Board of Directors Agenda

February 16, 2023

Click link to access the meeting:

https://us02web.zoom.us/j/98288032362

Zoom Meeting ID

Ways to Join

Computer: Click the link above. You will be prompted to run the Zoom browser or Zoom application. Once signed on to the meeting, you will have the option to join using your computer audio system or phone.

Webinar Features:

Raise Hand	▶	Use the **raise hand** feature every time you wish to make a public comment.
CC	▶	Participants can enable **closed captioning** by clicking the CC icon. You may also view the full transcript and change the font size by clicking 'subtitle settings'. These features are not available via phone.
	▶	This symbol shows you are **muted**, click this icon to unmute your microphone.
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	▶	The chat feature should be used by panelists and attendees solely for "housekeeping" matters as comments made through this feature will not be retained as part of the meeting record. See the **Live Verbal Public Comment** for instructions on how to make a public comment.

Smartphone or Tablet: Download the Zoom app and join the meeting by clicking the link or using the webinar ID (found in the link).

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Phone:

1. If you are joining the meeting audio by phone and viewing the meeting on a device, dial the number provided in the 'join audio' phone call tab of the initial pop-up, and enter the Meeting ID (found in the link).
2. If you are joining by phone only, dial: **+1-669-900-9128** or **+1-253-215-8782** and type the meeting ID found in the link, press #. You will have access to the meeting audio, **but will NOT be able to view the PowerPoint presentations.**

Live Verbal Public Comments: Use the 'Raise Hand' icon every time you wish to make a public comment on an item. Raise your hand once the agenda item you wish to comment on has been called. In person public comments will be taken first, virtual attendees will be taken in the order in which they raise their hand. Requests to speak will not be taken after the public comment period ends, unless under the Chair's discretion. General Public Comment, at the beginning of the Board of Directors meeting only, will be limited to five speakers. Additional speakers with general public comments will be heard at the end of the meeting. Three-minutes of time is allotted per speaker, unless otherwise directed by the Chair.

Public Comments Made Via Zoom

1. Click the link found at the top of this instruction page
2. Click the raise hand icon located in the bottom center of the platform
3. The Clerk will announce your name when it is your turn to speak
4. Unmute yourself to speak

Public Comments Made by Phone Only

1. Dial **+1-669-900-9128**
2. Type in the zoom meeting ID found in the link and press #
3. Dial *9 to raise your hand via phone
4. The Clerk will call out the last 4 digits of your phone number to announce you are next to speak
5. Dial *6 to unmute yourself

Written Public Comments (before the meeting): Written public comments will be recorded in the public record and will be provided to MTS Board Members in advance of the meeting. Comments must be emailed or mailed to the Clerk of the Board* by 4:00pm the day prior to the meeting.

Translation Services: Requests for translation services can be made by contacting the Clerk of the Board* at least four working days in advance of the meeting.

In-Person Participation: In-person public comments will be heard first. Following in-person public comments, virtual attendees will be heard in the order in which they raise their hand via the Zoom platform. Speaking time will be limited to three minutes per person, unless specified by the Chairperson. Requests to speak will not be taken after the public comment period ends, unless under the Chair's discretion.

Instructions for providing in-person public comments:

1. Fill out a speaker slip located at the entrance of the Board Room;
2. Submit speaker slip to MTS staff seated at the entrance of the Board Room;
3. When your name is announced, please approach the podium located on the right side of the dais to make your public comments.

Members of the public are permitted to make general public comment at the beginning of the agenda or specific comments referencing items on the agenda during the public comment period. General Public Comment, at the beginning of the Board of Directors meeting only, will be limited to five speakers. Additional speakers with general public comments will be heard at the end of the meeting.

Assistive Listening Devices (ALDs): ALDs are available from the Clerk of the Board* prior to the meeting and are to be returned at the end of the meeting.

Reasonable Accommodations: As required by the Americans with Disabilities Act (ADA), requests for agenda information in an alternative format or to request reasonable accommodations to facilitate meeting participation, please contact the Clerk of the Board* at least two working days prior to the meeting.

***Contact Information:** Contact the Clerk of the Board via email at ClerkoftheBoard@sdmts.com, phone at **(619) 398-9681** or by mail at **1255 Imperial Ave. Suite 1000, San Diego CA 92101.**

Agenda de la Junta de Directores

16 de febrero, 2023

Haga clic en el enlace para acceder a la reunión:

https://us02web.zoom.us/j/98288032362

ID de la reunión en Zoom

Formas de Participar

Computadora: Haga clic en el enlace más arriba. Recibirá instrucciones para operar el navegador de Zoom o la aplicación de Zoom. Una vez que haya iniciado sesión en la reunión, tendrá la opción de participar usando el sistema de audio de su computadora o teléfono.

Funciones del Seminario En Línea:

Levantar la mano	▶	Use la herramienta de **levantar la mano** cada vez que desee hacer un comentario público.
CC	▶	Los participantes pueden habilitar **el subtitulado** haciendo clic en el ícono CC. También puede ver la transcripción completa y cambiar el tamaño de letra haciendo clic en “configuración de subtítulos”. Estas herramientas no están disponibles por teléfono.
	▶	Este símbolo indica que usted se encuentra en **silencio**, haga clic en este ícono para quitar el silenciador de su micrófono.
	▶	Este símbolo indica que su micrófono se encuentra **encendido**. Haga clic en este símbolo para silenciar su micrófono.
	▶	La herramienta de chat deben usarla los panelistas y asistentes únicamente para asuntos “pertinentes a la reunión”, ya que comentarios realizados a través de esta herramienta no se conservarán como parte del registro de la reunión. Consulte el **Comentario público verbal** en vivo para obtener instrucciones sobre cómo hacer un comentario público.

Teléfono Inteligente o Tableta: Descargue la aplicación de Zoom y participe en la reunión haciendo clic en el enlace o usando el ID del seminario web (que se encuentra en el enlace).

Descarga en el App Store

Obténla en Google Play

Teléfono:

1. Si está participando en la reunión mediante audio de su teléfono y viendo la reunión en un dispositivo, marque el número indicado en la pestaña de llamada telefónica “unirse por audio” en la ventana emergente inicial e ingrese el ID de la reunión (que se encuentra en el enlace).
2. Si está participando solo por teléfono, marque: **+1-669-900-9128** o **+1-253-215-8782** e ingrese el ID de la reunión que se encuentra en el enlace, pulse #. Tendrá acceso al audio de la reunión, **pero NO podrá ver las presentaciones en PowerPoint.**

Comentarios Públicos Verbales en Vivo: Use la herramienta “levantar la mano” cada vez que desee hacer un comentario público sobre alguno de los artículos. Levante la mano una vez que el artículo de la agenda sobre el que desea comentar haya sido convocado. Los comentarios públicos en persona se escucharán primero, se escuchará a los asistentes virtuales en el orden en el que levanten la mano. No se aceptarán solicitudes para hablar después de que termine el periodo para hacer comentarios públicos, a menos de que el presidente determine de otra forma a su discreción. Comentarios públicos generales, únicamente al inicio de la reunión de la Junta de Directores, se limitarán a cinco personas que deseen hablar. Las personas adicionales que deseen aportar comentarios públicos generales podrán hacerlo al final de la reunión. Se otorga tres minutos de tiempo por persona que desee hablar, a menos de que el presidente instruya de otra forma. (*Consulte la página 2 para obtener instrucciones sobre cómo hacer un comentario público.*)

Comentarios Públicos a Través de Zoom

1. Haga clic en el enlace que se encuentra en la parte superior de esta página de instrucciones
2. Haga clic en el ícono de levantar la mano en el centro inferior de la plataforma
3. El secretario anunciará su nombre cuando sea su turno de hablar
4. Desactive el silenciador para que pueda hablar

Comentarios Públicos Realizados Únicamente por Teléfono

1. Marque el **+1-669-900-9128**
2. Ingrese el ID de la reunión en Zoom que se encuentra en el enlace y pulse #
3. Marque *9 para levantar la mano por teléfono
4. El secretario indicará los últimos 4 dígitos de su número de teléfono para anunciar que usted será el siguiente en hablar
5. Marque *6 para desactivar el silenciador

Comentarios Públicos por Escrito (Antes de la Reunión): Los comentarios públicos por escrito se registrarán en el registro público y se entregarán a los miembros de la Junta de MTS antes de la reunión. Los comentarios deben enviarse por correo electrónico o postal al secretario de la Junta* antes de las 4:00 p.m. el día anterior a la reunión.

Servicios de Traducción: Pueden solicitarse servicios de traducción comunicándose con el secretario de la Junta* por lo menos cuatro días hábiles antes de la reunión.

Participación en Persona: Los comentarios públicos en persona se escucharán primero. Después de los comentarios públicos en persona, se escuchará a los asistentes virtuales en el orden en el que levanten la mano a través de la plataforma de Zoom. El tiempo para hablar se limitará a tres minutos por persona, a menos de que el presidente especifique de otra forma. No se recibirán solicitudes para hablar después de que termine el periodo para hacer comentarios públicos, a menos de que el presidente determine de otra forma a su discreción.

Instrucciones para brindar comentarios públicos en persona:

1. Llene la boleta para personas que desean hablar que se encuentran en la entrada de la Sala de la Junta.
2. Entregue la boleta para personas que desean hablar al personal de MTS que se encuentra sentado en la entrada de la Sala de la Junta.
3. Cuando anuncien su nombre, por favor, acérquese al podio ubicado en el lado derecho de la tarima para hacer sus comentarios públicos.

Los miembros del público pueden hacer comentarios públicos generales al inicio de la agenda o comentarios específicos que hagan referencia a los puntos de la agenda durante el periodo de comentarios públicos. Los comentarios públicos generales únicamente al inicio de la reunión de la Junta de Directores, se limitarán a cinco personas que deseen hablar. Las personas adicionales que deseen aportar comentarios públicos generales podrán hacerlo al final de la reunión.

Dispositivos de Asistencia Auditiva (ALD, por sus siglas en inglés): Los ALD están disponibles con el secretario de la Junta* antes de la reunión y estos deberán ser devueltos al final de la reunión.

Facilidades Razonables: Según lo requerido por la Ley de Estadounidenses con Discapacidades (ADA, por sus siglas en inglés), para presentar solicitudes de información de la agenda en un formato alternativo o solicitar facilidades razonables para facilitar su participación en la reunión, por favor, comuníquese con el secretario de la Junta* por lo menos dos días hábiles antes de la reunión.

***Información de Contacto:** Comuníquese con el secretario de la Junta por correo electrónico en ClerkoftheBoard@sdmts.com, por teléfono al **(619) 398-9681** o por correo postal en **1255 Imperial Ave. Suite 1000, San Diego CA 92101.**

Metropolitan Transit System

REVISED

Board of Directors

Agenda

February 16, 2023 at 9:00 a.m.

In-Person Participation: James R. Mills Building, 1255 Imperial Avenue, 10th Floor Board Room, San Diego CA 92101

Teleconference Participation: (669) 444-9171; Webinar ID: 982 8803 2362, https://zoom.us/j/98288032362

NO.	ITEM SUBJECT AND DESCRIPTION	ACTION
1.	**Roll Call**	
2.	**Public Comments** This item is limited to five speakers with three minutes per speaker. Others will be heard after Board Discussion items. If you have a report to present, please give your copies to the Clerk of the Board.	
CONSENT ITEMS		
3.	**Approval of Minutes** Action would approve the January 26, 2023 Board of Director meeting minutes.	Approve
4.	**Kearny Mesa Division (KMD) Zero Emission Bus (ZEB) Overhead Charging System Layout and Design – Work Order** Action would authorize the Chief Executive Officer (CEO) to execute Work Order WOA356-AE-05 under MTS Doc No. PWL356.0-22 with Pacific Railway Enterprises, Inc. (PRE), a Disadvantaged Business Enterprise (DBE), in the amount of $354,742.55 to provide engineering planning services for the KMD ZEB master planning.	Approve
5.	**Adoption of 2022 Conflict of Interest Code – Amendment** Action would 1) Adopt Resolution No. 23-01 amending the MTS Conflict of Interest Code pursuant to the Political Reform Act of 1974; 2) Adopt the amended 2023 MTS Conflict of Interest Code; and 3) Forward the amended 2023 MTS Conflict of Interest Code to the County of San Diego, the designated code-reviewing body, (Gov. Code § 82011) requesting approval of the amendment as required under Government Code section 87303.	Approve

6. **Purchase of 24 Class C Propane Powered Medium Duty Minibuses - Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. B0744.0-22, with Creative Bus Sales (CBS), for the purchase of up to twenty-four (24) propane powered Class C Minibuses in the amount of $5,028,360.24.

7. **MTS Excess Liability Insurance Renewals** — Approve

Action authorize the Chief Executive Officer (CEO) to purchase an Excess Liability Insurance Program, effective March 1, 2023, that results in a not to exceed amount of $3,196,218 based on the expiring coverage structure of $70M excess of a $5M Self Insured Retention (SIR).

8. **Investment Report – Quarter Ending December 31, 2022** — Informational

9. **Printing Timetables – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2686.0-23 with Neyenesch Printers, Inc., (Neyenesch), a certified Small Business (SB), for the provision of printing timetables for a period of three (3) years, in the amount of $375,731.09.

10. **Hazardous and Universal Waste Management and Trauma Scene Clean-Up Services for San Diego Trolley, Inc. (SDTI) & San Diego Transit Corporation (SDTC) – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2676.0-23 with Clean Harbors Environmental Services, Inc. (“Clean Harbors”) for the provision of Hazardous Waste and Trauma Scene Clean-Up Services for five (5) years for up to $1,912,145.96.

11. **C Street & Broadway Wye Sicas S7 And Wheel Counter Replacement - Work Order** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute Work Order MTS Doc. No. PWL355.0-22, WOA355-AE-11, with Psomas, in the amount of $299,610.15 to provide engineering design review for the C Street and Broadway Wye – Sicas S7 and wheel counter replacement.

12. **Security Services – Contract Amendment** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2359.5-20, with Inter-Con Security Services (Inter-Con), in the amount of $5,273,494 for Inter-Con contracted employee wage increases for the provision of security services through December 31, 2026.

DISCUSSION AND REPORT ITEMS

13. **San Diego Transit Corporation (SDTC) Pension Investment Status (Jeremy Miller, Representative with RVK Inc. and Larry Marinesi)** — Informational

14. **San Diego Transit Corporation (SDTC) Employee Retirement Plan's Actuarial Valuation as Of July 1, 2022 (Anne Harper With Cheiron Inc. And Larry Marinesi)** — Approve

Action would receive the SDTC Employee Retirement Plan's (Plan) Actuarial Valuation as of July 1, 2022, and adopt the pension contribution amount of $18,946,198 for fiscal year 2024.

15. **City of San Diego Planned Closure of Fifth Avenue (Denis Desmond)** — Approve

Action would approve an advisory statement to the City of San Diego as follows: "In order to operate the highest quality and most reliable service to our passengers, the MTS Board of Directors supports a solution that will maintain transit bus access along Fifth Avenue, north of Market Street. The Board asks the City staff to continue collaboration with MTS to identify transit friendly solutions prior to full implementation of the Promenade Project." ~~take an advisory vote to support maintaining access to Fifth Avenue for MTS buses north of Market Street at all times.~~

16. **MTS Safety Performance Annual Review (Fabeann Soberg and Jared Garcia)** — Approve

Action would approve updates to the Public Transportation Agency Safety Plan (PTASP).

17. **Operations Budget Status Report for December 2022 (Gordon Meyer)** — Informational

OTHER ITEMS

18. **Chair's Report** — Informational

19. **Chief Executive Officer's Report** — Informational

20. **Board Member Communications** — Informational

21. **Additional Public Comments Not on The Agenda**

If the limit of 5 speakers is exceeded under No. 3 (Public Comments) on this agenda, additional speakers will be taken at this time. Subjects of previous hearings or agenda items may not again be addressed under Public Comments.

ADJOURNMENT

22. **Next Meeting Date**

The next Board of Director's meeting is scheduled for March 16, 2023 at 9:00am.

23. **Adjournment**

DRAFT MINUTES

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM

BOARD OF DIRECTORS

January 26, 2023

[Clerk's note: Except where noted, public, staff and board member comments are paraphrased. The full comment can be heard by reviewing the recording at the MTS website.]

1. Roll Call

Chair Fletcher called the Board meeting to order at 9:01 a.m. A roll call sheet listing Board member attendance is attached.

2. Public Comment

Jose Puga – Representing Teamsters Local 683 made a verbal statement to the Board during the meeting. Puga representing service workers employed by Transdev advocated for a pay increase that bus drivers at MTS and Transdev received. Puga listed similar class requirements and licenses that service workers did and listed various obstacles such as poor lighting and bus backup liabilities. Puga stated that the wage increase was through a grant by MTS and asked if the grant was only for drivers or employees.

Pedro Franco – Representing Teamsters Local 683 made a verbal statement to the Board during the meeting. Franco acknowledged that entry level workers are making more money, where before, increases were granted through seniority. Franco acknowledged that incoming employees are being paid more, while veteran employees have not seen a similar adjustment. Franco is a 10-year service worker for Transdev who stated that current inflation rates have not been adjusted to seasoned workers.

Ivan Sanchez – Representing Teamsters Local 683 made a verbal statement to the Board during the meeting. Sanchez acknowledged his recent addition to the industry and noted the various weather conditions the team works under. Sanchez commutes daily from Tijuana that can become overnight stays in the US, which limits their ability to see their family. Sanchez stated that the wage increases were a dire request and hoped that the Board felt the same.

Ronald Barnes – Representing Teamsters Local 683 made a verbal statement to the Board during the meeting. Barnes noted a 1-year employment with Transdev and supported the wage increases of service workers. Barnes acknowledged the high turnover in the last eight months for higher paying jobs. Barnes noted a 30-day, mandatory six day a week schedule the crew had to accommodate in the past and a range of weather conditions the team works in. Barnes asked the Board for support on wage increases for service workers.

Hector Diaz – Representing Teamsters Local 683 made a verbal statement to the Board during the meeting. Diaz noted his 15-years with Transdev hoped the Board would consider the wage increase for service workers. Diaz stated that this department works in a variety of weather conditions and advocated for equal wage increases that drivers received. Diaz referenced El Latino newspaper article that acknowledged state and local wage increases starting the new year, and asked for a $2 wage increase.

SPECIAL ITEM

3. Elect Vice Chair, Chair Pro Tem, and Committee Appointments (Sharon Cooney)

Action would: 1) Elect a Vice Chair and a Chair Pro Tem for 2023; and 2) Consider the nominating slate proposed by the Ad Hoc Nominating Committee for the appointment of representatives to MTS committees for 2023 and vote to appoint representatives to those committees.

Committee Comment

Board Member Bush asked to be removed as the LOSSAN alternate representative. Sharon Cooney explained meeting attendance requirements. Board Member Moreno volunteered to be appointed as the alternate to the LOSSAN Board.

Board Member Bush nominated alternate National City Board Member Rodriguez to be the primary representative instead of himself on the Public Security Committee. Karen Landers, MTS General Counsel referenced MTS Policy 22 and stated that the Board did not have alternate limitations for internal MTS committee representatives. She added that the practical reasons for having primary representatives on committees is that Committee representatives can engage at the Board level on the issues discussed in more detail at the committee level. It is a Board decision to decide if alternates can serve on internal committees. Outside committees require primary representatives be appointed. Chair Fletcher asked that if an alternate is allowed to serve on an internal committee, that both representatives agree on issues at the committee and Board level. Board Member Bush agreed and believed that Alternate Board Member Rodriguez would be actively involved in advocating for MTS, and would be better able to do so by participating in the Public Security Committee.

Board Member Bush also asked that he be the primary South Bay representative at the Executive Committee and have Board Member Leyba-Gonzalez as the alternate. Ms. Cooney explained that the appointment was set by Board Policy and the Board would need to decide if the Policy would be waived to accommodate the request. She clarified that in two years, this change could create an impact to the rotation within the Policy, the South Bay Caucus would discuss this issue and decide how the accommodation would be executed.

Action Taken

Chair Fletcher moved to elect Board Member Whitburn as Vice Chair and Board Member Montgomery Steppe as Chair Pro-Tem, and approved the appointment of representatives to MTS and non-MTS committees for 2023, as proposed by the Ad Hoc Nominating Committee including the following changes: Board Member Moreno appointed as the LOSSAN alternate, Alternate Board Member Rodriguez as a Committee Member to the Public Security Committee, and Board Member Bush as the primary representative on the Executive Committee with Board Member Leyba-Gonzalez as the alternate representative on the Executive Committee. Board Member McCann seconded the motion, and the vote was 15 to 0 in favor.

CONSENT ITEMS:

4. Approval of Minutes

Action would approve the December 8, 2022 Board of Directors meeting minutes.

5. In-Plant Bus Inspections, Pre-Award and Post Delivery Buy America Audits – Contract

Award
Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. B0752.0-23 with TRC Engineering Services, LLC (TRC), for the provision of In-Plant Bus Inspections, Pre-Award and Post Delivery Buy America Audits, for both Battery Electric and Compressed Natural Gas (CNG) powered bused for a period of five (5) years, in the amount of $599,757.00.

6. Existing Cell Tower – Ground Lease Amendment
Action would authorize the Chief Executive Officer (CEO) to approve the Amended and Restated Ground Lease Agreement (Lease) for an existing cellular communication tower on SD&AE property.

7. PRONTO Fare Collection System – Contract Amendment
Action would authorize the Chief Executive Officer (CEO) to execute Amendment 15 to MTS Doc. No. G2091.0-18, with Innovations in Transportation, Inc. (INIT), for PRONTO In-App Messaging services, in the amount of $151,246.00.

8. Palm Tree Removal Services – Contract Award
Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. PWL363.0-23 with Integrity Arborist and Ecoscape Inc., at $160,150.00 for palm tree removal services.

9. Mount San Miguel Radio Site Lease – Contract Amendment
Action would authorize the Chief Executive Officer (CEO) to: 1) Ratify the original agreement MTS Doc. No. G1321.0-10; and 2) Execute Amendment 2 (in substantially the same format as Attachment B), with American Tower Corporation from February 1, 2023 to January 31, 2030, in the amount of $432,609.40.

10. Auction Services – Contract Award
Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2649.0-23 with JJ Kane Associates DBA Ken Porter Auctions (JJ Kane), for the provision for auction services for five (5) years.

11. Information Technology Service Management (ITSM) Upgrade and Add Enterprise Licensing and Purchase Unlimited Asset Discovery Add-On – Contract Amendment
Action would authorize the Chief Executive Officer (CEO) to execute Amendment No. 2 to MTS Doc. No. G2604.0-22, with Compulink Technologies, Inc. (Compulink), increasing the contract value in the amount of $208,780.68, bringing the contract total to $450,810.32.

12. Bytemark HaCon HAFAS Trip Planner Software – Sole Source Contract Award
Action would authorize the Chief Operating Officer (CEO) to: 1) Ratify Purchase Order (PO) 4500040451 with Bytemark for Trip Planner Web-App in the amount of $75,310.00; 2) Ratify PO 4500042353 with Bytemark for HAFAS Trip Planner Application Programming Interface (API) in the amount of $35,200.00 and Trip Planner Enhancements in the amount of $61,877.00 for a total of $97,077.00; and 3) Execute MTS Doc. No. G2707.0-23 with Bytemark, Inc., in the amount of $172,387.00 combining the POs for three years of HaCon Trip Planner software maintenance support and development.

13. Commvault Metallic Appliance and Subscription – Contract Award

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2701.0-23 with Nth Generation Computing, Inc., in the amount of $641,520.24, for a period of three (3) years for the provision of Commvault equipment and support subscription.

14. Imperial Avenue Division (IAD) Zero Emission Bus (ZEB) Overhead Charging Phase I – Work Order Amendment

Action would authorize the Chief Executive Officer (CEO) to execute Work Order amendment WOA353-AE-01.01 under MTS Doc. No. PWL353.0-22 with Dokken Engineering, Inc. (Dokken) in the amount of $717,696.61 to provide engineering final design services for Phase 1 of the IAD electric bus charging infrastructure project.

15. Paratransit and Minibus Fixed-Route Bus Services – Contract Amendment

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. B0703.8-19, with First Transit, Inc., in the amount of $16,639,833 for Operator Wage $2 increase for the provision of paratransit and fixed-route bus services through June 30, 2030.

16. Fixed Route Bus Services – Contract Amendment

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. B0708.2-20, with Transdev North America (Transdev), in the amount of $21,439,684 for Operator Wage $2 increase for the provision of fixed-route, express and Bus Rapid Transit (BRT) bus services through June 30, 2031.

17. Mills Building 1st Floor Security Breakroom and Transit Store Office Rehabilitation – Work Order

Action would authorize the Chief Executive Officer (CEO) to execute Work Order MTSJOC324-18 under Job Order Contract (JOC) MTS Doc. No. PWG324.0-21 with ABC General Contracting, Inc. (ABCGC), in the amount of $242,922.83, plus a 10% contingency in the amount of $24,292.28, for a total amount of $267,215.11, for rehabilitating the vacated "Check Cashing" suite on the first floor of the Mills Building.

Action Taken on Consent Items

Board Member Hall moved to approve Consent Agenda Item Nos. 4 to 17. Board Member McCann seconded the motion, and the vote was 15 to 0 in favor.

DISCUSSION ITEMS AND REPORT ITEMS:

18. Fare Enforcement Diversion Program (Karen Landers)

Ms. Landers presented on the Fare Enforcement Diversion Program. She outlined the following information: fare enforcement overview, MTS policy goals, diversion program pilot, additional program accommodations, MTS's civil justice goal, financial impacts of fare evasion, ridership recovery, passenger fare revenue variance, PRONTO best fare and tapping, PRONTO outreach and education efforts, fare evasion and diversion program data, diversion program participation, May to December 2022 PRONTO data, staff conclusions, program recommendation, proposed solution: create penalty fare for on-the-spot diversion option.

Ms. Cooney explained the agency's tapping education efforts and stated that evasion continues to be a problem as some riders purposefully avoid fare validation.

Chair Fletcher thanked Board Member Montgomery Steppe, Chair of the Public Security Committee, for her efforts on this program. He provided the Board historical context about the program and stated that if riders received a penalty for a lack of fare, the financial consequence could escalate to up to $200. The diversion program was designed to avoid a significant financial burden. He expressed concern in the low program participation rate and stated that it was necessary for MTS to collect this revenue since the agency continues to be in a structural deficit, with a quarter of the deficit associated to fares.

Public Comment

Sally Smull – An MTS rider made a verbal statement to the Board during the meeting. Smull stated that at times she does not have sufficient time between her connection to tap to ride the trolley. Smull said if riders do not have more than $2.50 on their card, it should be charged, otherwise a full day pass should be charged. Smull believed people were not intentionally not tapping and rather, were in a rush to board. Smull believed the program should continue and should not be penalized more than one day fare.

Corinna Contreras – Representing Climate Action Campaign made a verbal statement to the Board during the meeting. Contreras agreed that people are evading fare payment because they are in a rush to board. Contreras strongly believed that if there were validators on the system, more people would be inclined to validate their fare.

Committee Comment

Board Member Montgomery Steppe thanked staff for partnering with the committee to establish the program. She provided historical context and explained that while exploring various ways to address fare evasion, the committee considered a completely civil procedure rather than a criminal system. A Public Records Act (PRA) request exposed that 86% of fare evasions do not pay the penalty. The committee reassessed investment and return of resources. Anecdotal interviews in a City community action plan to address homelessness showed that people who had tickets from the MTS system were prohibiting them from opportunities in the future. The Diversion Program was meant as an alternative for riders to not be caught in the criminal justice system. She acknowledged that the 169 people that completed their citations had the opportunity to avoid the trajectory of their future. Board Member Montgomery Steppe agreed that she has also experienced issues with the tapping system and believed that the agency should develop a clean analysis before enforcement officers began approaching people for $15 instead of $2.50. She was not against the recommendation, but she was not ready to make a proper evaluation based on the PRONTO system. She acknowledged fare box recovery as a priority for her and implored staff to work towards reforming the Transportation Development Act. She believed that the recommended approach seemed reactive and did not support the recommendation, because PRONTO was not at a point where the agency could make that determination. She recommended that the agency reevaluate the PRONTO system issues so that the Board can properly decide the future of the program.

