VICTOR VALLEY TRANSIT AUTHORITY
REGULAR MEETING OF
THE BOARD OF DIRECTORS
Monday, July 20, 2026, 9:30 A.M.

Victor Valley Transit Authority
17150 Smoke Tree Street
Hesperia, CA 92345

Victor Valley Transit Authority Board of Directors

Liz Beccera, Chair, City Victorville
Allison Lee, Vice-Chair, City of Hesperia
James Noble, Director, City of Barstow
Paul Cook, Director, County of San Bernardino
Dawn Rowe, Director, County of San Bernardino
Gabriel Reyes, Director, City of Adelanto
Curt Emick, Director, Town of Apple Valley

MISSION STATEMENT

Our mission is to serve the community with excellent public transportation services in terms of quality, efficiency, and responsiveness.

AGENDA

The Board of Directors meeting facility is accessible to people with disabilities. If assistive listening devices or other auxiliary aids or services are needed in order to participate in the public meeting, requests should be made through the Clerk of the Board at least three (3) business days prior to the Board meeting. The Clerk's telephone number is 760-948-3262 x102, (voice) or for Telephone Device for the Deaf (TDD) service, begin by calling 711 and provide the VVTA phone number and the office is located at 17150 Smoke Tree Street, Hesperia, CA. This agenda will be available and posted: Friday, July 10, 2026.

CALL TO ORDER
ROLL CALL
PLEDGE OF ALLEGIANCE

ANNOUNCEMENTS

PUBLIC COMMENTS

This is the time the Board will hear public comments regarding items on the agenda, not on the agenda, or the consent calendar. Individuals who wish to speak to the Board regarding agenda items or during public comments should fill out a comment card and submit it to the Clerk of the Board. Each speaker is allowed three (3) minutes to present their comments. The Board will not remark on public comments; however, each comment will be taken into consideration by VVTA.

CONSENT CALENDAR

Consent Calendar items shall be adopted by a single vote unless removed for discussion by Board member request.

Pg. 9 ***Item #1:*** **Minutes from the Public Hearing and Regular Meeting of The Board of Directors Conducted June 15, 2026.**
Recommendation: Move for approval.
Presented by: None.

Pg. 19 ***Item #2:*** **Warrants for May 2026.**
Recommendation: Move for approval.
Presented by: None.

REPORTS

Pg. 25 ***Item #3***: **Management Reports – Verbal Report from Chief Executive Officer.**
Recommendation: Information item only.
Presented by: Rod Goldman, CEO.

Pg. 37 ***Item #4***: **Transit Operations Division, Victor Valley Detail Report.**
Recommendation: Information item only.
Presented by: VVTA Transit Operations Division Victor Valley Detail.

Pg. 41 ***Item #5:*** **Hydrogen Fueling Station Update.**
Recommendation: Information item only.
Presented by: Dustin Strandberg, CMO.

INFORMATION ITEM

Pg. 45 ***Item #6*: Opening of Public Comment Period for Proposed FY27 Fare Adjustment.**
Recommendation: Information item only.
Presented by: Rod Goldman, CEO.

ACTION ITEMS

Pg. 51 ***Item #7:* Authorize the Purchase of Additional Battery Strings and Amend the VVTA TDA Claim to Re-Allocate Surplus Local Transportation Funds (LTF).**
Recommendation: Authorize the Purchase of Additional Battery Strings and Amend the VVTA TDA Claim to Re-Allocate Surplus Local Transportation Funds.
Presented by: Megan Christian, Financial Analyst, Grants.

Pg. 55 ***Item #8:* Release IFB 2027-01 – Construction Services for Building Modifications for Maintaining Hydrogen Fuel Cell Buses.**
Recommendation: Approve the release of IFB 2027-01 Construction Services for Building Modifications for Maintaining Hydrogen Fuel Cell Buses.
Presented by: Christine Plasting, Procurement Manager.

BOARD OF DIRECTORS COMMENTS

CORRESPONDENCE AND PRESS CLIPS

DATE OF NEXT MEETING

Monday, August 17, 2026, at 9:30 AM
At Barstow City Council Chambers
220 East Mountain View Street
Barstow, CA 92311

ADJOURNMENT

Victor Valley Transit Acronym List
Page 1 of 2

ADA	Americans with Disabilities Act
APTA	American Public Transit Association
AQMP	Air Quality Management Plan
BABA	Build America, Buy America
BAFO	Best and Final Offer
BEB	Battery Electric Bus
BOE	Board of Equalization
CALTRANS	California Department of Transportation
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFP	Call for Projects
CIP	Capital Improvement Program
CMAQ	Congestion Mitigation and Air Quality
CMP	Congestion Management Program
CNG	Compressed Natural Gas
COG	Council of Governments
CSAC	California State Association of Counties
CTC	California Transportation Commission
CTC	County Transportation Commission
CTP	Comprehensive Transportation Plan
CTSA	Consolidated Transportation Services Agency
DAC	Disadvantaged Communities
DBE	Disadvantaged Business Enterprise
DBELO	Disadvantaged Business Enterprise Liaison Officer
DOD	Department of Defense
DOT	Department of Transportation
E&H	Elderly and Handicapped
EEM	Environmental Enhancement and Mitigation
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
ETC	Employee Transportation Coordinator
FAST	Fixing America's Surface Transportation ACT
FCEB	Fuel Cell Electric Bus (Hydrogen)
FEIS	Final Environmental Impact Statements
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GIMS	Geographic Information Mapping Systems
GIS	Geographic Information Systems
GPS	Global Positioning System
HOV	High-Occupancy Vehicle
HVIP	Hybrid and Zero-Emission Truck and Bus Voucher Incentive Program.
IAS-FFA	Independent Auditors Statement for Federal Funding Allocation
IIJA	Infrastructure Investment and Jobs Act
ITS	Intelligent Transportation Systems
JPA	Joint Powers Authority
LAP	Language Assistance Plan
LCFS	Low Carbon Fuel Standard
LCTOP	Low Carbon Transit Operations Program
LD	Liquidated Damages
LEED	Leadership in Energy and Environmental Design
LEP	Limited English Proficiency

Victor Valley Transit Acronym List

LTF	Local Transportation Fund
MaaS	Mobility-as-a-Service
MBTA	Morongo Basin Transit Authority
MDAQMD	Mojave Desert Air Quality Management District
MDT	Mobile Display Terminal
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Planning
MTBP	Mass Transit Benefit Program
NEPA	National Environmental Policy Act of 1969
NOFO	Notice of Funding Opportunity
NTD	National Transit Database
OCTA	Orange County Transportation Authority
OWP	Overall Work Program
PASTACC	Public and Specialized Transportation Advisory and Coordinating Council
PCA	Personal Care Attendant
PTMISEA	Public Transportation Modernization Improvement and Service Enhancement Account.
POP	Program of Projects
RCTC	Riverside County Transportation Commission
RDA	Redevelopment Agency
RTAP	Rural Technical Assistance Program
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agencies
SaaS	Software as a Service
SBCTA	San Bernardino County Transportation Authority (formerly SANBAG)
SCAG	Southern California Association of Governments
SGIP	Self-Generation Incentive Program
SOV	Single-Occupant Vehicle
SRTP	Short Range Transit Plan
STAF	State Transit Assistance Funds
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TAC	Technical Advisory Committee
TAM	Transit Asset Management
TCM	Transportation Control Measure
TDA	Transportation Development Act
TEA	Transportation Enhancement Activities
TEAM	Transportation Electronic Award and Management
TNC	Transportation Network Company
TOCP	Transit Operating and Capital Plan
TrAMS	Transit Award and Management System
TREP	Transportation Reimbursement Escort Program
TRIP	Transportation Reimbursement Incentive Program
TSP	Transit Signal Priority
TSSSDRA	Transit System Safety, Security and Disaster Response Account
ULEV	Ultra Low Emission Vehicle
UZAs	Urbanized Areas
VOMS	Vehicles Operated in Maximum Service
ZEB	Zero Emission Bus
ZEV	Zero Emission Vehicle

VICTOR VALLEY TRANSIT AUTHORITY

MISSION STATEMENT

Our mission is to serve the community with excellent public transportation services in terms of quality, efficiency, and effectiveness.

QUALITY

To increase ridership and community support by exceeding expectations.

EFFICIENCY

To maintain an efficient operation that represents a highly valued service.

RESPONSIVENESS

To provide services and facilities which are responsive to the needs of the community.

Victor Valley Transit Authority
Meeting Procedures

The Ralph M. Brown Act is the state law which guarantees the public's right to attend and participate in meetings of local legislative bodies. These rules have been adopted by the Victor Valley Transit Authority (VVTA) Board of Directors in accordance with the Brown Act, Government Code 54950 et seq., and shall apply at all meetings of the (VVTA) Board of Directors.

1. **Agendas** - All agendas are posted at the VVTA Administrative offices, and the Victorville, Hesperia, Barstow and Apple Valley city/town halls at least 72 hours in advance of the meeting. Staff reports related to agenda items may be reviewed at the VVTA Administrative offices located at 17150 Smoke Tree Street. Hesperia, CA 92345.
2. **Agenda Actions** - Items listed on both the "Consent Calendar" and "Action/Discussion Items" contain suggested actions. The Board of Directors will generally consider items in the order listed on the agenda. However items may be considered in any order. New agenda items can be added and action taken by two- thirds vote of the Board of Directors.
3. **Closed Session Agenda Items** - Consideration of closed session items exclude members of the public. These items include issues related to personnel, ending litigation, labor negotiations and real estate negotiations. Prior to each closed session, the Chair will announce the subject matter of the closed session. If action is taken in closed session, the Chair may report the action to the public at the conclusion of the closed session.
4. **Public Testimony on an Item** - Members of the public are afforded an opportunity to comment on any listed item. Individuals wishing to address the Board of Directors should complete a "Request to Speak" form. A form must be completed for each item an individual wishes to speak on. When recognized by the Chair, speakers should be prepared to step forward and announce their name and address for the record. In the interest of facilitating the business of the Board, speakers are limited to three (3) minutes on each item. Additionally, a twelve (12) minute limitation is established for the total amount of time any one individual may address the Board at any one meeting. The Chair or a majority of the Board may establish a different time limit as appropriate, and parties to agenda items shall not be subject to the time limitations. If there is a Consent Calendar, it is considered a single item; thus the three (3) minute rule applies. Consent Calendar items can be pulled at Board member request and will be brought up individually at the specified time in the agenda allowing further public comment on those items.
5. **Public Comment** - At the beginning of the agenda an opportunity is also provided for members of the public to speak on any subject within VVTA' s authority. Matters raised under "Public Comment" may not be acted upon at that meeting. The time limits established in Rule #4 still apply.
6. **Disruptive Conduct** - If any meeting of the Board is willfully disrupted by a person or by a group of persons so as to render the orderly conduct of the meeting impossible, the Chair may recess the meeting or order the person, group or groups of persons willfully disrupting the meeting to leave the meeting or to be removed from the meeting. Disruptive conduct includes addressing the Board without first being recognized, not addressing the subject before the Board, repetitiously addressing the same subject, failing to relinquish the podium when requested to do so, or otherwise preventing the Board from conducting its meeting in an orderly manner.

Please be aware that a NO SMOKING policy has been established for VVTA meetings. Your cooperation is appreciated!

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AGENDA ITEM ONE

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VICTOR VALLEY TRANSIT AUTHORITY

AGENDA MATTER

Minutes from the Public Hearing and Regular Meeting of the Board of Directors Conducted on June 15, 2026.

SUMMARY STATEMENT

The following are copies of the minutes from the Public Hearing and Regular Meeting of the Board of Directors conducted on June 15, 2026.

RECOMMENDED ACTION

Move for approval.

PRESENTED BY	FISCAL IMPACT	MEETING DATE	ITEM NUMBER
Debi Albin, Clerk of the Board	N/A	July 20, 2026	1

VICTOR VALLEY TRANSIT
PUBLIC HEARING AND REGULAR MEETING OF THE
BOARD OF DIRECTORS

June 15, 2026
MINUTES

CALL TO ORDER

The Public Hearing and Regular Meeting of the Board of Directors of the Victor Valley Transit Authority was called to order at 9:30 a.m. by Chair Becerra.

ROLL CALL

Board Members Present: Chair Liz Becerra
Vice-Chair Allison Lee
Director James Noble
Director Gabriel Reyes
Alternate Director CJ Porter
Alternate Director Sam Shoup

Staff Members Present:

Juan Robinson, City of Victorville
Adam Ebright, County Counsel
Rod Goldman, VVTA
Maged Azer, VVTA
Chris Ackerman, VVTA
Marie Downing, VVTA
Christine Plasting, VVTA
Kristian Ibarra, VVTA
Jazmin Castro, VVTA
Sylvia Abadeer, VVTA
Nija Enos, VVTA
Willy Perez, Keolis
Hunab Garcia, Keolis
Nancie Goff, VVTA
Sandye Martinez, VVTA
Debi Albin, VVTA
Tisha Lopez, VVTA
Craig Barnes, VVTA
Michelle Morris, VVTA
Sylvia Harris, VVTA
Dana Fleming, VVTA
Vaness Estrada, Keolis
Elizabeth White, VVTA
Jerry Perez, VVTA
Scott Rippee, Keolis
Corp. Devon Steuerwald, SBCOSD

PLEDGE OF ALLEGIANCE

Director Reyes led the audience in the pledge of allegiance.

