Agenda Date: 03/14/2017
Agenda Item: 5.1

OAKLEY
CALIFORNIA

STAFF REPORT

Date: March 14, 2017

To: City Council

From: Bryan Montgomery, City Manager

SUBJECT: **Resolution supporting the CyberTran International Rapid Light Rail Transit Proposal**

Background and Analysis

The proposed CyberTran Ultra-Light Rail Transit (ULRT) system could serve as an extension to BART in East County from the Hillcrest Station in Antioch, east to Oakley and Brentwood, as well as to Byron and Discovery Bay. This is a proposal that has been discussed for several years and the Oakley City Council provided a letter of support in April of 2010 (attached).

CyberTran is working to raise private sector capital that could match any government funds needed to complete the final development and approvals of the ULRT system. Some new federal funding opportunities may be on the near horizon and CyberTran is seeking an additional resolution of support to assist with applications for funding.

Representatives from CyberTran will be at the meeting to make a presentation, provide more detail to the proposal, and answer any questions that may come up. Attached is a background of the project that highlights some milestones and here are links to three videos that also provide information:

https://www.youtube.com/watch?v=aX-Ov-boCAE
https://www.youtube.com/watch?v=dd-uzo2DdP0&t=176s
https://www.youtube.com/watch?v=Di5acGAmcm0

Fiscal Impact

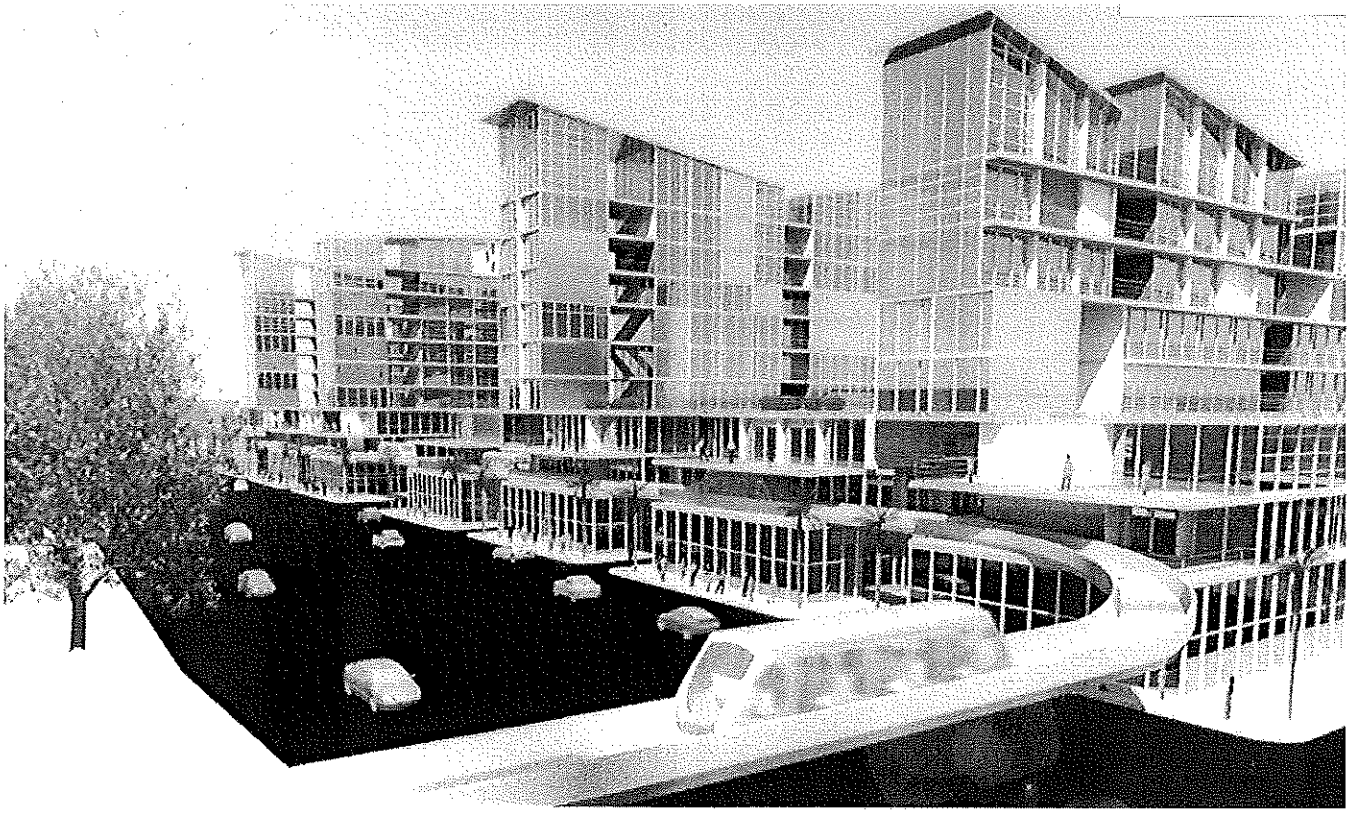
Not applicable to this action.