Chair Fletcher added that the agency is happy to evaluate current practice and acknowledged that fare box recovery is an issue and asked that staff return with an update in six months to address the reports of tapping issues.

Board Member Montgomery Steppe asked what the operation implications would be as the program exists today. Ms. Landers clarified that there would be no change to the current

program if the recommendation was to keep the program as it is now and re-evaluate the recommendation at a later date.

Board Member Hall suggested a phased in approach and that one of his obstacles with the system is finding a validator. He suggested adding more validators in the system. Ms. Cooney replied that ticket vending machines will double as validators. Staff also placed flags on top of the validators so riders can easily identify them.

Chair Fletcher acknowledged challenges and noted that the agency was not a closed system and wanted to know how often the same patron was caught without a fare.

Board Member Chavez agreed that validators are hard to identify with potential bilingual obstacles. She encouraged improved promotional efforts to tap along with bilingual accessibility and thanked Board Member Montgomery Steppe for addressing financial hardship on people through institutional means.

Board Member Bush thanked staff and urged the Board to be mindful of resources and incoming revenue. Board Member Bush asked staff for the data that shows why riders are not tapping. Ms. Landers replied that staff does not have data, she explained that the few people who have participated in the diversion program fill out an optional survey which reports why they evaded fare. Amongst various potential options to choose from, she replied that a majority of the responses stated that they were “risking it”. Board Member Bush encouraged staff to somehow capture the data. He asked if riders who have an annual and monthly pass who do not tap are also being factored into the same data category. Ms. Landers explained that those riders were not part of the same count pool and the data differentiates between not validating a pass product or no money/pass. Board Member Bush asked what was the percent of riders who were intentionally evading. Ms. Landers replied that the agency does not have that data. Ms. Landers referenced data in the presentation that showed that 21% of people that officers contact did not have a valid fare. 85% of the time inspectors used the validation app to take an on-the-spot fare, there were funds on the card. Staff does not know if this was a calculated risk or if this was a one time event. Board Member Bush expressed the importance of capturing the data and asked if there were validators in the trains themselves. Ms. Landers replied that there were not validators in the trains. He encouraged staff to assess that option before increasing the fare evasion fine and would like to be provided with more data. Ms. Cooney cautioned the Board to not assume that a large percentage of people do not know they need to tap or cannot find validators. Ms. Cooney referenced a campaign where a security officer, posted next to validators, reminded riders to tap before boarding, only a small percentage of people walking by complied. Board Member Bush stated that why people were evading and how many of them were doing so was still a critical data set.

Board Member Moreno acknowledged the huge undertaking. She noted the 26% gap between ridership and fare revenue collected. She suggested that the fare diversion pilot program was not the major cause for the gap. She asked staff to focus on comments that could possibly be the cause of other problems. She asked staff what the gap in revenue of ridership was for the trolley system rather than the bus. Ms. Cooney noted that there was compliance on the bus system because the driver acts as a consistent regulator. Board Member Moreno noted that the required tapping for the service, coupled with the driver offering a type of enforcement leads her to believe that validator limitations such as number and placement of validators, coupled with inadequate fare inspections. She also mentioned that validators were not located within the trolley or near the trolley doors and asked staff if validators will be installed inside of trolleys and

additional validators will be installed on platforms. Ms. Cooney stated that the ticket vending machine will now also serve as a validator along with the ability to load money at the ticket vending machine. The agency is also adding more validators on platforms along with flags to call attention to the validators and additional signage. Board Member Moreno added that the action of conducting fare inspection is another consequential factor. She was supportive of the motion but did not believe that fare evasion was the source of the problem; rather, insufficient fare inspection and inadequate infrastructure on the trolley was the problem. She asked staff to return to the Board to address the issues.

Board Member Goble stated that pre-pandemic, the agency saw between 30-40% fare box recovery, and last year was 18%. The agency would need about $48 million to address the gap. He noted that the agency could use this as a case study to assess how much free transit would cost and claimed that it was costly without a new revenue source. If the agency has more fare checks, it would cost less that the $8-$10 million being lost in fares, and intrinsically, have more security benefits for all riders.

Board Member Mendoza asked that senior and disabled riders are taken into consideration when making penalty suggestions. When there is a bottleneck to acquire a ticket, it is easier to board the train without a fare, and at times, the security team tells patrons to board without a fare.

Chair Fletcher suggested temporary mobile tapping infrastructure to accommodate special event high passenger volumes.

Board Member Elo-Rivera stated that as the Board revisits the conversation in the future, the agency staff develop ideas to make it easier to pay into the system. Ms. Cooney stated that staff will present an update on PRONTO in a few months.

Board Member Goble suggested simplified marketing slogans to direct people to tap.

Board Member Chavez suggested the agency adopt a scan code to simplify the process. Ms. Landers replied that she would talk to staff about the viability of that option.

Action Taken

Board Member Montgomery Steppe moved to extend the existing Fare Enforcement Diversion Program for six months while working on evaluation and engagement efforts to make PRONTO improvements. Chair Fletcher seconded the motion, and the vote was 15 to 0 in favor.

19. For-Hire Vehicle Administration (Leonardo Fewell)

Leonardo Fewell, MTS For-Hire Vehicle Administration Manager presented on For-Hire Vehicle Administration Sector. He presented on: industry overview, status of MOUs with cities and county, FHVA Regulatory Responsibilities, County of San Diego Sheriff's regulatory responsibility, FHVA budget, taxicabs, taxicabs wheelchair accessible vehicles (WAVs), NEM and charters, low-speed vehicles, jitneys, permitted vehicles (as of 1/12/23), total taxicab permits over time, total non-taxi permits over time (NEM, Charter, Jitney, low-speed vehicle), MTS efforts to assist the For-Hire Vehicle industry, and MTS contact information.

Public Comment

Corinna Contreras – Representing Climate Action Campaign made a verbal statement to the Board during the meeting. Contreras highlighted low speed vehicles and stated it was critical the

region has the infrastructure for a low speed vehicle which is currently in streets posted at 35mph or less. Low speed limits not only encourage safety but would allow the network of this type of vehicle to expand and encouraged local jurisdictions to plan for low speed vehicles in the future.

Committee Comment

Board Member Elo-Rivera stated the privilege it has been to be the Chair of the Taxicab Advisory Committee and stated that this part of the industry is an important part of the transportation network as they compete against profit driven companies like Uber and Lyft. He thanked staff for the hard work on behalf of the agency to manage the regulatory process. He looks forward to incorporating low speed vehicles into the transportation network and looks forward to working with the committee to explore more opportunities for folks in the taxi industry, to branch in that type of driving. He also encouraged suggestions from the Board to bring back to the committee.

Action Taken

Informational item only. No action taken.

20. Operations Budget Status Report for November 2022 (Gordon Meyer)

Gordon Meyer, MTS Operating Budget Supervisor presented an Operations Budget Status Report. He provided details on: comparison to budget – November 30, 2022 – FY, total operating revenues, total operating expenses, and total operating activities.

Committee Comment

Board Member Montgomery Steppe asked if there was a date where stimulus funds would expire. Mr. Meyer replied that the CARES Act did not have an expiration date, but ARP funds have an obligation date of 2026. Staff will prioritize spending ARP funds first.

Board Member McCann stated that the agency needs to ensure a firm financial foundation and asked what staff's plan is to ensure the agency is financially stable especially with a structural deficit if the stimulus funds are decreased or taken aback. Ms. Cooney replied that staff is concerned of the possibility of funds being retracted that have not been used. The agency has obligated all CARES Act funds which deems them secure. Staff is working on scenario proposals to present at the Budget Development Committee for the remaining stimulus funds. Board Member McCann encouraged staff to have a strategy in case of funding removal. He also stated that if the agency host another free ride month, that it be used as an educational, marketing opportunity. Ms. Landers clarified that the agency hosted a free ride month in September of 2021 to allow for a transition from Compass to the PRONTO system. The agency does not plan on hosting another free ride month at this time. Mr. Meyer confirmed that the agency does not have funding allocations for a free ride month, but has offered a free ride day most years. Board Member McCann suggested a media opportunity to properly use the system. He also acknowledged Comic-Con and asked staff to ensure that advertisement wraps are being maximized for revenue. Mr. Meyer replied that the agency contracts out the service for vehicle advertisement and has seen that number steadily increase.

Board Member Bush spoke about the positive variance in passenger revenue and asked staff to clarify that it was done through fare box recovery. Mr. Meyer confirmed that higher ridership created a higher revenue that the agency had not budgeted for. Board Member Bush clarified

that the revenue stream was not at a crisis, as suggested in the previous agenda item. He also asked what the percent variance has been in staff's estimate with the budget. Ms. Cooney clarified that this agenda item is a snapshot of one month and as Ms. Landers stated earlier, the agency is losing approximately $9 million. She replied that this lost revenue is not considered a crisis because the agency is relying on stimulus funding to backfill the loss. She also explained that the variance is positive because ridership has recovered at a faster rate than the agency projected. Board Member Bush asked staff to confirm the $8-$10 million revenue loss estimates. Ms. Landers confirmed that was an accurate account. Board Member Bush asked staff to project what the variance would have been on fare revenue. Ms. Cooney clarified that the $8-$10 million estimate was a projected annual loss plus a steady increase. She stated that the range was projected as an annual loss while losses increase over time and suggested that the figure could not be broken down into a monthly figure because of those variables. Mr. Meyer added that budget figures included projected impact of the lack of tapping.

Action Taken

No action taken. Informational item only.

OTHER ITEMS:

21. Chair Report

There was no Chair report.

22. Chief Executive Officer's Report

Ms. Cooney invited the Board to participate in the virtual event for MTS's annual laptop scholarship program. She also prompted the Board to provide their availability for participation at 2023 APTA conferences.

23. Board Member Communications

Board Member McCann looked forward to being a part of the MTS Board.

24. Additional Public Comments on Items Not on the Agenda

John Wood – A resident of Lemon Grove made a verbal statement to the Board during the meeting. Wood asked for additional bus shelters in the Lemon Grove area.

Mathew Kostrinsky – A resident of San Diego made a verbal statement to the Board during the meeting. Kostrinsky spoke about a law suit settlement agreement reached with MTS and asked staff to finalize the agreement.

ADJOURNMENT

25. Next Meeting Date

The next regularly scheduled Board meeting is February 16, 2023 at 9:00am.

26. Adjournment

The meeting was adjourned at 11:13am.

Chairperson
San Diego Metropolitan Transit System

Filed by:

Approved as to form:

Clerk of the Board
San Diego Metropolitan Transit System

General Counsel
San Diego Metropolitan Transit System

Attachment: Roll Call Sheet

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS
ROLL CALL

MEETING OF (DATE): January 26, 2023 CALL TO ORDER (TIME): 9:01am

RECESS: RECONVENE:

CLOSED SESSION: RECONVENE:

PUBLIC HEARING: RECONVENE:

ORDINANCES ADOPTED: ADJOURN: 11:13am

JURISDICTION	BOARD MEMBER		ALTERNATE		PRESENT (TIME ARRIVED)	ABSENT (TIME LEFT)
City of Chula Vista	Chavez	☒	Cardenas	☐	9:01am	11:13am
City of Chula Vista	McCann	☒	Cardenas	☐	9:09am	11:13am
City of Coronado	Donovan	☒	Duncan	☐	9:01am	11:13am
County of San Diego (Chair)	Fletcher	☒	Vargas	☐	9:01am	11:13am
City of El Cajon	Goble	☒	Ortiz	☐	9:01am	11:13am
City of Imperial Beach	Leyba-Gonzalez	☒	Aguirre	☐	9:01am	11:13am
City of La Mesa	Dillard	☒	Arapostathis	☐	9:01am	11:13am
City of Lemon Grove	Gastil	☐	Mendoza	☒	9:01am	11:13am
City of National City (Vice Chair)	Bush	☒	Rodriguez	☐	9:01am	11:13am
City of Poway	Frank	☒	Pepin	☐	9:01am	11:13am
City of San Diego	Montgomery Steppe	☒	Von Wilpert	☐	9:01am	11:13am
City of San Diego	Elo-Rivera	☒	LaCava	☐	9:01am	11:13am
City of San Diego	Gloria	☐	Moreno	☒	9:08am	11:13am
City of San Diego	Whitburn	☒	Campillo	☐	9:01am	11:13am
City of Santee	Hall	☒	Koval	☐	9:01am	11:13am

SIGNED BY THE CLERK OF THE BOARD: /S/ Dalia Gonzalez

Metropolitan Transit System

Agenda Item No. 4

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

Kearny Mesa Division (KMD) Zero Emission Bus (ZEB) Overhead Charging System Layout and Design – Work Order

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute Work Order WOA356-AE-05 under MTS Doc No. PWL356.0-22 (in substantially the same format as Attachment A) with Pacific Railway Enterprises, Inc. (PRE), a Disadvantaged Business Enterprise (DBE), in the amount of $354,742.55 to provide engineering planning services for the KMD ZEB master planning.

Budget Impact

The total cost of this contract is estimated to be $354,742.55. The project is funded by Capital Improvement Program (CIP) budget number 3009117201 – KMD ZEB Overhead Charging Master Planning.

DISCUSSION:

On October 19, 2017 (AI 30), the MTS Board directed staff to implement a ZEB pilot program. As part of the pilot program, MTS installed six stand-alone charging stations at Imperial Avenue Division (IAD), two at KMD, two at the East County Division, and two at the South Bay Bus Maintenance Facility (SBMF). In addition to the installation of the charging stations, MTS has completed an electric bus concept layout study at SBMF and IAD, is in construction for the first phase of overhead charging infrastructure at SBMF, and is in design for the first phase of overhead charging infrastructure at IAD.

MTS operates and maintains a fleet of one hundred one hundred sixteen (116) compressed natural gas (CNG) buses and two (2) battery electric buses at KMD and seeks to implement a scalable and modular battery bus charging system for the entire fleet. Today's proposed action would help MTS take the next step of meeting this goal. The initial intent of the KMD zero emission bus master planning study is to commence charging for an additional twelve (12) 40'

Battery Electric Bus (BEB) in FY27, twenty-three (23) 40' BEB in FY28 while maintaining current operations. Charging thirty-five (35) BEBs requires a more robust infrastructure for multi-bus simultaneous charging. Given the state mandate to convert the MTS fleet to ZEB over time, the infrastructure to charge these buses will be the first installation of a scalable and modular battery bus charging system at KMD.

Under the proposed work order, PRE will provide planning services for a set of conceptual layouts, planning report, and a recommendation for the phased implementation of BEB charging facilities for the entire bus fleet at KMD. The scope of services under this work order will focus on charging technology, conceptual layouts, and a summary explaining all aspects of the proposed master plan.

On September 15, 2021, MTS issued a solicitation for On-Call Architectural and Engineering (A&E) Design Services by requesting Statements of Qualifications (RFSQ) from firms with expertise in a variety of A&E design and related consulting services separated into the following three (3) categories:

Category A: Comprehensive/Full Service - Five (5) prime contracts
Category B: Small Business Set Aside- Three (3) prime contracts awarded to a certified Small Business (SB) or a DBE certified firm, (which is also considered to be a SB)
Category C: Specialty Prime – Up to Five (5) specialty service contracts

As a result of the RFSQ, seven (7) firms were selected to perform various A&E services. For projects requiring A&E Services, work orders are issued to these firms.

On November 4, 2022, MTS issued a Request for Proposals (RFP) to all firms in Categories A and B.

On December 9, 2022, MTS received a total of four (4) proposals from Chen Ryan Associates (CRA) (a DBE firm), Dokken, HDR, Inc., and PRE (a DBE firm).

An evaluation panel was comprised of MTS representatives, and the proposals were evaluated based on the following factors.

1. Project Team
2. Project Team's Capabilities
3. Project Understanding and Approach
4. Schedule

On January 9, 2023, , the selection committee evaluated the initial proposals and scored as follows:

Ranking	Proposer Name	Total Score
1.	PRE (a DBE firm)	89.01
2.	Dokken	88.33
3.	HDR. Inc.	73.67
4.	CRA (a DBE firm)	70.66

After an evaluation of the proposal, the evaluation panel determined that PRE was the most qualified firm and best met the requirements set forth in the RFP, with final score of 89.01 points out of maximum 100 points.

The evaluation panel then reviewed PRE's initial price proposal in the amount of $354,742.55. Based on the level of effort and the design work involved for this project, staff determined the contract price to be fair and reasonable. For the project, PRE will utilize the following subcontractor:

Subcontractor Name	Firm Classification	Value of Services
AECOM Technical Services	None	$319,067.84

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Work Order WOA356-AE-05 under MTS Doc No. PWL356.0-22 (in substantially the same format as Attachment A) with PRE, a DBE and SBE, in the amount of $354,742.55 to provide engineering planning services for the KMD ZEB master planning.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachment: A. Draft Work Order MTS Doc. No. WOA356-AE-05

February 16, 2023

MTS Doc. No. PWL356.0-22
Work Order No. WOA356-AE-05

Pacific Rail Enterprises, Inc.
Jennifer . Seccombe
President/CEO
3560 University Ave, Suite F
Riverside, CA 92501

Dear Mrs. Seccombe:

Subject: WORK ORDER WOA356-AE-05, TO MTS DOC. NO. PWL356.0-22, GENERAL ENGINEERING SERVICES FOR KEARNY MESA DIVISION (KMD) ZERO EMISSION BUS (ZEB) OVERHEAD CHARGING SYSTEM LAYOUT AND DESIGN

This letter shall serve as our agreement for Work Order WOA356-AE-05 to MTS Doc. No. PWL356.0-03, for engineering services under the General Engineering Consultant Agreement, as further described below.

SCOPE OF SERVICES

Provide engineering planning services for the KMD ZEB master planning. Work provided under this Work Order will be performed in accordance with the attached Scope of Services (Attachment A).

SCHEDULE

The Scope of Services, as described above, shall be for a period of fifteen (15) weeks from the date of the Notice to Proceed.

PAYMENT

Payment shall be based on actual costs in the amount not to exceed $354,742.55 without prior authorization of MTS (Attachment B).

Please sign below, and return the document to the Contracts Specialist at MTS. All other terms and conditions shall remain the same and in effect.

Sincerely,

Sharon Cooney
Chief Executive Officer

Accepted:

Jennifer Seccombe, President/CEO
Pacific Rail Enterprises

Date:

Attachments: Attachment A, Scope of Services
Attachment B, Negotiated Fee Proposal

ATTACHMENT A
SCOPE OF SERVICES

PWL356.0-22 Work Order Agreement Request for Proposal

December 9, 2022

Kearney Mesa Division (KMD) Zero Emission Bus (ZEB) Overhead Charging Systems Layout and Design

Pacific Railway Enterprises, Inc.

AECOM

3560 University Avenue
Suite F
Riverside, CA 92501

PACIFIC RAILWAY ENTERPRISES, INC.

December 9, 2022

Mr. Elias Belknap
Senior Project Manager
San Diego Metropolitan Transit System
1255 Imperial Avenue
San Diego, CA 92101

RE: Request for Proposal for Contract PWL356.0-22, Work Order Agreement WOAXXX-AE-05

Dear Mr. Belknap,

Pacific Railway Enterprises, Inc (PRE) is pleased to submit this proposal for your review and consideration. **Our team should be selected for this work because we have included AECOM's National Zero Emission Bus Facility Lead, Jewels Carter to lead the study at Kearney Mesa Division.** Mr. Carter was the task lead for site analysis, Battery Electric Buses (BEB) charging technology selection, and transitional phasing for both MTS' South Bay Maintenance Facility and Imperial Avenue Division. PRE formed this team with AECOM Technical Services for opportunities like this: providing MTS with access to AECOM's extensive resources and increase the overall competition for work within the A&E Contract.

Below is PRE's company information:

- Contact: President/CEO, Jennifer A. Seccombe, PE; jaseccombe@pacrail.com
- Address: 3560 University Avenue, Suite F, Riverside, CA, 92501
- Telephone: (951) 784-4630, x110
- DBE Firm CUCP #42273; DIR #1000009052
- Website: www.pacrail.com

Within this proposal we have demonstrated our team's relevant qualifications and experience, our understanding and approach to this project, a proposed schedule, resumes of key individuals from our team, and a separately submitted fee. As the Consultant Contract Manager, I commit to working closely with you to make this project a success.

Thank you for this opportunity and we look forward to meeting MTS's objectives for a transition plan to BEB.

Sincerely,

Jennifer A. Seccombe

Jennifer Seccombe, PE
PRE-PWL356.0-22 Consultant Contract Manager

PROJECT TEAM OVERVIEW

All project members planned for the KMD-ZEB Study are profiled here. The unique qualifications of each proposed staff member are described along with their anticipated time commitment.

KMD - ZEB PROJECT LEADERSHIP TEAM PROFILES & COMMITMENT

Jennifer Seccombe, PE (PRE) will lead the team as the Project Manager. As PRE's MTS Contract Manager, Jennifer has been working on MTS rail systems projects for over a decade. She has 25 years of experience in systems engineering design. Jennifer has led multiple small projects for agency owners that have been highly successful, including Metrolink, NCTD, and SANDAG providing comprehensive project management, design and value engineering. She successfully managed a $14M communications project, her largest to date.

20%

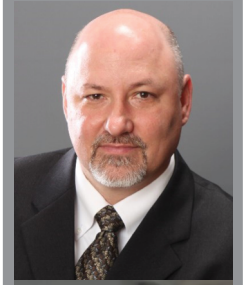
The Deputy Project Manager will be **Ryan Winn (AECOM)**. As a specialist, Ryan has 7 years of experience specific to Zero Emissions fleet transition projects. Ryan is currently working on predictive energy modeling for bus routes to determine energy needs for conversion of Capital Metro's bus fleet to ZEB. In addition he developed strategies based on best fitting programs, policies and project management for San Diego Gas & Electric's Acceleration 2 Zero project.

25%

Robert Hertz, AICP (AECOM) will be the Principal in Charge. Robert is a senior project manager with 31 years of industry experience in transportation planning with a local presence to MTS. He can contribute knowledge and experience from both MTS and SANDAG projects. Robert was AECOM's project manager for the SANDAG Downtown Bus Stopover and Multiuse Facility conceptual design project, which included bus operations and configuration planning.

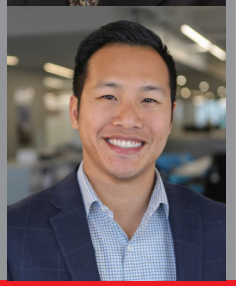
5%

The Battery Electric Bus (BEB) Master Plan leader will be **Jewels Carter, AIA (AECOM)**. Jewels brings his experience with MTS on ZEB past projects at South Bay Maintenance Facility and Imperial Avenue Division. He led the BEB functional design for those projects and developed documents and detail specified components that are anticipated to be applied to KMD. As the national zero emissions lead for AECOM with 30 years of career experience, Jewels not only brings a diverse perspective but incorporates lessons learned from ZEB projects across the country.



50%

Andrew Bui, PE (AECOM) will lead Quality Assurance and Quality Control (QA/QC). Andrew is AECOM's national transportation innovation leader. He has served as the project manager and technology lead for the Los Angeles Department of Transportation Bus Electrification for BEB retrofits to four of their facilities. This experience will make him a strong independent reviewer of the KMD-ZEB project.



5%

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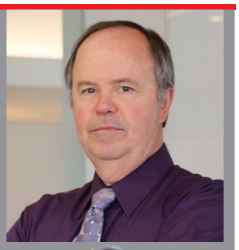
KMD - ZEB PROJECT ENGINEERING TEAM PROFILES & COMMITMENT

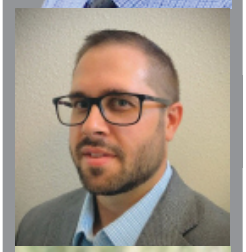


Bruce Farrell, AIA (AECOM) will be the Architectual Lead. Bruce was part of the MTS ZEB Pilot Program, which produced a ZEB Transition Plan for 5 MTS divisions, including Kearney Mesa. He developed multiple alternatives of yard bus parking and circulation. Bruce has been involved in ZEB transition studies for Culver City Transportation Department (CityBus) where he designed overhead charging equipment space frame structure with maximum flexibility.

40%

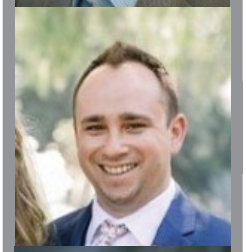
The Structural Lead will be **Steven Brokken, PE (AECOM)**. Steven was the structural engineer for the Culver City Bus Electrification Transition project. He has provided design for a space frame systems to provide overhead routing of electric vehicle charging equipment and solar panels on the top surface of the space frame. Steven brings an impressive 44 years of engineering experience to the team.

25%



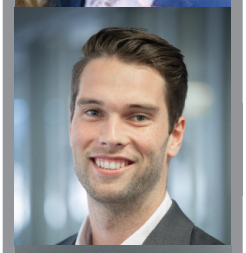
Jason Fischer, PE (AECOM) will serve as the Civil Lead. Jason provides a local presence based in AECOM's San Diego office with 16 years of design experience. In the past he has led a task for the Port of San Diego mapping out existing utilities. Jason as participated in preliminary studies as well as full PS&E design for bikeways, roadways, and busways.

10%



As a Civil Associate, **Kevin Ciucki, PE (AECOM)** has 9 years experience in surface transportation for a variety of civil disciplines including a BRT project in Oakland, CA. He has experience in preparing project reports for the SR-91/I-15 Express Lanes Connector project and the SR-33 Pavement Rehabilitation project including a traffic management plan. Kevin is local to San Diego.

25%



Jordan Zimmer (AECOM) will be a Civil Design Engineer on the project. Jordan has spent 5 years working with MTS, SANDAG and SDG&E. He completed a vehicle layout analysis for the SANDAG Downtown Bus Stopover and Multiuse Facility conceptual design project. Working on the University Avenue Bikeway project, Jordan led design for proposed and relocated bus stops.

25%

As a Certified Estimating Professional, **Russell Link, CEP (AECOM)** will provide cost estimating for the project. Russell has 17 years of experience preparing cost estimates for materials, labor and equipment for construction projects. He recently assembled estimates for the new Ameren Transmission Operations Control Center, which in cluded smart technologies, renewable energy, energy storage and various technology systems.

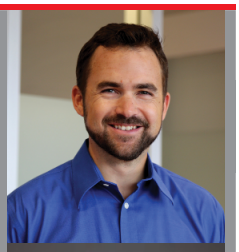
25%

PROJECT TEAM OVERVIEW

All project members planned for the KMD-ZEB Study are profiled here. The unique qualifications of each proposed staff member are described along with their anticipated time commitment.

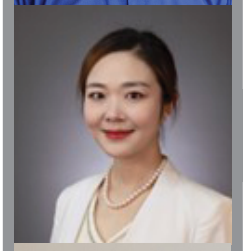
KMD - ZEB PROJECT ENGINEERING TEAM PROFILES & COMMITMENT

The Electrical Lead and Generator/Solar Designer will be **Tyler Blauvelt, PE (AECOM)**. Tyler worked on the BEB transition at Culver City Transportation, producing IFB electrical drawings and specifications for the incremental transition of 60 buses. He also completed assessments and produced a report detailing infrastructure build-out for a fully electric fleet as well as a hybrid fleet of BEB and hydrogen fuel cell powered busses for Livermore Amador Valley Transit Authority.



60%

Lynn Feng (AECOM) has extensive knowledge of the planning process in California including familiarity with the San Diego area and the governance model, focusing on electrification for 3 years. Lynn worked on the Fleet Electrification Feasibility White Paper for VDOT, GDOT and FDOT, developing an industry scope pilot project to gather real-world data and operating experience.



