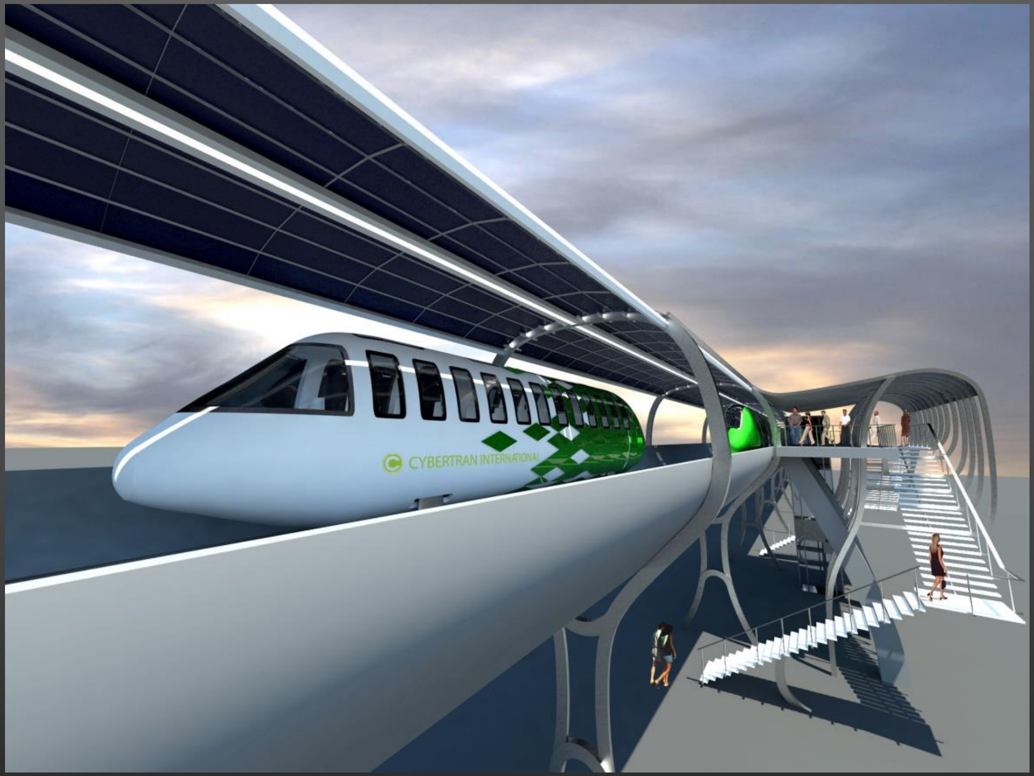
CyberTran International Inc. and ULRT



Neil Sinclair, Chairman

Alameda Transportation Commission

Technical Advisory Committee 10/4/2018

Conventional rail transit technology is expensive - many systems are costing over $100 M/mile

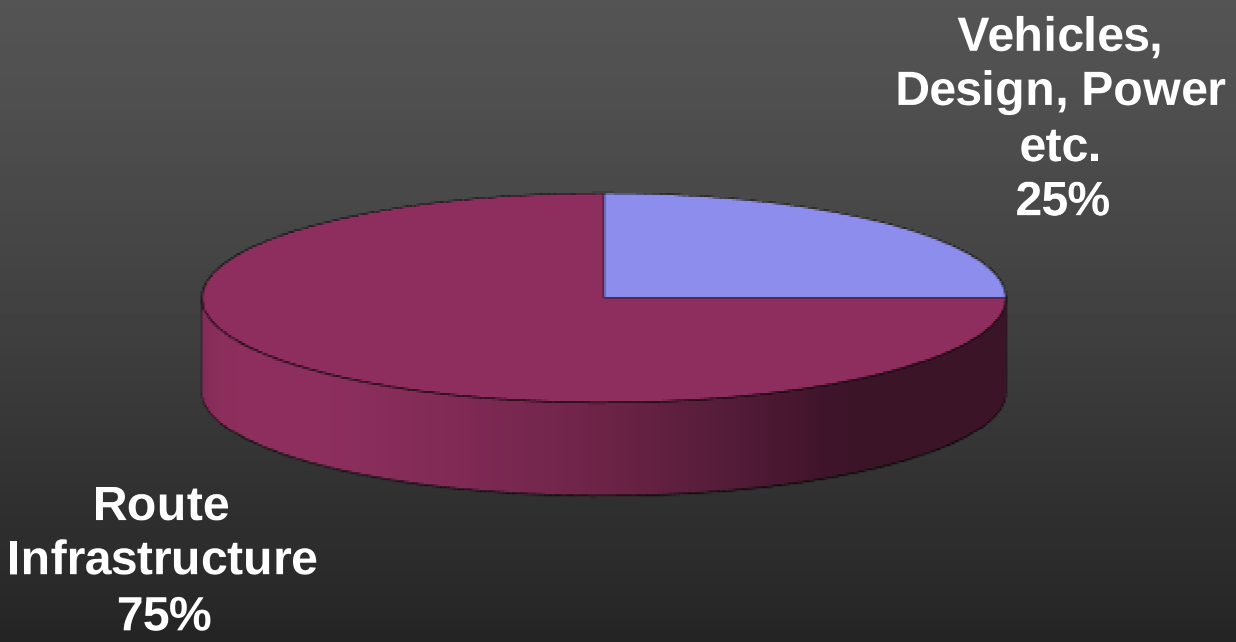
System	Type	Construction Complete	Gross Cost	Track miles	Capital Cost / Mile
EBART	Diesel Multiple Unit	Future	$1.3B	21	**$61M**
SFO AirTrain	Airport Circulator	2003	$430M	6	**$71M**
Nanjing Metro	Light Rail	2005	$1B	13.5	**$74M**
Shenzhen Metro	Light Rail	2004	$1.5B	13.5	**$115M**
LA Gold Line	Light Rail	Future	$899M	6	**$150M**
OAC	Airport Circulator	Future	$496M	3.1	**$160M**
Linimo	Low-speed Maglev	2005	$955M	5.5	**$174M**
Las Vegas Monorail	Monorail	2005	$730M	4	**$182M**
BART to Livermore	BART	Future	$1.2B	5	**$240M**
BART to San Jose	BART	Future	$4.7B	16.7	**$281M**