Recommendation

Adopt a resolution supporting the CyberTran proposal.

Attachments

1. CyperTran background nnformation
2. City letter of support from April 2010
3. City of Davis resolution
4. Proposed Resolution



Richmond, California TOD project rendering.

CyberTran® International

Milestones, Studies and Evaluations to Date

Over the course of the development and testing of CyberTran®, a number of studies have been conducted that show the CyberTran® System and concept to be well founded, functional, as well as cost effective and operationally efficient with respect to other more conventional technologies. These studies and evaluations have been conducted by both CyberTran® International, Inc. and independent entities. A list of developments of the CyberTran® system both at Idaho National Engineering and Environmental Laboratory (INEEL) and in Alameda, as well as those studies and evaluations conducted by independent entities and funded by independent sources are discussed below.

- Track stability up to 60 mph 1990

Two mile of ground level track was built; a vehicle was designed and built with computerized radio control and electric propulsion. The vehicle/rail interaction was proven to be stable

- MK Study 1991

The CyberTran® system was jointly studied by Morrison-Knudsen and the INEEL. MK conducted a cost evaluation and market analysis for their own benefit to evaluate the potential for CyberTran®. Their conclusions were that the best market for the technology at the time was in the airport people mover area and that the technology could be implemented for approximately 10% - 50% of existing technology. While they saw the potential benefit of the technology, the system was not developed at that point in time to a level such that it could be taken into the commercial market.

- Curve - self-steering capability 1992

The CyberTran® vehicle was tested on conventional rail for its steering capability through a curve. The vehicle was found to successfully steer through a curve.

Agenda Date: 03/14/2017
Agenda Item: 5.1

OAKLEY
CALIFORNIA

STAFF REPORT

Date: March 14, 2017

To: City Council

From: Bryan Montgomery, City Manager

SUBJECT: **Resolution supporting the CyberTran International Rapid Light Rail Transit Proposal**

Background and Analysis

The proposed CyberTran Ultra-Light Rail Transit (ULRT) system could serve as an extension to BART in East County from the Hillcrest Station in Antioch, east to Oakley and Brentwood, as well as to Byron and Discovery Bay. This is a proposal that has been discussed for several years and the Oakley City Council provided a letter of support in April of 2010 (attached).

CyberTran is working to raise private sector capital that could match any government funds needed to complete the final development and approvals of the ULRT system. Some new federal funding opportunities may be on the near horizon and CyberTran is seeking an additional resolution of support to assist with applications for funding.

Representatives from CyberTran will be at the meeting to make a presentation, provide more detail to the proposal, and answer any questions that may come up. Attached is a background of the project that highlights some milestones and here are links to three videos that also provide information:

https://www.youtube.com/watch?v=aX-Ov-boCAE
https://www.youtube.com/watch?v=dd-uzo2DdP0&t=176s
https://www.youtube.com/watch?v=Di5acGAmcm0

Fiscal Impact

Not applicable to this action.

Recommendation

Adopt a resolution supporting the CyberTran proposal.