ANNOUNCEMENTS

Ms. Goff recognized Craig Barnes, Senior Route Planner, for his 10th Anniversary with VVTA. Mr. Barnes came to VVTA with a wealth of knowledge that he has only expanded over the years. Congratulations to Mr. Barnes for 10 years of service.

Ms. Goff also presented a certificate for Employee of the Month to Hunab Garcia. Mr. Garcia is recognized for his outstanding teamwork. He is always willing to step and assist wherever and whenever he is needed. He demonstrates a positive attitude and offers his support to colleagues without hesitation.

Lastly, Ms. Goff shared updates from the National APTA Bus Roadeo that took place in Salt Lake City last month. Several VVTA representatives placed above other much larger agencies; a great showing for VVTA.

PUBLIC COMMENTS

None.

CONSENT CALENDAR

1. **Minutes from the Public Hearing and Regular Meeting of the Board of Directors Conducted May 18, 2026**
   Recommendation: Move for approval.
   Presented by: None.

2. **Warrants, April 2026.**
   Recommendation: Move for approval.
   Presented by: None.

A MOTION WAS MADE BY Director Reyes to approve the Consent Calendar and Seconded by Director Noble. The motion passed unanimously

REPORTS

3. **Management Reports for Hesperia and Barstow Divisions – Verbal Report from Chief Executive Officer.**
   Recommendation: Information item only.
   Presented by: Nancie Goff, CEO.

Ms. Goff shared fluctuating in ridership numbers, and, in an effort to keep things short due to the long agenda, said she would not verbally review the on-time performance and closed the Management reports.

4. **Victor Valley Transit Authority Sheriff's Division Unit Verbal Report.**
   Recommendation: Information item only.
   Presented by: VVTA, Sheriff Division Unit.

Corp. Steuerwald stated that during the month of May, the Transit Division saw 2,500 public contacts, 65 arrests, 11 uniformed bus rides, 307 bus stop checks, 75 reports generated and 140 citations issued.

Corp. Steuerwald shared that Security Guard Kennedy displayed her attentiveness and professionalism during an incident at the VVTA on May 16, 2026. Ms. Kennedy noticed what appeared to be a firearm in the waistband of a juvenile boarding a bus. She immediately contacted law enforcement and discreetly advised the bus driver to delay departure until deputies could arrive and assess the situation. Deputies later determined that the item was a plastic replica firearm being carried by a 9-year-old child. The

juvenile was shortly reunited with family members. Although the item was not a real firearm, Ms. Kennedy's attention to detail helped to ensure the safety of everyone at the transit center.

On May 31, 2026, Deputy Chapdelaine was patrolling the transit center when he was flagged down by a bus operator regarding an intoxicated passenger who refused to exit the bus. Through his investigation, he determined the passenger was intoxicated to the point of being unable to care for his own safety and was arrested. Chapdelaine's quick response and decisive action helped resolve the issue, allowing the bus operator to resume service with minimal delay and continue the route safely. Bus operators expressed their appreciation for his quick assistance in handling the situation.

ACTION ITEMS

5. **Approve the Draft Fiscal Year 2026-27 Annual Operating and Capital Budget.**
Recommendation: 1) In the absence of any substantive comments or additional considerations, approve the Federally Funded Program of Projects and the FY 2026-27 Annual Operating and Capital Budget as published and adopt Resolution 26-02; 2) Approve the updated attached Publicly Available Pay Schedules (PAPS) for FY27 reflecting the 2.9% CPI incorporated into the adopted FY27 Budget.
Presented by: Maged Azer, CFO.

Mr. Azer went through summary pages of the FY27 budget that was presented and well received last month at the May 18, 2026, Board meeting. The budget was developed to ensure continued delivery of comprehensive bus services amid inflationary pressures and contractual rate increases. Mr. Azer stated that there were no changes from the draft. Mr. Azer highlighted the modest 6% increase in this budget over FY26, stating that it is mainly due to increased operating costs.

The Board had a brief discussion and thanked Mr. Azer for his hard work on this budget.

Open Public Hearing:	9:55 am
Hear Testimony:	None
Close Public Hearing:	9:56am

There were no comments submitted during the review period and no requests from the public to speak.

A MOTION WAS MADE BY Director Noble to approve the recommended action and Seconded by Vice-Chair Lee. The motion passed unanimously with a roll call vote of 6 aye to 0 nay.

AYES: 6
NOES: 0
ABSENT: 1
ABSTAIN: 0

6. **Amend the VVTA TDA Claim to re-allocate the balance of STA funds from Barstow Facility.**
Recommendation: Amend the VVTA TDA Claim to re-allocate the balance of unobligated STA funds from Barstow Facility FF&E to a general FF&E account.
Presented by: Megan Christian, Financial Analyst, Grants.

Ms. Downing shared that this item requests approval to reallocate $159,223 in unobligated STA funds from the Barstow Facility FF&E account to a general account that includes all the VVTA facilities. While these FF&E fundings are still available for Barstow, funds for the Hesperia facility have been fully utilized. The benefit of this amendment is increased flexibility, allowing staff to address facility needs where they arise, including Barstow, and make the most effective use of available resources.

A MOTION WAS MADE BY Director Noble to approve the recommended action and Seconded by Alternate Director Shoup. The motion passed unanimously.

7. **Authorize the Chief Executive Officer to Execute the Funding Contracts for Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Awards.**
Recommendation: Authorize the Chief Executive Officer to Execute the Funding Contracts for Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Awards.
Presented by: Megan Christian, Financial Analyst, Grants.

Ms. Downing said this action gives authorization for the CEO to execute funding agreements for the Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Program. This is an important milestone for VVTA because VVTA is now the designated direct recipient of Section 5310 funds for our area and is responsible for administering these federal funds locally.

The Board approved the 5310 Program Management Plan in May 2025, and FTA subsequently designated VVTA as the direct recipient of these funds in August 2025. As the designated recipient, VVTA is responsible for program administration, oversight, compliance monitoring, reporting, and ensuring funds are distributed to eligible organizations that provide transportation services to seniors and individuals with disabilities.

Ms. Downing added that working with SBCTA and AMMA Transit Planning, applications were evaluated and scored, and funding recommendations were developed. The projects recommended for funding are listed in your Board Packet. Overall, the total program funding is approximately $865,368; as the designated recipient, VVTA will receive $43,268 for VVTA's administrative services allocation.

A MOTION WAS MADE BY Director Noble to approve the recommended action and Seconded by Director Reyes. The motion passed unanimously.

8. **Confirm the Approval of Cost-of-Living Adjustment (CPI) percentages for Fiscal Years 2022 – 2026 and Compensation Documents to Ensure CalPERS Compliance.**
   Recommendation: Confirm the Approval of Cost-of-Living Adjustment (CPI) percentages for Fiscal Years 2022 – 2026 and Compensation Documents to Comply with CalPERS Requirements and submit the approved required documents to CalPERS.
   Presented by: Sylvia Abadeer, Senior HR Manager.

Ms. Abadeer explained that during a compensation review, the California Public Employees' Retirement System ("CalPERS") Compliance Office noted a procedural administrative oversight. While the Cost-of-Living Adjustments (CPI) for prior fiscal years 2022 through 2026 were publicly presented to the VVTA Board of Directors and incorporated into the annual budget approval process, CalPERS requires compensation-related items to be approved by a separate line item in the Board actions.

Ms. Abadeer stated that the corrective action includes:

- Side Letter: Documenting CPI percentage increases for FY22 through FY26.
- Publicly Available Pay Schedules (PAPS): Aligning past schedules with CalPERS reporting standards.
- Personnel Action Forms (PAFs): Updated for the individual employee reporting to the Board.
- Compensation Policy: A formal policy developed to comply with CalPERS requirements. This policy is already included in the updated employee Handbook.

Lastly, this action is purely administrative and causes no fiscal impact.

A MOTION WAS MADE BY Chair Becerra to approve the recommended action and Seconded by Director Noble. The motion passed unanimously.

9. **Comprehensive Update and Amendment of VVTA's Employee Handbook.**
   Recommendation: Approve and adopt the updated Employee Handbook as presented, authorizing the Chief Executive Officer (or designee) to implement the policies effective immediately, and rescind all prior conflicting handbook provisions.
   Presented by: Syliva Abadeer, Senior HR Manager.

Ms. Abadeer said that the last update for the VVTA Employee Policies and Procedures Handbook was approved in November of 2024. This update now complies with federal and state changes, satisfies CalPERS' requirements and improves efficiency. This update also incorporates results from a 2025 employee survey in order to clarify ambiguities. Included in these updates is an increase in VVTA's health benefits contribution toward employee costs from $2,000 to $2,500 enhancing the current employee benefit package. Lastly, Ms. Abadeer shared that this document will be brought back before the Board as more regulatory changes are published.

A MOTION WAS MADE BY Alternate Director Porter to approve the recommended action and Seconded by Director Noble. The motion passed unanimously.

10. **VVTA RFP 2026-06 San Bernardino Regional Vanpool Providers Award to Commute by Enterprise.**
Recommendation: Award Contract 2026-06 to Commute with Enterprise.
Presented by: Sandye Martinez, Procurement Supervisor.

Ms. Martinez explained to the Board that an RFP was issued on April 2, 2026, VVTA received 1 (one) proposal. This is due to 2 (two) Vanpool providers going out of business, leaving only Commuter by Enterprise as an available vendor.

A MOTION WAS MADE BY Director Reyes to approve the recommended action and Seconded by Director Noble. The motion passed unanimously.

11. **Board Discussion Regarding Amending the Calendar Year 2026 Calendar of Meetings.**
Recommendation: Follow the Direction of the Board, if any.
Presented by: Nancie Goff, CEO.

At the May 18, 2026, meeting, Chair Becerra inquired about the possibility of reducing the number of meetings in Barstow. The Board discussed a variety of options and came up with the Board action below.

A MOTION WAS MADE BY Chair Becerra to reduce the number of meetings taking place at the Barstow location from four meetings per year to two meetings per year, in February and August, thereby altering the remaining Calendar of Meetings by moving the November 2026 meeting from Barstow to Hesperia. Seconded by Alternate Director Porter. The motion passed with a roll call vote of 4 ayes and 2 nays.

AYES:	4
NOES:	2
ABSENT:	1
ABSTAIN:	0

BOARD OF DIRECTORS COMMENTS

Many of the Board members expressed their thanks for the hard work that VVTA staff put forward.

DATE OF NEXT MEETING

The next Board meeting will be on Monday July 20, 2026, at Victor Valley Transit Authority, 17150 Smoke Tree Street, Hesperia, CA 92345.

ADJOURNMENT

The meeting was adjourned at 10:49 am.

APPROVED: _____
Liz Becerra, Chair

ATTEST: _____
Debi Albin, Clerk of the Board

AGENDA ITEM TWO

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VICTOR VALLEY TRANSIT AUTHORITY

AGENDA MATTER

Payrolls and Warrants for May 2026.

SUMMARY STATEMENT

The following registers of Payrolls and Warrants have been audited as required by Section 37202 and 37208 of the Government code, and said documents are accurate and correct.

Agency's Gross Payroll for Administrative Employees

Payroll Date	Amount	Register#
05/01/26	$157,164.67	PR-124-05-26
05/15/26	$151,857.69	PR-131-05-26
05/29/26	$153,402.36	PR-132-05-26
Total Payroll	**$462,424.72**	

Agency's Register of Warrants

Register Date	Amount	Check /ACH#	Register #
5/07/26	$6,226,831.66	324/1-2989	AP-05-2026
5/14/26	$191,136.03	329/1-3009	AP-05-2026
5/27/26	$575,387.85	3010-3031	AP-05-2026
	$6,993,355.54		

RECOMMENDED ACTION

Approve VVTA's expenditures for May 2026.