Idaho National Laboratory

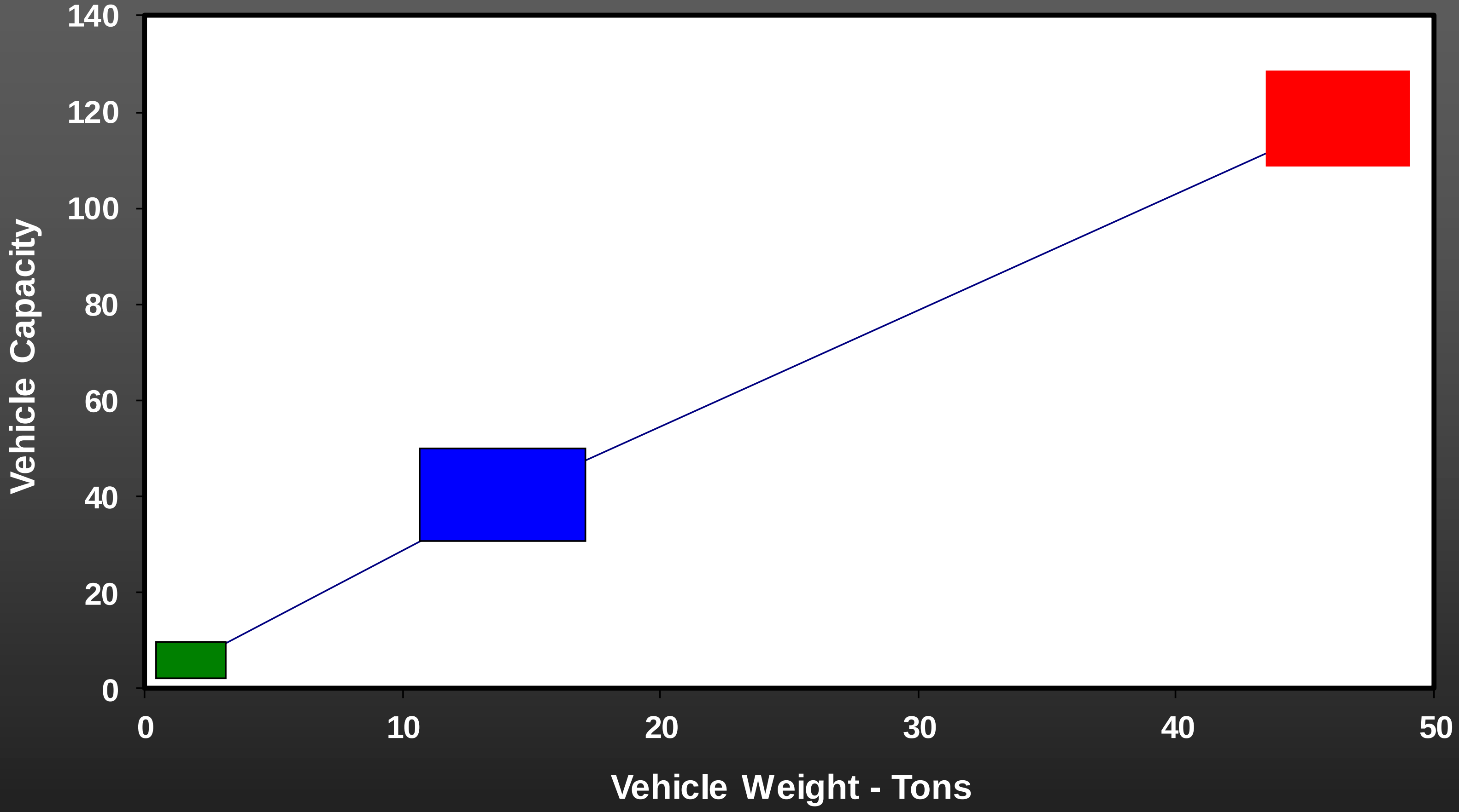
- Research indicated high cost of passenger rail and catalyzed system engineering project

- System Engineering Goals
  - Reduced Cost
  - Improved Service
  - Increased Safety