Attachments

1. CyperTran background nnformation
2. City letter of support from April 2010
3. City of Davis resolution
4. Proposed Resolution

- High speed computer simulation 1993

The CyberTran® vehicle and rail system was computer simulated at the American Association of Railroads Test Center in Pueblo, Colorado. The simulation result described the potential for travel at 160 mph as "promising".

- SAIC Circa 1994

Science Applications International Corp. performed an in-house evaluation of the technical and capital cost parameters of CyberTran® regarding a decision to approach the US Department of Transportation for testing and commercialization funding. While SAIC verified the potential cost savings of CyberTran® over conventional technologies, they could not put together an internal organizational structure that would have supported the pursuit or utilization of development funds.

- Technology Transfer 1998

In 1998 CyberTran® International Inc. took possession of intellectual and material property from the US DOE. Simultaneously, CTI received a $250,000 grant from the Federal Transit Administration, provided matching funds, and inaugurated a one mile test track at the site of the former Alameda Naval Air Station. A laboratory and office were also established in Alameda. The Chicago office of DOE signed the intellectual and material property transfer documents.

- Guideway switching 1999

The first use of the test track was the development of a new type of rail switch necessitated by the single-axle bogey design of the CyberTran® vehicle. The switch was tested in both the vehicle actuated and trackside actuated modes. It behaved correctly in both modes.

- Drive train 2000

In 1999 CTI received a $65,000 grant from the FTA to develop a propulsion system that would test different drivetrain configurations. The different installations were done and tested and a successful design was decided upon.

- Gradability of 10% 2001

In 2000 CyberTran® received a $100,000 grant from the FTA for a demonstration of the CyberTran®'s vehicle's 10% hill climbing capability. The CyberTran® test track in Alameda was modified in order to add a 10% section with ramps and a bridge section. The vehicle demonstrated hill climbing capability up to 20%.

- Clough Harbour Study 2001

Clough Harbour is an engineering firm in Albany, NY that performed a technical and cost evaluation of a CyberTran® line between the government center in Albany and an AMTRAK station across the river in Renssalier, NY. The application, approximately 1 mile in length, was estimated to cost approximately half of what a conventional LRT system would cost.

- BART/Port of Oakland/Alameda Study 2002-2004

In 2002, CyberTran® joined with the Bay Area Rapid Transit District, the Port of Oakland, and the City of Alameda to study the CyberTran® system with specific simulations of performance in the City of Alameda and at the Oakland International Airport. The study also included analysis of CyberTran®'s structures and a cost analysis of the system. The results have been positive and were published during the summer of 2004.

- Control System 2002-2004

In 2002 CyberTran® received a $150,000 grant from the FTA to analyze the potential for the use of BART's AATC system, co-developed with General Electric Transportation Systems, in CyberTran®'s

system. An analysis was completed, vehicle testing of communication, software, and sensor and actuator equipment was completed, and final control system architecture was designed.

- Kimley Horn 2003-2004

Kimley Horn, a Houston based company, world renowned in the transportation industry for simulation of highway, airport, and transit systems, was commissioned by BART to perform an evaluation and computer simulation of the operational validity of the CyberTran® concept. The objective was to determine if a transit system based on the use of large numbers of small (14 passenger) vehicles, with off-line stations, and controlled by a central control system, could carry the number of travelers required by a modern transit system. The simulation showed that CyberTran® could not only carry the number of passengers typical of the requirements of existing technology automated people movers (APM) and light rail transit (LRT) systems, but could carry these passengers at a higher average speed, with a lower number of total system seats, and with fewer total vehicle miles. These latter parameters reflect the characteristics of a system that has not only a lower system operating cost, but a higher passenger appeal.

- PGH Wong Engineering 2003-2004

PGH Wong Engineering, a well known San Francisco based company in the transit industry performed a structural system evaluation (with SF Bay area seismic criteria), and a capital and operating cost evaluation of the guideway, vehicle, and system. This study and evaluation was financed by the San Francisco Bay Area Rapid Transit District (BART) to evaluate the potential of CyberTran® to be used as an adjunct to the BART system in the bay area. The results of their evaluation were that the light weight system was structurally sound and could be installed and operated for substantially less than conventional transit technology.