PRESENTED BY	FISCAL IMPACT	MEETING DATE	ITEM NUMBER
Maged Azer, CFO	$7,455,780.26	July 20, 2026	2

Victor Valley Transit Authority
Check Register
May 1, 2026 - May 31, 2026

Check Number	Vendor	Date	Amount
00000324/1	New Flyer Of America	5/4/2026	$935,766.10
00000324/2	New Flyer Of America	5/4/2026	$235,715.42
00000325/1	New Flyer Of America	5/4/2026	$935,766.10
00000325/2	New Flyer Of America	5/4/2026	$235,715.42
2958	Kristian Ibarra	5/4/2026	$1,601.06
00000326/1	Keolis Transit Services, LLC	5/5/2026	$2,695,903.78
00000327/1	Keolis Transit Services, LLC	5/5/2026	$775,419.73
00000328/1	Abundant Living Family Church HD	5/6/2026	$940.00
00000328/2	Keolis Transit Services, LLC	5/6/2026	$17,000.00
00000328/3	RideCo US, Inc	5/6/2026	$180.93
00000328/4	San Bernardino County Sheriff's Department	5/6/2026	$245,709.00
2959	AECOM Technical Services, Inc.	5/7/2026	$9,974.14
2960	Aramark Refreshment Services, LLC	5/7/2026	$448.22
2961	California Transit Association	5/7/2026	$16,000.00
2962	CDW Government Inc	5/7/2026	$9,066.00
2963	Charter Communications	5/7/2026	$113.20
2964	Charter Communications	5/7/2026	$1,099.00
2965	Charter Communications	5/7/2026	$185.32
2966	Charter Communications	5/7/2026	$749.00
2967	Charter Communications	5/7/2026	$1,649.00
2968	Charter Communications	5/7/2026	$820.00
2969	Charter Communications	5/7/2026	$329.99
2970	Charter Communications	5/7/2026	$242.07
2971	Charter Communications	5/7/2026	$269.99
2972	Christianbelle Electric Inc	5/7/2026	$8,990.00
2973	City of Victorville	5/7/2026	$45,149.50
2974	Computer Team, Inc.	5/7/2026	$131.10
2975	Diamond Environmental Services, LP	5/7/2026	$796.55
2976	Southern California Edison	5/7/2026	$7,105.27
2977	Southern California Edison	5/7/2026	$4,391.76
2978	HI-Desert Communications	5/7/2026	$1,308.00
2979	Hi Desert Alarm	5/7/2026	$196.20
2980	Konica Minolta Business Solutions	5/7/2026	$680.65
2981	Loomis	5/7/2026	$1,228.00
2982	PSOMAS	5/7/2026	$5,716.87
2983	Ring Central, Inc.	5/7/2026	$2,577.72
2984	ShredYourDocs.com	5/7/2026	$180.00
2985	Sonic Systems, Inc.	5/7/2026	$8,950.00
2986	Stantec Consulting Services Inc.	5/7/2026	$17,282.00
2987	Triton Global Services, Inc.	5/7/2026	$984.57
2989	Town Of Apple Valley	5/7/2026	$500.00
00000329/1	New Flyer Of America	5/12/2026	$16,672.50
00000329/2	Transtrack Systems, Inc.	5/12/2026	$15,000.00
2990	ADARide.com LLC	5/14/2026	$3,393.50
2991	Amazon Business	5/14/2026	$956.11

2992	Beck Oil, Inc.	5/14/2026	$2,524.75
2993	City of Barstow	5/14/2026	$435.59
2994	City Of Victorville	5/14/2026	$770.04
2995	Clean Energy	5/14/2026	$5,999.76
2996	Southern California Edison	5/14/2026	$1,432.53
2997	Southern California Edison	5/14/2026	$20,008.59
2998	Southern California Edison	5/14/2026	$158.67
2999	Foothill AIDS Project	5/14/2026	$2,380.00
3000	Genfare, LLC	5/14/2026	$243.63
3001	Glory Global Solutions, Inc.	5/14/2026	$2,020.00
3002	Greater High Desert Chamber Of Commerce	5/14/2026	$505.00
3003	Safeway Sign Company	5/14/2026	$79.17
3004	San Bernardino County	5/14/2026	$2,144.37
3005	Special District Risk Management	5/14/2026	$3,805.22
3006	Southwest Gas Corporation	5/14/2026	$681.10
3007	Southwest Gas	5/14/2026	$108,850.36
3008	Southwest Gas Corporation	5/14/2026	$2,625.25
3009	Southwest Gas Corporation	5/14/2026	$449.89
3010	Allied Universal Security Services	5/20/2026	$11,742.99
3011	Aramark Refreshment Services, LLC	5/20/2026	$377.50
3012	Bonnie Baker Senior Center	5/20/2026	$1,133.17
3013	Commute With Enterprise	5/20/2026	$156,240.00
3014	Inter-Con Security Systems, Inc.	5/20/2026	$44,974.71
3015	USA TODAY Media Corp.	5/20/2026	$663.91
3016	Trona Community Senior Center	5/20/2026	$3,830.32
00000331/1	Abundant Living Family Church HD	5/26/2026	$1,860.00
00000331/2	Public Entity Risk Management Auth	5/26/2026	$2,205.00
00000331/3	RideCo US, Inc	5/26/2026	$166.43
00000331/4	San Bernardino County Sheriff's Department	5/26/2026	$245,709.00
00000331/5	GMV Syncromatics	5/26/2026	$965.80
3017	AECOM Technical Services, Inc.	5/27/2026	$11,096.51
3019	Angelo Meza	5/27/2026	$400.00
3020	Apple Valley Communications, Inc.	5/27/2026	$310.00
3021	Clean Energy	5/27/2026	$1,260.00
3022	Southern California Edison	5/27/2026	$3,594.86
3023	Southern California Edison	5/27/2026	$5,778.12
3024	Southern California Edison	5/27/2026	$65,893.30
3025	Southern California Edison	5/27/2026	$10,236.34
3026	Frontier	5/27/2026	$106.30
3027	Frontier	5/27/2026	$338.37
3028	High Desert Lock & Safe	5/27/2026	$16.86
3029	Southwest Gas Corporation	5/27/2026	$27.29
3030	Southwest Gas	5/27/2026	$371.07
3031	Vehicle Technical Consultants Inc	5/27/2026	$6,090.00
TOTAL			**$6,993,355.54**

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AGENDA ITEM THREE

VICTOR VALLEY TRANSIT AUTHORITY

AGENDA MATTER

Management reports.

SUMMARY STATEMENT

The attached Performance Reports are presented to the Board of Directors to provide an overview of the transit system's costs and performance.

- Keolis invoice for May 2026.
- Monthly Performance Statistics Systemwide Summary.
- Monthly Ridership Report.
- May 2025 over 2026 Ridership - Comparison by Mode.
- Monthly ADA Denial Report.
- Monthly Road Call Report.
- Keolis On Time Performance Report.

RECOMMENDED ACTION

Information items only.

PRESENTED BY	FISCAL IMPACT	MEETING DATE	ITEM NUMBER
Nancie Goff, CEO	N/A	July 20, 2026	3

KEOLIS

Keolis Transit Services
17150 Smoke Tree St.
Hesperia Calif. 92345

INVOICE NO. 0060309-IN

BILL TO Victor Valley Transit Authority
17150 Smoke Tree St.
Hesperia, CA 92345

Attention: Mrs. Nancie Goff
Chief Executive Officer

DATE 6/9/2026

CONTRACT NAME:
Victor Valley Transit

MONTH **May 2026**

BILLING PERIOD 05/01/2026 - 05/31/2026

	Budgeted Revenue hours	Actual Revenue hours	Variance in Missed Service	Rate Year 2	Budgeted Revenue USD	Actual Revenue USD	Allocated Fixed Cost	Variance (+ or -)	Budgeted Expense Year-to-date	Actual Expense Year-to-date	Variance (+ or -) Year-to-date
ADA ParaTransit	3,812.44	3,021.95		91.89	$350,325.11	$277,687.09	$168,115.80	($72,638.02)	$3,830,216.51	$3,474,462.07	**($356,754.44)**
Subscription	1,106.70	1,459.94		91.89	$101,694.66	$134,153.70	$56,038.60	$32,459.04	$1,179,681.34	$1,538,097.73	**$358,416.39**
Microlink	1,213.30	1,117.38		91.89	$111,490.14	$102,675.77	$56,038.60	($8,814.36)	$1,293,262.34	$1,230,467.23	**($62,795.11)**
Regional Fixed Rt	11,806.20	11,692.65	(27.00)	91.96	$1,085,698.15	$1,075,256.09	$549,178.28	($10,442.06)	$11,971,658.10	$11,759,289.36	**($212,368.75)**
Route 15	729.10	786.60	(2.50)	91.96	$67,048.04	$72,335.74	$33,623.16	$5,287.70	$750,529.71	$791,252.35	**$40,722.63**
Fort Irwin	240.00	289.59	(6.81)	89.14	$21,393.60	$25,814.05	$11,207.72	$4,420.45	$313,630.17	$366,192.48	**$52,562.31**
SUBTOTALS	**$18,907.74**	**$18,368.11**	**-$36.31**		**$1,737,649.70**	**$1,687,922.44**	**$874,202.16**	**-$49,727.26**	**$19,338,978.17**	**$19,159,761.21**	**-$179,216.96**

TOTAL INVOICE **$2,562,124.60**

Please REMIT TO:
Keolis Transit Services, LLC
53 State Street, 11th Floor
Boston, MA 02109
ARDept@keolisna.com

Manager's Signature and Business Phone

INVOICE NO. 0060310-IN

KEOLIS

Keolis Transit Services
17150 Smoke Tree St.
Hesperia Calif. 92345

BILL TO Victor Valley Transit Authority
17150 Smoke Tree St.
Hesperia, CA 92345

Attention: Mrs. Nancie Goff
Chief Executive Officer

DATE 6/9/2026

CONTRACT NAME:
Victor Valley Transit

MONTH **May 2026** **BILLING PERIOD 04/01/2026 - 04/30/2026**

	Budgeted Revenue hours	Actual Revenue hours	Variance in Missed Service	Rate Year 2	Budgeted Revenue USD	Actual Revenue USD	Allocated Fixed Cost	Variance (+ or -)	Budgeted Expense Year-to-date	Actual Expense Year-to-date	Variance (+ or -) Year-to-date
County	1,568.10	1,627.62	(5.28)	91.96	$144,202.48	$149,675.94	67,246.32	$5,473.46	$1,595,255.90	$1,652,663.75	**$57,407.85**
Barstow-Fixed Route	2,137.00	2,138.99	(4.21)	91.96	$196,518.52	$196,701.52	100,869.48	$183.00	$2,148,632.53	$2,138,026.79	**($10,605.74)**
Barstow-County	1,258.40	1,193.95	(1.00)	91.96	$115,722.46	$109,795.64	56,038.60	($5,926.82)	$1,268,153.23	$1,191,606.66	**($76,546.57)**
Barstow-DAR	448.30	510.37		91.89	$41,194.29	$46,898.29	22,415.44	$5,704.00	$450,414.92	$573,248.95	**$122,834.03**
SUBTOTALS	**5,411.80**	**5,470.93**	**(10.49)**		**$497,637.75**	**$503,071.38**	**246,569.84**	**$5,433.64**	**$5,462,456.58**	**$5,555,546.14**	**$93,089.56**

TOTAL INVOICE **$749,641.22**

Please REMIT TO:
Keolis Transit Services, LLC
53 State Street, 11th Floor
Boston, MA 02109
ARDept@keolisna.com

Manager's Signature and Business Phone

VICTOR VALLEY TRANSIT

FY 2026 -- Monthly Performance Statistics by Mode

Systemwide Summary

All Routes

Performance Statistics for May

Mode	Passengers	Revenue Hours	Operating Costs	Passenger Revenue	Passengers Per Rev. Hour	Operating Cost Per Passenger	Operating Cost Per Rev. Hour	Passenger Revenue Per Passenger	Passenger Revenue Per Rev. Hour	Farebox Recovery Ratio
Bus (Motorbus)	109,092	17,426.2	$3,320,527	$67,223	6.3	$30.44	$190.55	$0.62	$3.86	2.02%
Commuter Bus	2,173	289.6	$62,209	$17,327	7.5	$28.63	$214.82	$7.97	$59.83	27.85%
Demand Response	10,975	6,307.0	$1,082,456	$26,956	1.7	$98.63	$171.63	$2.46	$4.27	2.49%
System Total	122,240	24,022.8	$4,465,191	$111,505	5.1	$36.53	$185.87	$0.91	$4.64	2.50%

VICTOR VALLEY TRANSIT

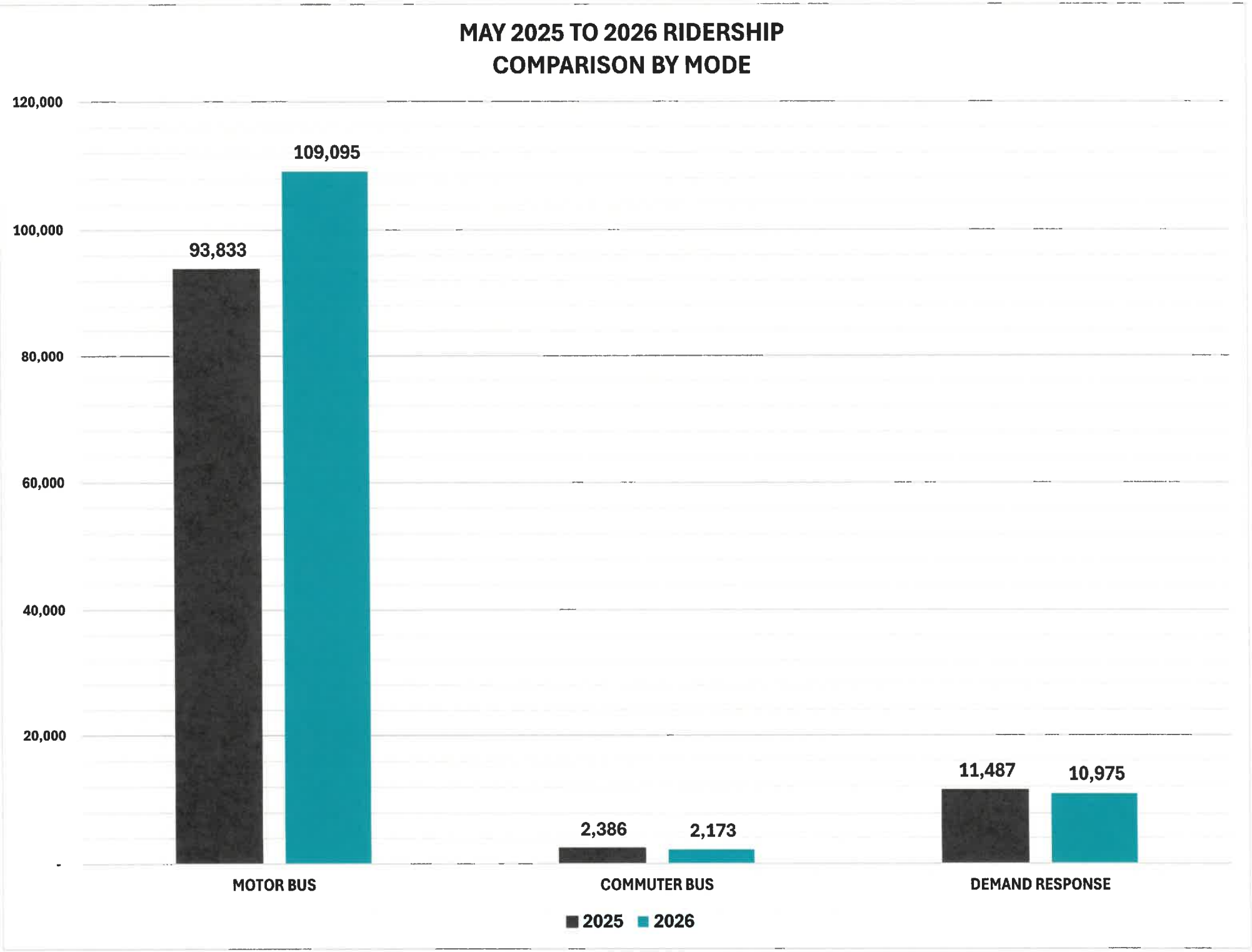
Monthly Ridership Report

May, FY 2026

Bus (Motorbus), Commuter Bus, Demand Response Only

Total (All Day Types)