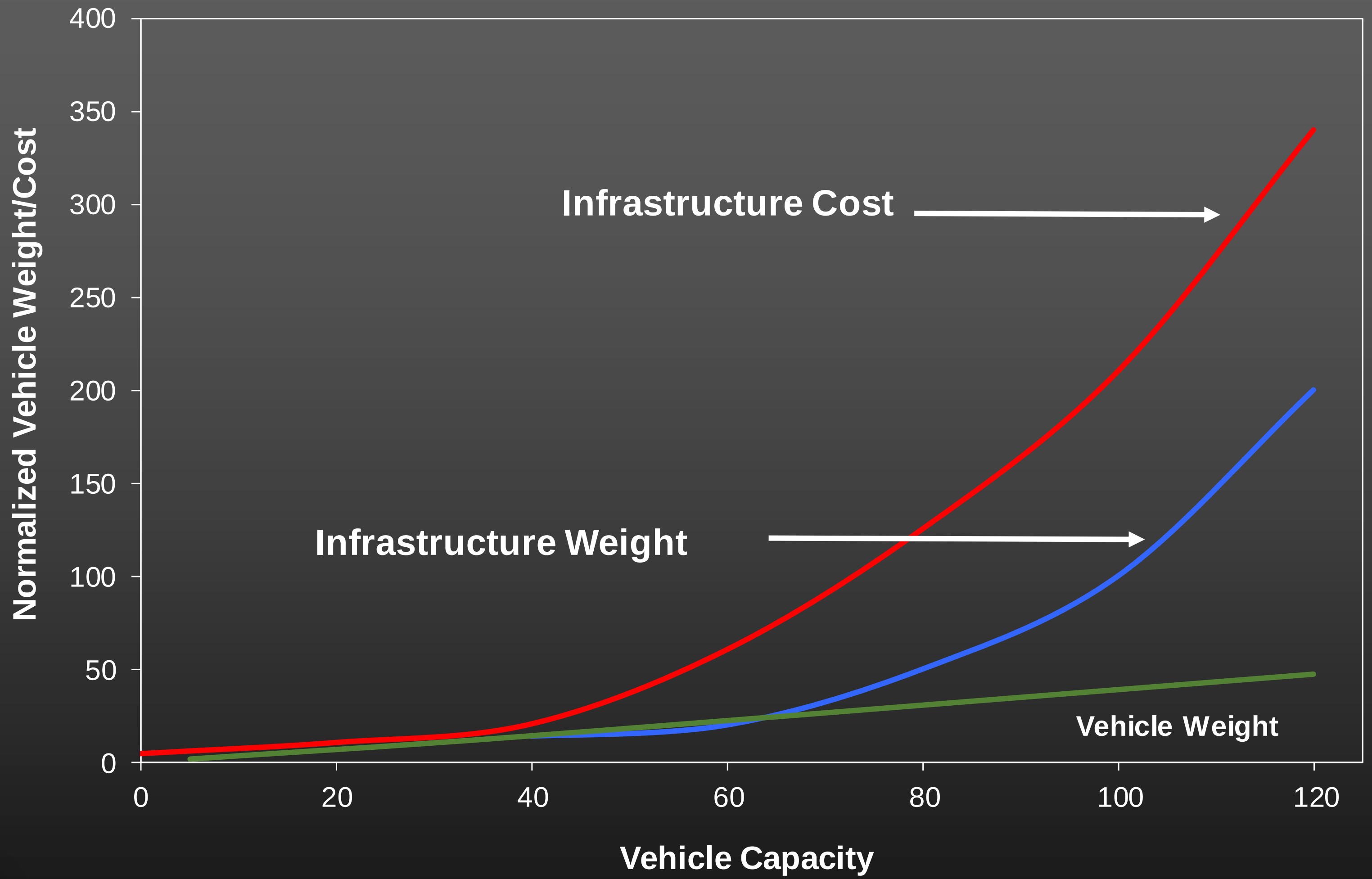
Typical Rail
Capital Cost Breakdown



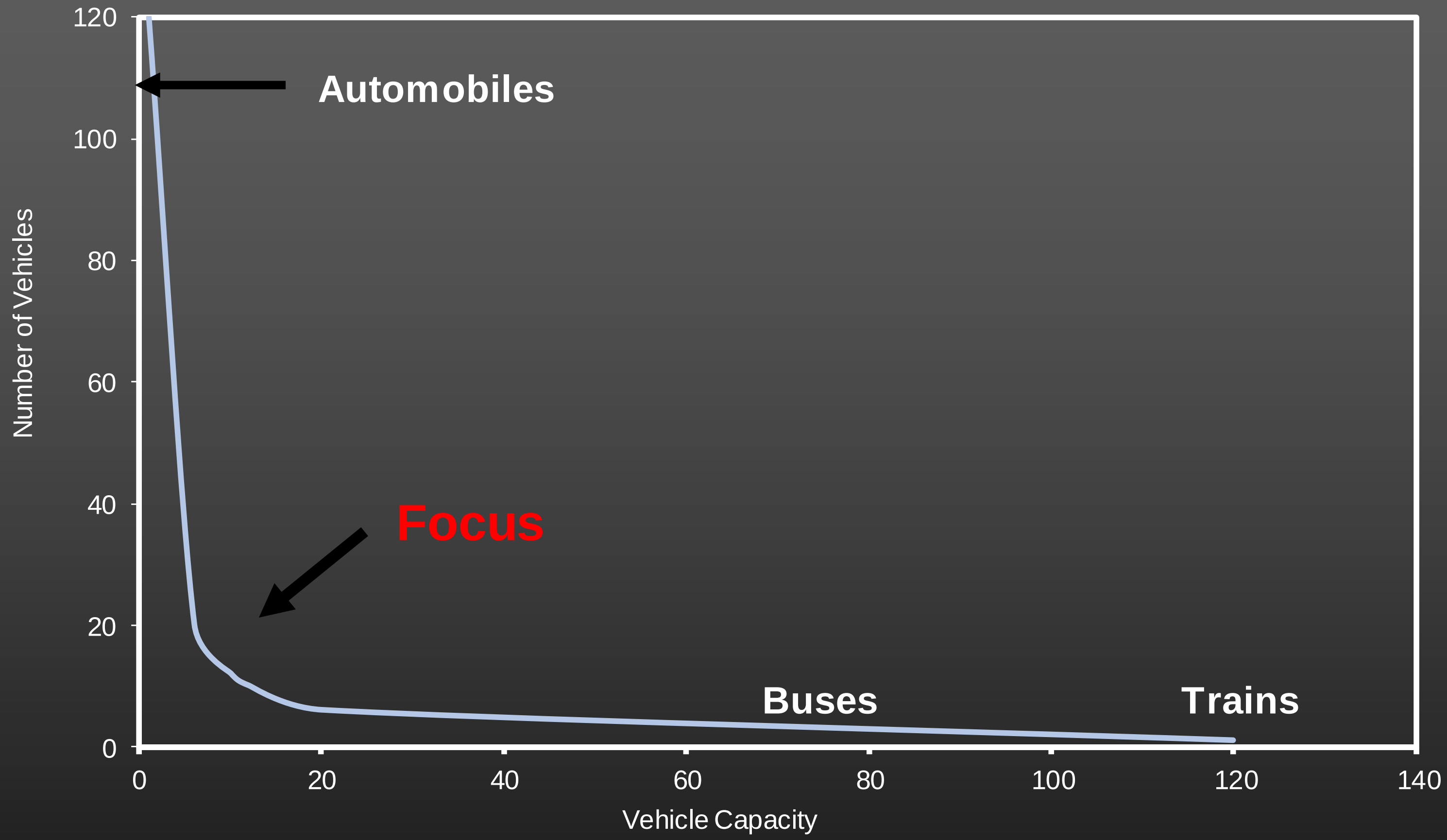
Passenger Rail Is Heavy



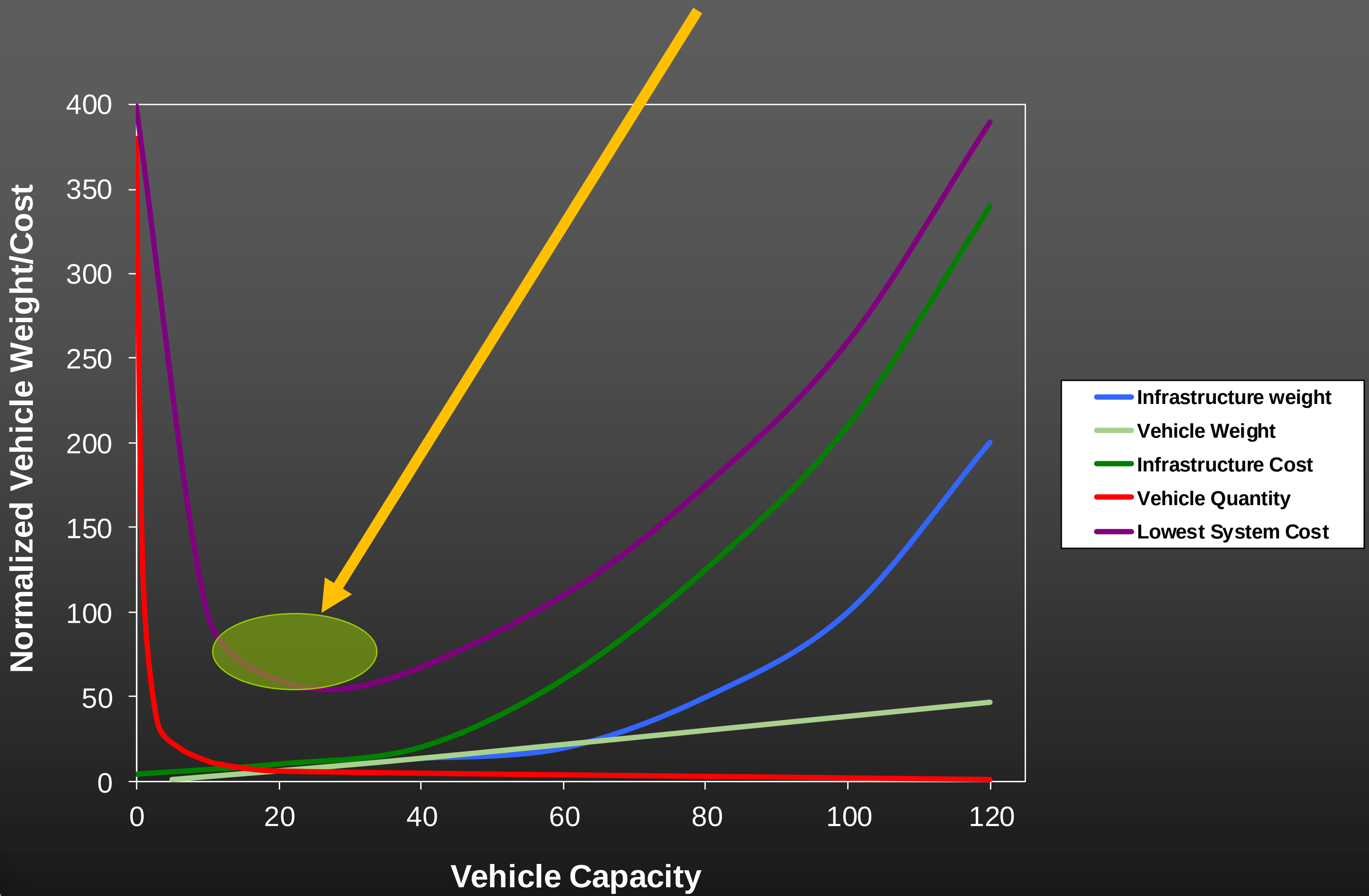
Cost of Weight



How Many Vehicles to Carry 120 Passengers?

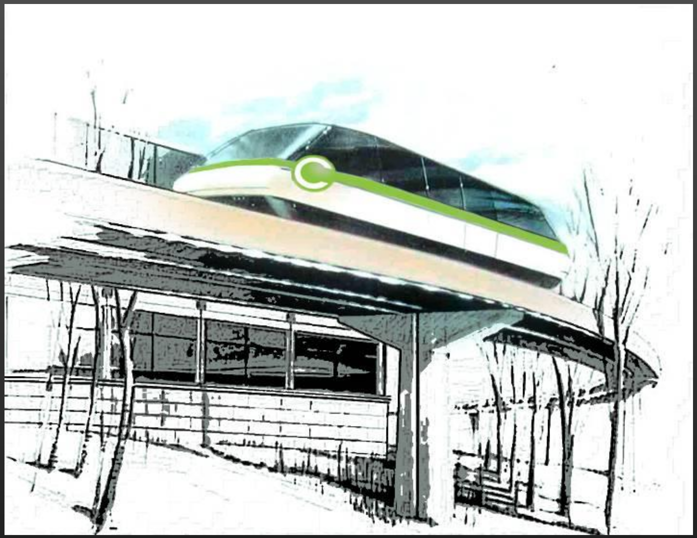


Lowest System Cost



Based on analysis, design parameters established

- 6 to 30 Passengers per Vehicle
- Computer Controlled - Low Operating and Capital Costs
- Lightweight - 10,000 Pounds
- Low Cost, Proven Materials and Technologies
- Steel Wheel on Steel Rail - Most Energy Efficient, High-speed Capable
- Electrically Powered – Clean, Efficient, Renewable Energy Sources



Lightweight Guideway

Easy and quick to install
No ground clearing
Smaller foundations

Components prefabricated offsite
Can be built off the end of itself
Grade separated for safety

