matter of months from approximately 2 million riders to over 4.3 million in FY2006. This rapid ridership increase caused CyRide to purchase twelve, used buses that had exceeded their useful life of 12 years and operate these in daily service. Therefore, CyRide has an inordinate number of 1970 -1990 buses (31 or 55% of the fleet) which creates significant air quality concerns in the urban area. No other transit system in Iowa has experienced this kind of ridership growth in such a short period of time; and without federal discretionary funds, CyRide was forced to purchase late model buses with 100% local dollars to meet the new demand for its services. Unfortunately, this has had a detrimental affect on air quality in Ames.

Cleaner Fuel

In addition to the cleaner burning engine, CyRide would be using B20 (20% biodiesel) fuel in the bus during the summer months of May 1 – October 15th of each year and B5 for the remainder of the year. The CO and HC air quality benefits of this cleaner fuel further positively impact air quality as demonstrated by the attached document entitled, "Biodiesel Reduced Emissions" – Exhibit A-1. Specifically, an

additional 10 -50% improvement in CO and HC can be achieved by operating buses using biodiesel. These factors have not been taken into consideration in calculating the emissions savings (Exhibit G) that could be attained by replacing the older bus as documentation specific to CyRide has not been completed at this time. The Center for Transportation Research & Education (CTRE) in Ames will be conducting a study using CyRide buses beginning in March 2008 to test the specific emissions reduction for B5, B10 and B20 for new and older model buses. Future applications will include these calculations once the data is obtained and verified.

Conclusion

CyRide's proposed project to replace an extremely old model bus with a new bus manufactured with the new emissions standards would make a big impact on air quality in the Ames community ensuring that the community continues to meet air quality attainment standards. With the unique situation caused by ISU's fare free system, CyRide is poised to make a significant air quality impact in the State of Iowa as it is able to modernize its fleet. With the city and university's commitment to environmentally sound practices, this project could provide other transit system's with valuable data that could be used to document the need for earlier retirement of 1970 and 1980 style buses through future federal competitive grant applications.

CyRide
New Alternative Fueled Bus
Budget

Activity	Cost
Purchase 1- 40' Bus With 2007 Emission Standards	$335,000

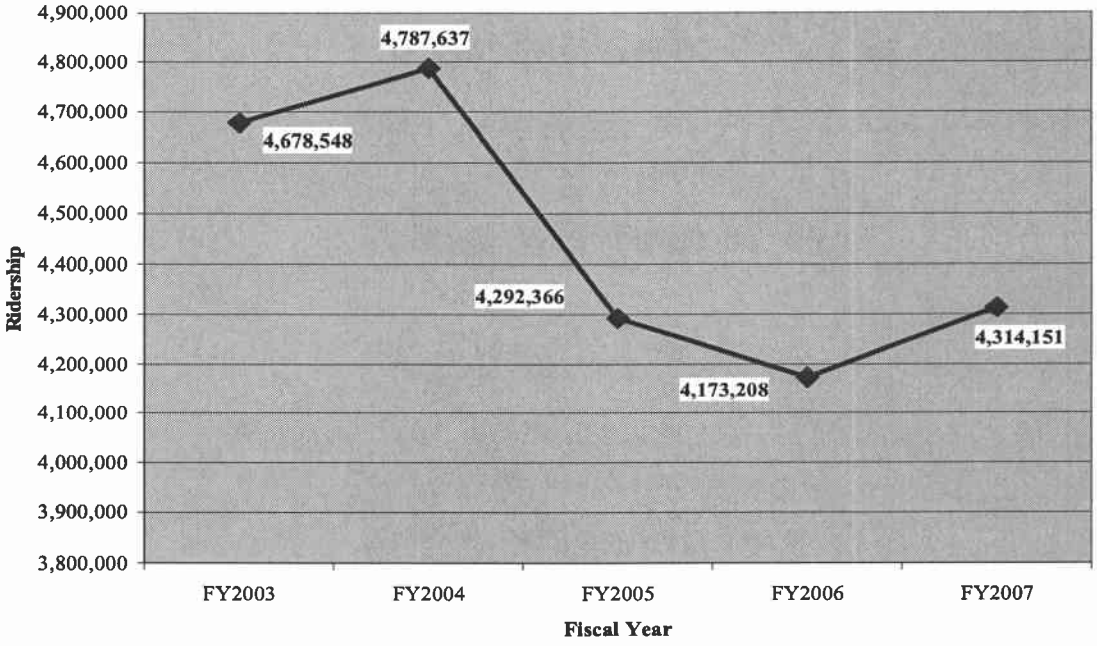
TOTAL COST	**$335,000**
ICAAP Share	**$268,000**
CyRide Share	**$67,000**