Mode	Passengers		Passengers Per Revenue Hour		Farebox Recovery Ratio	
	Prior Year	Current Year	Prior Year	Current Year	Prior Year	Current Year
Bus (Motorbus)	93,833	109,092	5.5	6.2	2.03%	2.02%
Commuter Bus	2,386	2,173	5.0	7.5	27.42%	27.85%
Demand Response	11,487	10,975	1.7	1.7	3.10%	2.49%
System Total	107,706	122,240	4.4	5.0	2.92%	2.50%


MAY 2025 TO 2026 RIDERSHIP
COMPARISON BY MODE
120,000
100,000
80,000
60,000
40,000
20,000
-
93,833
109,095
2,386
2,173
11,487
10,975
MOTOR BUS
COMMUTER BUS
DEMAND RESPONSE
2025
2026

ADA Dispatch Denial Report For the Month of May 2026

Date	Reservationist Name	Passenger Name	Time Requested	Reason for Denial	Alternate Ride Provided
All Rides Negotiated					

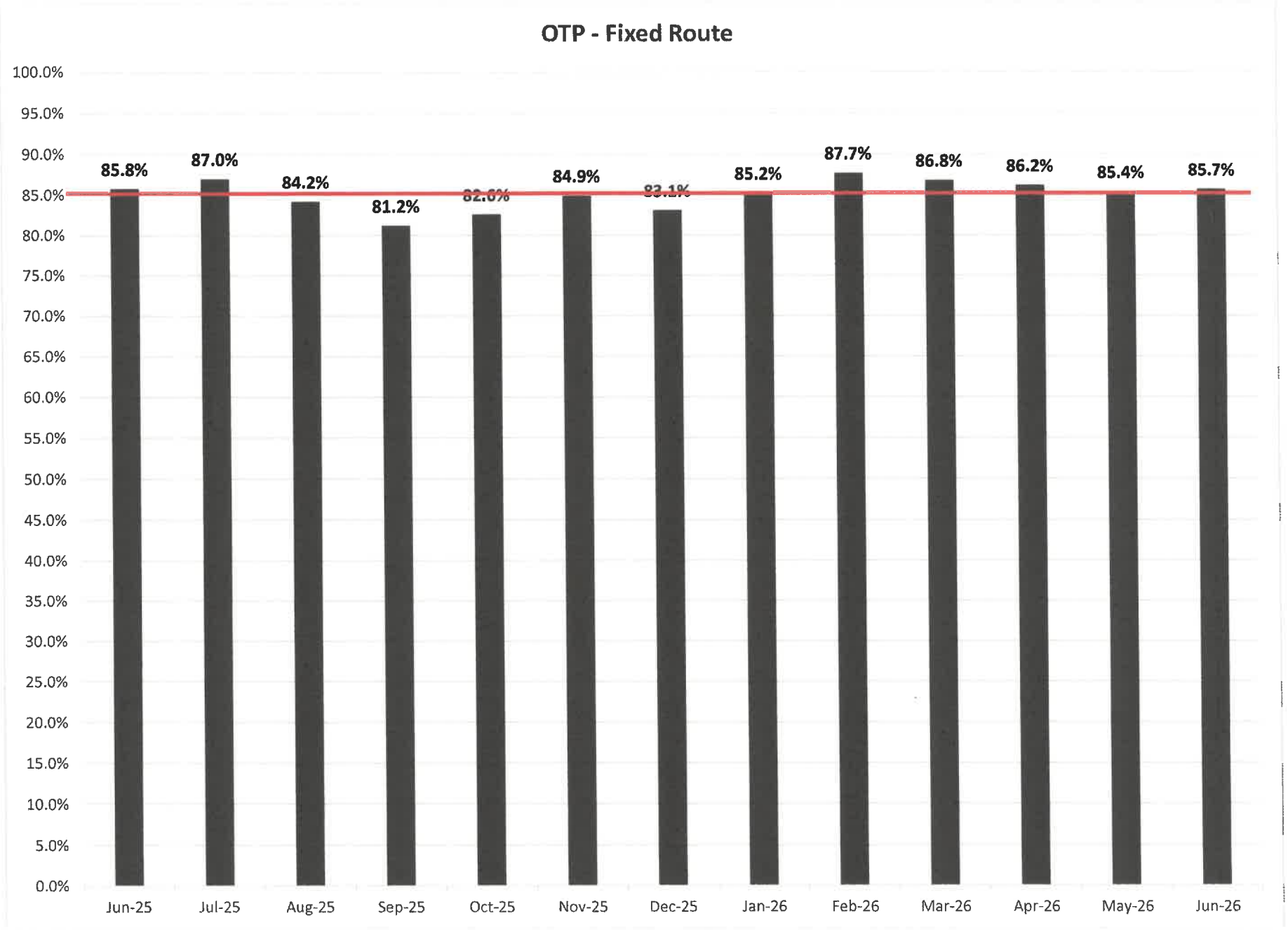
MAY

Major and Non-Major
Miles Between Road Calls

Total Miles	2025	2026
Demand Response	73,296	69,737
Commuter Bus	18,507	11,322
Motor Bus	295,410	259,291
Total Miles	**387,213**	**340,350**

Total Road Calls	2025	2026
Demand Response	6	14
Commuter Bus	3	2
Motor Bus	43	46
Total Road Calls	**52**	**62**

Miles Between Road Calls	2025	2026
Demand Response	12,216	4,981
Commuter Bus	6,169	5,661
Motor Bus	6,870	5,637
Total System	**7,446**	**5,490**


OTP - Fixed Route
100.0%
95.0%
90.0%
85.0%
80.0%
75.0%
70.0%
65.0%
60.0%
55.0%
50.0%
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
85.8%
87.0%
84.2%
81.2%
82.6%
84.9%
83.1%
85.2%
87.7%
86.8%
86.2%
85.4%
85.7%
Jun-25
Jul-25
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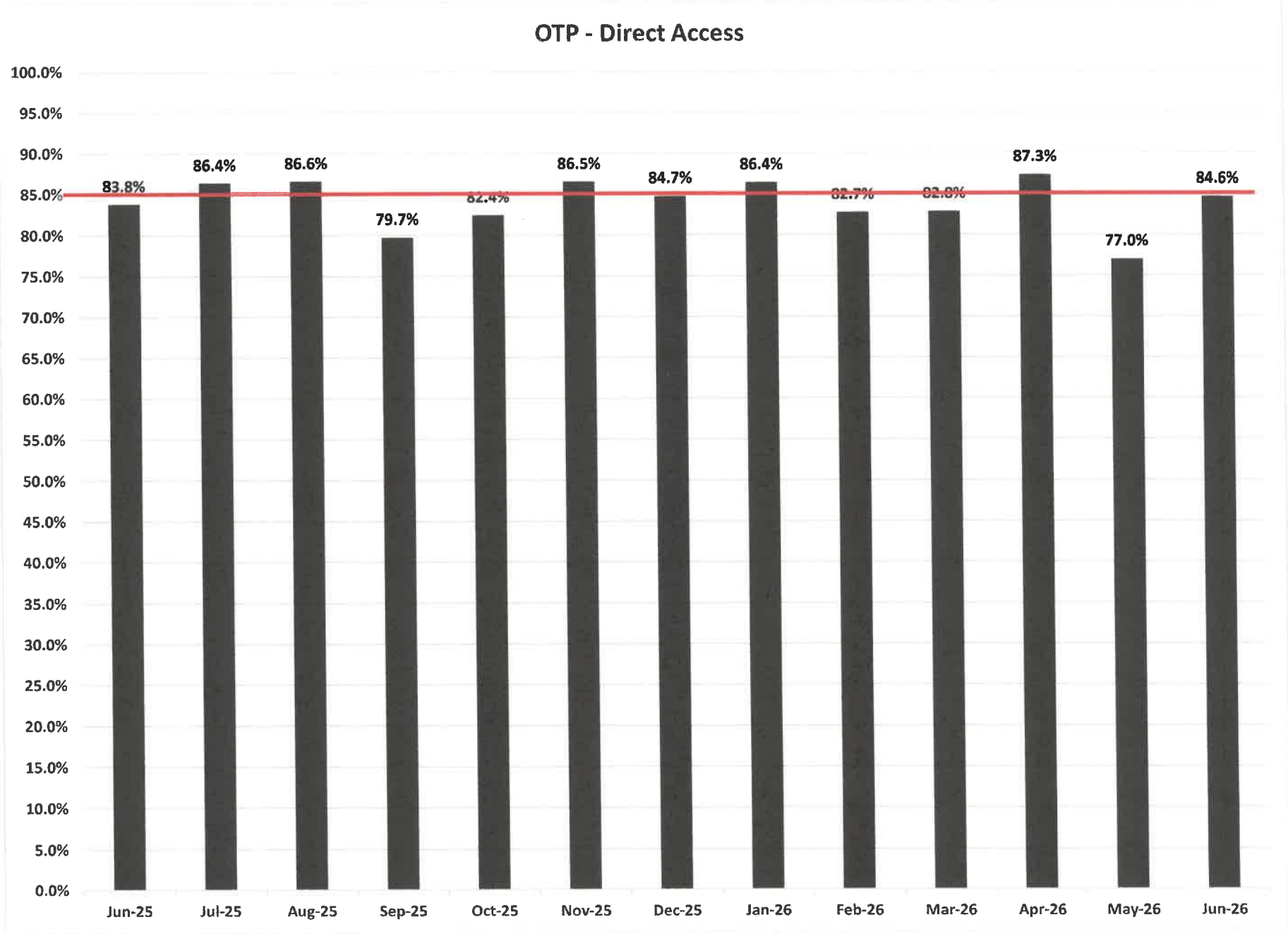
May-26
Jun-26


OTP - Direct Access
100.0%
95.0%
90.0%
85.0%
80.0%
75.0%
70.0%
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60.0%
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83.8%
86.4%
86.6%
79.7%
82.4%
86.5%
84.7%
86.4%
82.7%
82.8%
87.3%
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Jun-25
Jul-25
Aug-25
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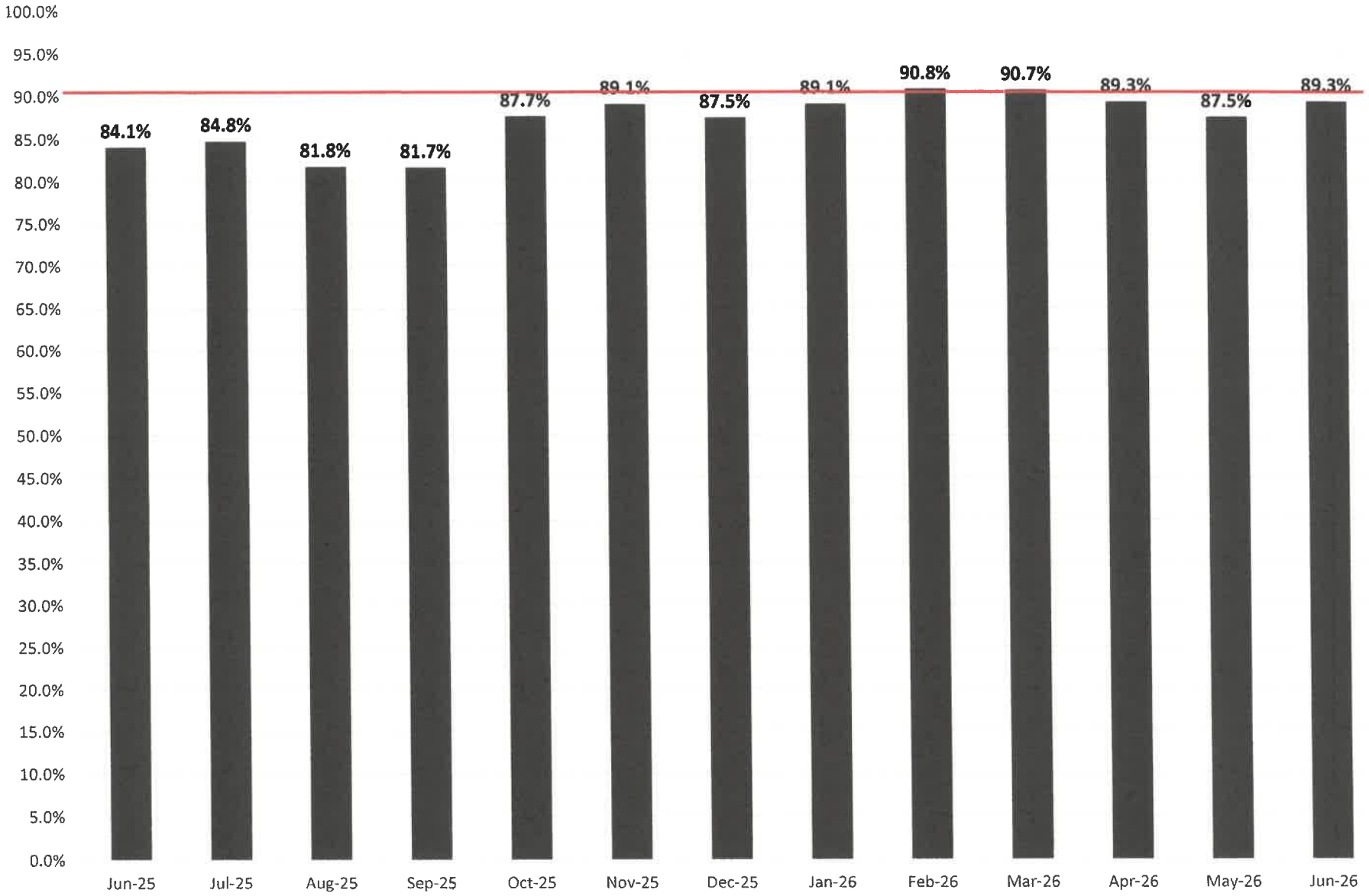
May-26
Jun-26

Micro-Link OTP



AGENDA ITEM FOUR

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VICTOR VALLEY TRANSIT AUTHORITY

AGENDA MATTER

Transit Operations Division, Victor Valley Detail Report.