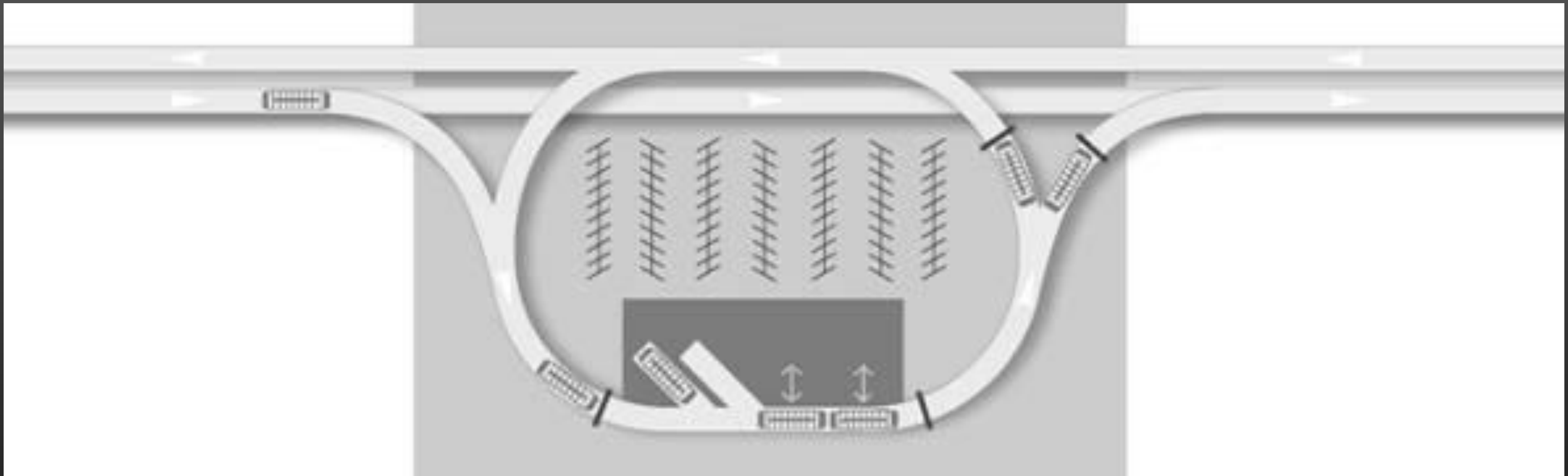
Off Line Stations

Increased line capacity

On-demand service

Network capable

Direct-to-destination travel



Initial Development at INL – Cost Analyses

- Morrison-Knudsen, 1991, $5.8 M/mile
- Parsons, Brinckerhoff, Quade, and Douglas, 1995, $2.8 M/mile (guideway only)
- Applied Engineering Services, 1995, $5M/mile
- BART all-inclusive cost, 2007, $25 M/mile

Idaho National Laboratory

Initial Development at INL – Testing

- **Prototype vehicle and 2-mile track built and tested at 60 mph**
- **2nd prototype vehicle built and tested in curves**
- **High-speed simulation, American Assn. of Railroads**
- **Further system design and testing**

Technology transferred from US DOE to CyberTran International, Inc.

CTI Development – Analysis

- **HNTB seismic analysis**
- **BART/CNCI investigative study including cost, civil structure design, and operational capability**
- **Technology program development**

Reductions in Energy Consumption & Global Warming

High energy efficiencies

High operational efficiency

90% lower CO_2 than cars

Can be fully solar powered

Other Environmental Benefits

Avoided air pollution

Greatly reduced vehicle scrap

Reduced ecological impacts

Reduced land consumption




Social Benefits

product **sustainability** markets product development implementation strategy management financials appendices