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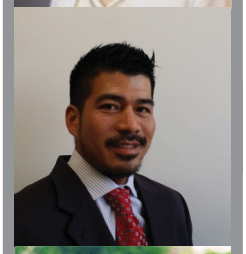
Utility Coordination for the project will be performed by **David Ibanez, EIT (AECOM)**. Coordination with local power utilities to coordinate incoming new medium voltage electrical service and gear are routine tasks for David. He worked on the ZEB Pilot program for Culver City Transportation, completing coordination with PG&E for expanded service requirements, performing load analysis and voltage drop calculations.



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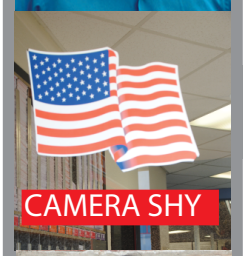
Eric Bullock (AECOM) will provide the project with any CAD/BIM needs. Eric worked on the on the ZEB Pilot program for Culver City Transportation as a designer, drafter and planner. The project included planning for a new parking structure on site that will accomodate buses on the ground level and employee parking on four upper levels.

75%

Shannon Race (AECOM) will provide project financial management to the AECOM team members and will provide information to PRE for monitoring, helping the overall project to stay on budget. She is currently serving as financial lead/control support for mutiple SANDAG, Caltrans, and SDG&E projects.



15%

Caroline Le (PRE) will provide project management assitance and coordination to the team by preparing agendas, recording meeting minutes and updating the project schedule. Caroline is a detail oriented electrical engineer with 4 years of experience in design of communications systems, conduit, low voltage power and standby power. She will participate in the meetings and assist Jennifer in reviewing deliverables prior to delivery to MTS.

40%

PROJECT TEAM ORGANIZATION CHART

MTS Project Manager, Mr. Elias Belknap

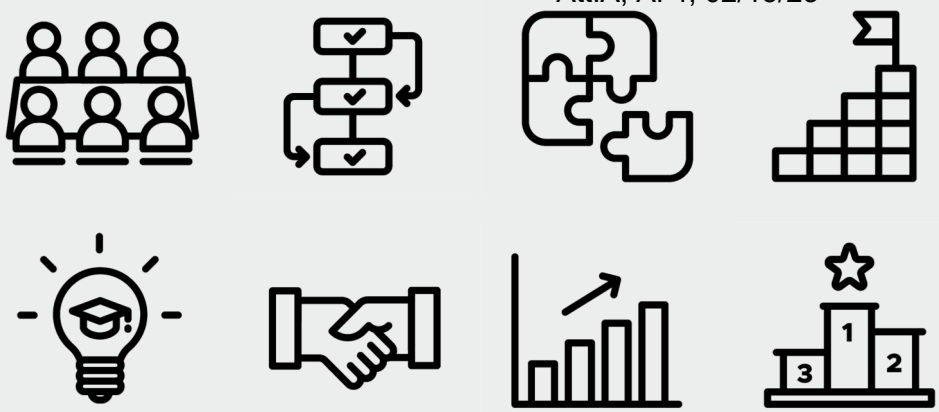
- **PRE PROJECT MANAGER** — JENNIFER SECCOMBE, PE
- **PROJECT COORDINATOR** — CAROLINE LE
- **DEPUTY PROJECT MANAGER** — RYAN WINN
- **AECOM PRINCIPAL IN CHARGE** — ROBERT HERTZ, AICP
- **BEB MASTER PLAN** — JEWELS CARTER, AIA
- **QA/QC** — ANDREW BUI

KMD-ZEB STUDY TEAM

- **STRUCTURAL** STEVEN BROKKEN, PE
- **CIVIL LEAD** JASON FISCHER, PE; KEVIN CLUCKI; JORDAN ZIMMER; ERIC BULLOCK
- **COST ESTIMATING** RUSSELL LINK, CEP
- **ARCHITECTURAL** BRUCE FARRELL, AIA
- **ELECTRICAL LEAD** TYLER BLAUVELT, PE
- **UTLITY COORDINATION** DAVID IBANEZ, EIT
- **GENERATOR** TYLER BLAUVELT, PE
- **SOLAR** TYLER BLAUVELT, PE

- **AECOM PROJECT CONTROLLER** — SHANNON RACE

All project members shown in the organization chart for the KMD-ZEB Study are profiled under the Project Team Overview, pages 3-5 of this proposal. We believe we have assembled a team with relevant experience that aligns with the scope and objectives of this study. To keep the project on track, we have added a specific project controls interface between PRE and AECOM, as shown in the dashed line.

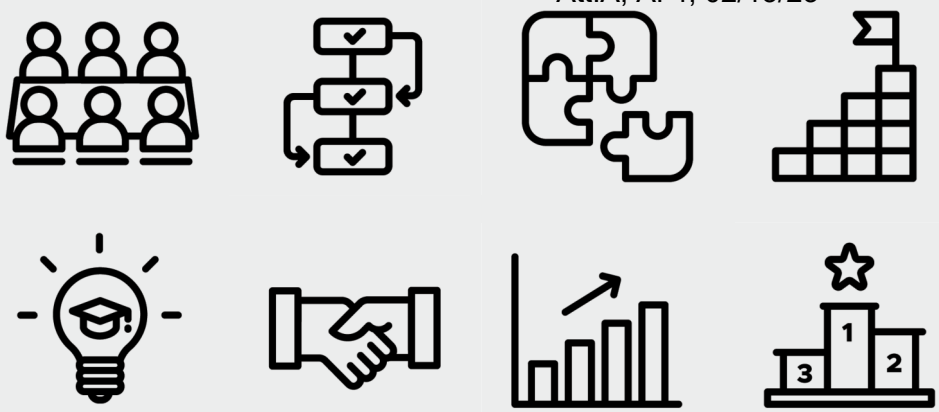


KMD - ZEB PROJECT TEAM CAPABILITIES

- **Team Management Coordination and Scheduling Abilities:** Our team will develop a strong Project Management Plan and define/track specific project risks in order to successfully monitor overall project scope, schedule and budget. It is important that this roadmap be revisited and statused regularly throughout the study. Regular communication, both with and without the owner, will help identify any issues early on in the project, allowing freeform discussion to determine risk mitigation. Meeting minutes will be recorded and action items will be assigned and monitored until completion. Scheduling will be performed with Microsoft Project software, updated weekly, and distributed for review at each meeting.

- **Team Ongoing Work:** The broad knowledge of the team in performing ZEB related work will enable the team to have flexibility to adapt to various resource demand levels. The KMD-BEB project size is not large enough to require dedicated staffing, but this is not a disadvantage to MTS. Resources working on simultaneous projects that are trying to solve similar problems can have a beneficiary effect. Challenges encountered on one project can present lessons learned for another project. The majority of these proposed staff are comfortable with managing multiple projects at one time. For the KMD-ZEB project, the philosophy “What gets measured gets done” will be deployed. Effective project management will ensure forward progress is occuring. Appropriate steps will be taken to remedy in a timely manner if delays are detected.

- **Quality Assurance and Quality Control:** PRE’s goal on every project is to deliver a product that is professionally prepared, on time, within budget and in accordance with all industry and client standards. We have proposed a design team with experienced, competent staff and good relationships across disciplines. Communication will be reinforced through regularly scheduled design meetings throughout the project development to strengthen the team and leverage solutions collectively. The following quality control steps are proposed:
  - Define the project scope, schedule, and key contacts in a Project Management Plan (PMP) that is accessible to the team.
  - Hold regular design meetings with the owner and without the owner throughout project development.
  - Assemble deliverables in Bluebeam and allow adequate time for interdisciplinary review.
  - Check deliverables via an independent competent party, not directly working on the project design.
  - Project Manager consistently drives agendas, risk register review, schedule review, and tracking of action items.



KMD - ZEB PROJECT TEAM CAPABILITIES

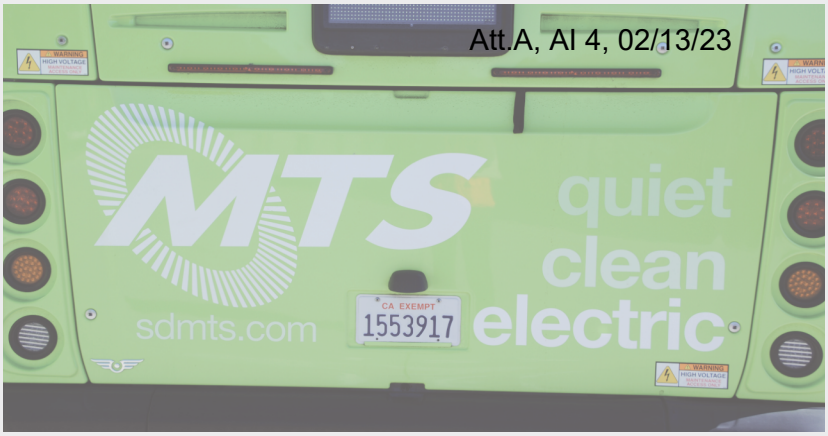
- **Cost Controls:** The overall budget will be monitored versus schedule and project progression. PRE has an in house tracking tool to monitor company budgets in real time. PRE's Project Coordinator will communicate with AECOM's Project Controller to get regular updates of AECOM's budget utilization. If an out-of-scope item arises, PRE will assess the specific impacts and prepare sufficient details with potential options for a discussion with MTS so a timely and informed decision can be made. Often it is when out-of-scope items are not addressed immediately there is an impact to the budget, because the team loses sight of direction. Regular meetings with communication and status discussions should allow for early identification of these items if any.

- **Staff Availability and Commitment to KMD-ZEB:**

The following table shows each proposed staff member for this project and the availability and commitment of time towards the project. The staffing assumes a March 16 MTS Board of Directors approval with an NTP in late March or early April.

Within the table, all starred staff members are based within the Southern California and can easily respond locally to MTS.

KMD-ZEB Team Staff Member	Availability & Commitment
Jennifer Seccombe*	20%
Ryan Winn*	25%
Robert Hertz*	5%
Jewels Carter	50%
Andrew Bui*	5%
Bruce Farrell	40%
Steven Brokken	25%
Jason Fischer*	10%
Kevin Ciucki*	25%
Jordan Zimmer*	25%
Russell Link	25%
Tyler Blauvelt	60%
Lynn Feng*	15%
David Ibanez	30%
Eric Bullock	75%
Shannon Race	15%
Caroline Le*	40%



KMD - ZEB PROJECT UNDERSTANDING AND APPROACH

The Zero Emission Bus (ZEB) Charging Concept Master Plan shall be comprehensive to implement complete ZEB infrastructure to support either a fleet of (125) one hundred and twenty five Battery Electric Buses (BEBs) fleet or Hydrogen Fuel Electric Buses (HFCEB) fleet at the Kearney Mesa Division (KMD). The HFCEB master plan concept will show a final buildout of Zero Emission (ZE) supporting infrastructure including concept layouts of the hydrogen storage, compression, on-site distribution and dispensing / fueling system. The BEB master plan will show a final buildout of BEB supporting infrastructure including concept layouts of the new SDG&E charging electrical service entrance and gear, new MTS owned electrical charging power distribution gear, overhead structural frame over bus parking area to support overhead pantographs to charge the BEBs, chargers to energize the pantographs and resiliency components such as solar photovoltaic arrays, provision and sizes for fixed and trailerized power generators, and a battery electric storage system container(s) (BESS). Each master plan will be subdivided into smaller construction concept 'phases' that allow the various ZE components to be constructed with minimal impact to on-going transit operations and with the goal of retaining all KMD buses on site during construction. Two known phases will be the initial phase supporting twelve (12) 40-ft ZEBs in an initial installation ready in year 2027 and a second phase supporting (23) twenty-three 40-ft ZEBs in year 2028. Additional phase concepts will be developed that allow conversion of the remaining yard to ZEB while keeping all KMD buses on-site.

Services shall generally include:

- Identification of required charging infrastructure and placement needed to support the initial (12) twelve incoming BEBs as a scalable solution, allowing for an incremental scaling electrical design to support a future full fleet of all electric vehicles and its supporting resilient infrastructure.
- Identification of required hydrogen storage / compression / distribution and dispensing system to support a full HFCEB fleet as well as an only a portion of the fleet in a mixed BEB and HFCEB option. Design goal will be to allow either HFCEB infrastructure or BEB infrastructure to be constructed without affecting the ability to build the other ZE infrastructure.
- Design with a focus of keeping existing buses on-site during master plan phased construction. This includes identifying potential general contractor construction staging areas.
- While keeping the existing bus parking orientation will be considered in the early concepts, additional out of the box concepts such as replacing the existing staff parking garage and or relocating the entry / exit gates will also be considered if the modifications enhance the ZEB master plan operational efficiency and parking capacity.
- Development of three (3) concepts for nose to nose, side by side parking with overhead frame charging and for HFCEB including cost and recommendations for laying out and operating the initial twelve (12) ZEBs and the ultimate full transition to ZEbuses.
- Validation of the site's existing utilities against the incoming fleet's requirements and coordinate with the public utilities on implementing any required additions.
- Assisting MTS with preparation of the required BEB infrastructure additions to be implemented with the ongoing Kearney Mesa Division daily operations.

KMD - ZEB PROJECT UNDERSTANDING AND APPROACH

Our team proposes that these consulting services be divided into sequential tasks, as indicated in the scope of work outline below:

SCOPE OF WORK

Task 1: Project Management

1. Perform project management and coordination with MTS and subconsultant AECOM.
2. Conduct a project kick-off meeting to establish clear lines of communication, review the scope of work and project schedule, clearly define project goals and objectives, and identify MTS staff to be involved in the review process. Schedule and coordinate up to seven (7) bi-weekly project status meetings identifying appropriate participants for each meeting, developing (with MTS input) and distributing agenda prior to meetings, developing and distributing minutes for each meeting. Note that (2) two of the seven (7) bi-weekly meetings will be combined with the (2) preassessment discussion / charrettes.
3. A project schedule will be developed using Microsoft Project and updated prior to each meeting.
4. Prepare and submit monthly progress reports. Each report shall include an updated schedule, summary of tasks in progress and completed, and projected tasks to be accomplished in the next month.
5. Interdisciplinary team meetings will be held and internal Interdisciplinary review of deliverables will be held using Bluebeam sessions.

Task 1 Deliverables - Kick-off meeting, up to seven (7) status meetings, and monthly progress reports and schedule.

Task 2: Site Assessment

1. Review existing documents provided by MTS which are pertinent to the project including:
   a. As-built drawings of existing facilities with a focus on identifying available space for battery electric bus (BEB) and hydrogen fuel cell electric buses (FCEB) infrastructure and existing site items / conditions that will hinder zero emission bus (ZEB) improvements. Identify any new modified or added site modifications, structures, electrical service, backup generators, existing charging stations, or otherwise enhanced or modified the Kearney Mesa Division (KMD) site, power service and service entry points.
   b. Ongoing KMD projects or studies that could impact the KMD ZEB master plan designs.
      i. Maintenance bus in ground lift replacements
      ii. Concrete lot replacements
      iii. LED lot lights
      iv. CNG upgrades
   c. Specifications for proposed battery electric buses, charging equipment, and charge management software to be procured directly by MTS.

KMD - ZEB PROJECT UNDERSTANDING AND APPROACH

   d. Existing KMD CAD background including built structures, fueling, fare, and wash equipment, above and underground utilities including storm water vaults and testing wells, piping, electricity, water, and natural gas if available.
   e. One (1) years' worth of utility bills to establish existing site power usage and current rate structure. Review SDG&E load analysis if available.
   f. Ten (10) years' KMD power disruption report from SDG&E to help establish grid reliability to site.
2. Develop a site specific questionnaire for discussion with MTS Management.
3. Conduct a Preassessment Discussion to field verify as-built conditions and confirm operational site, vehicle and work flows. Meet with MTS key stake holders and KMD operations and maintenance staff to identify current O&M practice that could be affected by the introduction of ZEBs and confirm the current on-site bus traffic flow during pull-in, pull-out, and nightly servicing.
4. Perform on-site assessment observations observing and verifying the current bus parking configuration. (daytime). Review flow of staff, private vehicle, and vendor (staff and vehicles) on site.
5. Perform on-site assessment observations observing and verifying the current bus parking configuration (nighttime). Review flow of staff, private vehicle, and vendor (staff and vehicles) on site.
6. Prior to completing existing conditions report:
   a. Confirm existing electrical natural gas and electrical service to site. Confirm availability of hydrogen fuel to site.
   b. Confirm the capacity and usage of any on-site power generation at existing bus facilities, including existing CNG generation and confirm current power requirements and usage to support existing facilities, existing CNG fueling system and BEB charging stations.
   c. Review and document adjacent off-site power availability as well as availability (voltage and capacity) and locations of closest substations with SDG&E.

Task 2 Deliverable - Existing Conditions Report Draft and Final

Task 3: KMD Zero Emission Vehicle Layout Analysis

1. As a prerequisite activity, review anticipated MTS KMD Phase 1 chargers and dispensers to establish charging infrastructure component sizes (foot print area and height) to be used for layout of the ZEB master plan concepts. Our team will need to:
   a. Identify and analyze infrastructure requirements to support the ZEB fleet. Analysis will include PE concept:
      i. Develop master plan to maximize capacity of buses parked on site.
      ii. Confirm with MTS the anticipate mix of vehicle sizes (40, 60-ft buses) and types (transit, articulated, double-decker, etc...) to be used for master planning concepts.

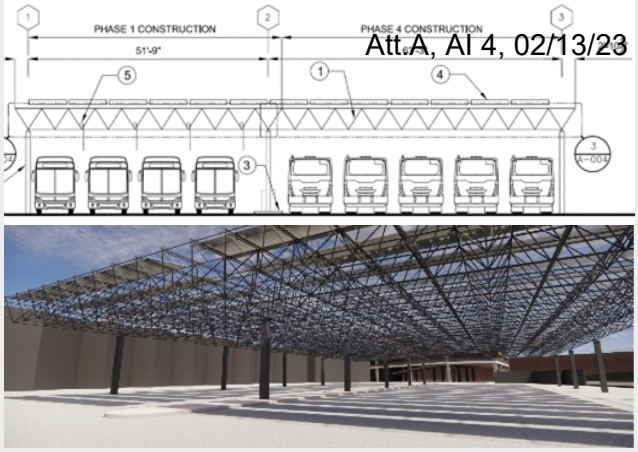
Overhead Charging Frame in Construction
at South Bay Maintenance Facility

KMD - ZEB PROJECT UNDERSTANDING AND APPROACH

iii. Identify power system components required (transformers, switchgear, chargers, dispensers, etc.) and power requirements for coordination with SDG&E.
iv. Identify emergency power and backup requirements including fixed & portable generators, solar array and BESS battery storage system.
v. Identify potential risks and steps to mitigate those risks.
vi. Integrate MTS existing agency standard smart charging / charge management systems into incoming BEB fleet and on-site building management systems.
vii. Confirm with SDG&E maximum size (physical and capacity) available as utility provided medium voltage service switch and transformer(s). Include switch and transformer required clearances for operation and maintenance.

b. Identify necessary infrastructure upgrades and energy strategies to minimize risk for operating ZEBs.
c. Identify potential long lead electrical service, electrical equipment, and charge management items that will not only affect “how” to procure these items but also “who” and ” when”.
d. Validate MTS’s selection of inverted overhead pantographs as the proposed type of charger to use and how its use affects charger to pantograph ratio, bus parking, charge time, charge management hardware / software opportunities, yard management, and charge management approach.
e. Identify existing site and facility modifications needed to maintain the ZEBs on the KMD site.

2. Develop Electric Vehicle Layout Concepts. The design team intends to work collaboratively with MTS while these concepts are being developed. Our team will need to:
   a. Develop site and charger layouts with emphasis on:
      i. Master planning for “Ultimate Buildout” to maximize bus parking, service and operational capacity.
      ii. Circulation patterns for vehicles, equipment, materials, and personnel that will provide efficient, cost effective, and safe operation. Ingress and egress routes that maximize safety and security and minimize vehicular and pedestrian conflict on and off the site.
      iii. Ability to improve existing site parking and driveways to provide better on-site vehicle flow.
      iv. Scalability of power for the on-site electrical distribution and charging systems to expand from the initial twelve (12) 40-ft BEBs in FY27, (23) 40-ft BEBs in FY28 to the ultimate completely electric fleet. The designs will be created to readily accept modular expansion to grow with minimal operational impact during



Section & Rendering of Culver City Overhead BEB Charging Frame - Out for Bid

KMD - ZEB PROJECT UNDERSTANDING AND APPROACH

the phased transition of a mixed size fleet.

v. Identification, location, and requirements of future electrical infrastructure expansion elements including but not limited to CNG generator, solar array and battery electric storage onsite.

vi. Consider utilization and re-purposing of existing CNG yard to support a new hydrogen yard to support FCEBs.

b. Develop a conceptual modular phasing plan to show how the site can remain operational during construction. The phasing plan will include drawings with a narrative description to be reviewed and agreed upon by MTS. Critical areas for phasing are site access, contractor lay down area, site traffic and parking, building access, and building system coordination.

c. Develop circulation pattern options for buses, non-revenue vehicles, private vehicles (employees and visitors), delivery vehicles, and service contractor vehicles. On-site vehicle traffic flow will be impacted by the introduction of ZEBs and its supporting infrastructure. As a result, we will:

i. Recommend the on-site traffic flow to be implemented for ZEBs and non ZEBs, including pull- in, bus parking, nightly service cycle, and pull-out.

ii. Identify space and electrical infrastructure requirement impacts and considerations for possible future employee and non-revenue electric vehicle charging.

d. Develop a conceptual implementation schedule including ZEB procurement, design phases, approvals, bidding, construction, commissioning, move-in and start-up.

e. Develop Initial Power Requirements for each layout concept developed. This high-level power demand will allow the design team to compare the effectiveness and viability of the different options and present the various power scenarios to both MTS and SDG&E for input.

f. Schedule and participate in an utility coordination meeting with SDG&E. This meeting will allow SDG&E to review anticipated power need ranges of potential options and provide the design team with their systems capacity to provide equivalent power to the site or confirm that maximum power is available to the site.

g. Submit Conceptual Layouts package for MTS review and comment. This is the formal deliverable that will include:

i. Developed Concepts.

ii. Conceptual phasing plan.

iii. Implementation schedule.

iv. Power requirements per developed concept.

v. Notes from SDG&E review of concepts and power requirements.

KMD - ZEB PROJECT UNDERSTANDING AND APPROACH

Task 3 Deliverables - Conceptual Layouts package.

Task 4: Firm Recommendation

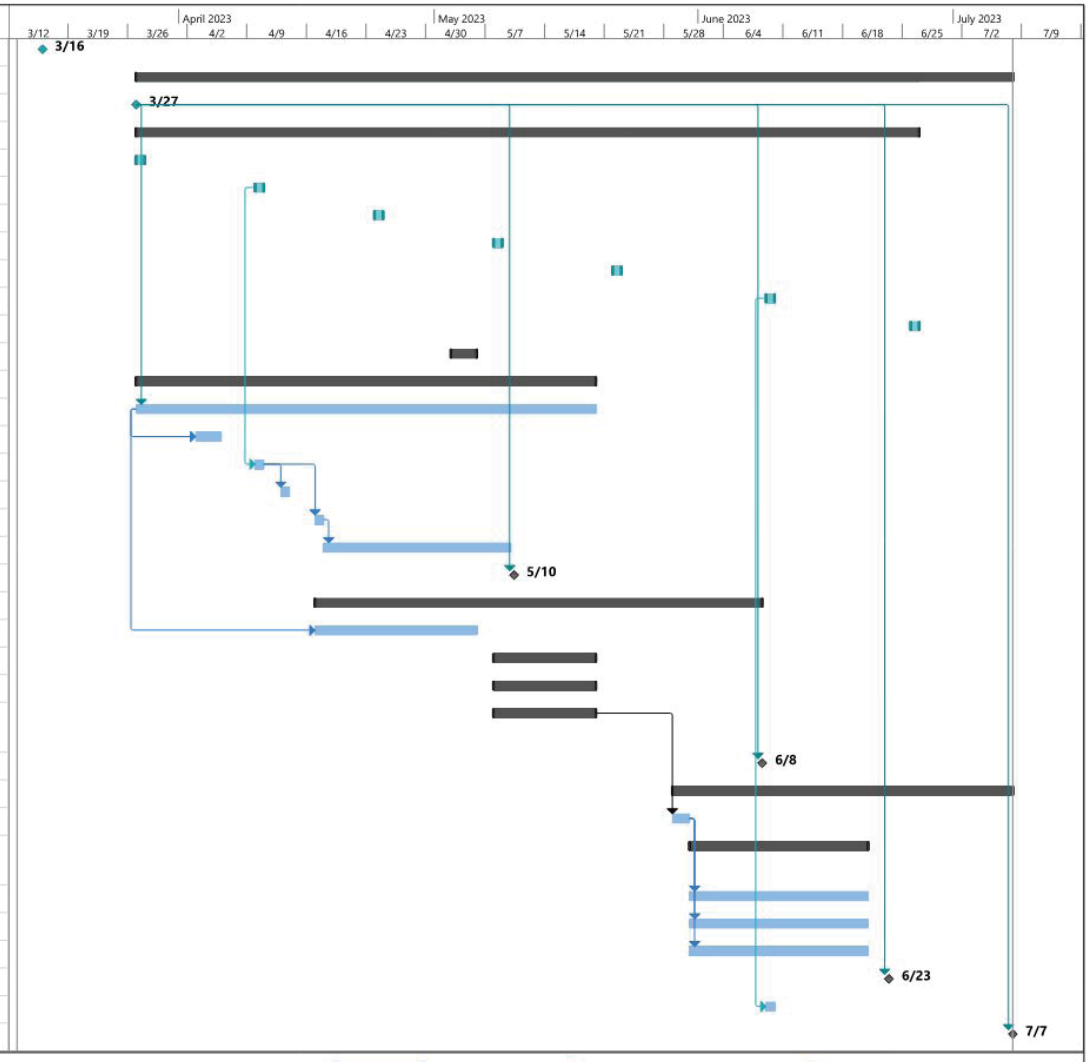
1. Develop a charging configuration tradeoff matrix with pros and cons identified for discussion with MTS. Concepts will be reviewed with respect to operational flow, constructability, cost, impact to ongoing operations, and expandability. Based on these discussions, the concepts will be refined and presented for review. This review will result in the selection of three (3) concepts to be further developed as the recommended options. Each concept will present solutions for the initial near-term twelve (12) BEB's charging support, near mid-term of twenty three (23) BEB's charging support and the ultimate ZEB master plan buildout of the site to a fully electric fleet.
2. Develop Rough Order of Magnitude (ROM) cost estimates for each developed charging concept option, phasing plan, implementation schedule, on-site and off-site electrical improvements, and CNG fueling system decommissioning. These estimates will include any proposed facility renovation / modification / construction, site improvements, and associated equipment.
3. Hold a working meeting with MTS to form a summary recommendation.
4. Update the two selected Electric Vehicle Layout Concepts and prepare/submit a Final Recommendation Report to include:
    a. A statement of the problem, purpose, and objective of the Conceptual Layouts.
    b. Analysis of the Conceptual Layouts leading up to the recommended options including pros and cons of each concept.
    c. Updated ROM cost estimates.

Task 4 Deliverables – Draft and Final Recommendation Report including four (4) bound copies of final report.

KMD - ZEB SCHEDULE AND DBE UTILIZATION

Our team schedule is presented below. The schedule will be published to all team members and be revisted regulaly at each team meeting. A PDF version of the schedule is included in the appendix.