SUMMARY STATEMENT

At this time, a representative of the VVTA Transit Operations Division, Victor Valley Detail will present highlights and statistics from the last month.

RECOMMENDED ACTION

Information item only.

PRESENTED BY	FISCAL IMPACT	MEETING DATE	ITEM NUMBER
VVTA Transit Operations Division Unit	N/A	July 20, 2026	4

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AGENDA ITEM FIVE

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VICTOR VALLEY TRANSIT AUTHORITY

AGENDA MATTER

Hydrogen Fueling Station Update.

SUMMARY STATEMENT

At this time, Dustin Strandberg, Chief Maintenance Officer, will provide an update on the Hesperia Hydrogen Fueling Station.

RECOMMENDED ACTION

Information item only.

PRESENTED BY	FISCAL IMPACT	MEETING DATE	ITEM NUMBER
Dustin Strandberg, CMO	N/A	July 20, 2026	5

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AGENDA ITEM SIX

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VICTOR VALLEY TRANSIT AUTHORITY

AGENDA MATTER

Opening of Public Comment Period for Proposed FY27 Fare Adjustment.

SUMMARY STATEMENT

One of the recommendations in the VVTA Comprehensive Operations Analysis (COA) approved by the Board at its June 17, 2024, meeting was to implement a fare modernization program that would provide a more simplified fare structure and incorporate new fare payment technologies for passenger convenience.

It should be noted that VVTA last initiated modifications to the fare structure in 2017 and prior to that in 2007. Since the 2017 fare modification, the growth in fare revenues has not kept pace with increases in operating costs due to price inflation over the 10-year period. This has resulted in a decrease in the percentage of farebox revenue to operating expenses from a high of 16% in FY19 to approximately 3% in FY26. Also, during this period, as a result of the COVID-19 Pandemic, transit ridership declined steeply, and while ridership has grown steadily since FY22, it is still at 77% of pre-COVID ridership. Additionally, there have been significant advancements in fare technology that can simplify the fare payment process for passengers.

The COA recommended a modernization of the VVTA fare structure that would provide the following enhancements and help VVTA meet the Fare Ratio target of 18%.

- Expand Payment Options
- Incorporate New Technology
- Enhance Fare Equity

Continued

RECOMMENDED ACTION

Information Item Only.

PRESENTED BY	FISCAL IMPACT	MEETING DATE	ITEM NUMBER
Rod Goldman, Chief Executive Officer	N/A	July 20, 2026	6

VICTOR VALLEY TRANSIT AUTHORITY

AGENDA MATTER

Opening of Public Comment Period for Proposed FY27 Fare Adjustment.

SUMMARY STATEMENT

These fare changes would provide several benefits for passengers including:

- Fare Payments Using Credit and Debit Cards
- Fare Capping (pay-as-you-go with a cap on the daily, weekly, and monthly cost)
- Increased Investment in Service Quality Improvements (Increased service, new buses, passenger amenities)
- Streamlined Fare Structure

With the proposed fare modifications, VVTA regular and student fares for Local fixed route service would increase by twenty-five cents from $1.50 to $1.75. County fixed-route fares would be decreased to match Local fixed route service. Micro-Link fares would also be adjusted to match Local fixed route service. Day Passes and Monthly Passes would be eliminated and replaced by the new Fare Capping program which would cap the amount of fares paid by a passenger for travel within a day, week, and month.

Route 15 fares between Barstow to Victorville and from Victorville to San Bernardino would be increased from $6.00 to $7.00 per segment.

ADA Direct Access fares would increase from $2.50 to $3.00. Additional Zone fares beyond the FTA required 3/4-mile distance from a bus route will be increased from $4.50 to $5.00 for Zone 2 (3/4 of a mile to 1.5 miles from a bus route) and from $6.00 to $6.50 for Zone 3 (1.5 miles to 2.25 miles from a bus route). Fares for ADA Subscription services would also be increased slightly.

There is no fare increase planned for Fort Irwin NTC Commuter Bus service or for route deviations on qualified bus routes. It is also recommended that during the week of Veterans Day veterans and active-duty military service members would be provided fare-free rides on VVTA fixed-route bus and Micro-Link services.

Staff would continuously review fare revenues and recommend fare modifications to the Board, if needed, on a bi-annual basis to meet farebox recovery targets.

Continued

VICTOR VALLEY TRANSIT AUTHORITY

AGENDA MATTER

Opening of Public Comment Period for Proposed FY27 Fare Adjustment.

SUMMARY STATEMENT

Attached Table 1 outlines the proposed FY27 fare modifications. Next steps in the public outreach process include the following:

- Begin a 30-Day Public Hearing Process in August 2026
- Receive and Review Public Comment
- Provide Recommendations to the Board on September 21, 2026
- Conduct a Public Education Program on Fare Changes
- Implement Fare Modifications on January 3, 2027 (Pending Board Approval)

VVTA PROPOSED FARE STRUCTURE
Effective January 3, 2027

Fare Category	Current Fare	Proposed Fare	Fare Capping: Daily Paid Trip Cap	Fare Capping: Weekly Paid Trip Cap	Fare Capping: Monthly Paid Trip Cap
Local Routes					
Regular Fare	$ 1.50	$ 1.75	3 Trips	12 Trips	37 Trips
Student Fare	$ 1.25	$ 1.50	3 Trips	12 Trips	37 Trips
Senior/Disabled/Veteran Fare	$ 0.75	$ 0.75	3 Trips	12 Trips	37 Trips
Regular Day Pass	$ 4.00	- After 3 trips in a day additional trips taken in the day are fare free - After 12 trips in a week additional trips taken in the week are fare free - After 37 trips in a month additional trips taken in the month are fare free			
Student Pass	$ 3.50				
Senior/Disabled/Veteran Day Pass	$ 2.00				
Regular 31-Day Pass	$ 55.00				
Student 31-Pass	$ 45.00				
Senior/Disabled/Veteran Day 31-Pass	$ 27.50				
County Routes					
Regular Fare	$ 2.50	Merged into Local Route Fare Policy			
Student Fare	$ 2.25				
Senior/Disabled/Veteran Fare	$ 2.00				
Regular Day Pass	$ 6.00				
Student Pass	$ 5.00				
Senior/Disabled/Veteran Day Pass	$ 3.00				
Regular 31-Day Pass	$ 80.00				
Student 31-Pass	$ 70.00				
Senior/Disabled/Veteran Day 31-Pass	$ 40.00				
Micro-Link					
Regular Fare	$ 2.00	Merged into Local Route Fare Policy			
Student Fare	$ 1.00				
Senior/Disabled/Veteran Fare	$ 1.00				
Route 15					
Regular Fare	$ 6.50	$ 7.00	3 Trips	12 Trips	37 Trips
Student Fare	$ 6.50	$ 7.00	3 Trips	12 Trips	37 Trips
Senior/Disabled/Veteran Fare	$ 3.25	$ 3.50	3 Trips	12 Trips	37 Trips
Direct Access					
Zone 1	$ 2.50	$ 3.00	No Fare Capping for Direct Access Service		
Zone 2	$ 4.50	$ 5.00			
Zone 3	$ 6.00	$ 6.50			
Zone 1 Subscription (Monthly Fare)	$ 130.00	$ 155.00			
Zone 2 Subscription (Monthly Fare)	$ 160.00	$ 175.00			
Zone 3 Subscription (Monthly Fare)	$ 180.00	$ 190.00			
NTC Commuter					
Regular Fare	$ 13.00	$ 13.00	No Fare Capping for NTC Commuter Service		
Student Fare	$ 13.00	$ 13.00			
Senior/Disabled/Veteran Fare	$ 13.00	$ 13.00			
NTC Monthly Pass (Mega Pass)	$ 180.00	$ 180.00			
NTC Monthly Military Pass	$ 255.00	$ 255.00			
Deviations					
Regular Fare	$ 2.00	$ 2.00	No Fare Capping for Deviations		
Student Fare	$ 2.00	$ 2.00			
Senior/Disabled/Veteran Fare	$ 1.00	$ 1.00			

AGENDA ITEM SEVEN

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VICTOR VALLEY TRANSIT AUTHORITY

AGENDA MATTER

Authorize the Purchase of Additional Battery Strings and Amend the VVTA TDA Claim to Re-Allocate Surplus Local Transportation Funds (LTF).

SUMMARY STATEMENT

On September 24, 2025, VVTA received a recall notice from New Flyer Inc. identifying a defect in the XALT high-voltage battery system used in five (5) of VVTA's 2021 Gen 3 Battery Electric Buses (BEBs). The affected buses were temporarily removed from service. As a short-term solution, a programming change was implemented to limit maximum state of charge to 75%, addressing the identified risk associated with higher charge levels. This allowed the buses to return to service while a permanent solution was developed.

New Flyer will transition the affected buses from the XALT battery system to the American Battery Solutions (ABS) system. This transition will replace the current six (6) battery strings with five (5) ABS strings of equivalent energy capacity, preserving expected vehicle range. The new configuration will provide approximately 455.1 kWh of usable capacity, compared to 454.6 kWh under the current XALT system — a modest net gain in usable energy despite the reduction in battery strings.

Because the ABS solution uses only five of the available six string slots, VVTA has the option to add a sixth battery string at a cost of $50,000 per bus. This upgrade would increase usable capacity from 455.1 kWh to 546.1 kWh, extending daily range by an estimated 50 miles per bus (before degradation) and improving performance across the fleet's remaining 8 – 10-year service life.

Continued

RECOMMENDED ACTION

Authorize the Purchase of Additional Battery Strings and Amend the VVTA TDA Claim to Re-Allocate Surplus Local Transportation Funds.

PRESENTED BY	FISCAL IMPACT	MEETING DATE	ITEM NUMBER
Megan Christian, Financial Analyst (Grants)	No Change	July 20, 2026	7

VICTOR VALLEY TRANSIT AUTHORITY

AGENDA MATTER

Authorize the Purchase of Additional Battery Strings and Amend the VVTA TDA Claim to Re-Allocate Surplus LTF funds.

Original Project	Source	Surplus Funds
Fencing (shortfall)	LTF	$ 74,401.00
Transloc	LTF	$ 45,733.81
Infotainment	LTF	$ 130,974.00
Total Reallocated Surplus Funding		**$ 251,108.81**

The recommended funding plan for this project is to reallocate $251,108.81 in surplus Local Transportation Funds (LTF) from FY24 Fencing (shortfall), FY23 Transloc, and FY23 Infotainment accounts to the purchase of five (5) additional battery strings for VVTA's BEBs.

AGENDA ITEM EIGHT

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VICTOR VALLEY TRANSIT AUTHORITY

AGENDA MATTER

Release IFB 2027-01 – Construction Services for Building Modifications for Maintaining Hydrogen Fuel Cell Buses.

SUMMARY STATEMENT

With the addition of 13 Hydrogen Fuel Cell Buses in VVTA's fleet, certain upgrades to the existing facilities are required to detect hydrogen within the maintenance building. In April 2025, VVTA released an RFP for professional engineering services for Building Modifications for Hydrogen Fuel Cell Buses, and it was awarded to Stantec. The Design has been completed and permits for construction have been issued.

In order to complete the project and ensure compliance with the National Fire Protection Agency and San Bernardino Fire Department by having adequate detection, VVTA must release an IFB to obtain a contractor to source the products for the upgrades, perform minor demolition to the existing sensor equipment, and perform the upgrades according to specifications.

Staff recommend that the Board of Directors approve the release of IFB 2027-01 Construction Services for Building Modifications for Hydrogen Fuel Cell Buses.

RECOMMENDED ACTION

Approve the release of IFB 2027-01 Construction Services for Building Modifications for Maintaining Hydrogen Fuel Cell Buses.