Discourages urban sprawl

Increases social equity

Reduces auto collisions

Improves walking and biking environment

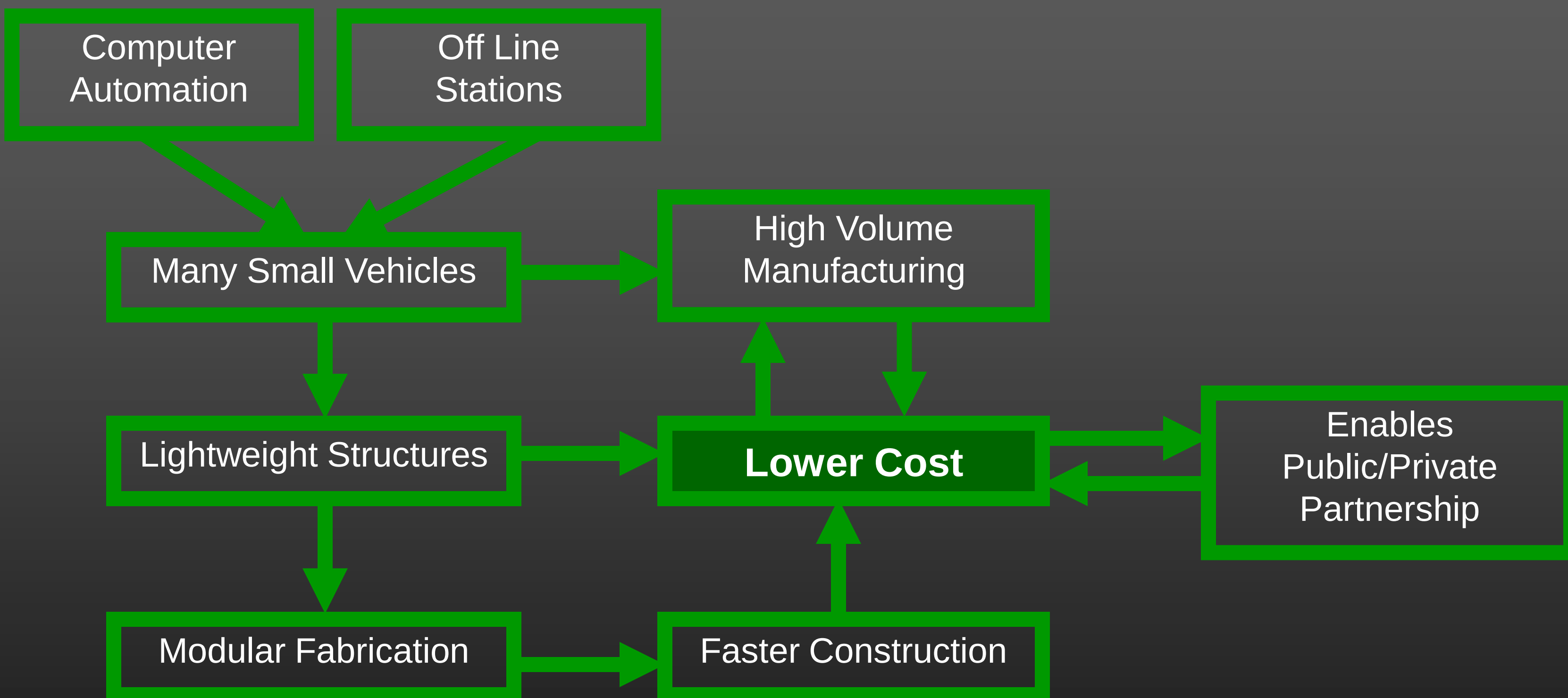
External Economic Benefits

Reduced consumption of oil

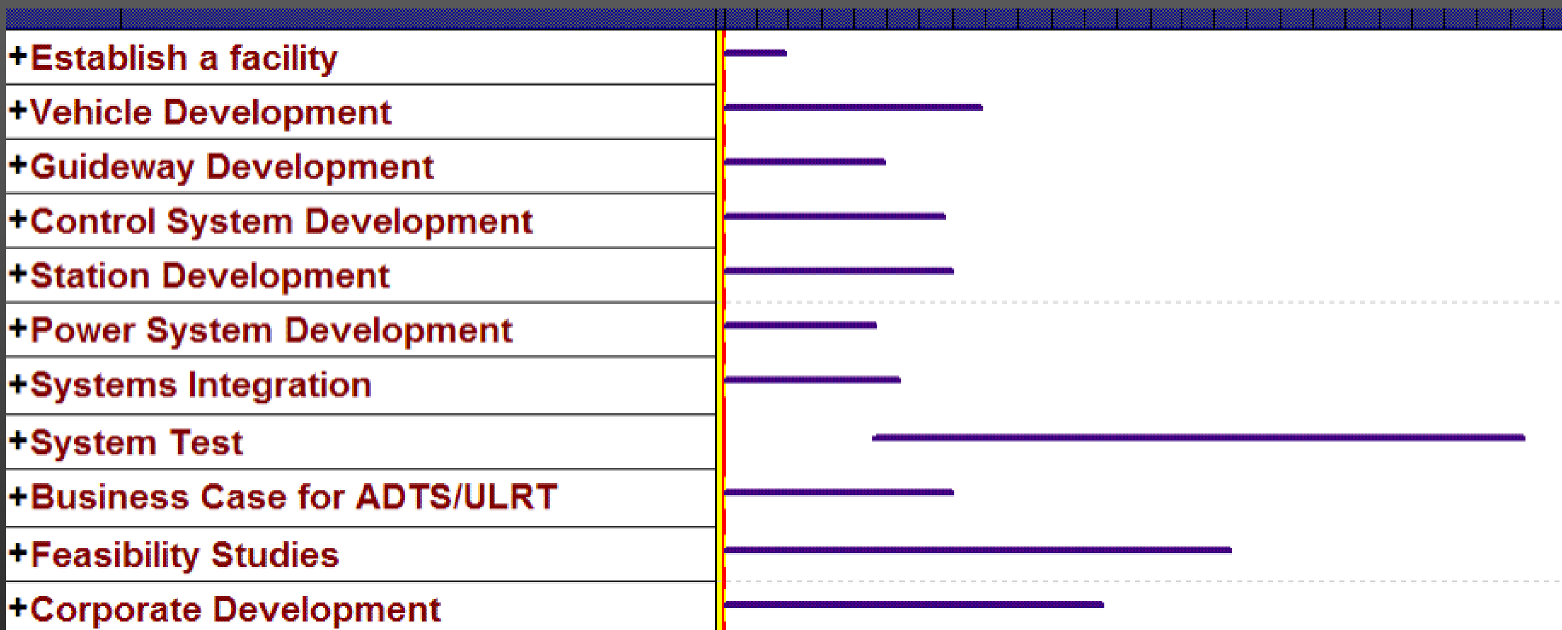
Lower traffic congestion

Avoids new automobile infrastructure

CyberTran as Henry Ford
Mass Producing Mass Transit



Final Integration and Test Program (FITP)



Product Development Plan

FITP

Low Speed Test & Cert

Low Speed Commercial

High Density Rapid Transit Develop

High Density Rapid Transit Test & Cert

High Density Rapid Transit Commercial

High Speed Develop

High Speed Test & Cert

High Speed Commercial

CyberTran Intellectual Property

- IP development in:
  - Vehicle
  - Controls
  - Guideway
  - Stations
  - Power
  - Maintenance and Monitoring
  -
- US DOE intellectual property purchased by CyberTran International
- Currently 8 US patents issued including ULRT system patent