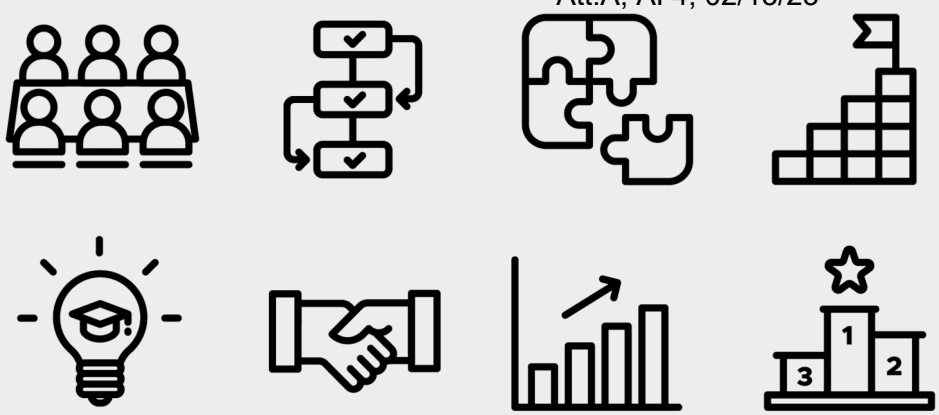
ID	Task Mode	Task Name
1		MTS Board Award
2		**Task 1: Project Management (15 weeks/105 days)**
3		Notice to Proceed
4		**Project Development Team Meetings**
5		PDT Meeting 1
6		PDT Meeting 2
7		PDT Meeting 3
8		PDT Meeting 4
9		PDT Meeting 5
10		PDT Meeting 6
11		PDT Meeting 7
12		**Bluebeam Review**
14		**Task 2: Site Assessment (8 weeks)**
15		Site Assessment Research
16		Questionnaire Development
17		Preassessment Discussion
18		Onsite Assessment (Day)
19		Onsite Assessment (Night)
20		Existing Conditions Report
21		Existing Conditions Report Submittal
22		**Task 3: KMD Electric Vehicle Layout Analysis (7.5 Weeks)**
23		Develop layout options
24		**Identify and Develop Modular Phases for Full Buildout**
27		**Develop circulations patterns (all vehicles)**
30		**Determine placement of CNG generator, solar array and battery electric storage**
33		Conceptual Layouts
34		**Task 4: Firm Recommendation (6 weeks)**
35		Develop charging configuration tradeoff matrix
36		**Develop ROM construction cost for charge configuration options (maximum 3)**
37		ROM Option 1
38		ROM Option 2
39		ROM Option 3
40		ROM Cost Estimates
41		Meeting with MTS to form Summary Recommendation
42		Final Recommendation Report



Project: KMD_ZEB_Schedule
Pacific Railway Enterprises/AEC

Task	Project Summary	Manual Task	Start-only	Deadline			
Split	Inactive Task	Duration-only	Finish-only	Progress			
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress			
Summary	Inactive Summary	Manual Summary	External Milestone				

As the DBE Prime, Pacific Railway Enterprises, Inc (PRE) will be utilized on this project. The project will provide an opportunity to perform a job that differs from MTS rail. It will also give our electrical engineering staff exposure to ZEB technology, principles, and design approach.



KMD - ZEB PROJECT TEAM RESUMES

KMD-ZEB Team Staff Member
Jennifer Seccombe
Ryan Winn
Robert Hertz
Jewels Carter
Andrew Bui
Bruce Farrell
Steven Brokken
Jason Fischer
Kevin Ciucki
Jordan Zimmer
Russell Link
Tyler Blauvelt
Lynn Feng
David Ibanez
Eric Bullock
Caroline Le

JENNIFER A. SECCOMBE, P.E.
PRESIDENT & CEO/SENIOR SYSTEMS ENGINEER

EDUCATION
Bachelor of Science, Electrical Engineering,
Specialization in Computer Engineering,
Minor in Management, 1997
University of California-Irvine

Certificate, Communications, 2009
University of California-Los Angeles

PROFESSIONAL AFFILIATIONS
Professional Engineer, Electrical, CA License No. E 19158
Comity in: OR, WA, NM, NV, TX, CO, AZ, UT, FL, MA, IL

WTS-Inland Empire

AREMA

REFERENCES
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909/451-2346

Fred Byle
SDTI (MTS)
1255 Imperial Avenue, Suite 1000
San Diego, CA 92101
619/595-4937

EMPLOYMENT HISTORY
Pacific Railway Enterprises: 04/2007 – present

Mindspeed Technologies (Formerly Conexant): 01/2001 - 04/2007

Conexant Systems (Formerly Rockwell): 01/1999 – 01/2001

Rockwell Semiconductor Systems: 05/1996 – 01/1999

PACIFIC RAILWAY ENTERPRISES, INC.

Jennifer Seccombe's career includes over 25 years of systems engineering experience in design, CAD, programming, problem solving, configuration management, standards development and documentation. As the principal of PRE, Jennifer Seccombe has worked within the train control systems industry designing signal, highway grade crossing, communications, positive train control, station, and central office systems. Mrs. Seccombe has held a leading role in all aspects of the transportation engineering project life cycle including: project funding evaluation and study reports, design concept, creation of issue for bid plans, specifications and estimates, material list development, design support during construction, field testing oversight, systems integration, and cutover. As Responsible Engineer, Mrs. Seccombe leads PRE staff developing signal and communications designs for agencies within the Southern California area.

REPRESENTATIVE PROJECTS INCLUDE:

DART – Silver Line Regional Rail Design Build, Dallas, TX. Sealing design build specification set for the communications infrastructure including: fiber, power over Ethernet, telephone, video IP cameras, public address, video message boards, intrusion detection, fire suppression, SCADA, and voice radio. Will also provide review and approval for communications product submittals once the specification set is approved by the owner. Timeframe: 01/2022 – present.

SCRRA – SCORE Simi Valley Communications Design, Simi Valley, CA. Producing issue for bid plans, specifications and estimates for communications backhaul and station systems. Project included addition and phasing of station systems (Visual Message Signs, Cameras, Speakers, Information Monitors) on a new second platform, including a pedestrian underpass and replacement of the existing communications shelter. Communications backhaul tied fiber to an existing microwave facility. Timeframe: 08/2021 – present.

MTS – El Cajon Third Track Project, San Diego, CA: Systems design lead for relocation of the station platform communications cabinet in conflict with the new third track. The project required extensive field verifications due to scarce documentation of existing systems. Developed innovative phasing of the platform systems to support existing infrastructure operation during construction. She developed 100% level design plans, specifications, and cost estimates. Timeframe: 01/2021 – present.

SBCTA – Arrow Maintenance Facility PTC Initialization Design, San Bernardino, CA: Used EDX software to produce predicted area of coverage for WLAN channels for 2 PTC initialization locations along the wayside. Integrated design into maintenance facility communications room. Coordinated Wide Area Network (WAN) connections with SCRRA to integrate the system. Timeframe: 10/2020 – 06/2021.

NCTD – Downtown Convention Center Station Project, San Diego, CA: Used EDX software to produce predicted area of coverage for VHF and ATCS. Used Infovista Planet to produce predicted coverage for 220MHz along the track for PTC. Produced a 5% Design Radio Study Report. Timeframe: 05/2020 – 07/2020.

MTS – Bayside Station Project, San Diego, CA: Systems design lead for track and station platform modifications to support operational changes. The signal design utilizes presence detection for switch indicators. Modifications to this location impacted MTS' central communications facility. Field verifications were performed to identify communications stakeholders and minimize impact to them. She developed 100% level design plans, specifications and cost estimates. Timeframe: 07/2019 – 07/2020.

SCRRA – SCORE San Gabriel Project Study Report, Pomona, CA: Signal design lead for study of 3 double track projects on the San Gabriel subdivision. Evaluated signal placements,

braking calculations, crossing improvements, and communications infrastructure. Produced signal and communications project narrative, estimates and exhibits for larger report. Coordinated constructability evaluations with other disciplines. Timeframe: 09/2018 – 05/2019.

SCRRA – Security Data Network, Pomona, CA: Produced design plans for a systemwide network utilizing DWDM for passenger station security camera video monitoring at a centralized location. The 10Gbps network was designed with two fiber strands and 8 channels, providing future expansion for 7 network isolated applications. In addition, the project involved discovery and proofing of existing conduit, and installation of intercept pull boxes for fiber installation from San Bernardino Station to Rancho Cucamonga Station along the San Gabriel subdivision. This project has been executed in 5 phases to cost effectively utilize an $8M grant. Within each phase she supported 100% design, bill of materials, estimates, contractor evaluation and selection, design support during construction and construction oversight. Timeframe: 06/2017 – Present.

MTS – Courthouse Station Project, San Diego, CA: Systems design lead for this new station to support operational changes for the future Mid Coast Trolley Extension. The signal design utilizes presence detection for switch indicators in this street running area of the San Diego Trolley. Modified the existing Wide Area Network to add the new station and devised cost-effective integration solutions for the train control network. She developed design plans, specifications and cost estimates. Timeframe: 04/2016 – 05/2017

LACMTA – Willowbrook/Rosa Parks Station Improvements Project, Los Angeles, CA: Design lead in the development of Issue for Bid (IFB) contract documents for two grade crossing modifications and one station pedestrian crossing for the Blue Line light rail system. The project included extensive field verifications, drawing creation, specifications, and engineering support. This project is currently in design support during construction. Timeframe: 11/2015 – Present.

MCCARTHY – County Center - Little Italy Station Cabinet Relocation Project, San Diego, CA: Design lead for this third-party contract to relocate the communications cabinet for construction of the County Center parking structure. She developed design plans, specifications and cost estimates to assist McCarthy in gaining SANDAG/MTS approval to complete the third-party relocation work. Timeframe: 02/2015 – 09/2016.

SANDAG - Orange Line CTC Project, San Diego, CA: Led project management, design and development of Job Order Contract (JOC) documents to incorporate track circuits and signal indications to MTS central control for display on their ARINC CTC supervisory system. She also developed an engineering estimate, construction schedule, scope of work and bill of materials for Contractor negotiations. Delivered the project on time and within budget, meeting MTS goals for providing next train information. Timeframe: 04/2014 – 09/2015.

LACMTA - Microwave Replacement Project, Los Angeles, CA: Communications lead in the project management and development of Issue for Bid (IFB) contract documents. She also developed the proposal to competitively bid and win this LACMTA contract. The microwave network backhaul design used the Alcatel-Lucent 9500 for the Rail Services Division. The project included drawings, a bill of materials list, engineering estimate, and existing conditions survey. Timeframe: 09/2013 – 04/2014.

SCRRA - Orange County Communications Rehabilitation Design, Orange, CA, Lead Design Engineer: Communications lead in the project management and development of Issue for Bid (IFB) contract documents. This project included design of fiber optic SONET and Gigabit Ethernet networks, digital point to point microwave, Advanced Train Control Systems (ATCS) network, and railroad voice radio systems. Mrs. Seccombe provided design support during construction, field testing and integration participation. Timeframe: 05/2009 – 11/2012.

AECOM

Ryan Winn

Transportation Planner/Project Manager

Ryan is a mobility planner with 12 years' experience on various transportation projects, including corridor planning studies, alternatives analysis, environmental mitigation monitoring, and project management. His recent experiences focus on planning for emerging mobility trends in electrification of transit and municipal fleets, planning for public charging stations, connected and automated vehicles, and congestion pricing/tolling. He holds an undergraduate degree in civil engineering and a graduate degree in urban planning providing him a diverse set of technical skills to deliver various planning studies and infrastructure projects. His Master's thesis was published by UCLA's Luskin Center for Innovation that quantitatively analyzed 500,000 EV charging transactions to study charging behavior and pricing policies.

Years of Experience

With AECOM: 12
With Other Firms: 0

Education

Masters Urban and Regional Planning (MURP), University of California, Los Angeles, 2016

B.S., Civil and Environmental Engineering, Cornell University, 2010

Professional Affiliations

Rautenberg New Leader's Program

Toastmasters International, Competent Communicator

Project Experience

Acceleration 2 Zero, San Diego Gas & Electric, CA. Transportation planner and task lead developing the core principles that steer the overall EV strategy based on best fitting programs, policies, and projects. Using the key principles and evaluation criteria established during the project through stakeholder outreach, EV strategies are ranked based on potential effectiveness and fit with local policies. Highest ranked strategies are then developed into action plans. 2021-present.

Los Angeles County Public Works ZEV Transition Study, Los Angeles, CA. Project manager responsible for developing the long-term plan for transitioning Public Work's fleet of light, medium, and heavy-duty vehicles to zero-emission vehicles. Tasks include inventorying and categorizing existing composition of fleet vehicles to conduct performance comparison, lifecycle cost analyses, and air quality benefits of transitioning to ZEVs. Specific considerations made for vehicles where no zero-emission alternative exists, is unrealistically priced, or is considered hard-to-electrify so a long-term transition plan based on upcoming procurement cycles can be developed. 2022-present

Arizona DOT Electric Vehicle Infrastructure Deployment Plan, AZ. Task lead responsible for developing the existing and future conditions report that aligns with the National EV Infrastructure (NEVI) requirements for installing charging infrastructure along the designated alternative fuel corridors. 2022-present

Electric Vehicle Infrastructure Study. County of Union. Union County, NJ. Internal project manager to a local subconsultant to study existing and future infrastructure deployment within Union County, NJ. Leading internal team utilizing proprietary EV-Readi software to

determine where future EV infrastructure should be deployed based on socioeconomic inputs and stakeholder adjustments. 2022-present

Study of Transitioning the County's Public Works Fleet to Electric Vehicles, Anne Arundel County, Maryland. Transportation planner and task lead responsible for policy analysis of transitioning Department of Public Works municipal light duty vehicle fleet to electric vehicles. Policies look at localities that provide EVs to employees to charge at home, paying for electricity, use by public of city- or county-owned chargers, and pricing policies for public use chargers. 2021-present

Transportation Management Plan, United States Air Force Academy, Colorado. Task lead for developing the electric vehicle transition phasing plan for various users and Academy's fleets of shuttle buses, sedans, vans, trucks, and other specialty vehicles. Plan included identifying key user groups on site and types of chargers needed over time to satisfy EV charging needs. Documented fleet considerations and phased approach to achieve EV needs over time. 2022

Bus Electrification Fleet Study, Denver Regional Transportation District, Denver, Colorado. Transportation planner responsible for putting together state of the industry report and a policy and funding background report regarding recommendations for electric bus deployment, including best practices for propulsion, vehicle, infrastructure, and systems technology. Policy and funding report described all available funding sources at local, state, and federal levels as well as near-term opportunities and potential partnerships for innovative financing. Supporting initial operations planning to determine best routes to electrify based on operating characteristics, vehicle energy loads, and battery sizes. 2019

National Automated Bus Consortium, Los Angeles, California and Nationwide. Transit analyst and project manager for two of the transit agencies in an AECOM-led consortium to accelerate the deployment of full-size automated buses. Duties include analysis of existing bus routes suitable for conversion to automated fleets, including considerations of charging infrastructure. Additional consortium efforts include identifying candidate routes for automated bus deployment, developing bus specifications, and assisting agencies with operating plans. 2019-present.

Publication

Electric Vehicle Charging at Work. Published by: UCLA Luskin Center for Innovation, 2016. Available at: https://innovation.luskin.ucla.edu/wp-content/uploads/2019/03/EV_Charging_at_Work.pdf

AECOM

Robert D. Hertz, AICP
Vice President/Sr. Project Manager

Education

MS, Urban and Regional Planning, Florida State University, 1991

BS, Economics, Florida State University, 1989

Licenses/Registrations

Certified Planner, #10760

Years of Experience

With AECOM: 22

With Other Firms: 9

Professional Associations

American Planning Association

American Institute of Certified Planners

Mr. Hertz is a senior project manager with a background in environmental planning and specific applications for transit and transportation projects. He offers over 30 years of experience in transportation planning projects at the local, regional, and state level. His experience includes project and task management for commuter rail and light rail transit corridor planning, transit maintenance facility planning, high-speed rail planning, long-range and master planning, environmental evaluations, alternatives analysis, and feasibility studies. Mr. Hertz also has a technical background that includes experience with specific evaluations related to traffic and transportation impacts, social and economic impacts, land use assessment, traffic and transit air quality, noise and vibration assessment, and hurricane evacuation planning.

Project Experience

San Diego Association of Governments (SANDAG), I-8 (Kumeyaay Corridor) Comprehensive Multimodal Corridor Plan, San Diego, California. Currently serving as the rail transit lead for a multidisciplinary team conducting the evaluation and consideration of transportation improvement strategies in the I-8 corridor. The team developed and is recommending improvement strategies that will be evaluated for effectiveness and cost and included in the final CMCP to provide future funding eligibility under SB 1.

Los Angeles County Metropolitan Transportation Authority, Crenshaw/LAX Northern Extension Advanced Alternatives Analysis, Los Angeles, California. Project Manager responsible for oversight, management, and direction of a team of professionals to develop an advanced screening of alternative alignments and features to be recommended for further evaluation during the CEQA and potential NEPA environmental process. The advanced evaluation included elements of engineering, travel demand, transit-oriented communities, first/last mile, environmental, and cost considerations to screen five alternatives down to three alternatives to be recommended for further consideration. Agency and community outreach and coordination were also critical aspects of the process.

Orange County Transportation Authority (OCTA), Orange Maintenance Facility Preliminary Engineering and Environmental Clearance. AECOM Project Manager, working as a subconsultant on CEQA and NEPA environmental clearance for a new commuter rail maintenance facility in Orange County. The

AECOM team is preparing CEQA environmental documentation, anticipated to be a Mitigated Negative Declaration and is assisting OCTA with development and approval of a conditional use permit for the site with the City of Irvine. The project includes a NEPA environmental clearance, consisting of development of an Categorical Exclusion.

San Diego Association of Governments (SANDAG), Downtown Bus Stopover and Multiuse Facility, San Diego, California. Served first as project director responsible for ensuring staffing, resource availability, and strategic decision-making for a multi-disciplinary team, then as project manager. The team evaluated the potential configuration and viability of a downtown bus stopover and potential multiuse development in downtown San Diego. Services include environmental and geotechnical assessment, bus operations and configuration planning and conceptual design, market assessment, and project delivery/procurement assessment. The team evaluated options to satisfy the bus stopover need while providing the greatest value in terms of overall development and potential revenue under a public private partnership.

Metro Gold Line Foothill Extension Construction Authority, Phase 2B, Monrovia, California. Project Manager and Environmental task leader responsible for the development of CEQA environmental documents addressing changes since completion of the Phase 2B Final EIR of the Metro Gold Line Extension between Azusa and Montclair. This second phase of the Gold Line Extension currently in design and changes necessary for implementation are being processed for environmental clearance. During the first time period, between 2014 and 2016, the team produced two CEQA FEIR addenda, developed visual representations of potential grade separations, conducted traffic and transportation analysis, and completed other environmental analysis. Since that time, the team a Supplemental EIR to address changes related to parking at stations and is currently preparing an additional Supplemental EIR to address further changes related to parking.

Los Angeles County Metropolitan Transportation Authority, Eastside Phase 2 Transit Corridor, Los Angeles, California. Alternatives analysis task manager responsible for developing and analyzing alternatives for extension of the Eastside Gold Line from East Los Angeles to the city of Whittier (approximately 10 miles). The project is being developed in three parts. An alternatives analysis consistent with FTA New Starts requirements is part one and was completed in December 2008. The goal of part one was the identification of a locally preferred alternative or set of alternatives that can be advanced into the draft environmental impact statement phase of project development. The LACMTA Board approved the second phase of the project in January 2009.

Mid City/Exposition Corridor Light Rail Transit Project Phase 2, Exposition Authority, Los Angeles California: Mr. Hertz served as a technical reviewer and author for the Environmental Impact Statement/Environmental Impact Report for this planned extension of the light rail system between Culver City and Santa Monica. The project included evaluation of at-grade alignment with multiple roadway and facility crossing locations throughout the western portion of Los Angeles. Mr. Hertz also served on a peer review team to evaluate the completeness of the Final Environmental Impact Report prior to its submittal to the client.

Draper Transit Corridor Light Rail Extension, Utah Transit Authority, Salt Lake City, Utah: Transportation Planning Task Leader responsible for directing the analysis of transportation issues related to this planned extension of the north/south light rail line in Salt Lake City to the Draper Town Center. Mr. Hertz managed the development of all transportation elements of the alternatives analysis and the subsequent Environmental Impact Statement including the analysis of traffic, grade crossing, parking, and station access impacts and potential mitigation measures.

California High-Speed Train Project, Merced to Fresno Section, California High-Speed Rail Authority, Sacramento, California: Technical sufficiency reviewer and editor. Participated in the initial review and revisions to several key sections of the Draft EIR/EIS including the Land Use, Noise and Vibration, Transportation, and Safety and Security sections integral to meeting of a deadline was for delivery of the Administrative Draft EIR/EIS for review by the Federal Railroad Administration and the State of California Attorney General. This deadline was integral to keeping the project on track to receive funding from the American Recovery and Reinvestment Act for further design and construction.

AECOM

Jewels Carter

Vice President, National Zero Emission Bus Facility Lead

Business Development Senior Director

Jewels has over 30 years of experience on over 50+ Zero Emission Bus projects and over 110+ Transit and Garage project experience. He has extensive experience designing new and modifying existing transit bus and public works, school bus and private fleet facilities for fleet growth, equipment replacement to accommodate new vehicles and fuel types, and site and bus yard/fleet operational vehicle flow enhancements.

Years of Experience

With AECOM: 0
With Other Firms: 30

Education

Bachelor of Architecture (BArch), Architecture, University of Houston, 1992

Licenses / Registrations

Registered Architect, Texas, 16123

Professional Affiliations

American Public Transportation Association (APTA), Member

APTA Zero Emission Fleet Committee Member

American Institute of Architects, Member

Zero Emissions Bus Resource Alliance (ZEBRA) Member

Automated Bus Consortium (ABC)

Project Experience

MTS Metropolitan Transit System, Imperial Avenue Division BEB Master Plan & Phase 1 Implementation, San Diego, California
Facility task lead for existing site analysis, BEB charging technology selection and impact of implementation of the different charging systems on the existing operating 200+ bus site. Provided full site BEB master plan options and implementation phases [Prior to AECO

MTS Metropolitan Transit System, South Bay Maintenance Facility BEB Master Plan & Phase 1 Implementation, San Diego, California.
Facility task lead for existing site analysis, BEB charging technology selection and impact of implementation of the different charging systems on the existing operating 258 bus site. Developed master plan implemental in 11 phases to allow full BEB transition while facility remains operational, Detail design for initial Phase 1 for 24 BEBs as well as installing future proofing infrastructure electrical improvements for microgrid with solar, on-site generator and on-site energy storage for future 271 BEB fleet. [Prior to AECOM]

San Diego Association of Governments (SANDAG) / San Diego Metropolitan Transit System (MTS), East County Bus Maintenance Facility, El Cajon, California. Task lead and facilities team manager for the replacement bus maintenance, administrative and operations facility. The current East County site was a mixture of 1950s and 1960s era buildings and adjacent parcels that had been used to service an 80-bus diesel fleet. Work included new maintenance facility, operations, administrative offices, new CNG fueling lanes, bus wash and parking for an ultimate fleet of 120 CNG buses including 60-foot articulated buses. Buildings were demolished and rebuilt. The site was completely re-graded and paved in phases, without disrupting ongoing onsite transit operations. [Prior to AECOM]

KCATA Zero Emission Transition Plan and BEB Charging Infrastructure Detail Design, Kansas City, MO. Facility task lead to support zero emission plan development for use in Phase 1 and Phase 2

Jewels Carter

Publications / Presentations

2003 Published **– Industrial Spaces Vol 1**, The Images Publishing Group – Rtron Corporate HQ

2005 Published – **Texas Architect,** Rail Expressed. July / August 2005 Issue

Carter, Jewels. *"Challenges and Issues with Operating a Fleet of Battery Electric Buses."* **APTA Bus & Paratransit Conference, Reno,** NV May 8, 2017

Carter, Jewels. *"Site Impacts of Incorporating On-Site Depot BEB Charging with Traditional Diesel / CNG Nightly Service Cycle."* **APTA Sustainability & Multimodal Planning Workshop, Minneapolis, MN** August 7, 2017

Carter, Jewels, *"Each City's Journey To Transit Bus Fleet Electrification Looks Different"* **ABB Expert Day Conference**, New York City, NY October 30, 2018

Carter, Jewels, *"Considerations for Creating a Long-Term Electric Bus Charging Plan - Best Practices."* **BusCon Conference**, Indianapolis, IN October 2, 2018

Carter, Jewels. *"Site Impacts of Incorporating On-Site Depot BEB Charging with Traditional Diesel / CNG Nightly Service Cycle."* **APTA Bus & Paratransit Conference, Tampa, FL** May 8, 2018.

Carter, Jewels. *"Electric Bus Infrastructure and Your Garage."* **APTA Bus and Mobility Conference, Louisville, KY** May 20, 2019

Carter, Jewels "*ZE Depot Design Strategies*" **UTIP ZEB Masterclass** UTIPANZ International Association of Public Transport Australia / New Zealand March 9, 2022

Carter, Jewels "*Zero-Emission Infrastructure and Resilience*" **Power Up! Connecting the First Coast – Zero Emissions Conference**, Jacksonville, FL June 22, 2022

FTA grant approvals. Project includes reviewing existing installed battery electric bus (BEB) chargers, incoming BEB chargers, near and far future BEB charging infrastructure. Develop drawing and specs to support public bid and construction of two incoming BEB chargers. Work includes construction service oversight during charger and new electrical infrastructure installation. (April 2022 ongoing)

Ragged Lake Transit Centre (RTLC) Battery Electric Bus Facility Expansion, Halifax Regional Municipality, Halifax, Nova Scotia. – EV subject matter expert (SME). The RLTC Expansion and Fleet Electrification project aims at reducing greenhouse gas emissions of the Halifax Transit fleet and storage facility. The project included the expansion of the bus storage garage to accommodate up to 62, SBE Battery Electric Buses (BEBs) and charging infrastructure and chargers including design / engineering and construction. Responsibilities / Level of Involvement: Jewels, as AECOM's US National ZE Bus Facility Lead, provided the AECOM Canadian design team with insight and review of the developing transit operations plans for charging and operation; confirming that the facility is reaching a net-zero operation target with heat recovery from bus charging and roof top solar. (March 2022 – ongoing)

MTS Zero Emission Bus Transition Plan, Minneapolis, MN. Facility task lead to support zero emission plan development Metropolitan Transportation Services (MTS) and its five (5) additional suburban providers – Maple Grove Transit, Metro Transit, MVTA, Plymouth-Metrolink, SouthWest Transit. A total of (16) sixteen garages were assessed for feasibility of updating to operate a hundred percent zero emission fleet. The suburban transit agencies provide transit in and around Minneapolis including Burnsville, Eagan, Blaine, Brooklyn Center, Fridley, Buffalo, Eden Prairie, and St Paul with 757 shuttles and 359 buses. Conceptual full fleet BEB master plan detailed design and phased implementation and utility coordination performed at the two MVTA and one SouthWest Transit garage. (June 2022 – ongoing)

Los Angeles County Metropolitan Transportation Authority (METRO), Zero Emission Bus (ZEB) Program Master Plan, Los Angeles, California. Task Lead to review 11 of it 14 bus divisions for fleet capacity and facility impacts to transition all of Metro's bus fleet to battery electric vehicles. Task included review of existing conditions, incorporation and prioritizing existing facility capital needs with full fleet BEB master planning and modifications required to charge fleet on-site, estimate increased electrical service size, impacts to maintenance bays and equipment, investigate impacts to existing grid and the possibility of utilizing on-site micro-grids and battery storage. [Prior to AECOM]

Andrew Bui, PE

Vice President, AECOM Ventures
Andrew.bui@aecom.com
+1.213.949.8212

Education
BS, Civil Engineering, California Polytechnic University of California, Pomona

Professional Licenses
California Licensed Civil Engineer, License Number 78996

Awards
2018 AECOM CEO Award for outstanding contributions leading innovation throughout the organization

Professional Societies/Affiliates
Board of Directors, VELOZ
American Society of Civil Engineers
Asian American Architects/Engineers Association
WTS International
Engineers Without Borders

Chronology
06/2004 - Present, AECOM
09/2003-06/2004 Associated Engineers
06/2003-09/2003 Parsons Brinkerhoff

Overview
Andrew Bui is Vice President AECOM's National Transportation Innovation Leader. A California registered professional engineer by background with over 15 years of transportation and mobility experience, Bui currently leads development of AECOM innovation strategy for new transportation and smart cities technology integration and how it will impact infrastructure planning, design, construction and operations and maintenance. His key technology initiatives include smart cities, connected and automated technologies, electric vehicle infrastructure/technology, and hyperloop. As a global industry leader on mobility technologies, Andrew supports cities around the nation and globe better plan how emerging technologies can improve the safety, efficiency, and operability of their transportation network.