PRESENTED BY	FISCAL IMPACT	MEETING DATE	ITEM NUMBER
Christine Plasting, Procurement Manager	None	July 20, 2026	8

SECTION 28 42 00
FUEL GAS DETECTION, HYDROGEN FLAME DETECTION, AND ALARM SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY

A. This project manual references work at the Victor Valley Transit Authority located at 17150 Smoke Tree St, Hesperia, CA, 92345.

B. The project manual, drawings, and general provisions of the Contract, General and additional terms and Conditions of the Contract, apply to this section.

C. This Section includes the following requirements: Contractor shall provide, install, make fully functional, and warrant the system to detect natural gas (also described as "Methane" or CH_4), hydrogen gas (also described as H_2), and carbon monoxide (also described as CO) inside the vehicle-repair bays at the project site and provide annunciation, control signals, and alarms as specified in this section and related contract drawings. The work also includes the installation of flame detectors in the maintenance building and wiring them to an existing fire alarm control panel. Required equipment includes:

1. Point-infrared (IR) natural gas leak detectors for methane
2. Catalytic-bead detectors for hydrogen
3. Electrochemical CO detectors
4. MODBUS Data transmitters for gas detectors
5. Microprocessor-based gas detection controller with human-machine interface (HMI) for monitoring leak detectors and controlling addressable relay contacts via MODBUS communication protocol
6. Remote display monitors for remote monitoring
7. Backup battery or uninterruptible power supply for detection system
8. Audible and visual annunciators
9. Inter-component wiring and conduit.
10. Control connections to motor starters and power contactors
11. Control connections to existing facility management control system (FMCS)
12. Telephone auto dialer
13. Software for control and monitoring at control panel and remotely
14. Flame detectors for wiring to an existing fire alarm control panel

D. Related Documents: The following documents are related to this technical specification:
1. Design drawings for detection systems and related modifications to the existing maintenance garage.
2. Other contract documents as required.

E. Facility Operations. The maintenance facility shall remain operational during construction and start-up of the work required under this scope.

F. Scope Of Work Summary

1. General. The scope of work includes furnishing, installing, programming, integrating, testing, commissioning, training, and warranting a complete hydrogen (GH_2), methane (CH_4),

and carbon monoxide (CO) gas detection and hydrogen flame detection system, together with associated alarm, control, monitoring, supervisory, and reporting functions.

2. The Work shall include, but not be limited to, the following:
   a. Removal and disposal of existing gas detection equipment within the Maintenance Building as indicated on the Contract Drawings.
   b. Installation of hydrogen (GH_2), methane (CH_4), and carbon monoxide (CO) detection systems within the Maintenance Building. Installation of hydrogen (GH_2) and methane (CH_4) detection systems within the Fueling Area (Canopy).
   c. Furnishing and installation of gas detectors, transmitters, controllers, remote displays, alarm devices, power supplies, communication networks, and associated accessories.
   d. Integration of the gas detection system with ventilation equipment, heating systems, motorized doors, gas shutoff valves, and other equipment as indicated on the Contract Drawings.
   e. Installation of a hydrogen flame detection system within the Maintenance Building utilizing hydrogen-rated Triple-IR flame detectors.
   f. Integration of hydrogen flame detectors with the existing Simplex Fire Alarm Control Panel (FACP) through addressable monitor modules.
   g. Programming and modification of the existing FACP as required to provide alarm and trouble monitoring, supervision, and annunciation of flame detection events.
   h. Installation of conduit, wiring, mounting hardware, communication cabling, and associated electrical infrastructure required for a complete installation.
   i. Testing, calibration, startup, commissioning, and functional verification of all system components and interfaces.
   j. Preparation of operating and maintenance documentation, training of VVTA personnel, and submission of closeout documents.
   k. Provision of warranties, maintenance services, and support as specified herein.

1.02 STANDARDS

A. Comply with all Municipal, County, State and Federal laws, ordinances, rules and regulations governing or relating to building construction, employment standards and public health and safety.

B. The latest enforced editions of the following listed codes, specifications and standards shall be considered an integral part of this specification, to the extent that they apply to the design, manufacture and assembly of the specified equipment. Compliance with the enforced version of the following documents as amended by the State of California and City of Hesperia is mandatory:

1. 2025 California Electrical Code.
2. 2025 California Mechanical Code.
3. 2025 California Fire Code.
4. 2025 California Building Code.
5. 2025 California Plumbing Code
6. 2022 NFPA 30A – Code for Fuel Dispensing and Repair Garages.
7. 2023 NFPA 2 – Hydrogen Technologies Code.

8. 2023 NFPA 715 – Standard for Installation of Fuel Gases Detection and Warning Equipment.

9. All components for the gas detection system, from sensor(s) to control output, will be tested by a recognized NRTL to meet or exceed ANSI/ISA Performance Standard 12.13.01 (2013).

10. The system detectors shall be listed with UL 2075 - Standard for Gas and Vapor Detectors and Sensors and indicate the gases they are designed to detect.

11. The controller shall be listed with UL 2017 - Standard for General Purpose Signaling Devices and Systems.

12. Buy America – U.S. Department of Transportation (FTA).

    a. Requirements. The contractor agrees to comply with 49 U.S.C. § 5323(j), as amended by MAP-21 and 49 C.F.R. part 661, to the extent consistent with MAP-21, and subsequent amendments to those regulations that may be promulgated. The Contractor also agrees to comply with FTA directives to the extent those directives are consistent with MAP-21, except to the extent that FTA determines otherwise in writing. Buy America requirements state that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA, or the product is subject to a general waiver. General waiver requirements are listed in 49 CFR 661.7.

1.03 MATERIALS

A. Furnish and install all items required to make a complete and functional system as required elsewhere herein.

B. The Contractor shall furnish and install all labor, materials, equipment, devices, wiring, conduit, software, hardware, accessories, supports, and incidentals required to provide a complete, fully functional, tested, and commissioned fuel gas detection and hydrogen flame detection system as specified herein and indicated on the Contract Drawings.

C. All materials and equipment shall be new, current production, and suitable for the intended application. Equipment shall be installed in accordance with the manufacturer's published recommendations and the requirements of the Contract Documents.

D. All equipment, devices, and system components shall be listed, labeled, and approved for their intended service and installation environment, and shall comply with the requirements of the Contract Drawings, applicable codes, standards, and Authority Having Jurisdiction (AHJ) requirements. Where specified, equipment shall be UL Listed, FM Approved, or otherwise certified by a nationally recognized testing laboratory acceptable to the AHJ.

1.04 SUBMITTALS

A. Manufacturers' Warranties. All manufacturers' original warranties for material, components and assemblies shall be passed through to the Owner. These are in addition to the comprehensive Facility warranty that is the responsibility of the Contractor.

B. Approvals. Prior to procurement, fabrication, shipment, or installation of any equipment or materials, the Contractor shall submit all required product data, shop drawings, calculations,

certifications, and supporting documentation for review by the Owner and Engineer of Record (EOR).

C. Required Submittals

1. Submittals are required for all materials and pre-packaged equipment listed in this Section and are subject to approval by the Owner. Submittals shall include the additive alternates procured by the Owner, and include all the equipment listed below:

2. Submittals shall be provided for all equipment, materials, assemblies, and systems specified herein, including but not limited to:

1. Gas detectors and associated transmitters.
2. Gas detection controllers, HMI panels, and relay/interface panels.
3. Remote display panels.
4. Audible and visual alarm devices.
5. Power supplies, battery backup systems for detection/alarm system.
6. Communication modules and networking equipment.
7. Wiring, communication cabling, and raceway systems.
8. Conduits, fittings, supports, brackets, and associated accessories.
9. Test stations, calibration tubing, and termination cabinets.
10. Natural gas shutoff valve assemblies and actuators.
11. Any additional equipment identified on the Contract Drawings.

D. Required Documentation. The following documentation shall be submitted, as applicable, for each item identified above:

1. Manufacturer's product data sheets and technical specifications.
2. Dimensional drawings and installation requirements.
3. Equipment listings and certifications.
4. Wiring diagrams, control schematics, and communication architecture diagrams.
5. Electrical connection and termination details.
6. Installation, operation, testing, calibration, and maintenance procedures.
7. Recommended maintenance schedules.

8. Special tools required for operation, maintenance, testing, or calibration.

9. Manufacturer's warranties.
    a. Shop drawings identifying equipment.
    b. Electrical and wiring-termination schematics of supplied equipment.

10. Test data indicating compliance with all normal and specified functions and processes, including gas detection by LEL %, detector locations and interfaces.

11. Factory test reports and certification data, where applicable.

12. Documentation demonstrating compliance with Buy America requirements, where required by the Contract.

E. Submittal Format. Submittals shall be organized by system and equipment type and shall include a table of contents if multiple products are provided in a common submittal. All data for a particular packaged system shall be grouped, i.e. Piping and Instrumentation Diagrams, required sub-component listings, shop drawings, test data, etc. Cut sheets or catalog sheets containing multiple product listings shall include marks to clearly indicate actual unit(s) proposed for use, and all. All electronic submittals shall include a mark or reference indicating intended location of use or application. Submittals shall be provided as a searchable PDF documents with logical file names.

1.05 QUALITY ASSURANCE

A. The Specifications and accompanying Drawings are intended to encompass a system that will be complete, and which will fit into the available space. As it is not within the scope of the Drawings to show all necessary offsets and obstructions, it shall be the responsibility of the Contractor to install all work in such a manner that it will conform to the space available, avoid obstructions and interferences, preserve headroom, and keep openings and passageways clear.

B. Provide qualified personnel to perform tests and inspections. Personnel qualifications shall be made available to the Owner upon request.

C. All instruments, controls, and other electrical equipment must be qualified for the hazardous area classification where the equipment is to be installed.

1.06 PREPARATION AND COORDINATION WITH OTHER TRADES

A. Coordinate construction works as necessary with other trades to assure proper and adequate interface with all the Work.

B. Where equipment, pipes, electrical conduit and other items are shown in conflict with structural members and other equipment, provide labor and materials required for extensions, offsets, and supports to clear the encroachment.

C. Although such work may not be specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances, and devices incidental to or necessary for a sound, secure and complete installation.

D. Coordinate accepted equipment changes from those scheduled or specified with other trades affected.

1.07 PRODUCT DELIVERY AND HANDLING

A. Materials shall be delivered in the manufacturer's original unopened packaging, labeled to indicate the manufacturer's name and product identification.

B. Delivered materials shall be handled and stored so as to ensure that the packaging and labeling remain intact until the material is installed. Materials shall be stored and protected from ground contact and from the elements.

C. All containers, including internal containers, shall be indelibly labeled to clearly describe their contents. Labels shall show the manufacturer's name and clearly state the equipment type, size, and catalog number.

1.08 PROJECT COMPLETION

A. Submit record data, as-built drawings, operating and maintenance manuals, final project photographs, damage or settlement survey, and similar final record information.

B. Deliver tools, spare parts, and similar physical items.

C. Complete start-up testing of specified systems. Includes commissioning of all detectors, controllers, alarms, communication subsystems, software and appurtenances by technicians authorized and trained by the respective manufacturers of the equipment.

D. Provide functional and operational training on use of the detection and alarm system, including theory of operation, troubleshooting, calibration, testing, and interpretation of display data and alerts. Training shall consist of one 4-hour course, held at the Owner's garage, for staff. Furnish a written course outline for approval by the Owner, at least two weeks prior to the date that the training is given.

E. Remove temporary facilities and services from the project site, along with construction tools and facilities, mock-ups and similar elements.

F. Upon completion of the work, thoroughly clean all exposed portions of the installation, removing all traces of soil, labels, grease, oil, and other foreign material, and using only the type of cleaner recommended by the manufacturer of the item being cleaned.

1.09 INSPECTION, TESTING AND ACCEPTANCE

A. General. Contractor shall be responsible for proving to the satisfaction of the Owner that the minimum specifications for the detection and alarm system, as described herein, have been met. The Owner will require the execution of various inspections and tests, and furnish written test reports, prior to accepting the leak detection and alarm system as being complete and in compliance with these specifications. Such inspections and tests shall be based on recommendations by the contractor, as well as the main vendor and manufacturer/vendors of various components and systems of the detection and alarm system. If the Owner determines that such recommended inspections and tests are not adequate, the Owner shall require additional inspections and tests as needed. Neither inspection, witnessing of tests, nor waiving of any such procedures by the Owner shall release the component/system contractor, main

vendor or other vendors from full responsibility for compliance with equipment, materials and functional requirements according to this specification.

B. Requirements. Contractor shall supply the Owner with all manufacturer-recommended installation and start-up procedures for the following systems:

1. Gas-leak detectors and detectors transmitters.

2. Gas detection system HMI controller and relay panels.

3. Relay display panels.

4. Alarm Devices (visual and audible).

5. Backup battery or uninterruptible power supply for detection and alarm system.

6. Telephone auto dialer / IP notifier.

C. Contractor shall also provide test equipment, material and labor during inspection to conduct construction testing and start-up. Construction inspection procedures will be provided to the Owner to include each of the above components and systems. All tests shall be made available to be witnessed by the Owner to determine compliance with specifications.

D. Documentation and Notification. Recommended procedures for equipment testing during start-up will be submitted in writing to the Owner not more than thirty days after contract award, or not later than two weeks prior to the start of testing, whichever occurs first. Off-the-shelf equipment must be accompanied by factory test and inspection reports and manufacturer warranties at the time of delivery to site. The contractor shall notify the Owner's project manager of all planned start-up tests at least 48 hours prior to the scheduled start of testing, so as to give the Owner adequate opportunity to witness the testing.