CyberTran Key Executives

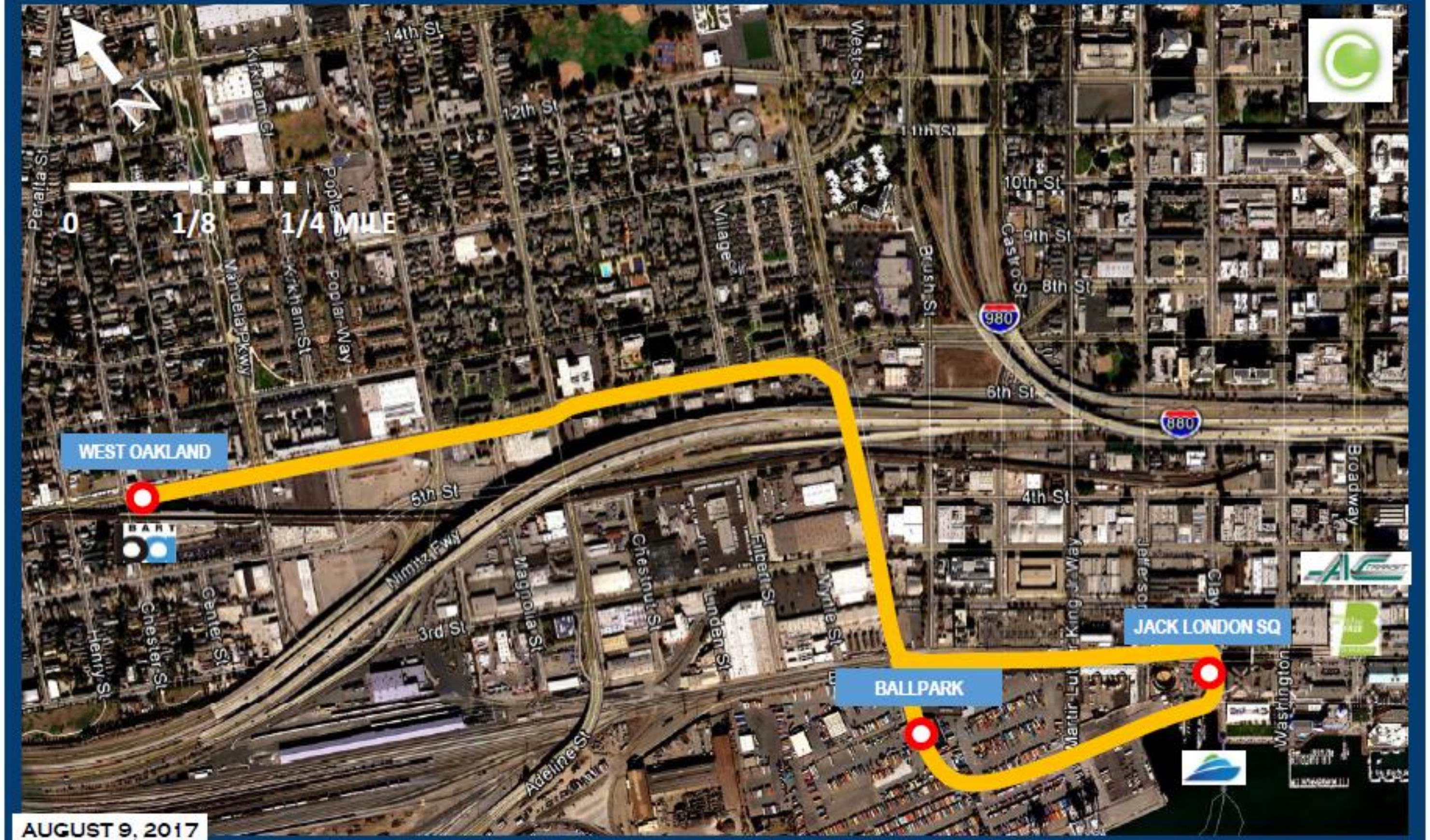
- Neil Sinclair, Chairman
  - Advanced transportation systems business executive since 1990.
- Dexter Vizinau, President
  - Government Relations Specialist, 22 years at IBM
- Harry Burt, Board Secretary
  - Rail vehicle and system engineering management since 1969

Consultants and Partners

Development Team

• Deterministic Systems Inc	Control
• StanTec	A and E
• Todd Jersey Architecture	Architecture
• Interfleet	Rail Systems
• Schwweitzer Engineering Labs	Power Systems
• BayPac	Civil Engineering
• University of California, Berkeley	Advanced Control
• Lawrence Berkeley Laboratory	Power Systems
• Lawrence Livermore/Sandia Natl. Lab	Safety, Vehicle

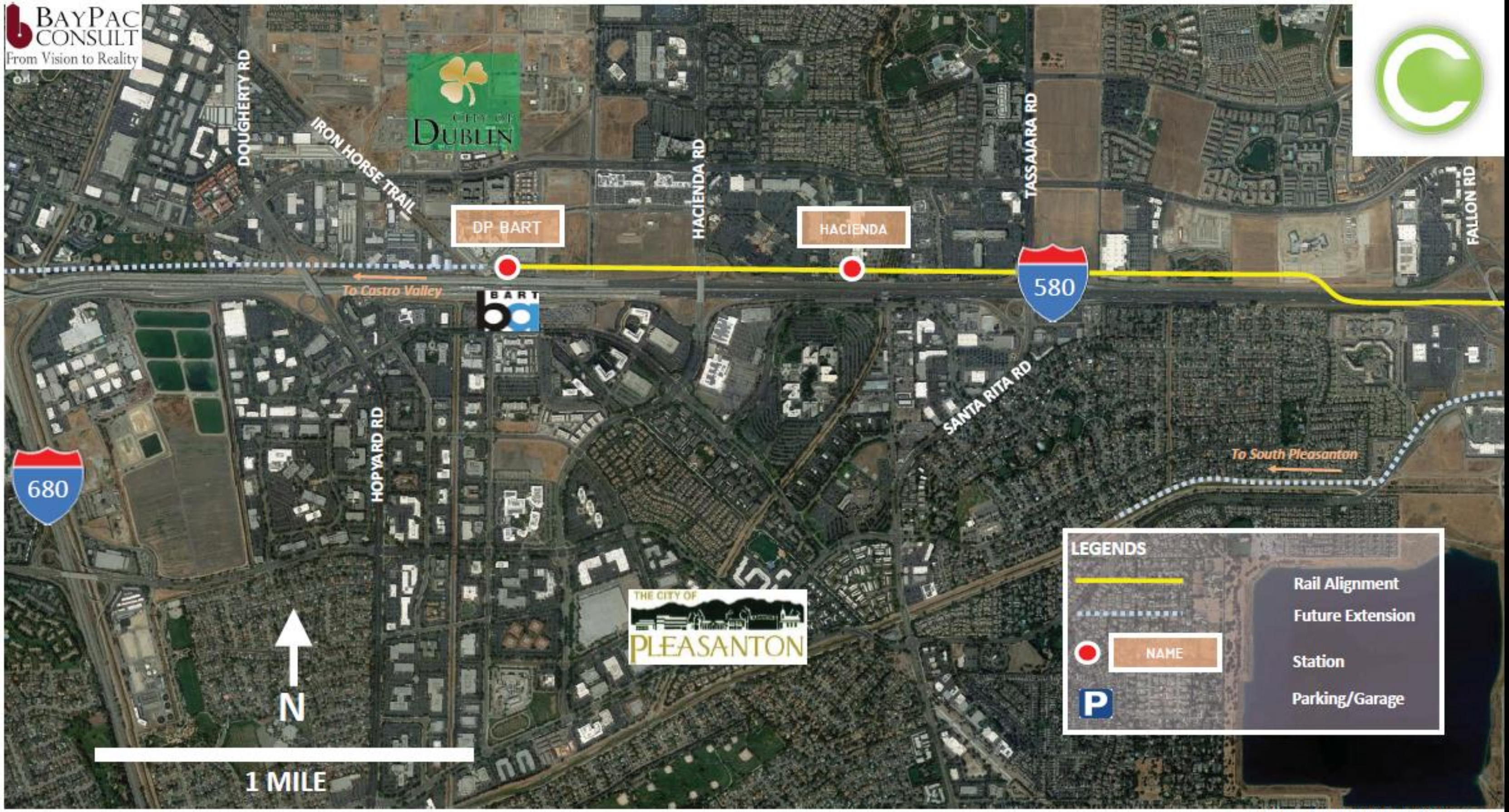
PORT OF OAKLAND
Jack London Square ULRT BART Connector System Map