Project Manager, Los Angeles Department of Transportation Bus Electrification Project Management, 2019-Present: Project manager and technology lead for Los Angeles Department of Transportation to lead the planning and design of four LADOT bus facility retrofits to accommodate their conversion to battery electric buses. This project aims to convert these facilities for delivery of buses starting in 2021 with the eventual full fleet conversion by 2028. The project includes design and coordination of the power infrastructure upgrades, planning the facility's layout and expansion, and strategy development for how LADOT will manage other technologies to support their fleets, including smart charging, battery storage, and on-site power generation.

Project Director, ARPA-E Charge as You Go Study, 2017-present: Project manager and civil planning lead for an ARPA-E study to understand benefits, impacts and potential deployment strategies for charge as you go technologies for electric vehicles. Both inductive and conductive charging technologies will be studied in major corridors in California for case study impacts on traffic, grid infrastructure, and sustainability.

Project Manager, eHighway, Carson CA, Siemens, 2016: Project manager for technology integration and civil infrastructure for the Siemens demonstration project that will install equipment to allow for electric trucks powered by overhead cables to travel through a heavily used corridor near the Ports of Los Angeles and Long Beach. The e-highway concept is particularly effective from an environmental and economic point of view on heavily used and relatively short truck routes, e.g. between ports, industrial estates, freight transport centers and central transshipment terminals. The intention is to set up a "zero emission corridor" for shuttle traffic between the two sea ports and the inland rail transshipment centers around 30 kilometers away.

I-805 HOV Widening, San Diego, CA, Caltrans, 2010-2011: Design Lead for the design-build team to design and build an HOV widening on I-805 in San Diego. The Project includes design of the HOV facility, freeway modification and a direct access ramp for the HOV Lane. Responsibilities include geometric design and traffic design for the HOV facilities,

Project Manager, Roseville Electric Vehicle Study, California, City of Roseville, 2017-present: Project manager and lead for a City of Roseville study on electric vehicle adoption and strategy to better promote adoption of electric vehicles, understand impacts to the grid infrastructure, and to develop preliminary strategies to better prepare for long term electric vehicle adoption. The study involved both the transportation and energy groups of the City and works closely with key stakeholders to develop an initial strategy to futureproof proposed electric vehicle technology deployments around the City.

Technical Lead, Feasibility Analysis of Electric Roadways through Localized Traffic, Cost, Adoption, and Environmental, Utah, Department of Energy, 2017-present: Lead for a study to provide analysis of opportunities for integration of electric roadways in Southern California. . This assessment will provide an initial technology strategy for electrified roadways in major urban populations.

Technical Lead, ODOT AV/CV System Engineering Analysis Development, ODOT, April 2018-Present: Technical lead to develop the statewide architecture for all future AV/CV deployments in the state of Ohio. The system engineering analysis (SEA) will be developed as a template for how future deployments will be managed and approved, regardless of the stakeholder. The SEA will be focused on developing successful metrics for all statewide deployment, with an understanding of key priorities that will be defined during the development phases, and developing a cohesive technology integration strategy for Ohio.

Technical Lead, South Corridor Study-AV task, Miami-Dade County, 2017-Present: Technical lead for a study of an existing dedicated transit way that has at-grade intersections in the County of Miami Dade. The AV tasks looks to identify near terms AV technologies, assess technology readiness, and develop a technology strategy that can enhance the transit way. Technologies to be studied include AV shuttles and connected technologies, and how those could increase ridership, promote safety, and improve operations.

Technical Lead, MNDOT Autonomous Bus Pilot, Minnesota, 2017-Present: Researching vehicle and infrastructure requirements for an autonomous vehicle bus that can safely operate in cold weather climate conditions. Evaluating autonomous bus technology readiness and regulations, defining the state of the industry, and reviewing national and international case studies and lessons-learned. Defining pilot project requirements and goals and identifying and evaluating locations to implement Minnesota's first autonomous vehicle pilot project.

Technical Lead, Dubai BRT Master Plan, Dubai RTA: Providing oversight and technical oversight for planning for a proposed BRT system for Dubai RTA. RTA proposes to use state-of-the-art technology to integrate a BRT of the future with an anticipated opening date in 2019. Technologies that will be focused on for the BRT system will include autonomous technologies and electric propulsion.

AECOM

Bruce Farrell, AIA, CSI

Architecture/Construction Phasing

Education
BS, Architecture, California Polytechnic State University

Registrations
Professional Registered Architect, CA #14987

Years of Experience
With AECOM: 29
With Other Firms: 13

Bruce is an Associate Vice President at AECOM, an architect and senior project manager in the Oakland office. He is the leader of the firm's Northern California transportation architecture practice and has managed and designed a variety of transit infrastructure design and planning projects, including several ZEB Transition Planning projects. His experience has included these transit battery electric and hydrogen fuel cell procurement plans, maintenance and repair facilities, marine terminal operations buildings, and industrial, office and commercial projects.

Recent example projects include:

San Diego Metropolitan Transit System (MTS) Zero Emission Bus Pilot Program, San Diego, CA. This project is a zero-emission bus feasibility assessment, a ZEB Roadmap (or ZEB Transition Plan), and a Zero-Emission Bus Pilot program with AECOM as a sub to CTE.

Culver City Transportation Department (CityBus), BEB Transition Plan, Culver City, CA. Project Architect and

Planner. Project includes planning, architectural design, electrical engineering, and cost estimating services for the conversion of 44 CNG fueled buses to 54 Battery Electric Buses (BEB). AECOM provided assessments of existing buildings at their depot for adapting the design to accommodate BEBs/FCEBs. Developed electrical service concept and the design of new electrical infrastructure to serve the agency's future BEB fleet charging needs. A phasing scheme was developed to begin with a 4 BEB pilot phase, through five subsequent construction phases that will increase the charging infrastructure on an incremental basis as new BEBs are added to the fleet. Planning for a new parking structure on site will accommodate buses on the ground level and employee parking on four upper levels. Coordination with the local utility, Southern California Edison and their "Charge Ready" assistance program was part of the project scope.

Livermore Amador Valley Transit Authority (LAVTA), BEB/FCEB Transition Study, Livermore, CA. Project Architect and Planner. Project includes architectural design, electrical engineering and cost estimating services for the conversion of 60 fuel burning buses to 68 completely zero emissions BEB. An alternate scenario, deploying 41 BEBs and 19 hydrogen fuel cell electric buses (FCEB) was also developed. AECOM provided assessments of planned construction documents for new buildings at a new depot site for adapting the design to accommodate BEBs/FCEBs. Developed electrical service concept and the design of new electrical infrastructure to serve the agency's future BEB fleet charging needs. The phasing scheme worked to base new BEBs on the new site and commence operations as expansion construction was planned during a 10-year time frame.

SolTrans, BEB Feasibility Study, Vallejo, CA. Project Architect and Planner. Project includes architectural design, electrical engineering and cost estimating services for the conversion of 58

fuel burning buses to 70 completely zero emissions BEB. AECOM coordinated assessments of existing electrical service capacities and the design of new electrical infrastructure to serve the agency's future BEB fleet charging needs. An electrical improvement project schedule and phasing plan with cost estimates of annual capital improvement budgets extending to the year 2040 was developed along with design requirements, and estimated costs related to battery charging infrastructure. The phasing scheme worked to minimize disruption of daily bus operations for the duration of the project.

Contra Costa County Transit Authority (CCCTA), BEB Transition Study, Concord, CA. Project Architect and Planner. Project includes site planning and phasing, electrical engineering and cost estimating services for the conversion of 125 CNG fueled buses to 173 completely zero emissions BEB. Three alternate scenarios were developed:

- Scenario 1B: Depot Only with Expansion, CCCTA would add BEBs to their fleet in order to meet the range requirements of their blocks. In this scenario, 48 BEBs would be added to the fleet of 125, for a total of 173 BEBs.
- Scenario 2: Depot and On-Route, they would have 125 BEBs, 48 of which would require in-service, on-route charging in addition to their depot charge.
- Scenario 3: BEB and FCEB, they would have a final number of 77 BEBs with the remaining 48 buses in the fleet being FCEBs.

AECOM provided assessments of existing depot buildings for adapting the design to accommodate BEBs/FCEBs. Developed electrical service concept and the design of new electrical infrastructure to serve the agency's future BEB fleet charging needs. The phasing scheme worked to maintain operations as expansion construction will be carried out during a 12-year time frame.

AC Transit Zero Emissions Bus Study, Oakland, CA. Bruce was the lead architect, providing technical assistance in assessing feasibility and defining capacities, site layouts, and costs related to battery charging and hydrogen fueling infrastructure to transition AC Transit to a zero emission bus fleet. 2018.

Yuba-Sutter Transit Battery Electric Bus Feasibility Study, Marysville, CA. Bruce worked with a multi-disciplined AECOM team providing an analysis for transitioning Yuba-Sutter's fleet of buses from diesel/gas fuels to BEBs by 2020. Bruce assessed feasibility and answering critical questions on the number of BEBs that can be deployed on their existing site. Options for charger placement and power cord delivery were developed for the project, employing space saving concepts on their limited area site.

AECOM

Steven Brokken, SE
Senior Structural Engineer

Professional History

06/1980 - Present, AECOM Senior Structural Engineer

Education

Bachelor of Science (B.S.), Civil Engineering, University of California-Berkeley, 1978
Master of Science (M.S.), Structural Engineering and Structural Mechanics, University of California-Berkeley, 1979

Registrations

Civil Engineer - State of California
Structural Engineer - State of California

Years of Experience

With AECOM: 42
With Other Firms: 2

Professional Affiliations

Structural Engineers Association of Northern California (SEAONC)

Steven has provided design for a variety of structures, including parking garages, bridges, maintenance facilities, warehouses, administrative offices, research laboratories, tunnels, and nuclear power plants. His experience includes technical direction of engineering activities, coordination of consultants and subcontractors, and management of budgets and schedules. Steven has a strong background in seismic retrofit of concrete structures, long-span structures, and seismic engineering. He experience includes design on difficult sites in high-seismic regions.

Experience

Project Structural Engineer, Culver City Bus Electrification Transition Project, Culver City, 2022.
Structural Engineer of Record for improvements at the Culver City Bus storage facility for electrification of the bus fleet. Improvements include installation of a space frame system to provide overhead routing of electric vehicle charging equipment. The space frame system is to be constructed in 2 phases, with the final plan dimensions of both phases being 207 ft by 115 ft. The project includes solar panels on the top surface of the space frame, and a new parking structure accommodating busses and standard vehicles at this facility.

City of San Jose, Norman Y. Mineta San Jose International Airport - Consolidated Rental Car Facility, San Jose, California.
Structural engineering peer review services for the consolidated rental car facility (CONRAC) and new parking structure at the airport. Services included complete structural engineering review of Design Build Documents for issuance of building permits. The CONRAC is a pile supported 8-story reinforced concrete shear wall building consisting of a ground level public parking, elevated levels for parking, a single level customer service building located interior to the main structure on the ground level. The building has overall plan dimensions of 950 by 280 feet and provides access and storage for both public parking and the rental car garage.

River Rock Casino, Site Work and Parking Structures, Sonoma County, California. Project Structural Engineer providing multidisciplinary project management and administration services for several related components, including three interconnected reinforced-concrete parking structures, six, seven, and eight stories high; geotechnical investigations and design of site retaining walls including tie-back walls for landslide mitigation; civil design of the main access road; preparation of a stormwater master plan for the site; evaluation of sanitary sewer treatment, reuse, and disposal systems; and NPDES permitting support. All construction occurred simultaneously on a highly constrained 75-acre site and was accomplished without affecting the ongoing operations of a 60,000 square-foot casino.

AECOM

Steven Brokken, SE

Gateway Homeowners Association, McKinley Towers Parking Facility, Albany, California. Structural consultant for the McKinley Tower condominium complex, which consists of multi-story reinforced-concrete and masonry residential towers and a 3-level precast and reinforced-concrete parking structure for 509 cars. The parking structure, designed by another firm, had unacceptable performance under service loads. The performance was manifested by excessive deflections, vibration under vehicle loads, extensive cracking of the reinforced and precast members, and water intrusion. Served as the engineering representative during construction overseeing construction work, including strengthening and replacing existing structural members and repairing by epoxy injection more than two miles of concrete cracks.

US Bureau of Reclamation, Hoover Dam Visitors Center and Parking Garage, Boulder City, Nevada. Engineer of record for the 5-story visitor center and multilevel parking garage accommodating 450 cars with provision for tour buses at the first level. The visitor facility includes a pedestrian path below the interstate highway to eliminate the necessity for pedestrians crossing the roadway, and two 50 passenger elevators traveling from the visitor center 650 feet down to the turbine deck at the Nevada side of the dam. The visitor facility is in a very restricted area at the Nevada Dam abutment and required extensive rock excavation for construction. The facility was designed to an elevated level of seismic standards.

San Francisco Airport Commission, San Francisco International Airport - Central Parking Garage Seismic Assessment, San Francisco, California. Project manager for a condition and seismic/structural assessment study of the 5-story, 3.2-million-square-foot central parking garage. The study included the garage, the central plant region and tunnels connecting the garage to the terminal buildings. The condition study consisted of a survey of the garage slabs, girders, walls and columns and provided documentations of deterioration such as cracking (surface, diagonal, vertical and horizontal) spalling and erosion. Methods for repair and remedial measures were provided as part of the condition assessment final report. The seismic/structural assessments of the garage were performed by developing computer models of the garage structures, performing dynamic analyses for earthquake loadings and identification of seismic/structural vulnerabilities. The study included a parameter study to investigate the cost of seismic retrofit for a range of possible seismic upgrade criteria.

Transbay Joint Powers Authority, Transbay Transit Center Program Management, San Francisco, California. Project structural engineer for preliminary design of the $2B six level redevelopment project used as a component of proof of concept and cost verification for this three-block long transit facility. Produced design build specifications for the 1,300 feet long by 185 feet wide by 65 feet deep excavation in downtown San Francisco for construction of this facility.

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Jason Fischer, PE

Surface Transportation Leader/Civil Design

Jason has over 16 years of experience designing and managing local roadway and highway interchange projects for various local public agencies. He has experience in all aspects of project design, ranging from preliminary engineering studies to PS&E packages and construction support services. He has an outstanding application of design principles used to craft innovative and optimal designs while meeting local agency and ADA standards.

Years of Experience

With AECOM: 1
With Other Firms: 15

Education

B.S., Civil Engineering, North Dakota State University, 2007

Professional Affiliations

ACEC

ASCE

APWA

Project Experience

University Avenue Bikeway, San Diego, CA. Design Manager. The scope of services included the final design of bike lanes along University Avenue and improvements to signing, striping, drainage, pavement rehabilitation, and various enhancements to existing pedestrian features. Project Cost: $32M. Owner: SANDAG

Metro Gold Line Foothill Extension Phase 2B, Los Angeles, California. Civil Design Lead for this design-build project, which extends the current Metro Gold Line light rail by approximately 9 miles and adds four new light rail transit stations in the cities of Glendora, San Dimas, La Verne, and Pomona. Jason was responsible for the design and construction support of 23 at-grade crossings, 4 transit stations along the track corridor, various bus transit stations and curb ramps along the adjacent roadways, pedestrian grade crossings, and designed each of these features to meet all ADA and local agency requirements. This work was done under a highly accelerated schedule with integrated quality management. Owner: Metro

SR-33 Pavement Rehabilitation Project, Coalinga, CA. Task Order Manager. The scope of services includes preparing both the Project Report and final PS&E design for a 2-mile-long roadway project through the City of Coalinga, which includes a total of 72 impacted pedestrian curb ramps along with other pedestrian sidewalk upgrades. The roadway improvements feature a road diet for approximately 1 mile. Project Cost: $18M. Owner: Caltrans

I-8 Concrete Slab Replacement Project, San Diego, CA. Task Order Manager. The scope of services included the final design of 34 pedestrian curb ramps and pavement rehabilitation work along I-8. Project Cost: $16M. Owner:

Jason Fischer, PE

Caltrans

Port of San Diego Utility Mapping, San Diego, CA. Task Order Manager for mapping the existing utilities throughout the limits of the Port of San Diego, which included coordinating field verification work and created a BIM model recognized by various CADD platforms such as ArcGIS, Civil 3D, and augmented reality applications. Owner: Port of San Diego

SR-29 Pavement Rehabilitation Project, Caltrans District 4, Vallejo, CA. Task Order Manager for project as part of a Caltrans District 4 on-call contract. The scope of services includes preparing both the Project Report 6-mile-long pavement rehabilitation of SR-29 between SR-198 and Merced Ave, which is located through the City of Coalinga. This project includes a total of 72 impacted pedestrian curb ramps along with other pedestrian sidewalk upgrades. The roadway improvements feature the pavement rehabilitation along with a road diet for approximately 1 mile of the project limits. Project Cost: $32 million Owner: Caltrans

SR-82 Pavement Rehabilitation Project, Palo Alto, CA. Task Order Manager. The roadway improvements feature the added bicycle lanes, driveway improvements, pavement rehabilitation, and enhancements to pedestrian features for approximately 8 miles. Project Cost: $43M. Owner: Caltrans

SR-91/I-15 Express Lanes Connector Project, RCTC, San Bernardino and Riverside Counties, CA. Project Manager for project report, environmental clearance, and construction management services for the I-15 Express Lanes Connector project design build project for the Riverside County Transportation Commission (RCTC). The project includes toll system planning and policy development; procurement strategy development for a design-builder, a systems integrator, and a toll operator; procurement and contract document development; conceptual engineering to support the design-build procurement; third-party coordination; and finance support to implement the tolled managed lanes between SR-91 and I-15 in Riverside County. Jason is responsible for preparing the supplemental project report, supporting technical studies, and approval of the design standard decision document and the geometric approval drawing. Project Cost: $83 million Owner: RCTC

Kevin Ciucki, PE

Associate Design Engineer

Education
BS, Civil Engineering, California Polytechnic State University San Luis Obispo, 2012

Years of Experience
9

Years with Firm: <1

Registrations/Certifications
Professional Engineer, CA, #85702, Civil

Kevin Ciucki has 9 years of experience in surface transportation including state construction, at-grade rail crossings, and traffic engineering for clients such as Caltrans, LA Metro, RCTC, and other public agencies. He has experience in a variety of phases of project development, including project reports, geometric approval drawings (GAD), design standard decision documents, Plans, Specifications, and Estimate (PS&E), and construction support. Kevin is well-versed in the various design software, standards, and manuals to meet project needs. Kevin's responsibilities include road and highway design, plan production, exhibit preparation, construction cost estimate, and construction support.

Selected Project Experience

SR-138 Widening Project, Caltrans District 7, Palmdale, Design Engineer for PS&E which included a roadway widening and safety improvements at an at-grade crossing. Kevin's responsibilities included leading the design and preparation of the Traffic Management Plan, stage construction, traffic handling, and temporary water pollution control plans.

SR-33 Pavement Rehabilitation Project, Caltrans District 6, Coalinga, CA, Design Engineer for the project as part of a Caltrans District 6 on-call contract. The scope of services included assisting in the preparation of both the Project Report and final PS&E design for a 2-mile-long rehabilitation between SR-198 and Merced Ave, which is located within the City of Coalinga. This project included a total of 72 impacted pedestrian curb ramps along with other pedestrian sidewalk upgrades. The roadway improvements featured the pavement rehabilitation along with a road diet for approximately 1 mile of the project limits. Kevin's responsibilities included assisting in preparation of the Project Report, Design Standard Decision Document, and Traffic Management Plan.

SR-91/I-15 Express Lanes Connector Project, RCTC, San Bernardino and Riverside Counties, CA, Design Engineer for project report, environmental clearance, and construction management services for the I-15 Express Lanes Connector project design build project for the Riverside County Transportation Commission (RCTC). The project includes toll system planning and policy development; procurement strategy development for a design-builder, a systems integrator, and a toll operator; procurement and contract document development; conceptual engineering to support the design-build procurement; third-party coordination; and finance support to implement the tolled managed lanes between SR-91 and I-15 in Riverside County. Kevin was responsible for preparing the supplemental project report, technical design concepts, and approval of the design standard decision document and the geometric approval drawing. **Cost:** $83M

I-10/Pepper Avenue Bridge Replacement PS&E, SanBAG, Colton, CA, Traffic Engineer for PS&E of this 7-lane bridge replacement project. The scope of services consisted of lighting, modification of an existing fiber-optic network, CCTV, ramp meters, traffic signals, pavement delineation, and signing. Kevin assisted in the stage construction plans including temporary signs and temporary traffic signals. Responsibilities included layout plans, plan details, quantities, and engineer's estimates.

California High-Speed Rail Construction Package 1, Madera to Fresno, CA, Design Engineer for this design-build project which included the first section of a new, ultimately 800-mile-long high-speed rail system to accommodate trains running between San Diego and Sacramento at speeds of more than 200 mph. It is predominantly a civil infrastructure project that included 27 grade separations, a 250-foot-long jacked box tunnel, 3.4 miles of aerial structures, a major river crossing over the San Joaquin River, and 2.7 miles of trench. Kevin was responsible for supporting the design of the temporary traffic signals and stage construction plan.

I-15 Cajon Pass Rehabilitation Design-Build, San Bernardino County, CA, Design Engineer for this design build project to rehabilitate the existing I-15 Freeway. The roadway rehabilitation extended the pavement service life with minimal maintenance expenditures. Kevin was responsible for plan production of modifying intelligent transportation system elements and staging for temporary roadway lighting design.

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Professional History

04/2017 - Present, AECOM Civil Engineer
01/2017 - 04/2017, Dodd and Associates Structural Designer
06/2016 - 09/2016, M.F. Maher Inc. Construction Engineering Intern
06/2015 - 09/2015, Mid-Pacific Engineering Geotechnical Technician

Education

Bachelor of Science (BSc), Civil Engineering, San Diego State University, 2017
Bachelor of Science (BSc), Civil Engineering with Structural emphasis, California State University - San Diego, 2017

Registrations

Professional Engineer (PE) - State of California, State of California
Engineer in Training - EIT - State of California, State of California

Years of Experience

With AECOM: 5
With Other Firms: 1

Jordan Zimmer

Jordan is a civil engineer in the San Diego office. His design experience includes the preparation of improvements, grading, storm drain and best management practices plans, storm drainage analysis reports, cost estimates, and specifications.

Experience

City of Escondido, Citracado Parkway Widening and Extension, Preliminary Engineering, Escondido, California. The project includes a roadway extension to connect the northern and southern Citracado Parkway terminations and the widening of the existing portion of Citracado Parkway. The project includes a bridge, soil nail wall, and sound walls designed to Caltrans Standard Plans. Jordan was responsible for design efforts for most of the project corridor which included curb alignments and profiles, cross sections, daylight grading, curb ramps, and finished surfaces. He also redesigned a portion of the proposed storm drain system and updated the project drainage report accordingly. He was also responsible for updates to the stormwater pollution prevention plan, stormwater quality management plan, signing/striping plans, traffic control plans, and construction quantities.

San Diego Association of Governments, University Avenue Bikeway Final Design - TO 07, San Diego, California. Deputy project manager who assisted project manager in effectively managing change with the client and the project team. Regularly met with client to confirm that project expectations were satisfied. Understood and mitigated for project and business risk issues. Prepared for and participated in monthly project reviews. Regularly confirmed that the project EAC was current and accurately reflected the anticipated project financial outcomes. Assisted project manager by preparing and updating the project schedule. Prepared and executed the project technical approaches. Led the weekly team technical approach meetings. Conducted a preliminary storm drain analysis and prepared the Hydrology and Hydraulics Technical Memorandum. Lead the design effort for the storm drain improvement plans and sign plans. Ensured execution of project deliverables were consistent with the project plan. Mentored project team members in furtherance of their professional development.

City of San Diego, Otay Mesa Truck Route Phase IV Environmental & Design Services, San Diego, California. The project is a roadway widening along the Otay Truck Route in San Diego, and proposed improvements include a new storm drain system, rain garden, rigid pavement, and retaining walls designed to Caltrans Standard Plans. During the design phase, Jordan assisted in redesigning a portion of the proposed storm drain system and rain garden, and assisted in the redesign of the retaining walls and curb profiles. During the construction phase, Jordan responded to RFIs, conducted field inspections, submitted construction changes to the City of San Diego, and led the efforts for the City-required CAD conversion from Civil3D to MicroStation.

City of San Diego, Hazard Center Drive Extension - Final Design, San Diego, California. The project includes a roadway extension underneath the SR-163 freeway to connect the eastern and western Hazard Center Drive terminations in San Diego. Proposed improvements include a U-channel buoyancy slab, pump station, biofiltration swale, storm drain

AECOM

system, and curb ramps. During the design phase, Jordan was responsible for the redesign of pedestrian curb ramps, sidewalk improvements, driveway improvements, and portions of the proposed storm drain system. During the bid and construction phases, Jordan responded to RFIs, conducted field inspections, submitted construction changes, and was responsible for preparation of the conformed set of Caltrans plans.

City of San Diego, I-805/La Jolla Village Drive Interchange and Miramar Road Widening, San Diego, California. Prepared updated improvement plans, retaining wall plans, storm drain plans, traffic control plans, specifications, and estimate including quantity calculations. Conducted a preliminary storm drain analysis for the proposed biofiltration basin.

Array Technologies, Inc., Array Mt. Jackson Solar, Shenandoah, Virginia. Civil Engineer that led and oversaw final grading design for a solar array project. Site analysis was accomplished by setting profiles for proposed drive lines and torque tubes of solar panel arrays along the existing, mountainous grade. Site design was accomplished using AutoCAD Civil 3D grading tools. The final design required a combination of adherence to array design requirements, conservation of existing watershed areas, and minimal, balanced site grading.

sPower, Skipjack Solar Center, Charles City County, Virginia. Civil Engineer that led and oversaw final grading design for a solar array project. Site analysis was accomplished by setting profiles for proposed drive lines and torque tubes of solar panel arrays along the existing, mountainous grade. Site design was accomplished using AutoCAD Civil 3D grading tools. The final design required a combination of adherence to array design requirements, conservation of existing watershed areas, and minimal, balanced site grading.

Broad Reach Power., Cascade Energy Storage Project, Stockton, California. Led the civil/stormwater design effort for a battery storage area in Stockton. Tasks were accomplished using AutoCAD Civil 3D, and included storm water analysis and design, site grading, and vehicle turn analysis. Led the design of an underwater stormwater retention chamber to ensure the proposed design complied with local standards.

Enel Green Power North America, Inc., Pomerado Battery Energy Storage, Poway, California. Led the civil/stormwater design effort for a battery storage area in Poway. Led the design for the proposed storm drain facility, retaining wall, and site grading. Ensured the proposed design complied with local standards.

Russell Link, CEP
Cost Estimator

Years of Experience
17

Registrations
AACE International (Association for the Advancement of Cost Engineering), Member

Professional Societies/Affiliates
American Association of Cost Engineers Member and Certified Estimating Professional (CEP)

Specialized Training
Confined Space Entry Training
Shell Oil Contractor Safety Training
OSHA 10 Hour Safety Training
Adult/Child/Infant CPR, AED and First Aid Training

Clearances
TS Clearance/Single Scope Background Investigation, 2016

Summary
Mr. Link has 17 years of experience preparing estimates of costs of materials, labor, and equipment for construction projects. He is a focused and efficient worker. His skillset allows him the ability to build strong relationships, lead a team, and adapt to client specific needs. He also has extensive experience with federal/military projects, change order management, and estimate reconciliation processes.

Project Experience

Detroit Water and Sewer District, CIPMO Program

Cost Estimator for various projects related to Detroit Water and Sewerage Department (DWSD) investment of $500 million through a Capital Improvement Program (CIP). These projects, which are the largest for DWSD in decades, will help the city to maintain their water and sewer systems for future generations.