- BART 2003-2004

In addition to the funding of outside studies on the cost and functional viability of CyberTran®, the Research and Development Division of BART has conducted its own studies on the operational capabilities of systems like CyberTran®, and how a system such as CyberTran® might be made to interface with BART. CyberTran® was found to be a viable adjunct to systems like BART when used to extend a large metro system beyond its current coverage and into areas where existing ridership would not support the capital and operating cost of a large system like BART (presently costing approximately $100M per mile). CyberTran® could be used to extend the reach of BART into low passenger flow areas at a fraction of BART costs, expanding BART's ridership at a fraction of the per passenger cost associated with extending BART. There are several areas in the bay area where this concept of low cost BART extension with CyberTran® is possible.

- World Clean Energy Awards Nominee 2007

The World Clean Energy Awards are prestigious Awards for achievement and innovation in integrative use of energy efficiency. The Awards were developed by the Swiss-based Transatlantic21 Association to honour mainstream applications of Clean Energy in seven categories: construction & rehabilitation, transport & mobility, product, services & trade, finance & investment, policy & lawmaking, NGOs & initiatives. Based on the proposal of a nominating institution the nominee is invited to participate in the nomination for the Awards. Similar to other prestigious nominations, the nomination itself will serve as recognition of achievement in its own right.

- PATH Intent Letter 2009

This is to confirm that California PATH is interested in participating in the project team to work closely with Cybertran on automated control of fixed guideway driverless vehicles.
California PATH is a world-wide known research organization working on surface transportation systems and technologies for over 22 years. PATH has the top reputation in the US on vehicle dynamics and control which was witnessed by many world level demonstrations including the demo 1997 San

Diego, and the 1999 demo in Netherlands. Those demos are strong evidence of PATH' superior capability in vehicle control system development based modern technologies including computers, sensors, actuators, and communication systems. PATH is currently developing automated control of Heavy Duty Trucks sponsored by the US DOT Federal Highway Administration (FHWA). The overall control software structure adopted by Cybertran is what PATH developed ten years ago for Automated Highway Systems. PATH would like to see the application of PATH research results and technologies to road or rail vehicle control systems and benefit to the society.

- Government Letters of Support 2009-10

Letters of support for CyberTran's efforts to obtain government funding, were obtained from the University of California, Berkeley, the Cities of Richmond, Antioch, Oakley, Brentwood, San Ramon, the West Contra Costa Transportation Advisory Committee (WCCTAC), Port of Oakland, U.S. Senators Dianne Feinstein and Barbara Boxer, then-Congressman George Miller, State Senator Loni Hancock, Assemblymember Nancy Skinner, and Contra Costa County Supervisor John Gioia and Amory Lovins, Chairman of thte Rocky Mountain Institute - named by *Time* magazine one of the World's 100 most influential people in 2009. In addition, letters of support for a system in Fresno had been previously obtained by Central Transit & Development Company from the City of Fresno in 2007.

- City of Richmond Partnership 2011

The City Council of Richmond, California adopted Resolution No. 76-11, on a vote of 6-1, supporting a partnership between the City of Richmond and CyberTran International Inc., an ultra light rail transit system manufacturer was presented.

- iGATE 2012

i-GATE is a public-private regional partnership of ten cities, two national laboratories, universities, research institutions, and over thirty additional venture capital, angel investor, economic development, and industry partners. As a State of California designated iHub (innovation hub), i-GATE supports the growth of new technology companies and creation of jobs in clean energy, green transportation, and high performance computing. i-GATE officials visited the future site of the CyberTran International low-speed test track in Richmond, CA. The meeting was attended by representatives from the cities of Richmond and Davis and the three East Bay department of energy national labs - Lawrence Livermore, Sandia, and Lawrence Berkeley. The primary focus of the meeting was to discuss requirements of a high-speed test track location for CyberTran's ultra-lightweight high-speed rail technology. CyberTran is considering both Lathrop and Davis as potential locations for the high-speed test track.

- Patents & IP 2013

In 2013 the company filed for ten patents in the area of control systems, braking, and others. Thus far six patents have been issued and four are pending. In addition the company maintains substantial Intellectual Property in the form of patent disclosures and trade secrets. The company's intellectual property is part of the primary assets of the company and the Directors believe that in combination with our team, relationships, and projects in development, success will be the result. For that reason the directors have invested their own time, cash, and effort into the company to bring it to success.