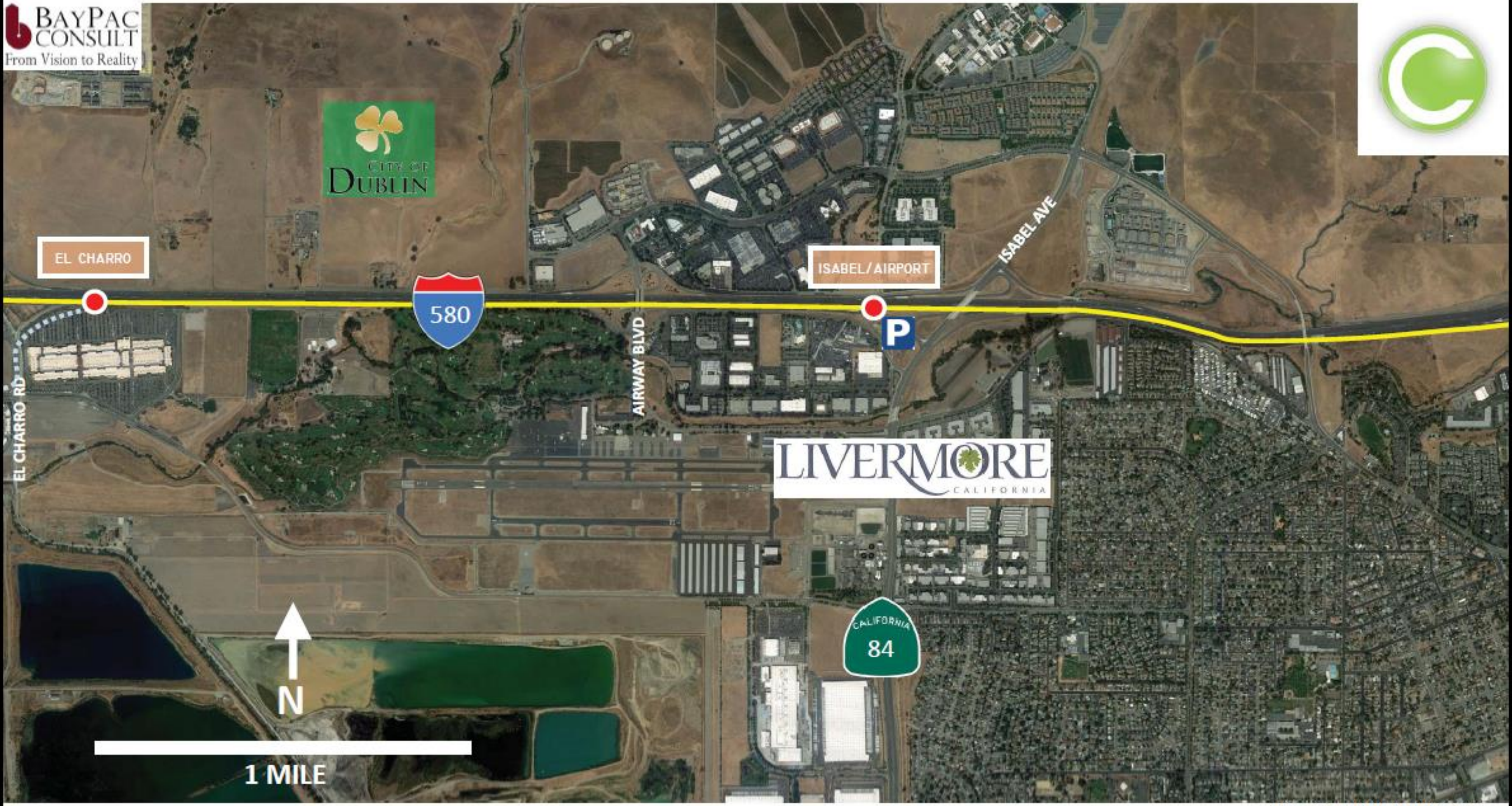
AUGUST 9, 2017

SOUTH BAY MOBILITY LINK

Dublin to Livermore



Dublin to Livermore cont.



Dublin to Livermore cont.

Valley Mobility Link – LLNL to Tracy