The CIP's goal is to improve service delivery and quality of life in the neighborhoods by reducing water main breaks, reducing street flooding and sewer system failures, reducing future investment in new CSO facilities (wet weather treatment), increasing acres managed by green stormwater infrastructure, and upgrading/maintaining facilities, equipment and systems for effective operations. Since the program launched in 2018, DWSD has repaired or replaced 25 miles of water main, 22 miles of sewer collection piping and 173 lead service lines.

Ameren Transmission Operations Control Center, Illinois

The project is for the construction of a new transmission operations control center (TOCC) for the American power company Ameren Corporation. The new TOCC will be approximately a 66,500-squarefoot single story building located on a 25.87ac property in Illinois. It will accommodate up to 40 critical operations personnel. The new TOCC will be Tier 3+, and capable of withstanding extreme natural conditions, resisting high altitude electromagnetic pulse (HEMP) events, integrating smart technologies, renewable energy, energy storage for better monitoring and controlling of the grid, and providing increased physical security measures. The project includes technology systems in the control room which will be designed to facilitate rapid and easy information sharing for decision making and collaboration, a video management system that will ingest content from a variety of sources, process them, and display them as needed, and a networked visualization system that will be a platform that allows content sharing to a control room spanning display wall.

Remedial Design, Raymark Superfund Site, Stratford, CT

Serving as cost estimator throughout the design of remedial efforts at the Raymark Superfund Site in Stratford, CT. Areas of this 34-acre former industrial site have been contaminated due to historical manufacturing processes involving the disposal of liquid wastes to on-site lagoons, which were periodically excavated and used as fill around the town of Stratford, CT. The remedial efforts include the excavation of contaminated soils from several operable units within the overall site, and consolidation and capping within a single operable unit. The project also includes off site disposal of approximately 10% of the overall excavated wastes. Additional task orders related to this project include estimating for the deconstruction of an existing athletic facility to allow the conversion of the site into a landfill, as well as a new waste water pumping station and conveyance system. This project requires the use of MCACES (MII) estimating software.

Corrective Action Plan, Phase I Slope Lining System Repair, Las Pulgas Landfill, MCB Camp Pendelton, San Diego County, California

Cost Estimator from concept through final design of this NAVFAC project which constitutes the initial phase of a landfill slope lining system

repair/replacement. This $4.5 million project included deconstruction of the existing landfill liner including clay cap, and reconstruction of the entire liner and anchor trenches as well as new leachate collection and removal system main lines and subdrains. Phase I also required tie-in to the existing liner system.

Portland General Electric Company, Boardman Plant Decommissioning, Boardman, OR

Lead Estimator / QAQC in the estimation of salvageable concrete and structural steel for the decommissioning of a coal powered energy plant. Digital quantity takeoff software was utilized to determine the amount of structural steel and volumes of concrete from several thousand historical as-built documents. The estimated 33,000 tons of salvageable material provided PGE an offset to their overall decommissioning cost.

U.S. General Services Administration, Office of Personnel Management Relocation, VA Butler Healthcare Center Renovation and Additions, Butler, Pennsylvania

Lead Cost Estimator for the preliminary design of renovations of and additions to the existing 230,000 square foot VA Butler Healthcare Center. The hospital was built in 1937 by the Pennsylvania Department of Health as a Tuberculosis Sanitarium and served as a soldier's hospital during world war two, prior to being purchased by the Veterans Administration in 1948. In 2018, AECOM designers and cost estimators explored the feasibility of renovating and relocating OPM offices to the building, from their current facility within an abandoned mine in Boyers, PA. Renovations included the complete gut and reconfiguration of all interiors and MEP systems, extensive hazardous material remediation, and many anti-terrorism/force protection upgrades. Various options associated with the project included combinations of file storage warehouse additions, parking garages, and a multi-story atrium entrance. Site work associated with the project included new site roads, complete removal and replacement of existing parking surfaces, various major utility reconfigurations, and additional anti-terrorism/force protection upgrades. Project construction value was estimated at $160,000,000.

Building 23640 – Battery Control Building HVAC Repairs, White Sands Missile Range, New Mexico

Served as cost estimator on this mechanical renovation project at White Sands Missile Range. The project includes the replacement of air handling units, chillers, boilers and associated temperature controls on this nearly 60-year-old facility. The renovation will provide ventilation systems that operate at reduced energy consumption as compared to the existing outdated equipment. This project required the use of MCACES (MII) estimating software.

Bus Rapid Transit Project, Port Authority of Allegheny County, Pittsburgh, PA

Estimator and QA/QC lead for this $200+ million Bus Rapid Transit project in Pittsburgh Pennsylvania. Tasks included development of a complex estimating template which allows for real-time updates to the overall budget estimate as scope is tweaked by engineers on an intersection by intersection basis. The project provides a vital east-west connection between downtown Pittsburgh and the Uptown, Oakland, and East End neighborhoods, and includes changes to both physical infrastructure and transit operations. Challenges in estimating the project include significant phasing considerations as well as near total replacement of utility mains along a significant portion of the project corridor.

Long-Baseline Neutrino Facility, Near Site Facilities, Fermi National Accelerator, Batavia, IL

Estimation and QA/QC of civil and structural elements of this $280 million+ multi-facility project. The LBNF project will connect new facilities to an existing particle accelerator to conduct studies on neutrino particles projected from Illinois to be detected in South Dakota as part of DUNE (Deep Underground Neutrino Experiment). Efforts required interfacing with engineers and other estimating disciplines in order to properly capture a rapidly evolving scope of work into an accurate estimate. The civil scope required the estimation of facilities built either partially, or entirely underground with mining-like conditions. Additionally, I participated in the transition from a traditional spreadsheet-based cost estimate to a cloud based estimating software package which allowed for estimating teams across the country to work concurrently, as well as BIM and schedule integration.

F-15QA Beddown Program for the Qatar Emiri Air Force, Al Udeid Air Base, Doha, Qatar

Cost estimating team member for the $900,000,000 F-15 QA Beddown program at Al Udeid Air Base in Qatar. The purpose of this program is to provide the facilities necessary to support the modernization of the F-15QA aircraft for the Qatar Emiri Air Force (QEAF). The program includes 40 + facilities, inclusive of hangars, munitions storage, squadron operations, maintenance and utility structures and related site work.

AECOM

Tyler Blauvelt, PE

Electrical Engineer

Areas of Expertise

Power Distribution -LV/MV
Traction Power
Solar Photovoltaics
Battery Energy Storage
Power System Modeling
Arc Flash Analysis
Infrastructure Assessment

Education

BS, Electrical Engineering
Power Systems and Electronics, Cal Poly San Luis Obispo, 2011

Licenses/Registrations

Professional Electrical Engineer, CA #E21957

Years of Experience

With AECOM	4
With Other Firms	7

Professional Associations

Institute of Electrical and Electronics, Power and Energy Society

Institute of Electrical and Electronics, Industry Applications Society
Institute of Electrical and Electronics, Young Professionals

Tyler Blauvelt is an electrical engineer with a diverse background in power distribution, having worked in both the renewable energy and transportation sectors as electrical designer and project electrical engineer, and lead electrical engineer. Having a combined ten years of experience in electrical design and engineering, as well as having spent four years as a US Marine, Tyler is well-organized and takes a disciplined approach to all projects. He has worked on medium and large design-build solar installations, large grid-connected lithium-ion battery storage projects, and most recently various transit electrification programs. He is well-suited to work in conjunction with other disciplines to identify design challenges early in the process. Tyler is also registered as a professional engineer in California and can be relied upon to be the electrical engineer-of-record should the need arise.

Experience

Culver City Transit, Culver City, CA. Electrical Engineer of Record. Tyler is currently working as lead Electrical Engineer and Engineer-of-Record for a full battery electric bus (BEB) transition at Culver City Transportation. He is producing full issue-for-bid electrical drawings and specifications for the gradual transition of a 60-bus fleet to 54 BEBs. The project is multi-disciplinary with several specialized architectural and structural elements to provide electrical charging infrastructure to the depot while minimizing operations disruptions.

Caltrans, Oakland, CA. Electrical Engineer. Tyler is currently working as Electrical Engineer and Deputy Project Manager to complete an architectural lighting design for several Caltrans highway tunnel portals. He is facilitating coordination between designers and suppliers to produce plans, specifications, and estimates for a lighting design which will provide colorful light displays to enhance the architectural experience of bay area portals to users of these tunnels.

San Francisco Public Utility Commission (SFPUC) Water Supply and Treatment Division, San Francisco, CA. Electrical Engineer. Tyler worked as a project electrical engineer to calculate the arc flash incident energy, safe work boundaries, and personal protective equipment (PPE) requirements per OSHA to provide accurate labeling per NEC requirements, as well as submit a full report to the client for 50 sites. He conducts field visits to SFPUC facilities to document existing conditions and uses as-built drawings to create an accurate system model in SKM PowerTools, which he then uses to produce arc flash information for reporting and labeling.

Altamont Corridor Express (ACE) Passenger Stations (multiple), CA. Lead Electrical Designer. Tyler is currently leading a design team to produce the electrical discipline drawings for new passenger platform stations in multiple locations in the California central valley. The projects are currently in the design phase, requiring interdisciplinary coordination with architects, civil, structural, landscape engineers. The electrical designs include lighting, power, CCTV, and communications diagrams and layouts. He focuses on reviewing drawings produced by remote design teams, creating markups for incorporating new

design elements, and optimizing design efficiency using various digital applications.

Bay Area Rapid Transit District (BART), Measure RR Substation Replacement, San Francisco Bay Area, CA. Electrical Engineer. Tyler worked as designer and project engineer to produce construction documents for the replacement of seven traction power substations and one switching station. He supported the project in multiple facets, including producing calculations, designing physical layout, bid support, and coordinating quality control of the final documents for submittal. The work involved coordination of several disciplines, including traction power, electrical, structural, mechanical, and civil engineering. He designed the conduit and cable tray layout for two complete substations and assisted in creating detailed schedules for hundreds of circuits used for everything from medium voltage transmission to low-voltage control wiring. He also organized the quality assurance and control process, digitizing the process and reducing many man-hours of work. Construction services end year: 2020. Total cost of the substations is estimated to be $300 million.

Chestertown Wastewater Treatment Plant, 1.3 MW Photovoltaic Solar Plant, Chestertown, MD. Design Engineer. Tyler worked as design engineer to design a large, ground-mount type solar installation at a wastewater treatment plant. He developed drawings using AutoCAD and responded to plan check comments from authorities having jurisdiction. He created calculations for sizing protection elements and balance of system equipment, including transformers, disconnects, and switchgear. Total cost estimated at $3.7 million.

Livermore Amador Valley Transit Authority, Livermore, CA. Electrical Engineer. Tyler worked with the Project Manager and Lead Architect to complete infrastructure assessments of two existing bus depots. He completed conceptual electrical single line diagrams for the new facility's planned transition to battery electric buses (BEB) and assisted in developing site plans showing conceptual locations and phasing of new equipment construction which will eventually support a fleet of 68 BEB's. In addition, he wrote a four-page technical memo detailing the required infrastructure build-out which considered both a fully electric fleet, as well as hybrid fleet of both BEB's and hydrogen fuel cell-powered busses. LAVTA will use this information in planning their eventual transition to a fully zero-emission bus fleet.

David A. Ibanez
Electrical Engineer

Professional History

07/2004 - Present, AECOM Electrical Engineer III

Registrations

E.I.T

Education

BS, Electrical Engineering, University of California - Santa Cruz, 2004

Years of Experience

With AECOM: 18
With Other Firms: 0

Mr. Ibanez has a wide range of design experience. He has worked on a variety of infrastructure improvement projects, including highway, rail, marine ports and airports. His expertise is focused on electrical elements associated with these projects with emphasis on electrical lighting systems, power distribution and communications infrastructure. He is well versed in AutoCAD, SKM, Visual Professional and other computer programs relating to electrical design, and is extremely knowledgeable with current national and local codes and requirements. Coordination with local power utilities to coordinate incoming new medium voltage electrical service and gear are routine task on the majority of Mr. Ibanez's projects.

Mr. Ibanez has construction management and field inspection experience on the various types of projects listed above with emphasis on airfield electrical construction. During construction he has been a valuable resource to provide support to projects being constructed.

Experience

Zero Emissions Bus Pilot Program, Culver City Bus, Culver City California. Electrical engineer responsible for preparation of plans and specifications. The ZEB pilot program included the Phased development of overhead, space frame mounted electrical bus depot boxes for the charging of (22) City buses. The project also included coordination with PG&E for additional service to (2) 4000A, 480V switchboards that support the bus charging equipment. Load analysis and voltage drop calculations were also provided, adhering to the local electrical codes and the NEC. Additional coordination with bus charging manufacturer was made to ensure infrastructure is compatible with charging system. Developed Project Specification and CAD drawings/exhibits using AutoCad. [Ongoing]

Slover Boxcar, Slover Intermodal Facility, Colton, California. Electrical engineer responsible for preparation of plans, quantity/cost estimate and reports. The intermodal facility project included the development of a new site for fully automated handling of cargo. Yard wide 12KV underground distribution was provided as a doubled ended loop system. The 12KV distribution provide power to Automated Straddle Carrier Charging units, Automated Rail Mounted Gantries (ARMG's), Buildings, Hoslter Electrical Charging Stations and Inbound and Outbound Gates. The yard was provided with 100' high mast LED lighting. UPS's are located at each substation locations to provide back up power to yard instrumentation. The project also included design of (2) 2.5MW, 12KV centralized generators to provide standby power to a portion of the site. Developed CAD drawings/exhibits using Microstation.
[Ongoing]

Zero Emissions Charging Stations, Pier T, Port of Long Beach, California. Electrical engineer responsible for quality control of plans and specifications. The Zero Emissions Charging Stations quality control included the technical discipline review of the electrical plans and specifications for the project. This review included providing comments to the designer/engineer to

ensure the package is technically sound, consistent and meets the department standards. [2019]

Infrastructure for Zero Emission Busses, San Jose International Airport, San Jose, California. Electrical engineer responsible for preparation of plans, quantity/cost estimate and reports. The Bus Charging Station included the development of an existing parking lot site for the charging of (10) City buses. The project also included coordination with PG&E for additional service to a 1200A 480V switchboard supporting the bus chargers. Additional coordination with bus charging manufacturer was made to ensure infrastructure is compatible with charging system. Developed Project Specifications, Cost Estimates and CAD drawings/exhibits using AutoCad. [2018]

Tapac LLC, Berth 24/26 Redevelopment at Port of Oakland, Oakland CA, Lead Electrical Engineer. Lead electrical engineer that provided complete design for (52) electrical reefer bunkers to support storage of refrigerated containers and also included design for wireless high mast lighting system within backlands complying with Port of Oakland and TraPac standards. Provided design for underground power distribution which included 480V low voltage distribution and 2.5MVA 12KV medium voltage outdoor secondary unit substation. This work included calculations for short circuit analysis, coordination study and arc fault current study. This project also included the extension of existing 600A 12KV bus to a new 15KV section. As part of the project, a truck entry gate design was provided that included scales, pedestals, chassis cameras, T-pole and OCR. Communication and Lighting control was also provided, coordinated with TraPac IT and the existing lighting control system. Provided support for the design efforts and developing CAD drawings. Developed technical specifications, construction cost estimates and provided construction support and inspection. [2016]

Eric Bullock

Senior CAD/BIM Technician
Transportation

Education
Western Career College
Architectural CADD Drafting

Art Institute of California – San Francisco
Media Arts & Animation

City College of San Francisco
Computer Drafting & Design

Years of Experience
With AECOM: 15

Specialized skills
Building Information Modeling
3D Modeling & Animation
Graphic design
ProjectWise Administrator

Eric creates construction documents and coordinates drawing production in the Oakland office. He has also been project CADD/BIM manager with experience on numerous projects and is proficient with AutoCAD Release 2020, MicroStation V8i SS2, and Revit 2020, as well as graphics and animation software including Photoshop, Illustrator, 3DS Max. He has been involved with the planning and design of a variety of transit infrastructure projects, including several ZEB Transition Planning projects. His experience has included these transit battery electric and hydrogen fuel cell phasing plans, maintenance and repair facilities, marine terminal operations buildings, rail station and maintenance buildings, and industrial, office, and commercial projects.

Recent example projects include:

Culver City Transportation Department (CityBus), BEB Transition Plan, Culver City, CA. Designer, Drafter and Planner. Project includes planning, architectural design, electrical engineering, and cost estimating services for the conversion of 44 CNG fueled buses to 54 Battery Electric Buses (BEB). AECOM provided assessments of existing buildings at their depot for adapting the design to accommodate BEBs/FCEBs (fuel cell electric buses). Developed electrical service concept and the design of new electrical infrastructure to serve the agency's future BEB fleet charging needs. A phasing scheme was developed to begin with a 4 BEB pilot phase, through five subsequent construction phases that will increase the charging infrastructure on an incremental basis as new BEBs are added to the fleet. Planning for a new parking structure on site will accommodate buses on the ground level and employee parking on four upper levels. Coordination with the local utility, Southern California Edison and their "Charge Ready" assistance program was part of the project scope.

Chapel Hill Transit Center
BEB Transition Plan and Yard Expansion, Chapel Hill, NC. Designer, Drafter and Planner. Project includes planning services for the conversion of a variety of sizes of CNG fueled buses to Battery Electric Buses (BEB), as well as an expansion of the yard. AECOM provided assessments of existing buildings and proposed new buildings, bus and yard vehicle circulation, POV parking, and a combination of overhead and ground mounted charging at their depot to accommodate an expanded fleet of BEBs/FCEBs.

Livermore Amador Valley Transit Authority (LAVTA), BEB/FCEB Transition Study, Livermore, CA. Designer, Drafter and Planner. Project includes architectural design, electrical engineering and cost estimating services for the conversion of 60 fuel burning buses to 68 completely zero emissions BEB. An alternate scenario, deploying 41 BEBs and 19 hydrogen fuel cell electric buses (FCEB) was also developed. AECOM provided assessments of planned construction documents for new

buildings at a new depot site for adapting the design to accommodate BEBs/FCEBs. Developed electrical service concept and the design of new electrical infrastructure to serve the agency's future BEB fleet charging needs. The phasing scheme worked to base new BEBs on the new site and commence operations as expansion construction was planned during a 10-year time frame.

Contra Costa County Transit Authority (CCCTA), BEB Transition Study, Concord, CA. Designer, Drafter, and Planner. Project includes site planning and phasing, electrical engineering and cost estimating services for the conversion of 125 CNG fueled buses to 173 completely zero emissions BEB. Three alternate scenarios were developed:

- Scenario 1B: Depot Only with Expansion, CCCTA would add BEBs to their fleet in order to meet the range requirements of their blocks. In this scenario, 48 BEBs would be added to the fleet of 125, for a total of 173 BEBs.
- Scenario 2: Depot and On-Route, they would have 125 BEBs, 48 of which would require in-service, on-route charging in addition to their depot charge.
- Scenario 3: BEB and FCEB, they would have a final number of 77 BEBs with the remaining 48 buses in the fleet being FCEBs.

AECOM provided assessments of existing depot buildings for adapting the design to accommodate BEBs/FCEBs. Developed electrical service concept and the design of new electrical infrastructure to serve the agency's future BEB fleet charging needs. The phasing scheme worked to maintain operations as expansion construction will be carried out during a 12-year time frame.

San Diego Metropolitan Transit System (MTS) Zero Emission Bus Pilot Program, San Diego, CA. This project is a zero-emission bus feasibility assessment, a ZEB Roadmap (or ZEB Transition Plan), and a Zero-Emission Bus Pilot program with AECOM as a sub to CTE.

Other recent ZEB projects include:

- Long Beach Transit ZEB Transition Plan
- Santa Cruz Transit ZEB Transition Plan and Pilot Program

CAROLINE LE
SYSTEMS ENGINEER

EDUCATION
BS, Electrical Engineering, University of California, Riverside

REFERENCES
Jennifer A. Purcell, PE, Pacific Railway Enterprises, Inc.
3560 University Ave.
Riverside, CA 92501
951/784-4630

Robert Baumgarten, Pacific Railway Enterprises, Inc.
3560 University Ave.
Riverside, CA 92501
951/784-4630

EMPLOYMENT HISTORY
Pacific Railway Enterprises, Inc.
June 2018 – Current

As an Electrical Engineering graduate, Ms. Le has demonstrated that she is an enthusiastic learner with strong analysis, multi-tasking and collaboration skills. She is knowledgeable in SCORE communications design and signal breaking calculations, simulated RF frequency coverage, logic design, modeling and simulating Dynamic Systems, and embedded systems. She is familiar with MicroStation, Microsoft Office, C++, C, Atmel Studios, Xilinks, Pspice, RIBS, MatLab and Synopsis. Since joining PRE in 2018, first as an engineering intern and moving to a full-time position, Caroline's tenacity and spirit have quickly made her a PRE favorite. She is a quick learner who knows how to apply her skills to help and assist in everything she does.

REPRESENTATIVE PROJECTS INCLUDE:

SCORE Final Design, Simi Valley Double Track: As Systems Engineer, created logical network diagram, physical fiber diagram, fiber route diagram and detailed location plans to add fiber to this 2.2 mile project. Also supported Simi Valley communications shelter design and addition of second platform at the station. Timeframe: 08/2021 – Current

PVL Fiber to Intermediates Design: As Systems Engineer, completed modification of logical network diagram, physical fiber diagram, fiber route diagram and detailed location plans to add all intermediate signal locations to PVL network. Also created bill of materials for each location. Timeframe: 03/2021 – Current

Redlands Passenger Rail (RPRP): As Systems Engineer, evaluated OTDR and Power Meter test results for vital fiber tested by installation contractor. Timeframe: 07/2020 – 03/2022

PBX Design Drawing Orange Subdivision: As Systems Engineer, ran EDX simulations to determine signal strength and received power of antennas. Performed battery calculations and worked on location design plans. Timeframe: 07/2020 – 03/2022

NCTD Escondido Signal Fiber Installation: As Systems Engineer, reviewed contractor submittals and returned comment response logs. Timeframe: 07/2020 – 02/2022

Wi-Fi Mesh Node: As Systems Engineer, helped with the design of NCTD's Wireless Mesh Network System that covers the areas near the City of Del Mar and Rose Canyon. Checked proposed locations of nodes, created a cost estimate of materials, and ran TOWAIR determination. Timeframe: 07/2019 – 02/2022

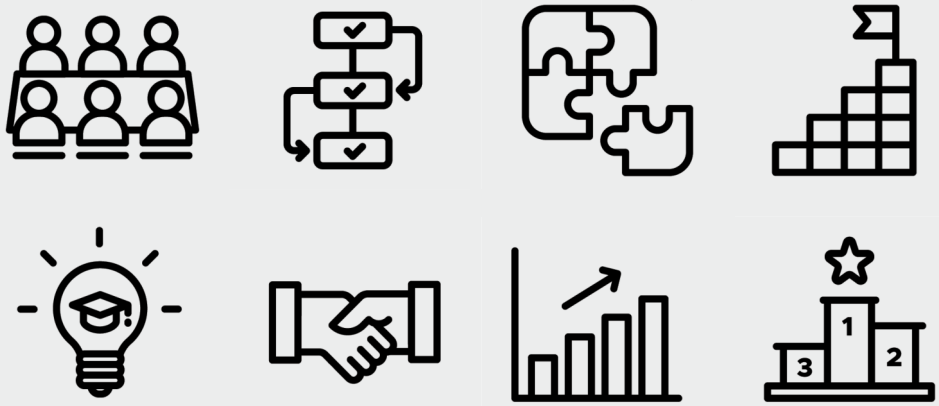
Security Data Network: As Systems Engineer worked on detailed location plans, created BOM and ICE for the design. Worked on all phases of the project: 1 to 6. Kitted materials for each location in phases 1 and 2. Completed design for phases 3 and 5. Attended and documented field installations. Timeframe: 06/2018 – Current

Communications Engineering Standards: As Systems Engineer Intern, helped complete the Communications Engineering Standard Drawings for SCRRA/Metrolink, Used MicroStation to create plans that detailed the engineering standards for the design of fiber optic, microwave, voice radio, and data radio systems used by Metrolink. Timeframe: 06/2018

SCORE 5% Concept Designs (Ventura, Orange, San Bernardino): As Systems Engineer Intern, performed SCORE and breaking calculations, used MicroStation to draw new signal locations on aspect sheets and added prediction limits to aspect sheets. Timeframe: 11/2018 – 05/2019

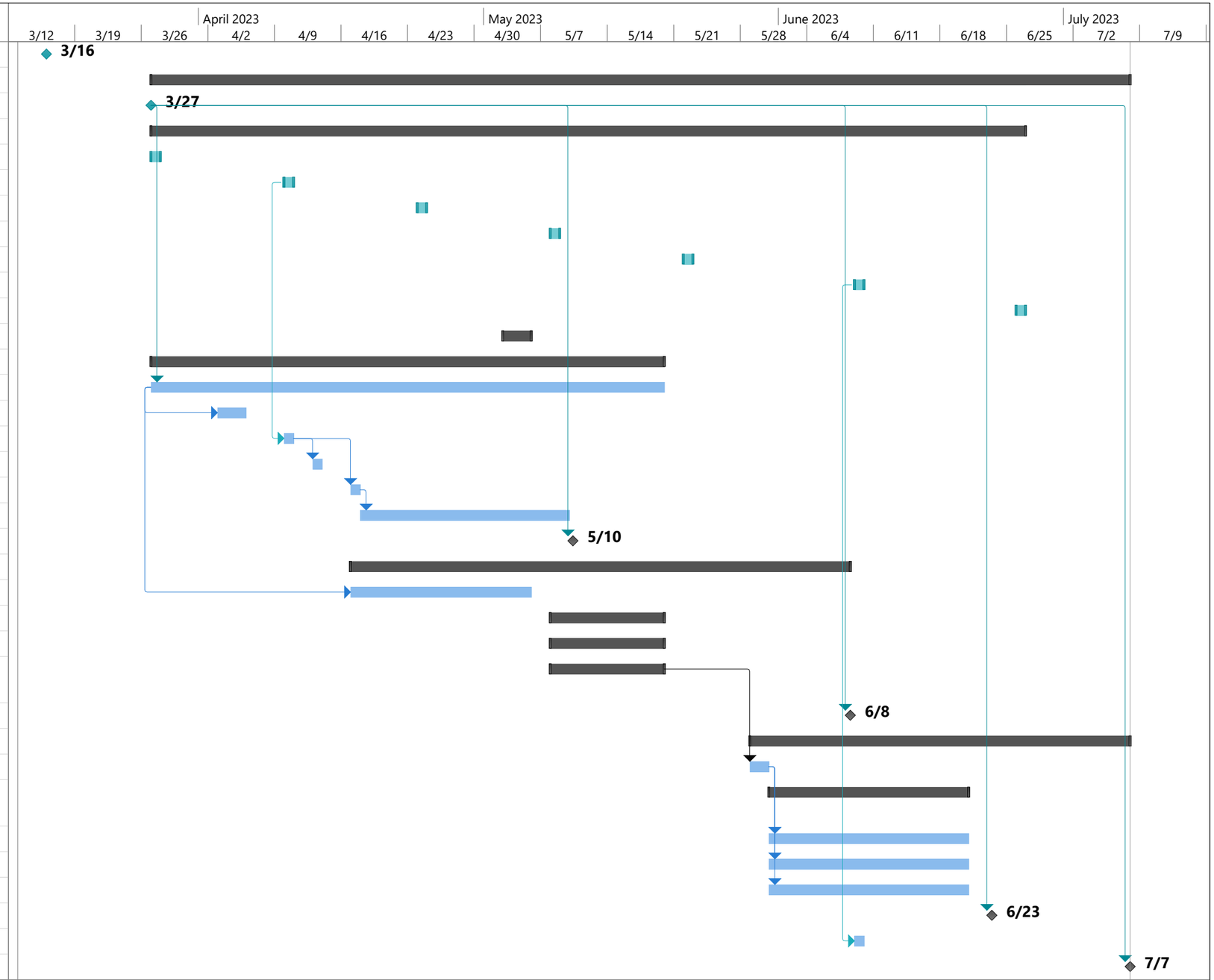
PACIFIC RAILWAY ENTERPRISES, INC.