E. Additional Inspections. Additional inspections will be carried out to by the Owner to determine compliance with material and component specifications that may be beyond the scope of jurisdictional inspections. The Owner will prescribe a final punch list following start-up tests and inspections. The content and completion schedule for the punch list will be agreed upon by the Owner, Contractor and key equipment supplier(s).

1.10 WARRANTY

A. General. The contractor shall warrant that the gas detection and flame detection system, including all associated equipment, controls, software, programming, integration, testing, and commissioning, shall be free from defects in design, materials, installation, workmanship, and construction for a period of one (1) year commencing upon Owner acceptance and recordation of the Notice of Completion. The warranty shall include all parts, labor, travel, software updates, programming modifications, testing, and commissioning support necessary to restore the system to full operation.

B. Original Component Warranties. All manufacturers' original warranties for materials, equipment, components, software, and assemblies furnished under this Contract shall be assigned and transferred to the Owner upon project acceptance. Such warranties shall be in addition to, and not in lieu of, the Contractor's warranty obligations under the Contract.

C. 1.11.3 Warranty Enforcement. In the event of a warranty claim, the Contractor shall promptly investigate the reported condition and take all actions necessary to restore the affected system to

normal operation. Temporary repairs, replacement equipment, or other interim measures shall be provided where required to maintain safe and continuous facility operations until permanent corrective actions have been completed.

PART 2 - PRODUCTS

2.01 GENERAL

A. New Equipment. All equipment and materials to be supplied by the contractor shall be in new condition unless otherwise expressly permitted by the Owner and shall include all components, appurtenances, and systems necessary for the leak detection and alarm system to function as described herein.

B. Complete System. The detection system shall be complete, functional, code-compliant and furnished with all required accessories and controls needed for functionality.

C. Compatibility. All detection components shall be from the same manufacturer, unless indicated or approved otherwise by the Owner. All the hardware and software provided shall be compatible with the overall system and with existing interfaces.

D. Acceptable Products.

1. Each significant component specified within Part 2 of this specification includes at least one acceptable product with corresponding manufacturer and model where applicable. These are listed to provide a basis of function and performance.

2. The Contractor may propose the use of alternative or substitute products, as approved by the owner. It is the Contractor's responsibility to satisfy the Owner that the proposed substitution meets or exceeds the function and performance of the listed products. This includes provision of complete data sheets, manuals, and at least three customer references where the proposed substitution has been in service for at least 24 months. Any variation from design drawings needed for alternative or substitute products will be the contractor's responsibility to verify and design. Such substitutions shall only be allowed when approved in writing by the Owner.

2.02 SYSTEM ARCHITECTURE AND FUNCTION

A. Theory of Operation.

1. Project site is a transit-fleet maintenance facility, which requires provisions for maintaining and repairing natural gas and hydrogen fuel-cell electric (FCE) vehicles. Contractor shall furnish, install, and make operational, a natural gas, hydrogen, and carbon monoxide, detection system in the maintenance garage as shown on the drawings. The gas detection system shall detect unique gas concentration as a percentage of lower-explosive limit (LEL)of methane and hydrogen in air. Similarly, the gas detection system shall detect unique gas concentration as a percentage of parts per million (ppm) of CO. The system shall initiate audible and visual alarms, open roll-up doors, energize exhaust fans and ventilation fans, if not already energized, interrupt welding machine electrical circuits, de-energize heating systems, and shut-off natural gas supply to heating systems and other equipment utilizing natural gas, and automatically provide alerts to designated personnel as indicated on plans.

2. Methane (CH4). The detection system for methane shall use point-type infrared-absorption natural gas detectors at the locations shown in the drawings. Gas concentration and alarm signals from the detectors will be conveyed to a central programmable controller via a serial-type hard-wired Modbus data highway with addressable detectors. The system shall distinguish low alarms from high alarms, whereby:
   a. "Low alarm" corresponds to natural gas concentrations detected that are between 10% and 25% of LEL for methane.

   b. "High alarm" corresponds to natural gas concentrations detected that are 25% or more of LEL for methane.

3. Hydrogen (H2). The detection system for hydrogen shall use catalytic-bead hydrogen detectors at the locations shown in the drawings. Gas concentration and alarm signals from the detectors will be conveyed to a central programmable controller via a serial-type hard-wired Modbus data highway with addressable detectors. The system shall distinguish low alarms from high alarms, whereby:
   a. "Low alarm" corresponds to hydrogen gas concentrations detected that are between 10% and 25% of LEL for hydrogen.

   b. "High alarm" corresponds to hydrogen gas concentrations detected that are 25% or more of LEL for hydrogen.

4. Carbon Monoxide (CO). The detection system for hydrogen shall use electrochemical detectors at the locations shown in the drawings. Gas concentration and alarm signals from the detectors will be conveyed to a central programmable controller via a serial-type hard wired Modbus data highway with addressable detectors. The system shall distinguish low alarms from high alarms, whereby:

   a. "Low alarm" corresponds to CO gas concentrations detected between 25ppm and 100ppm.

   b. "High alarm" corresponds to CO gas concentrations detected that are 100ppm or higher.

5. Each gas detector shall be addressable and identified with an assigned Unique ID#. Gas leak detection events shall be automatically and immediately reported upon each detection event by the controller. The report message shall include: Unique ID of detector that has detected gas leak, percentage of concentration of detected gas in terms of LEL, repair bay number in which gas leak has been detected.

6. The detection system shall have (6) functional zones. A low level detection alarm in any zone shall cause the controller to initiate alarms and other responses for the indicated zone. A high level detection alarm shall cause the controller to initiate alarms and other responses for all zones.

   a. West service bay shall be identified as 'Zone 1'.

   b. West service bay Maintenance Pit shall be identified as 'Zone 2'.

   c. Equipment/Parts storage room shall be identified as 'Zone 3'.

   d. Battery storage room shall be identified as 'Zone 4'.

e. Main service bay shall be identified as 'Zone 5.

f. East service bay shall be identified as 'Zone 6'.

B. Required functions during normal standby operation.

1. While no detector is in alarm, the detection system shall:
   a. Continuously monitor all gas detectors for malfunctions.
   b. Illuminate a steady green light at all visible alarm devices.
   c. Display detector data, including unique ID #, gas concentration being detected, and system status from the controller to authorized remote PC users via TCP-IP protocol.

2. Upon detecting a detector malfunction, the controller shall:
   a. Initiate low alarm devices, consisting of amber lights and audible alarm as noted in sequence of operations on drawing set.
   b. Signal the power contactor to disconnect power to welding machine(s) in the garage.
   c. Signal the power contactor to disconnect power to heating systems in the garage, if any.
   d. Signal the power contactor to close natural gas shut off valve and interrupt flow of natural gas to heating and other equipment.
   e. Disable the makeup air unit (MAU) furnace.
   f. Increase exhaust fan speed in the zone(s) containing the malfunctioning detector(s).
   g. Start (or continue running) make-up air units near zone(s) containing the malfunctioning detector(s).
   h. Display the malfunctioning detectors or other pieces of equipment on the HMI/Controller including location and unique ID, and visual to authorized remote PC users.
   i. Send an alert email, telephone call, and SMS message to the existing building fire alarm monitor service and assigned supervisory staff reporting unique ID# of malfunctioning detector or other equipment and its location.

C. Actions required when any gas leak is detected. The system shall automatically execute all required responses immediately after the alarm or other input signal is initiated.

1. Upon low-alarm condition detected by any gas system detector, the control system shall perform the following actions only within the zone(s) in which the detection event(s) are located.
   a. Start (or continue running) exhaust fans in the zone(s) containing the malfunctioning detector(s).
   b. Signal the power contactor to disconnect power to welding machine(s) in the garage.
   c. Signal the power contactor to disconnect power to heating systems in the garage, if any.
   d. Signal the power contactor to close natural gas shut-off valve(s) serving heating systems and other equipment.
   e. Disable MAU furnace
   f. Shut off all green lamps at the visual alarm stations associated with the zones containing the leak event, and initiate audible and visual low alarms, consisting of amber flashing lamps and a "low alarm" horn tone.
   g. Display the detectors locations giving alarm on the HMI/Controller.
   h. Display detectors data, including unique ID # and gas concentration being detected, and system status from the controller to authorized remote PC users via TCP-IP protocol.

i. Start (or continue running) make-up air units near zone(s) containing the malfunctioning detector(s).
j. Send an alert email, telephone call, and SMS message to fire alarm monitor company as determined by the owner, and to up to (6) assigned supervisory staff reporting ID# of detector that has detected gas leak, percentage of concentration of detected gas in terms of % LEL, and building ID or name, in which gas leak has been detected.

2. Upon high-alarm condition detected by any natural gas detector, the control system shall automatically perform the following actions within all zones.

a. Start (or continue running) exhaust fans in the zone(s) containing the malfunctioning detector(s).
b. Signal the power contactor to disconnect power to welding machine(s) in the garage.
c. Signal the power contactor to disconnect power to heating systems in the garage, if any.
d. Signal the power contactor to close the natural gas shut-off valve(s) serving heating systems and other equipment.
e. Disable MAU furnace
f. Shut off all green and amber lamps at the visual alarm stations associated with the zones containing the leak event, and initiate audible and visual high alarm signals, consisting of red flashing lamps and an urgent "high alarm" horn tone.
g. Display detectors data, including ID # and gas concentration being detected, and system status from the controller to authorized remote PC users via TCP-IP protocol.
h. Display detectors data, including ID # and gas concentration being detected, and system status from the controller to authorized remote PC users via TCP-IP protocol.
i. Start (or continue running) make-up air units near zone(s) containing the malfunctioning detector(s).
j. Turn off all building-heating systems.
k. Send an alert email, telephone call, and SMS message to fire alarm monitor company as determined by the owner, and to up to (6) assigned supervisory staff reporting ID# of detector that has detected gas leak, percentage of concentration of detected gas in terms of % LEL, and building ID or name, in which gas leak has been detected.

D. Acknowledgement Station. Provide an alarm acknowledgement station for each detection system adjacent to each controller. Each station shall consist of a push button for acknowledging gas-leak alarms. Acknowledgment shall shut off only the audible alarms and leave visual alarms in effect until the natural gas concentration falls below the alarm level(s) and the fault is manually reset at the HMI. The system shall annunciate new alarms after previous alarms have been acknowledged.

E. Test Switches. Provide test switch(s) in the gas detection system HMI control panel. The switch(s) shall activate all control panel responses, as noted in this document and sequence of operation on drawings, for testing purposes. Switches shall be selectable for testing system responses to either a simulated low natural gas leak alarm; or a simulated high natural gas leak alarm.

F. Provide signage that describes what each light color and each tone of audible annunciator mean. Include instruction to evacuate building upon detection of a high alarm. Sign shall be affixed at a location visual to all staff.

G. Provide software as needed for control, communication, and notifications specified in the project documents. Software shall be the latest version and be compatible with current building-facility software, interface and control architecture.

2.03 SUMMARY COMPONENT DESCRIPTIONS

A. Equipment and components to be installed for the leak detection and alarm system are listed below. Quantities shall be provided as shown in the contract drawings.

1. Infrared natural gas detectors, point type.
2. Catalytic-bead gas detectors.
3. Electrochemical CO detectors.
4. MODBUS data transmitters for gas detectors.
5. MODBUS-based gas detection control & signaling panel.
6. MODBUS wiring for natural gas detectors array.
7. MODBUS relay modules.
8. Visual and audible alarms.
9. Human-Machine Interface (HMI) panel & graphics.
10. IP/network interface card or module.
11. 24 VDC power supply for gas detection and alarm systems.
12. Backup battery or uninterruptible power supply for detection system.
13. Tygon tubing for ground-level calibration and testing of detectors, including wall-mounted NEMA-1 termination cabinets. Each tube shall be permanently tagged with the corresponding detectors number, and each cabinet shall house a no more than five tube terminations.
14. UV/IR flame detectors and interfaced modules.

2.04 INFRARED NATURAL GAS DETECTORS, POINT TYPE

A. Provide (31) methane detectors. Detectors shall be infrared self-contained optical methane detectors with 4-20 mA analog output that detect gas in range of 0-100% LEL concentration, with accuracy of +/-3% within 0-50% LEL and +/-5% within 51-100% LEL. Detectors shall require recalibration no more frequently than annually. Detector's output shall provide remote alarm, fault and calibration signals. Remote calibration at the controller shall be available. Detectors shall be powered by a 24 VDC supply, with 5 watts maximum power consumption.

B. Detectors shall be listed for use in Group D, Class 1, Division 1 hazardous areas, and listed per UL2075.

C. Furnish and install gas detectors at locations, as shown in the contract drawings.

D. Acceptable products.

1. Sensor Electronics Corp. – Millennium Hawk Infrared Hydrocarbon detector.

2.05 CATALYTIC-BEAD HYDROGEN- GAS DETECTORS

A. Provide (31) hydrogen detectors. Detectors shall be infrared self-contained optical hydrogen detectors with 4-20 mA analog output that detect gas in range of 0-100% LEL concentration, with accuracy of +/-3% within 0-50% LEL and +/-5% within 51-100% LEL. Detectors shall require recalibration no more frequently than quarterly. Detector's output shall provide remote alarm, fault and calibration signals. Remote calibration at the controller shall be available. Detectors shall be powered by a 24 VDC supply, with 5 watts maximum power consumption.