CyRide
Public Information Program
Narrative

Background

Over the past several years, CyRide ridership has evidenced a slow downward ridership trend until this last year (FY2007) as evidenced by the chart below.

CyRide Ridership By Year



Several factors make this next year a pivotal time to provide extra incentives, through intensive marketing efforts, to make a significant impact and change in travel patterns. This will result in positively affecting congestion and air quality in the City of Ames. First, this last year (FY2007) ridership rose 3.8% mainly due to higher fuel prices. By educating and reminding the public about CyRide's services at a time when they are more inclined to try more cost effective means of transportation, CyRide has a much bigger impact on changing individual travel patterns.

Second, the largest untapped market in Ames is the new freshmen class that attends Iowa State University each year. This year, the freshman class is significantly larger than in past years (additional 500 students). With this large influx of students unfamiliar with CyRide services, A large impact could be made early in the academic careers to have significant impact on travel patterns, reduced congestion and emissions. This new trend is expected to reoccur in the next several years providing a unique opportunity to impact student travel patterns for their entire stay in Ames.

In FY2007 and FY2008, CyRide will be focusing moving the ridership increase realized in FY2007 even higher and improving air quality within the community through intensified marketing efforts. One of these major efforts will encourage students to use CyRide to access the entire community as opposed to only trips to/from the University. This effort will be a multi-year marketing program to:

- Educate existing riders on additional trips that could be taken using CyRide
- Encourage new ridership, especially in light of continued high gas prices

CyRide has developed six initiatives/strategies to educate the public about CyRide services as is discussed next. One of the major hurdles that must be overcome through marketing efforts is to make students and residents comfortable with the bus as many have never ridden before living in Ames. This focus will be carried through all marketing efforts in the coming years.

Target Markets

To reverse the downward ridership trend, a marketing program has been developed that identifies three target markets as discussed below:

Residents Living in Apartment Complexes – There are a large number of apartment complexes in Ames. These residential units house university and lower-income individuals which are traditionally excellent markets for transit.

ISU Students - Students at ISU are more transit-dependent than typical residents and provide an excellent market to encourage using CyRide for more travel needs.

Business Community – Employees within the business community that drive to and from work each day provide a stable market that could benefit from lower commute costs.

Each of these market segments represents a unique opportunity to increase ridership; thereby meeting every public transit system's mission to provide service needed within the community and, specifically for CyRide, to reduce congestion and emissions around the campus area and within the community. Intensive marketing efforts in each of these three markets could significantly increase overall ridership for CyRide creating a positive impact on the environment.

Marketing Plan/Justification

CyRide has developed a marketing plan that addresses each of the three target markets and includes an image campaign to support the targeted marketing efforts. Specific goals have been developed that will guide the marketing efforts over the course of the next two year period. These goals include:

- Increase transit ridership by 3% per year
- Increase CyRide's visibility within the business and university communities

To achieve these goals, CyRide has developed six specific strategies designed to address needs of the three target markets. These strategies include the following:

Strategy 1 – Work with the university to put CyRide information in the hands of each student
Strategy 2 – Attend all new student orientation/welcome back events
Strategy 3 – Establish working relationship with university staff that will promote transit usage within the university
Strategy 4 – Work with 5-10 apartment complexes each year to promote CyRide services
Strategy 5 – Work with 5 businesses per year to develop a program specific to their business that will educate and promote transit services within the organization
Strategy 6 – Develop radio and print media to promote the economics and environmental benefits of CyRide

Each of these strategies is discussed in further detail.