APPENDIX
PROJECT TEAM
SCHEDULE



KMD - ZEB PROJECT TEAM SCHEDULE

ID	Task Mode	Task Name
1		MTS Board Award
2		**Task 1: Project Management (15 weeks/105 days)**
3		Notice to Proceed
4		**Project Development Team Meetings**
5		PDT Meeting 1
6		PDT Meeting 2
7		PDT Meeting 3
8		PDT Meeting 4
9		PDT Meeting 5
10		PDT Meeting 6
11		PDT Meeting 7
12		**Bluebeam Review**
14		**Task 2: Site Assessment (8 weeks)**
15		Site Assessment Research
16		Questionnaire Development
17		Preassessment Discussion
18		Onsite Assessment (Day)
19		Onsite Assessment (Night)
20		Existing Conditions Report
21		Existing Conditions Report Submittal
22		**Task 3: KMD Electric Vehicle Layout Analysis (7.5 Weeks)**
23		Develop layout options
24		**Identify and Develop Modular Phases for Full Buildout**
27		**Develop circulations patterns (all vehicles)**
30		**Determine placement of CNG generator, solar array and battery electric storage**
33		Conceptual Layouts
34		**Task 4: Firm Recommendation (6 weeks)**
35		Develop charging configuration tradeoff matrix
36		**Develop ROM construction cost for charge configuration options (maximum 3)**
37		ROM Option 1
38		ROM Option 2
39		ROM Option 3
40		ROM Cost Estimates
41		Meeting with MTS to form Summary Recommendation
42		Final Recommendation Report



Project: KMD_ZEB_Schedule.mp
Pacific Railway Enterprises/AEC

Task	Project Summary	Manual Task	Start-only	Deadline
Split	Inactive Task	Duration-only	Finish-only	Progress
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress
Summary	Inactive Summary	Manual Summary	External Milestone	

ATTACHMENT B
NEGOTIATED FEE PROPOSAL

Work Order Estimate Summary

MTS Doc. No.	**PWL356.0-22**
Work Order No.	**WOA356-AE-05**
Attachment:	**B**

Work Order Title: **KMD ZEB OVERHEAD CHARGING SYSTEM LAYOUT AND DESIGN**

Project No:

Table 1 - Cost Codes Summary (Costs & Hours)

Item	Cost Codes Description	Total Costs
1	Project Management	$57,719.52
2	Site Assessment	$44,753.91
3	KMD Electric Vehicle Layout Analysis	$153,615.15
4	Firm Recommendation	$98,653.97
	Totals =	**$354,742.55**

Table 2 - TASKS/WBS Summary (Costs & Hours)

Item	TASKS/WBS Description	Labor Hrs	Total Costs
1	Project Management	274.0	$57,719.52
2	Site Assessment	204.0	$44,753.91
3	KMD Electric Vehicle Layout Analysis	745.0	$153,615.15
4	Firm Recommendation	495.0	$98,653.97
	Totals =	**1,718.0**	**$354,742.55**

Table 3 - Consultant/Subconsultant Summary (Costs & Hours)

(If Applicable, Select One)				Consultant	Labor Hrs	Total Costs
DBE	DVBE	SBE	Other			
x		x		Pacific Railway Enterprises, Inc.	261.0	$35,674.71
				AECOM Techincal Services	1,457.0	$319,067.84
				Totals =	**1,718.0**	**$354,742.55**

Metropolitan Transit System

Agenda Item No. 5

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

Adoption of 2022 Conflict of Interest Code – Amendment

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors:

1) Adopt Resolution No. 23-01 (Attachment A) amending the MTS Conflict of Interest Code pursuant to the Political Reform Act of 1974;

2) Adopt the amended 2023 MTS Conflict of Interest Code (in substantially the same format as Attachment B); and

3) Forward the amended 2023 MTS Conflict of Interest Code to the County of San Diego, the designated code-reviewing body, (Gov. Code § 82011) requesting approval of the amendment as required under Government Code section 87303.

Budget Impact

None.

DISCUSSION:

The Political Reform Act (the "Act") requires all public agencies to adopt and maintain a Conflict of Interest Code containing the rules for disclosure of personal assets. Except for positions listed in Gov. Code § 87200, the Conflict of Interest Code must specifically designate all agency positions that make or participate in the making of decisions and assign specific types of personal assets to be disclosed that may be affected by the exercise of powers and duties of that position.

The Act further requires that an agency amend its Conflict of Interest Code when change is necessitated by changed circumstances which include the need to designate positions.

It is proposed that MTS's Conflict of Interest Code be amended to include new positions that must be designated, delete titles of positions that have been abolished and/or positions that no longer make or participate in making governmental decisions and revises the titles of existing positions (Attachment B). It is proposed that MTS's Conflict of Interest Code be amended to include new positions that must be designated, delete titles of positions that have been abolished and/or positions that no longer make or participate in making governmental decisions and revises the MTS's filing officer information.

Therefore, staff recommends the MTS Board of Directors:

1) Adopt Resolution No. 23-01 (Attachment A) amending the MTS Conflict of Interest Code pursuant to the Political Reform Act of 1974;

2) Adopt the amended 2023 MTS Conflict of Interest Code (in substantially the same format as Attachment B); and

3) Forward the amended 2023 MTS Conflict of Interest Code to the County of San Diego, the designated code-reviewing body, (Gov. Code § 82011) requesting approval of the amendment as required under Government Code section 87303.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Resolution 23-01
B. Redline of Amendment to 2023 Conflict of Interest Code
C. Notice of Intent

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

Resolution No. 23-01

Resolution of The Board of Directors of the San Diego Metropolitan Transit System Adopting an Amended Conflict of Interest Code Pursuant to the Political Reform Act of 1974

WHEREAS, the State of California enacted the Political Reform Act of 1974, Government Code Section 81000 et seq. (the "Act"), which contains provisions relating to conflicts of interest which potentially affect all officers, employees and consultants of the San Diego Metropolitan Transit System ("MTS") and requires all public agencies to adopt and promulgate a Conflict of Interest Code; and

WHEREAS, the potential penalties for violation of the provisions of the Act are substantial and may include criminal and civil liability, as well as equitable relief which could result in MTS being restrained or prevented from acting in cases where the provisions of the Act may have been violated; and

WHEREAS, the Board of Directors adopted a Conflict of Interest Code (the "Code") which was amended on November 10, 2022, in compliance with the Act; and

WHEREAS, subsequent changed circumstances within MTS have made it advisable and necessary pursuant to Sections 87306 and 87307 of the Act to amend and update MTS's Code; and

WHEREAS, notice of the time and place of a public meeting on, and of consideration by the Board of Directors of, the proposed amended Conflict of Interest Code was provided each designated employee and publicly posted for review at the offices of MTS; and

WHEREAS, a public meeting was held upon the proposed amended Conflict of Interest Code at a regular meeting of the Board of Directors on February 16, 2023, at which all present were given an opportunity to be heard on the proposed amended Conflict of Interest Code.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM DOES HEREBY RESOLVE AS FOLLOWS:

SECTION 1. The Board of Directors does hereby adopt the proposed amended Conflict of Interest Code, a copy of which is attached hereto and shall be on file with the General Counsel and available to the public for inspection and copying during regular business hours.

SECTION 2. The said amended Conflict of Interest Code shall be submitted to the Board of Supervisors of the County of San Diego for approval.

SECTION 3. The said amended Conflict of Interest Code shall become effective immediately after the Board of Supervisors approves the proposed amended Code as submitted.

PASSED AND ADOPTED by the Board of Directors this _16th_ day of _February_, 2023 by the following vote:

AYES:

NAYS:

ABSENT:

ABSTAINING:

Chairperson
San Diego Metropolitan Transit System

Filed by:

Clerk of the Board
San Diego Metropolitan Transit System

Approved as to form:

General Counsel
San Diego Metropolitan Transit System

Resolution 23-01

Attachment: A. Final Conflict of Interest Code

CONFLICT OF INTEREST CODE

OF THE

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

CONFLICT OF INTEREST CODE

OF THE

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

(Amended February 16, 2023)

The Political Reform Act, (Government Code Sections 81000, et seq.) requires state and local government agencies to adopt and promulgate conflict of interest codes. The Fair Political Practices Commission has adopted a regulation (2 Cal. Code of Regs. 18730) that contains the terms of a standard model conflict of interest code, which can be incorporated by reference in an agency's code. After public notice and hearing Section 18730 may be amended by the Fair Political Practices Commission to conform to amendments in the Political Reform Act. Therefore, the terms of 2 California Code of Regulations section 18730 and any amendments to it duly adopted by the Fair Political Practices Commission are hereby incorporated by reference. This incorporation page, Regulation 18730 and the attached Appendix designating positions and establishing disclosure categories shall constitute the conflict of interest code of the **San Diego Metropolitan Transit System (MTS).**

All officials and designated positions shall file their statements of economic interests with MTS's **Clerk of the Board** as MTS's Filing Officer. The **Clerk of the Board** shall make and retain a copy of all statements filed by Members and Alternates of the Board of Directors, Chief Executive Officer and the Chief Financial Officer, and forward the originals of such statements to the Clerk of the Board of Supervisors of the County of San Diego. The **Clerk of the Board** shall retain the originals of the statements filed by all other designated positions. The **Clerk of the Board** will make all retained statements available for public inspection and reproduction during regular business hours (Gov. Code Section 81008).

APPENDIX

CONFLICT OF INTEREST CODE

OF THE

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

(Amended February 16, 2023)

PART "A"

OFFICIALS WHO MANAGE PUBLIC INVESTMENTS

MTS Officials who manage public investments, as defined by 2 Cal. Code of Regs. § 18700.3, are NOT subject to MTS's Code, but must file disclosure statements under Government Code section 87200 et seq. [Regs. § 18730(b)(3)] These positions are listed here for informational purposes only.

It has been determined that the positions listed below are officials who manage public investments[1]:

Board of Directors and Alternates

Chief Executive Officer

Chief Financial Officer

Investment Consultant

[1] Individuals holding one of the above-listed positions may contact the Fair Political Practices Commission for assistance or written advice regarding their filing obligations if they believe that their position has been categorized incorrectly. The Fair Political Practices Commission makes the final determination whether a position is covered by § 87200.

DESIGNATED POSITIONS

GOVERNED BY THE CONFLICT OF INTEREST CODE

DESIGNATED POSITIONS' TITLE OR FUNCTION	DISCLOSURE CATEGORIES ASSIGNED
Administrative Assistant (Copy Center)	4
Applications Development & Support Manager	5
Assistant Manager of Maintenance	5
Assistant Manager of Stores	5
Associate Transportation Planner	5
Business Systems Analyst (ALL)	5
Buyer	4
Chief Human Resources Officer	5
Chief Information Officer	5
Chief of Staff	1
Chief Operating Officer – Rail	1
Chief Operating Officer – Transit Services	1
Community Engagement Specialist	5
Contract Administrator (ALL)	4
Controller	1, 2
Creative Design Manager	5
Deputy Director of Transit Enforcement	5
Deputy Fare Systems Administrator	5
Deputy General Counsel	2, 5, 6, 7
Director of Capital Projects	1, 2

Director of Contract Services & Passenger Facilities	3, 5
Director of Financial Planning & Analysis	1, 2
Director of Fleet and Facility Maintenance	5
Director of Human Resources	5
Director of Marketing & Communications	5
Director of Planning & Scheduling	1, 2
Director of Supply & Operations	4
Director of Support Services	5
Director of Transit Security & Passenger Safety	5
Director of Transportation	1
Division Manager of Maintenance	5
Environmental Health & Safety Specialist	5
Fare Systems Administrator	5
Financial Analyst	4
For-Hire Vehicle Administration Manger	5
General Counsel	1, 2
Grants Administrator	9
Graphic Designer	5
Information Security & Intelligence Engineer	5
Information Security & Intelligence Manager	5
Information Technology Development Manager	5

Information Technology Enterprise Architect (IoT)	5
Information Technology Operation Manager	5
Internal Auditor	4
Liability Claims Supervisor	1, 2, 7
Manager of Benefits & Compensation	5
Manager of Contract Operations & Passenger Facilities	2, 4
Manager of Government Affairs	1
Manager of Human Resources	5
Manager of Inventory Operations	4
Manager of Marketing and Communications	5
Manager of Paratransit & Mini Bus	5
Manager of Procurement	4
Manager of PRONTO AND Passenger Support	5
Manager of Real Estate Assets	1, 2
Manager of Risk and Claims	1, 2, 7
Manager of Scheduling	5
Manager of Service Quality and Special Operations	5, 8
Manager of Support Services	2, 3, 5
Manager of Talent Acquisition	5
Multimedia Designer	5
Network Operations Manager	5

Operating Budget Supervisor	1, 2
Procurement Specialist (ALL)	4
Project Administrator	5
Project Engineer	1, 2
Professional Standards Manager	7
Project Manager (ALL)	1, 2
Public Relations Specialist	5
Regulatory Enforcement Supervisor	6
Report Development Analyst	5
Revenue Maintenance Supervisor (ALL)	5
Right-of-Way Permit Coordinator	2, 5, 6
Security System Administrator	5
Senior Contract Operations Administration	5
Senior Data Warehouse Engineer	5
Senior Human Resources Analyst	5
Senior Project Manager - Rail Systems	1, 2
Senior SAP Architect	5
Senior Transportation Planner	1, 2
Software Developer	5
Superintendent of Facilities	5
Superintendent of LRV Maintenance	5

Superintendent of Transportation	5
Superintendent of Wayside Maintenance	5
Supervisor of Paratransit & Mini Bus	5
Supervisor Revenue Operations	5
Technical Project Manager	5
Transit Asset Management Program Manager	2, 4
Transportation Operations Specialist (ALL)	2, 5
Worker's Compensation Analyst (ALL)	7
ZEV and Sustainability Manager	5

Consultant and New Positions[2]

[2] Individuals serving as a Consultant defined in Regulation 18700.3, or in a new position created since this Code was last amended that makes or participates in making decisions shall disclose pursuant to the broadest disclosure category in this Code subject to the following limitation:

The Chief Executive Officer may determine that, due to the range of duties or contractual obligations, it is more appropriate to assign a limited disclosure requirement. A clear explanation of the duties and a statement of the extent of the disclosure requirements must be in a written document. (Gov. Code Sec. 82019; FPPC Regulations 18219 and 18734.). The Chief Executive Officer's determination is a public record and shall be retained for public inspection in the same manner and location as this Conflict of Interest Code. (Gov. Code Sec. 81008.)

PART "B"

DISCLOSURE CATEGORIES

The disclosure categories listed below identify the types of economic interests that the designated position must disclose for each disclosure category to which the designated is assigned.[3] "Investment" means financial interest in any business entity (including a consulting business, or other independent contracting business) and are reportable if they are either located in, doing business in, planning to do business in, or have done business during the previous two years in the jurisdiction of MTS.

Category 1: All investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, that are located in, do business in or own real property within the jurisdiction of MTS.

Category 2: All interests in real property which is located in whole or in part within, or not more than two (2) miles outside, the jurisdiction of MTS, including any leasehold, beneficial or ownership interest or option to acquire property.

Category 3: All investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, that are engaged in land development, construction or the acquisition or sale of real property within the jurisdiction of MTS.

Category 4: All investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, that provide services, products, materials, machinery, vehicles or equipment of a type purchased or leased by MTS.

Category 5: All investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, that provide services, products, materials, machinery, vehicles or equipment of a type purchased or leased by the designated position's department, unit or division.

[3] This Conflict of Interest Code does not require the reporting of gifts from outside this agency's jurisdiction if the source does not have some connection with or bearing upon the functions of the position. (Reg. 18730.1)

Category 6: All investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, subject to the regulatory, permit, or licensing authority of the designated position's department, unit or division.

Category 7: All investments and business positions in business entities, and sources of income, including gifts, loans, and travel payments, if such entities or sources have filed claims against MTS in the past 2 years, or have a claim pending before MTS.

Category 8: Disclose investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, that are located in, do business in, or own real property within the geographical area of, and within two miles of, the designated position's assigned project area.

Category 9: All investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, or income from a nonprofit or other organization, if the source is of the type to receive grants or other monies from or through MTS or its subdivisions.

LAW OFFICES OF
BEST BEST & KRIEGER LLP

CONFLICT OF INTEREST CODE

OF THE

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

CONFLICT OF INTEREST CODE

OF THE

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

(Amended ~~November 10, 2022~~ February 16, 2023)

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APPENDIX

CONFLICT OF INTEREST CODE

OF THE

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

(Amended ~~November 10, 2022~~ February 16, 2023)

PART "A"

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Chief Financial Officer

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[1] Individuals holding one of the above-listed positions may contact the Fair Political Practices Commission for assistance or written advice regarding their filing obligations if they believe that their position has been categorized incorrectly. The Fair Political Practices Commission makes the final determination whether a position is covered by § 87200.

DESIGNATED POSITIONS

GOVERNED BY THE CONFLICT OF INTEREST CODE

DESIGNATED POSITIONS' TITLE OR FUNCTION	DISCLOSURE CATEGORIES ASSIGNED
Administrative Assistant (Copy Center)	4
Applications Development & Support Manager	5
Assistant Manager of Maintenance	5
Assistant Manager of Stores	5
Associate Transportation Planner	5
Business Systems Analyst (ALL)	5
Buyer	4
Chief Human Resources Officer	5
Chief Information Officer	5
Chief of Staff	1
Chief Operating Officer – Rail	1
Chief Operating Officer – Transit Services	1
Community Engagement Specialist	5
Contract Administrator (ALL)	4
Controller	1, 2
Creative Design Manager	5
Deputy Director of Transit Enforcement	5
Deputy Fare Systems Administrator	5
Deputy General Counsel	2, 5, 6, 7
Director of Capital Projects	1, 2

Director of Contract Services & Passenger Facilities	3, 5
Director of Financial Planning & Analysis	1, 2
Director of Fleet and Facility Maintenance	5
Director of Human Resources	5
Director of Marketing & Communications	5
Director of Planning & Scheduling	1, 2
Director of Supply & Operations	4
Director of Support Services	5
Director of Transit Security & Passenger Safety	5
Director of Transportation	1
Division Manager of Maintenance	5
Environmental Health & Safety Specialist	5
Fare Systems Administrator	5
Financial Analyst	4
For-Hire Vehicle Administration Manger	5
General Counsel	1, 2
Grants Administrator	9
Graphic Designer	5
Information Security & Intelligence Engineer	5
Information Security & Intelligence Manager	5
Information Technology Development Manager	5

Information Technology Enterprise Architect (IoT)	5
Information Technology Operation Manager	5
Internal Auditor	4
~~Lead~~ Revenue Maintenance Supervisor (ALL)	5
Liability Claims Supervisor	1, 2, 7
Manager of Benefits & Compensation	5
Manager of Contract Operations & Passenger Facilities	2, 4
Manager of Government Affairs	1
Manager of Human Resources	5
Manager of Inventory Operations	4
Manager of Marketing and Communications	5
Manager of Paratransit & Mini Bus	5
Manager of Procurement	4
Manager of PRONTO AND Passenger Support	5
Manager of Real Estate Assets	1, 2
Manager of Risk and Claims	1, 2, 7
Manager of Scheduling	5
Manager of Service Quality and Special Operations	5, 8
Manager of Support Services	2, 3, 5
Manager of Talent Acquisition	5
Multimedia Designer ~~Marketing and Communications Specialist~~	5

Network Operations Manager	5
Operating Budget Supervisor	1, 2
~~Principal Contract Administrator~~	~~4~~
Procurement Specialist (ALL)	4
Project Administrator	5
Project Engineer	1, 2
Professional Standards Manager	7
Project Manager (ALL)	1, 2
Public Relations Specialist	5
Regulatory Enforcement Supervisor	6
Report Development Analyst	5
Right-of-Way Permit Coordinator	2, 5, 6
Security System Administrator	5
Senior Contract Operations Administration	5
Senior Data Warehouse Engineer	5
Senior Human Resources Analyst	5
Senior Project Manager - Rail Systems	1, 2
Senior SAP Architect	5
Senior Transportation Planner	1, 2
Software Developer	5
Superintendent of Facilities	5

Superintendent of LRV Maintenance	5
Superintendent of Transportation	5
Superintendent of Wayside Maintenance	5
Supervisor of Paratransit & Mini Bus	5
Supervisor Revenue Operations	5
Technical Project Manager	5
Transit Asset Management Program Manager	2, 4
Transportation Operations Specialist (ALL)	2, 5
Worker's Compensation Analyst (ALL)	7
ZEV and Sustainability Manager	5

Consultant and New Positions[2]

[2] Individuals serving as a Consultant defined in Regulation 18700.3, or in a new position created since this Code was last amended that makes or participates in making decisions shall disclose pursuant to the broadest disclosure category in this Code subject to the following limitation:

The Chief Executive Officer may determine that, due to the range of duties or contractual obligations, it is more appropriate to assign a limited disclosure requirement. A clear explanation of the duties and a statement of the extent of the disclosure requirements must be in a written document. (Gov. Code Sec. 82019; FPPC Regulations 18219 and 18734.). The Chief Executive Officer's determination is a public record and shall be retained for public inspection in the same manner and location as this Conflict of Interest Code. (Gov. Code Sec. 81008.)

PART "B"

DISCLOSURE CATEGORIES

The disclosure categories listed below identify the types of economic interests that the designated position must disclose for each disclosure category to which the designated is assigned.[3] "Investment" means financial interest in any business entity (including a consulting business, or other independent contracting business) and are reportable if they are either located in, doing business in, planning to do business in, or have done business during the previous two years in the jurisdiction of MTS.

Category 1: All investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, that are located in, do business in or own real property within the jurisdiction of MTS.

Category 2: All interests in real property which is located in whole or in part within, or not more than two (2) miles outside, the jurisdiction of MTS, including any leasehold, beneficial or ownership interest or option to acquire property.

Category 3: All investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, that are engaged in land development, construction or the acquisition or sale of real property within the jurisdiction of MTS.

Category 4: All investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, that provide services, products, materials, machinery, vehicles or equipment of a type purchased or leased by MTS.

Category 5: All investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, that provide services, products, materials, machinery, vehicles or equipment of a type purchased or leased by the designated position's department, unit or division.

[3] This Conflict of Interest Code does not require the reporting of gifts from outside this agency's jurisdiction if the source does not have some connection with or bearing upon the functions of the position. (Reg. 18730.1)

Category 6: All investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, subject to the regulatory, permit, or licensing authority of the designated position's department, unit or division.

Category 7: All investments and business positions in business entities, and sources of income, including gifts, loans, and travel payments, if such entities or sources have filed claims against MTS in the past 2 years, or have a claim pending before MTS.

Category 8: Disclose investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, that are located in, do business in, or own real property within the geographical area of, and within two miles of, the designated position's assigned project area.

Category 9: All investments and business positions in business entities, and sources of income, including gifts, loans and travel payments, or income from a nonprofit or other organization, if the source is of the type to receive grants or other monies from or through MTS or its subdivisions.

Metropolitan Transit System

NOTICE OF INTENT

DATE: February 6, 2023

TO: All MTS Conflict of Interest Code Filers

FROM: Dalia Gonzalez, Clerk of the Board

SUBJECT: Amend the Conflict of Interest Code of the San Diego Metropolitan Transit System

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NOTICE IS HEREBY GIVEN that the Board of Directors of the San Diego Metropolitan Transit System (MTS) intends to amend its Conflict of Interest Code (the "Code") pursuant to Government Code Section 87306.

The Appendix of the Code designates those employees, members, officers and consultants who are subject to the disclosure and disqualification requirements of MTS's Code. The proposed amendment include new positions that must be designated, delete titles of positions that have been abolished and/or positions that no longer make or participate in making governmental decisions and revises the titles of existing positions.

The proposed amended Code will be considered by the Board of Directors on February 16, 2023, at 9:00 a.m. at San Diego Metropolitan Transit System, James R. Mills Building, Board Meeting Room, 10th Floor, 1255 Imperial Avenue, San Diego, California. Any interested person may participate via teleconference 1(669) 444-9171; Board Webinar ID: 982 8803 2362 or via Zoom: https://zoom.us/j/98288032362 and comment at the public meeting or may submit written comments concerning the proposed amendment.

Any comments or inquiries should be directed to the attention of Dalia Gonzalez, Executive Assistant to CEO and Clerk of the Board, at clerkoftheboard@sdmts.com or (619) 398-9561. Written comments must be submitted no later than February 15,2023 at 4:00 p.m.

The proposed amended Code may be reviewed at, and copies obtained from Dalia Gonzalez, Executive Assistant to CEO and Clerk of the Board.

Metropolitan Transit System

REVISED

Agenda Item No. 6

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

Purchase of 24 Class C Propane Powered Medium Duty Minibuses - Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. B0744.0-22 (in substantially the same format as Attachment A), with Creative Bus Sales (CBS), for the purchase of up to twenty-four (24) propane powered Class C Minibuses in the amount of $5,028,360.24.

Budget Impact

The total cost of this contract is estimated to be $5,028,360.24, inclusive of all applicable taxes and fees. This project is funded by the Capital Improvement Project (CIP) 1001111601 – Minibus Replacement, and the transfer of $500,000.00 from project 1001110101 - ADA Bus Procurement to CIP 1001111601. This would replace authority previously granted on April 14, 2022 (AI 16) authorizing the purchase of eighteen (18) Class E minibuses at a cost of $4,465,915.38.

DISCUSSION:

MTS currently operates fixed route service with Class E cutaway buses to provide lifeline transit services in areas where ridership does not warrant the use of 40-foot transit buses. Twenty-four (24) vehicles have reached the end of their useful service life and have been scheduled for replacement as part of the FY 2022 MTS Fleet Replacement Plan. The new vehicles will maintain and enhance the agency's ability to provide transit services efficiently and cost effectively.

Federal Transit Administration (FTA) Circular 4220.1F, Chapter V, Section 4, encourages federal grant recipients to use state and local intergovernmental agreements for procurements of property and services. MTS staff identified an intergovernmental agreement that provides buses that meet MTS specifications, using a California State government purchasing schedule administered by the California Association of Coordinated Transportation (CalACT), Request for

Proposal (RFP) No. 20-01. The CalACT Vehicle Purchasing Cooperative allows MTS to select vehicles from a pre-competed menu of choices from different vendors and manufacturers.

On April 14, 2022 (AI 16), the MTS Board approved MTS Doc. No. B0744.0-22 with CBS for the purchase of up to eighteen (18) propane powered Class E Minibuses in the amount of $4,465,915.38; and the transfer of $2.6 million from project 1001110101- FY20 ADA Bus Procurement to project 1001111601 - FY22 Minibus Replacement to support the procurement of these Minibuses.

Shortly after the MTS Board approval and before an agreement was signed, CBS notified MTS that with the chassis delays from Ford, they could not offer these buses at the approved pricing. Ford estimated 24 to 48-months lead times for the F550 chassis as the best-case scenario. During that time, CBS and CalACT reviewed pricing on all vehicle types and classes to reflect current market pricing and ensure fair and reasonable cost. Once approved, the new pricing would be published for agencies to utilize in their vehicle procurements.

Due to the lack of availability of similar model vehicles, MTS conducted a review of optional replacement vehicles. MTS determined that it could purchase similar cutaway style vehicles built on a Ford E-450 Chassis as opposed to the current Ford F-550 buses. The E-450 chassis is the same as the MTS paratransit fleet and also available in propane fuel. The vehicles are 20 ~~22~~ passenger buses as opposed to the current vehicles that can hold 26 passengers. In conjunction with the MTS Planning Department, it was determined that 24 of the existing 31 vehicle fleet could be replaced with the smaller vehicles without impacting ridership. These vehicles also have a lower per unit purchase price ($209,515.01) than the prior vehicles ($248,106.41).