- High-Speed Test Track in Davis, CA 2013-15

In July, 2013 the City Council of Davis, California approved a resolution to become home to a high-speed, rapid ultra-light rail transit demonstration project. The resolution allows the city to identify funding sources for the idea. Possible sources of funding include the U.S. Department of Transportation or the U.S. Department of Energy. The system would be electric, and it could be covered in solar cells, putting the entire system into net gain for generation. Davis has indicated an interest in opening a CyberTran high-speed testing site in Davis and in implementing CTI lines connecting Davis to other cities in the area. The high enthusiasm shown in Davis gives great cause for optimism about CTI's future in California.

Attachment 2

CITY of OAKLEY
A PLACE for FAMILIES in the HEART of the DELTA

3231 Main Street
Oakley, CA 94561
925 625 7000 tel
925 625 9859 fax
www.ci.oakley.ca.us

April 1, 2010

The Honorable James L. Oberstar
Chairman, Committee on Transportation and Infrastructure
U.S. House of Representatives
2165 Rayburn House Office Building
Washington, DC 20515

Dear Honorable Oberstar:

I am writing to express the City of Oakley's support for an Economic Development initiative in California that we believe has broad and major implications for global transit solutions, while having a significant impact on reducing the carbon footprint and creating jobs for this region.

The City of Richmond, California is seeking federal stimulus funds for the purpose of completing a demonstration project of a new rail transit technology known as Ultra Light Rail Transit (ULRT). The technology was originally developed by the Department of Energy and subsequently privatized by CyberTran International, Inc.

What makes the ULRT system unique is its ability to transport riders direct to their destinations, non-stop anywhere within the system. The trains are small, light and fast. This results in a substantial reduction in cost as compared to most of today's rail systems. ULRT also has the ability to operate from solar electricity.

CyberTran is planning to move their headquarters to the City of Richmond to establish a manufacturing facility. This project has the ability to create in excess of 5,000 local and regional, well-paying construction, vehicle and steel manufacturing jobs, within five years if we act quickly. It will also create the only innovative rail transit manufacturer in the U.S. I encourage you to visit the CyberTran website at www.cybertran.com and watch the five-minute video (under Media), which demonstrates this exciting technology.

In addition to our City, many municipalities in the Bay Area have taken particular interest in the Richmond Project because of the many possible solutions it presents to our transit issues. It is quickly becoming a regional project. I ask that you support having the Department of Transportation conduct its due diligence and give this project the attention it deserves.

Please let me know if I can be of any assistance to you in the days ahead.

Warm Regards,

Pat Anderson
Mayor

cc:

The Honorable John Garamendi
The Honorable George Miller
The Honorable Barbara Boxer
The Honorable Peter A. DeFazio
The Honorable Jay Rockefeller
The Honorable Frank Lautenberg
The Honorable Ray LaHood
Ms. Maria Viramontes, Councilmember, City of Richmond, Chair, Contra Costa Transportation Authority
Mr. Bill Lindsey, City Manager, City of Richmond
Mr. Robert Taylor, Mayor, City of Brentwood, Chair, Transplan

RESOLUTION NO. 13-110, SERIES 2013

RESOLUTION OF SUPPORT FOR CYBERTRAN INTERNATIONAL, INC. IMPLEMENTING A RAPID ULTRA LIGHT RAIL TRANSIT PILOT TEST TRACK

WHEREAS, CyberTran International, Inc. using technology developed by the US Department of Energy at Idaho National Laboratory research, has created a new Rapid Ultra Light Rail Transit (Rapid ULRT) system; with a vision to create national and global sustainable transportation infrastructures; and

WHEREAS, the City of Davis learned about CyberTran International Inc.'s technology through the i-GATE Innovation Hub; and co-sponsored with i-GATE, a regional Symposium on Rapid Ultra Light Rail Transit to demonstrate Davis's support for innovative technologies and stimulate regional leader discussion of opportunities presented by such technology; and