B. Detectors shall be listed for use in Group D, Class 1, Division 1 hazardous areas, and listed per UL2075.

C. Furnish and install gas detectors at locations, as shown in the contract drawings.

D. Acceptable products.

1. Sensor Electronics Corp. – 3000 gas detector.

2. Or approved equal.

2.06 ELECTROCHEMICAL CARBON MONOXIDE GAS DETECTORS

A. Provide (7) CO gas detectors. Detectors shall be electrochemical, intrinsically safe and explosion proof with 4-20 mA output to connected transmitter, 316 stainless steel housing construction, min accuracy of +/- 5%. Provide 24 VDC power supply. Wall mounted unless otherwise noted.

B. Detectors shall be listed for use in Group D, Class 1, Division 1 hazardous areas, and listed per UL2075.

C. Furnish and install gas detectors at locations, as shown in the contract drawings.

D. Acceptable products.

1. Sensor Electronics Corp. – 3000 gas detector.

2. Or approved equal.

2.07 SINGLE AND DUAL TRANSMITTERS FOR GAS DETECTORS

A. Provide (31) dual transmitters and (7) single transmitter. Transmitter shall receive input of 4-20mA signal from gas detectors, and shall have outputs for RS-485 MODBUS. Transmitters shall support dual detectors and shall be pre-programmed by the manufacturer for connection to matching detector and for location and installation on a serial-type MODBUS data path. Transmitters shall be rated for Class 1 Div 1 Group D, with back-lighted LCD display, capability of time stamped data logging using a removable memory module.

B. Dual transmitters shall be programmed in a logical OR configuration such that either detector shall have the capability to trigger an alarm condition independent of the other.

C. Transmitters shall be suitable for powering by 24V DC supply.

D. Acceptable products.

1. Sensor Electronics Corp. Model SCE 3120 and SEC 3100.

2. Or approved equal.

E. Data Wiring. Route MODBUS serial wiring in loop configuration so that the first and last transmitter in the loop are both connected to the MODBUS system at the controller, and as recommended by the transmitter manufacturer.

F. Power Wiring. Route 24V power wiring in loop configuration so that the first and last transmitter in the loop are both connected to the power supply, as recommended by the transmitter manufacturer.

2.08 GAS DETECTION SYSTEM MONITOR, HMI AND RELAY PANEL

A. Furnish one Natural gas Detection System Monitor, human-machine interface (HMI) and Relay Panel, at each location shown on the contract drawings.

1. The System Monitor shall recognize natural gas detector data transmitters and relay modules on the MODBUS data path. The System Monitor shall be programmable by local input, and at the HMI panel, and shall include password protection for modifying settings or parameters. The System Monitor shall control dry relay contacts wired to the telephone emergency dialer, with separate contacts for separate voice messages for 1) system trouble; 2) low alarm; 3) high alarm. The System Monitor, HMI and Relay panel shall be installed in a non-hazardous area and are not required to be rated for hazardous areas.

2. HMI display shall show status of up to 4 zones, including green, yellow, orange and red for each zone, with indication based on scaled detection level. HMI display shall indicate percentage of LFL detected at each detector simultaneously with the color status. The System Monitor shall provide outputs for RS485 serial communication, Ethernet with RJ45 connection and IP addressability, and the RS485 Modbus communication protocol. HMI shall include graphic representation of each active zone and location of each detector within each zone, including each detector's status, ie green, amber, red, fail.

B. Acceptable products.

1. Sensor Electronics 3500 HMI Operator Interface and System Monitor.

2. Or approved equal.

2.09 MODBUS WIRING FOR GAS SENSOR ARRAY

A. Wiring between MODBUS input and relay devices shall be with Beldin-type cable with three #16 conductors and twisted shielded design, and as otherwise required by the manufacturer's written installation instruction.

2.10 MODBUS RELAY MODULES

A. Each MODBUS output relay module shall have MODBUS input and provide eight or 16 dry-contact outputs. Output shall be rated at either 8A at 30VDC, or 8A at 250VAC. Relay shall be programmed and addressable from the gas detection control panel).

B. Acceptable products

1. Sensor Electronics SEC 3500 relay controller.

2. Or approved equal.

2.11 INDOOR AND OUTDOOR VISUAL ALARMS

A. Provide visual alarms where shown in the Drawings. Visual alarm shall be illuminated by LED strobe warning light visual in bright daylight. Each visual alarm shall be multi-warning light to indicate different color at each condition, mounted in a NEMA 4X enclosure. Shall be UL listed for use in hazardous locations Class 1, Division 2, Group D, and shall be powered by 24 VDC supply. Lamps shall stay green continuously in normal condition while no gas leak alarms are detected. Lamps shall illuminate flashing amber when a low gas leak is detected and flashing red when a high gas leak is detected.

B. Acceptable products

1. Federal Signal Model #FB2LEDX-QC-012-024.

2.12 INDOOR AND OUTDOOR AUDIBLE ALARMS

A. Provide audible alarms (horns), in locations as shown on the Drawings. Alarms shall be rated at 110 dbA at 10', listed for Class 1, Division 2, Group D hazardous locations; shall be powered by 24 VDC supply, Nema 4X enclosure and with volume control.

B. Alarms shall operate distinctly for low alarm versus high alarm.

C. All audible alarms for leak detection shall be distinct in tone and pattern from audible fire alarms annunciated in the vicinity of the repair garage and shall not have a three-tone temporal pattern, which is reserved for the fire alarm.

D. Provide Federal Signal 300GCX-024.

2.13 BATTERY BACKUP AND POWER SUPPLY

A. General. Stand-by power source (battery back-up) capable of operating entire detection system continuously, including detectors, control panel, and visual and audible annunciators up to 40 minutes in the event of power outage. Output 24 VDC, input 120 VAC. See electrical drawings for more details.

2.14 TEST STATION

A. NEMA 1 Cabinet terminal box termination of test tubing. Provide each box with test tubes based on sensors in vicinity of each test station. Provide quantity as shown on the plans.

B. Provide Tygon tubing from each leak detectors to a cabinet. Label each tube-end with ID number of related detectors. Install the test cabinet on wall 5'-0" AFF.

C. Provide test cylinders for methane, hydrogen, and carbon monoxide.

2.15 FLAME DETECTOR

A. General. Provide (11) dual-spectrum UV/IR flame detectors, suitable for connection to the existing Fire Alarm Control Panel (FACP) at the site.

B. Requirements. Triple-IR flame detector, 3/4" standard configuration provide listed accessories as required by installation conditions, including standard mounting bracket modelFK-TMO-S01, air shiel/air purge assembly FLS-ADD-S01where dust exposure exists and other manufacturer recommended hardware to make for complete installation and integration.

C. Detectors shall be wired to and interfaced with existing simplex panel fire alarm control panel using listed compatible addressable module, as approved by Simplex for the existing panel.

D. Approved Manufacturer/Models:

1. Fike model 'FIK-IR3'.

2. Or approved equal.

PART 3 - EXECUTION

3.01 GENERAL

A. Execution is described in the respective Product description of this section, except as otherwise described within Part 3 of this specification.

B. All components and equipment shall be installed according to the respective manufacturers' instructions and recommendations. Industry-standard practices shall apply if no manufacturer instructions exist.

3.02 SUBMITTALS

A. Submittals shall be presented according to the terms of the contract.

B. The contractor shall be responsible for modifying or replacing any of the approved construction contract drawings.

1. Stamping by Professional Engineer. All modified or replaced drawings shall be stamped by an appropriate California-licensed Professional Engineer.

2. Approval by Authorities having jurisdiction (AHJs). Any such changes shall be approved by AHJs.

C. Manufacturers' original standard specifications and warranties for material, components and assemblies. These are in addition to the comprehensive leak detection and alarm system warranty that is the responsibility of the Contractor.

D. Approvals. Prior to construction, the Owner shall approve all drawings and other information required under Part 3, section 3.02.

1. Submittals are required for all items listed in this Section and are subject to approval by AHJs. Submittals shall include but are not limited to equipment listed under Article 2.03.A.

2. The following are required as applicable for each size and/or type of item listed in paragraphs 3.02.E of this Section, as applicable.

   a. Manufacturers' data sheets with dimensional drawings.
   b. Manufacturers certification complying to ANSI/ISA 12.13.01 (2013)
   c. Installation and operating instructions and test procedures.
   d. Recommended maintenance instructions and schedules.
   e. Special tools required for maintenance and testing.
   f. Warranties, including those of the original manufacturer.
   g. Wiring diagrams.

E. Items requiring submittals:

1. Gas-leak detectors and detectors transmitters.

2. Gas detection system controller and relay panels.

3. Alarms (visual and audible).

4. Human-Machine Interface (HMI) panel.

5. Backup battery and power supply, or uninterruptible power supply for detection system including annunciators.

6. Telephone auto dialer.

3.03 WORKMANSHIP

A. Labor shall be performed in a workmanlike manner by electricians skilled in their particular trade. Conduit and equipment shall be installed square and plumb accessible for proper operation and service. Installation shall be consistent with completeness and appearance whether concealed or exposed.

3.04 LABELING

A. The manufacturer shall provide a stainless-steel nameplate on each major component. The nameplate shall be permanently affixed and shall be embossed with the manufacturer's name, address, model number, serial number, pressure rating and flow capacity as well as the item description, equipment number, and mark number.

3.05 FIELD-STARTUP SERVICES

A. General. Contractor shall provide complete field startup services for the leak detection and alarm system. Contractor shall provide appropriate field-startup services from manufacturers and vendors, including on-site assistance from the main vendor.

B. Requirements. Contractor shall initialize and make fully operational the following:

1. Natural gas detectors and control panel.

2. Telephone emergency dialer.

3. Alarm relays.

4. Control interfaces to building systems controlled by the natural gas detection system

5. Battery uninterruptible power system.

3.06 ADJUSTING, BALANCING AND TESTING

A. After completion of the installation, start, regulate, adjust and test all equipment and devices.

B. Functional testing shall verify that all detectors detect natural gas leaks, give signals, and initiate alarms and other responses as specified. Each detectors' function, and associated building controls initiated by the detectors(s) shall be tested using test gases with methane concentrations at 10% LFL, 25% LFL and 50% LFL.

3.07 OPERATION AND MAINTENANCE DATA AND TRAINING

A. Maintenance Manuals: Organize maintenance and operating manual information into suitable sets of manageable size, and bind into individual binders, properly identified and indexed (thumb-tabbed). Examples: natural gas detectors, ventilators, pull stations, etc. Include emergency instructions, safety procedures, spare parts listings, warranties, wiring diagrams, recommended maintenance intervals, inspection procedures, shop drawings, product data, and similar applicable information. Use a standard method for highlighting safety procedures. Bind each manual of each set in a heavy-duty 2-inch, three ring vinyl-covered binder and include pocket folders for folded sheet information. Mark identification on both the front and spine of each binder, including "Volume ## of ##" information.

1. Data:
   a. Include all necessary information required for operation and maintenance of the equipment in the main text of the manuals and sufficient in itself for the purpose intended.
      1) Include manufacturer's leaflets (in original form) only to supplement the manual text and fully cross-reference to it.
   b. When incorporating manufacturer's leaflets, data and nomenclature, black items not related to the specific items(s) supplied or dearly indicated as not applicable.
2. Quantity and Delivery: Supply three (3) complete manuals for approval with the commencement of the delivery of the equipment to the site.

B. Electronic Copies. Provide (3) copies of maintenance manual in electronic PDF format. Content and organization shall match the printed manuals. Documents shall be text searchable. Provide on USB-C` flash drive and include printed label identifying project and content.

C. Leak detection and alarm system training.

1. General:
   a. At least 14 days prior to scheduled data for commencement of training, submit details of the training program and instructional materials to the Owner for review and approval.
   b. Where specified, develop and conduct a program to train selected Owner personnel in the safe operating procedures, and maintenance of equipment and systems furnished during the hours required by the Owner. Also include in the training

program key hazards and their protectors, and corrective actions for violation of safety rules.

c. Furnish instructors, instructional materials.
d. The Owner is to furnish physical facilities and equipment.
e. Begin instruction upon successful completion of Testing as specified in this Section.

2. Program content: At a minimum, instruction will include material covered in the operation and maintenance manuals as well as the following:
   a. Theory of operation.
   b. Practical aspects of operation.
   c. Description of system, equipment and components.
   d. Functional characteristics of system, equipment and components.
   e. Emergency operation procedures.
   f. Location, removal and reinstallation of components.
   g. Maintenance procedures.
   h. Servicing intervals and schedules.
   i. Diagnosis and problem solving (troubleshooting).
   j. Repair procedure.
   k. Hazards related to leak detection and alarm system operations.
   l. Conduct preventive maintenance checks and services.
   m. Review emergency responses to be performed in the event of a natural gas leak.

D. Special tools or equipment.

3. Vendor will supply special tools or equipment.
   a. The special equipment or tools are defined as, other than those nominally found in a mechanic's toolbox, necessary for the general upkeep, maintenance and overhaul of the equipment or products contained in coaches delivered under this contract.
   b. A list of special tools or equipment will be provided to he Owner. The list must be submitted for approval no later than 30 days after awarding contract.
   c. Any tools not found in the catalogue or over the counter of a local supply company are considered a specialty tool or equipment.

E. Emergency response training.

1. Contractor shall provide emergency response training and system familiarization for Fire Department and facility maintenance personnel.

END OF SECTION