Strategy 1

Each fall, CyRide has the opportunity to educate new and returning students about its services. This strategy would provide a packet of information about CyRide and how to use its services in each dorm room much like a telephone book is provided for students to use. Included in this packet would be:

- Route map/schedule
- Information on how to use CyRide services
- Information pieces about the locations CyRide can take them

To support this effort, the university's student email database would be use to send periodic emails to encourage students to try CyRide and directing them to the packet of information in their room/apartment.

Cost Estimate: $18,000
9,000 dorm rooms x $2 per packet

Strategy 2
The university hosts numerous orientation or welcome back sessions for students throughout the summer months. CyRide would provide a staff person at these events who could discuss CyRide services and promote usage of the system to travel to and from classes as well as for recreational types of trips. Student drivers/dispatchers would be used to conduct these sessions with their peers.

Cost Estimate: $1,800
20 sessions x 2.5 hours x $36/hr.

Strategy 3
University staff that work with residence halls and student events will be identified and relationships developed that will ensure that CyRide information is available to the maximum extent possible.

Cost Estimate: $0

Strategy 4
Staff will develop a list of every apartment complex within the City of Ames including the number of units at each complex. Staff will then contact between 5 – 10 of the largest apartments and work with the managers and owners to provide CyRide information to existing tenants as well as new tenants that move in throughout the year. Included in the information provided will be:

- Route map/schedule
- Information on how to use CyRide services
- Information pieces about the locations CyRide can take them

Cost Estimate: $6,000
3,000 apartments x $2 per packet

Strategy 5
Identify 5 major employers within Ames to begin working with to create customized educational programs promoting CyRide service within the businesses. The customized programs could include personalized travel planning for each employee, packets of information provided for each employee, table tents, lunch and learn educational meetings with employees, etc. Through discussions with each business, the right mix of activities will be developed to target their employees.

Cost Estimate: $2,500
$500/business x 5 businesses

Strategy 6

Work with the Ames radio station and newspaper to educate the general public about the benefits of using CyRide service enhancing public support for its service.

Cost Estimate: $3,000

Radio - $2,000

Printed Media - $1,000

The total annual cost to provide this comprehensive public information program is as follows:

Strategy	Cost
Student Information	$18,000
Student Orientation/Welcome Back	$1,800
University Staff Coordination	$0
Apartment Complex	$6,000
Employers	$2,500
Radio/Newspaper	$3,000
TOTAL	**$31,300**

It is anticipated that through these marketing efforts, CyRide could experience a 3% ridership increase each year of the project effectively taking an equivalent of more than 1,800 cars off the roadway significantly improving air quality in the community. This goal is achievable as CyRide evidenced a 3.4% increase in its daily route services during FY2007 without any marketing efforts. Given the costly gasoline climate, combined with information about CyRide services, a major impact can be achieved that can be used throughout the state to encourage increased transit usage.

Conclusion

Major arterials within the City of Ames such as Lincoln Way, Grand, Duff, etc. become very congested especially during the school year. Increasing ridership on CyRide will reduce this congestion and bring better air quality to the city. The Ames community is very environmentally conscious and providing a comprehensive marketing approach which places educational material into the hands of residents provides the tools and incentive to try using CyRide service. Once they try the service, they will discover how easy it is to move throughout town using CyRide services and will choose to use transit for even more travel needs. This program will provide the impetus to continue the upward ridership trend and improve congestion and air quality.

CyRide
Public Information Program
Budget

Activity	Cost
Strategy 1 – Student Information	$18,000
Strategy 2 – Student Orientation/Welcome Back	$1,800
Strategy 3- University Staff Coordination	$0
Strategy 4 – Apartment Complexes	$6,000
Strategy 5 – Employers	$2,500
Strategy 6 – Radio-Newspaper	$3,000
Total Per Year	**$31,300**
Two-Year Total	**$62,600**

TOTAL COST	**$62,600**
ICAAP Share	**$50,080**
CyRide Share	**$12,520**