WHERAS, this Rapid ULRT system offers significantly greater cost reductions and significantly greater flexibility in deployment of Rapid ULRT systems operating at low, moderate and high speeds in existing urban settings, within existing rights-of-way and varying terrain, alignments and environmental areas; and

WHEREAS, a Rapid ULRT system would provide a self-sufficient transit system operating from its own solar power source; and could ultimately reduce energy consumption by functioning as a solar power grid supplying renewable energy to surrounding communities, reducing use of fuel burning technologies; and

WHEREAS, this Rapid ULRT system can be constructed on elevated tracks in segments that can be removed or reconfigured after the pilot test with minimal site disruption to the test track area; and

WHEREAS, CyberTran Inc. is developing a low and moderate speed intra-city system in partnership with the City of Richmond, including a connection between the Lawrence Berkeley National Laboratory and its new Richmond Satellite lab; and

WHEREAS CyberTran, Inc. is seeking fund to implement a high speed pilot test track in the Yolo County Area with close proximity to UC Davis, Bay Area and State Capitol that could potentially be expanded in the future to connect Yolo County cities, UC Davis, Sacramento and Sacramento International Air Port and beyond; and

WHEREAS, the development of a future Rapid ULRT system in the Yolo County Area/Sacramento Region would improve existing infrastructure and facilities needed for the movement of people and vehicles throughout the region; and help meet transportation, safety and Green House Gas reduction goals; and

WHEREAS, a Rapid ULRT system could stimulate economic development by creating jobs through local manufacture and construction of system and rail components; and provide opportunity to improve local and regional economic health and quality of life.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Davis hereby supports CyberTran International, Inc. in seeking to fund and implement a Rapid ULRT Pilot High Speed Test Track in the Yolo County area.

PASSED AND ADOPTED by the City Council of the City of Davis this 9th day of July, 2013, by the following vote:

AYES: Frerichs, Lee, Swanson, Wolk, Krovoza

NOES: None

Joseph F. Krovoza
Mayor

ATTEST:

Zoe S. Mirable, CMC
City Clerk

RESOLUTION NO. _____

RESOLUTION OF THE COUNCIL OF THE CITY OF OAKLEY, CALIFORNIA IN SUPPORT OF CYBERTRAN INTERNATIONAL, INC. AND AN ULTRA LIGHT RAIL TRANSIT SYSTEM IN THE CONTRA COSTA COUNTY BAY AREA

WHEREAS, the cities of Richmond and San Pablo have adopted resolutions of support for CyberTran International 's an Ultra-Light Rail Transit System (ULRT) to help meet the policies and objectives of improving public transportation throughout the City, Bay Area Region and State of California; and

WHEREAS, the City Council of the City of Oakley encourages the development of innovative, efficient and sustainable transportation options for its residents; and

WHEREAS, the City of Oakley is committed to our nation's mission to reduce pollution through the implementation of technology innovation and smart growth planning; and

WHEREAS, the Highway 4 Corridor is identified as one of the most congested traffic corridors in the State of California; and

WHEREAS, the ULRT technology studies have shown it to be less costly to build operate and maintain than traditional rail transit systems with a "Zero Carbon Footprint"; and

WHEREAS, a demonstration and deployment ULRT System in East County could enable the extension of our existing Highway 4 rail transit system in a more timely manner.

WHEREAS, the collaborative efforts of Contra Costa County cities with rail transit needs can benefit from the demonstration and deployment of ULRT in the region, state and the world.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Oakley supports CyberTran's efforts to extend efficient and sustainable transportation options to East Contra Costa County and is supportive of efforts to seek funding from private, federal, and State resources for the purpose of demonstration and deployment of ULRT in Contra Costa County.

The foregoing resolution was introduced at Oakley City Council held on the 14th day of March 2017, by Councilmember _____, who moved its adoption, which motion being duly seconded by Councilmember _____, was upon voice vote carried and the resolution adopted by the following vote:

AYES:
NOES:

ABSTENTION:
ABSENT:

APPROVED:

_____

Sue Higgins, Mayor

ATTEST:

_____ _____

Libby Vreonis, City Clerk Date