Although the smaller Class C buses are not currently covered under the California Innovative Clean Transit (ICT) rule, and are not part of the MTS Zero Emission Bus (ZEB) Transition Plan until 2026 at the earliest, MTS staff did evaluate possible ZEB options for this purchase. Unfortunately, there is no current vehicle that can meet our range requirements and there is no current charging infrastructure at the Copley Division to support the fleet. The Class E cutaways are being evaluated by California Air Resources Board (CARB) for inclusion in the ICT rule starting in 2026. MTS staff is monitoring the regulatory process and other technical developments for future inclusion in the ZEB Transition Plan.

The Class C buses being purchased are similarly equipped as the majority of the current MTS medium duty, paratransit fleet which allows for additional savings in common spare parts and maintenance. MTS has used propane powered Class E and C buses in the past because fueling with propane autogas leads to significant reductions in exhaust emissions with up to 25 percent less greenhouse gases, 20 percent less nitrogen oxide and up to 60 percent less carbon monoxide than gasoline-powered vehicles. Based on these factors, it was determined that the Propane Powered, E-450 Class C cutaway option was the best all-around solution for MTS.

CalACT negotiates the purchasing collectively on behalf of multiple agencies and is able to obtain pricing that cannot be obtained through individual agency procurements. This pricing is in line with prior proposals from previous procurements for minibuses. Therefore, staff deems the $209,515.01/bus all-inclusive unit cost ($5,028,360.24 for 24 buses) to be fair and reasonable.

Today's Board action will approve a change from 18 previously approved Class E Minibuses on April 14, 2022 (AI 16) at $4,465,915.38, to 24 Class C Minibuses at $5,028,360. 24, a difference of $562,444.86.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. B0744.0-22 (in substantially the same format as Attachment A), with CBS, for the purchase of up to twenty-four (24) propane powered Class C Minibuses in the amount of $5,028,360.24.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft Agreement, MTS Doc. No. B0744.0-22
B. Contractor's Proposal

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. B0744.0-22

PURCHASE OF 24 CLASS C PROPANE POWERED MEDIUM DUTY MINI BUSES

THIS AGREEMENT is entered into this _____ day of _____, 2023 in the State of California by and between San Diego Metropolitan Transit System ("MTS"), a California public agency, and the following, hereinafter referred to as "Contractor":

Name: Creative Bus Sales

Address: 14740 Ramona Avenue

Chino CA 91710
City State Zip

Form of Business: Corporation
(Corporation, Partnership, Sole Proprietor, etc.)

Email: TonyM@creativebussales.com

Telephone: (562) 594-8948

Authorized person to sign contracts Tony Matijevich Vice President
Name Title

Provide up to twenty-four (24) Class C Propane Powered Medium Duty Minibuses as specified in the Creative Bus Sales Proposal dated January 31, 2023 (attached as Exhibit A), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit B), Federal Requirements (Exhibit C), and signed MTS Forms (Exhibit D).

The contract duration shall be for no more than a two-year initial term, effective April 1, 2023 through February 28, 2025, with no more than three optional extensions exercisable at MTS's sole discretion, of not more than one year each, for an overall five-year term ending February 28, 2028.

MTS and Contractor shall agree to production and delivery schedules in writing upon execution of the Contract.

Vehicle shall be delivered to: Metropolitan Transit System (MTS) c/o First Transit
7490 Copley Park Place
San Diego, CA 92111

The registered owner will be: San Diego Metropolitan Transit System (MTS)
1255 Imperial Avenue, Suite 1000
San Diego, CA 92101

Payment terms shall be net 30 days from invoice date. The total contract cost shall be firm fixed price not exceed $5,028,360.24, which includes tax, delivery, registration and California tire fee.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	CREATIVE BUS SALES
By: _____ Sharon Cooney, Chief Executive Officer Approved as to form: By: _____ Karen Landers, General Counsel	By _____ Title: _____

Creative Bus Sales
14740 Ramona Avenue
Chino, CA 91710
888.633.8380

Creative Bus Sales
7471 Reese Road
Sacramento, CA 95828
888.633.8380

CalACT MBTA RFP #20-01 - Class C - Quote Sheet *(Rev 2022)*

Vehicle Type:	**STARCRAFT ALLSTAR CLASS C BUS**	**Type of Lift:**	☑ Braun
Contact:	**JAY WASHBURN**	**Lift Location:**	☐ Front ☑ Rear
Agency:	**SAN DIEGO MTS**	**Seat Material Level:**	**LEVEL 4 DOCKET 90**
Address:	**100 16TH STREET**	**Seat Color:**	**WINE VINYL**
City, State, Zip:	**SAN DIEGO, CA 92101**	**Flooring and Color:**	**Altro Chroma TFCR27MTS Grey**
Phone:	**619.235.2648**	**Salesperson:**	**STEVE CHUNG**
E-Mail:	JAY.WASHBURN@SDMTS.COM	**Salesperson Cell:**	**909.549.9398**
Delivery:	**9 TO 12 MONTHS FROM ORDER (SUBJECT TO CARB CERTIFICATION)**	**Salesperson E-Mail:**	**STEVEC@CREATIVEBUSSALES.COM**

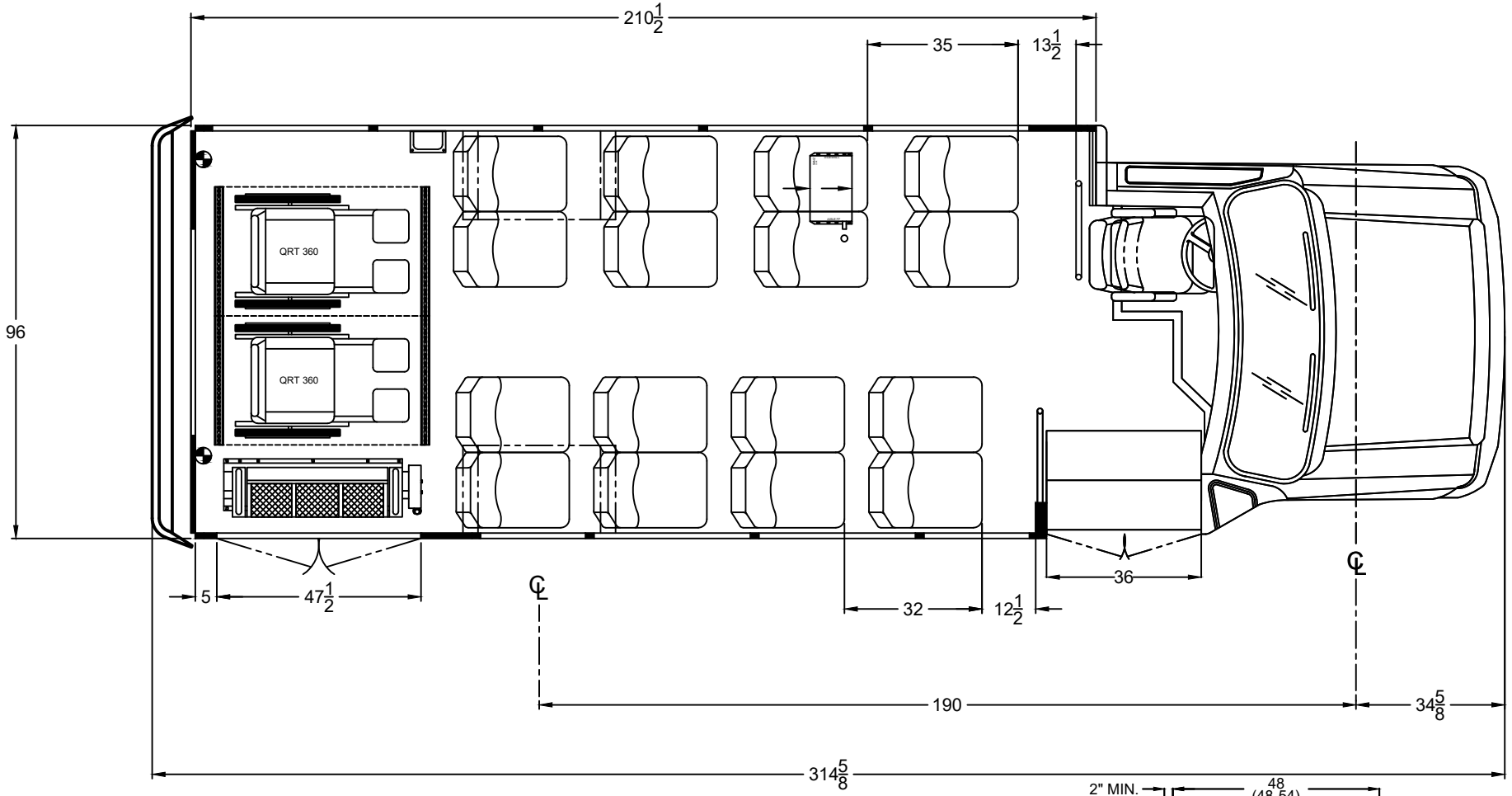
Quantity:	Description	Price	Ext. Price	ADA
1	Starcraft Bus - Class C - ***(Ford E450 Propane 64G)*** *Subject to CARB certification*	$127,459.00	$127,459.00	$11,790.00
2	2 - 34"-36" Freedman Flip Seat (featherweight)	$1,670.00	$3,340.00	$3,340.00
1	10 - Recaro SHS Drivers Seat (If not standard) (BLACK VINYL 77850L)	$1,185.00	$1,185.00	
2	31 - Qstraint Deluxe (8100) credit per set of 4	-$100.00	-$200.00	-$200.00
1	42 - Lift Pad Cover	$300.00	$300.00	$300.00
1	47 - 2-Way radio prep	$170.00	$170.00	
1	48 - REI PA system (4 interior, 1 exterior ADA spkr)	$460.00	$460.00	
1	64 - Telma Driveline Brake Retarder	$9,355.00	$9,355.00	
1	80 - Sportworks bike rack (Stainless 2 Bike) / APEX W/ FAT TIRE ADAPTORS FOR BOTH BIKE POSITIONS	$3,255.00	$3,255.00	
1	84 - Roof Vent (Safefleet)	$310.00	$310.00	
1	98 - Amerex Fire Suppression	$3,155.00	$3,155.00	
1	102 - Rear Backup Camera and Monitor	Standard	Standard	Standard
1	116 - Stop Request System (w/ sign)	$1,000.00	$1,000.00	$1,000.00
1	123 - Delivery Zone 1	$800.00	$800.00	
1	130 - Diamond Farebox SV W/ 2 VAULTS	$2,400.00	$2,400.00	$2,400.00
	Non-Published Options			
1	BUSES TO BE KEYED ALIKE (CHASSIS AND ACCESSORIES WHERE POSSIBLE)	$595.00	$595.00	
3	Altro T36T Aluminum step edging w/yellow insert (Each)	$50.00	$150.00	
1	REDUCE TENSION ON ALTERNATOR POWER WIRES FROM EXTRA SUPPORT BASE	$50.00	$50.00	
1	ALIGN FRONT END OF BUS	$0.00	$0.00	
1	INTERIOR BUS NUMBERS CENTERED ON FRONT EDGE OF CEILING	$20.00	$20.00	
1	FULL WIDTH DRIVER'S STORAGE COMPARTMENT LOCKED AND CARPETED	$595.00	$595.00	
1	EXHAUST TO EXIT STREET SIDE OF BUS TURNED DOWN 90 DEGREES FROM UNDERNEATH CHASSIS AND EXIT 6" OF REAR BUMPER	$495.00	$495.00	
1	(2) MATCHING 750 CCA BATTERIES WITH MILITARY BATTERY TERMINALS IN TRAY (NO BATTERY UNDER HOOD)	$595.00	$595.00	
1	BUS PAINT AND DECAL (VALSPAR #829R4072) TOYLAND RED	$8,000.00	$8,000.00	
1	CREDIT FOR TOOL BOX REMOVAL	-$20.00	-$20.00	
1	CREDIT FOR FIRST AID KIT AND BODY FLUID KIT	-$50.00	-$50.00	
1	LUMINATOR HORIZON SMT FRONT AND SIDE DESTINATION SIGNS	$9,445.00	$9,445.00	
1	FORD E450 CHASSIS COST INCREASE (SUBJECT TO MBTA / CALACT APPROVAL)	$4,371.00	$4,371.00	
1	ADD SLACK TO MAIN POWER CABLE AT WHEECHAIR BASE	$50.00	$50.00	
1	FLOW THROUGH GATOR VALVE CORE CAPS / NO VALVE EXTENSIONS	$50.00	$50.00	
	AS BUILT PARTS MANUAL	$495.00	$0.00	

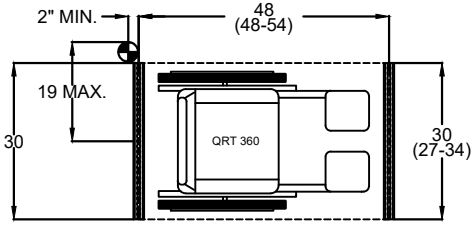
3	Antenna gound plane w/conduit and pull cord	$80.00	$240.00	
1	Pre-wire, BAT/IGN/GND Front Storage with Buss Bar	$595.00	$595.00	
1	Pre-wire, BAT/IGN/GND Behind Driver HD	$295.00	$295.00	
1	MOVE HEATER TO CURBSIDE THIRD ROW	$0.00	$0.00	
1	REMOVE OEM STEREO	$0.00	$0.00	
1	SAFEFLEET SEON CAMERA SYSTEM PER ATTACHED SPECIFICATIONS	$13,000.00	$13,000.00	
1	PROPANE HEAT MITIGATION SYSTEM	$3,000.00	$3,000.00	
1	WHEELCHAIR LOOP COMPARTMENT UNDER FLIP SEAT	$550.00	$550.00	
1	REMOVE BACK UP SENSORS IN REAR BUMPER	-$200.00	-$200.00	

	Class C - Base Price	$127,459.00	
	Published Options	$25,530.00	
	Non-Published Options	$41,826.00	
	Total	$194,815.00	$18,630.00
	Doc Prep Fee	$85.00	
The Non-Taxable Amount is the ADA Equipment in the Base and Added as Options	Non-Taxable	$18,630.00	
The Taxable Amount Includes the Mobility Rebate of $1,000.00 For Ford Chassis	Taxable Amount	$177,270.00	
San Diego*	Tax Total	$13,738.43	7.750%
	Sub-Total	$208,638.43	
*PLEASE NOTE THAT THE CALACT PROCUREMENT FEE IS CAPPED AT $20,000 PER PURCHASE ORDER. *THIS AMOUNT IS SUBJECT TO CHANGE DEPENDING ON NUMBER OF VEHICLES THAT ARE ORDERED.	CalACT Fee*	$833.33	
	DMV E-File Fee:	$31.00	
	DMV Fee	$0.00	*(Estimated)*
	Tire Fee	$12.25	
	Total	**$209,515.01**	
	Number of Units	24	
	Final Total	**$5,028,360.24**	

Purchasing of vehicles requires a CALACT membership, letter of assignment, and payment of procurement fee. If you have any questions, please contact CALACT direct at 916-920-8018

CLASS C REAR LIFT FORD GAS, CNG 16 + 2 W.C.





-RETRACTOR LOCATIONS

NOTE: SHOWN WITH MID HI FREEDMAN SEATS
E-450 14,500 GVWR
THIS FLOOR PLAN IS FOR ILLUSTRATION PURPOSES ONLY.
A WEIGHT ANALYSIS HAS NOT YET BEEN PERFORMED.
FINAL APPROVAL WITH A WEIGHT ANALYSIS IS REQUIRED UPON RECEIPT OF A COMPLETED ORDER WITH ALL OPTIONS SHOWN.
OPTIONAL EQUIPMENT MAY BE SHOWN.
THE SALES ORDER PLACED DICTATES ACTUAL OPTION CONTENT.

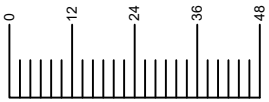
DEALER APPROVAL

☐ APPROVED

_____

CUSTOMER SIGNATURE

SCALE IN INCHES



REV. LET.	DESCRIPTION OF CHANGE	BY	CHK	DATE	ECN No.

TOLERANCE UNLESS OTHERWISE SPECIFIED

WOOD	OTHER
± 1/8"	± 1/16"
± 1°	± 1/2°

FOREST RIVER BUS

TITLE: 16 2 W/C 190" WB 199 BDY MODEL 26

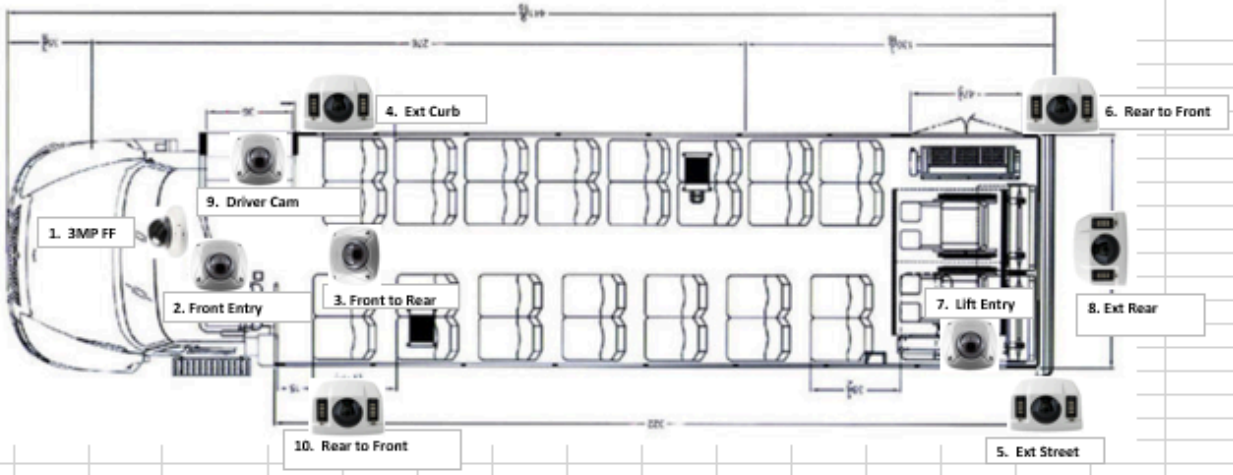
NAME: CRANS DATE: 11/07/22

DWG. No. 16 2 WC 190 199-15 FRB

SAFE FLEET

Driving Safety Forward™

SEON 10 CAMERA SYSTEM
NH16KH2T0 - NH NVR Hybrid, 16 Channels, 8CH Analog HD Built-In, 16 Port POE Switch, Audio, Security Front Cover with Lock Set, Mounting Plates, Power Harnesses, Stacking Bracket, 2TB Single HDD
WT1D20S20G4 - TL, TL-HD & TH, Explorer TX8 and HX16 wiring bundle with adapter harness, diagnostic indicator/alarm button cable 20 ft., five signal input 20 ft., GPS4 receiver magnetic mount 20 ft.
C3Q9PD03AF-BK-FF20 - IP Camera, PoE, dome, black, 3MP progressive scan, 2.8 mm lens size, interior, IR Day/Night, audio, 20 ft. harness, with Forward Facing Bracket - to use with TH8 or NH16
C3Q9PD03A20 - IP Camera, PoE, dome, white, 3MP progressive scan, 2.8 mm lens size, interior, IR Day/Night, audio, 20 ft. harness - to use with TH8 or NH16
C3Q9PD03A50 - IP Camera, PoE, dome, white, 3MP progressive scan, 2.8 mm lens size, interior, IR Day/Night, audio, 50 ft. harness - to use with TH8 or NH16
C3W9PD03E50 - IP Camera, PoE, wedge, 3MP progressive scan, 2.8 mm lens size, exterior (no audio), IR Day/Night, 50 ft. harness - to use with TH8 or NH16
C3W9PD03E75 - IP Camera, PoE, wedge, 3MP progressive scan, 2.8 mm lens size, exterior (no audio), IR Day/Night, 75 ft. harness - to use with TH8 or NH16
SRLN07NP - SmartReach Lite,2.4/5GHz,ANT,No POE,-N
G-SENSOR-EXT - G-Sensor, module and cable kit for compatible DVR
ANTK-W11W5 - Dual Band White WiFi Antenna Kit with Single Cable at 1.8 m Length plus 3 m Antenna Extension Cable and RP-SMA Male Terminating



Camera	Proposal Line
1	3
2	4
3	4
4	6
5	7
6	7
7	5
8	7
9	4
10	6

*Bus photo is not to exact specifications

Class C Standard Build Options

Allstar 25 176" WB E-450 7.3L Premium Gas Engine W/240 Amp Ford Alt **	ST	93091		1
SPECIAL INSTRUCTIONS OR NOTES				**1**
SEE BOTTOM OF ORDER FOR WARRANTY		**NOTE**		1
Dealer to Perform 4-Wheel Alignment in California		**NOTE**		1
Dealer to Weigh Each Bus on California Certified Scale		**NOTE**		1
No Tow Vehicle Allowed During Delivery		**NOTE**		1
Ship 4-Corner Weight Sheet with Every Vehicle		**NOTE**		1
Use 250 lbs Per Wheelchair Position		**NOTE**		1
Parts Manual with As-built Electrical Schematics		**NOTE**		1
All Excessories Except Lights, WC Lift & Mobile Radio (If Equipped) Are Ignition		**NOTE**		1
Wiring Harnesses Supported Every 24" Maximum		**NOTE**		1
No Butt Connectors Allowed		**NOTE**		1
If Driver Switch Panel is on Engine Cover, Then a Quick Disconnect is Required		**NOTE**		1
Fast Idle: 1500 RPM on Gas - Fast Idle to Engage if Voltage Drops Below 12.5		**NOTE**		1
Install Dome Light With Every Row of Seats, Including WC Position, Must		**NOTE**		1
Ground Engine to Chassis Frame, Body to Chassis Frame, Lift Pump Housing to		**NOTE**		1
Hip-To-Knee Spacing 27" Minimum		**NOTE**		1
Seat Track Not Extend More than 6" Past Seats		**NOTE**		1
Undercoat Metal Skirts		**NOTE**		1
Ground to First Step Height Shall Not Exceed 12.5" Unloaded		**NOTE**		1
304SS Required for Entry Grabs and Ceiling Grabs		**NOTE**		1
Ceiling Grab Rails Require Formed Elbows - No End Caps		**NOTE**		1
AC & Heater Hoses Supported Every 24" Minimum		**NOTE**		1
Build Front Driver Storage Compartment as Large as Possible, For Storage of		**NOTE**		1
Install Toolbox Next to Lift if Space Allows		**NOTE**		1
Convex Mirror Must Avoid Sun Visor and Overhead Door		**NOTE**		1
Headlight Aiming Certificate - Ship with Bus		**NOTE**		1
Water Test Certificate - Ship with Bus		**NOTE**		1
Driveline Metal Guards for Each Section of Shaft		**NOTE**		1
All Harnesses Secured to Frame at Maximum of 24"		**NOTE**		1
P-Clamps Added as Deemed Necessary by MBTA Inspector		**NOTE**		1
Batteries Must Be Same Type (No Mismatch) (1 In Tray - 1 Underhood)		**NOTE**		1
Continuous Run Battery Cables		**NOTE**		1
Slide Blocks To Hold Batteries In Place		**NOTE**		1
Floor Track Will Not Be Installed in Any Area not Covered by a Fixed Seat		**NOTE**		1
Operations Manual - Covering Conversion Features as Listed		**NOTE**		1
Parts Book, Operating Instructions, Troubleshooting Guide, Inspection &		**NOTE**		1
SPECIAL BUILD OPTIONS				**1**
Driver Entry Grab Steel Reinforced Plastic - Nutsert Install	ST	99		1
(3) GROUND WIRES TO BE ZERO OUGHT GAUGE, TO BE CONTINUOUS	ST	99		1
Interlock on Entry Door - Must Be in Park to Operate	ST	99		1
ENTRY DOOR HEADER ACCESS PANEL DOOR MUST BE HINGED WITH 2	ST	99		1
Battery Tray: SS Tray & Slides Per Standard Options Below. Must Extend at	ST	99		1
Install Battery Cable Wiring Diagram Inside Battery Access Door	ST	99		1
Decal: Battery Disconnect, Emergency Use Only	ST	99		1
Stainless Steel Battery Hold-Down Hardware	ST	99		1
Add 2nd Heater Line Brass 1/4 Turn Valve	ST	99		1
Decal: "Heater Shut Off Valve" - Install On Street Side Near Valves	ST	99		1
KEYED LOCK ILO THUMB LATCH FOR ELECTRICAL CENTER DOOR	ST	99		1
5/8", 7 Ply AC Marine Grade APA Plywood Floor	ST	99		1
Upgrade Driver Plexi Barrier: Extend to Within 6" of Ceiling	ST	99		1
14 Gauge Galvanized Steel Wheelwells	ST	99		1
Dual Handles on WC Lift Doors	ST	99		1
Flame Block on Bottom of Driver Seat Cushion (N/A on USSC & Recaro)	ST	99		1
Laminated Modesty Panel, Grey Melamine, Each	ST	99		2
Intermotive Break Out Box	ST	99		1
GENERIC PARTS MANUAL ON FLASH DRIVE	ST	99		1
ELECTRICAL SYSTEM				
Intermotive Flex Tech Electrical System	05	STD		1
SIDEWALL / REARWALL / CEILING				

Sidewall: Grey FRP	05	STD		1
Rearwall: Grey Seaspray Fabric	05	STD		1
Driver Area: Grey Padded Vinyl	05	STD		1
FRP on Ceiling, Grey	05	2289		1
Cove Colored Flooring on Sidewall to Seat Track	05	2238		1
FLOORING - WHITE NOSING IS STANDARD				
Altro Meta Storm	05	2248		1
Yellow Step Nosing - Per Step	05	8820		3
CHASSIS				
Front Mud Flap (1), Passenger Side Only **(to be used with Running Board) -** NOT AVAILABLE ON FORD TRANSIT	05	2340		1
Heavy Duty Anti-Slip Aluminum Running Board on Driver Side (Large) (NOT AVAILABLE ON FORD TRANSIT)	05	2623		1
Exterior Mirror Set Remote/Heated w/External LED Strip Turn Signal Ford	05	2825		1
Romeo Rim Rear Bumper w/HawkEye RAS Installed	05	2670		1
Valve Stem Extender Inner Dual Rear Wheel, pair	05	8606		1
ENVIRONMENTAL CONTROL				
TRANS/AIR AIR CONDITIONING SYSTEMS				1
TRANS AIR TA733 SUPER 75,000 BTU, TA73 EVAP, SMC3L COND, 13 CID COMP 7.3L GAS	ST	99		1
USE #16 SUCTION HOSE IN A/C SYSTEM	ST	99		1
HEATERS				1
Hot Water Heater, 35K BTU 3 Speed Low Profile	05	8044		1
MISCELLANEOUS				1
Silicone Heater Hose (for rear unit) w/full ring clamps	05	20090		1
ELECTRICAL				
Stainless Batt.**Tray** w/Std Batt.Box *IS 304 REQUIRED?* **YES**	05	2784		1
Stainless Steel Battery Tray Slides ILO Zinc Plated Slides - Extra Charge	05	2869		1
Rotary Disconnect Switch	05	8790		1
Laminated Wiring Schematic ***AS BUILT*** ON ELECTRICAL PANEL DOOR	05	22101		1
Wiring Diagram "AS BUILT" ON USB Flash Drive		**STD**		**1**
EXTERIOR LIGHTS				
Surface Mount LED Entry Door Exterior Light - STD Choose Optional Below or Special builds	05	STD		1
LED Rear Center Mount Brake Light, **Rectangular**	05	20136		1
LED Mid-Ship Turn / Marker Lights	05	20138		1
Independent **RED** Brake & **AMBER** Turn Signal Lights	05	20139		1
INTERIOR LIGHTS				1
Additional Interior LED Dome Lamp - Each	05	8041		2
AUDIO / VISUAL				1
Jensen JHD36AB AM/FM/CD/Clock Blue Tooth/USB Enabled / 4 SPEAKERS **PA Ready**	05	8830		1
DOORS / HATCH / WINDOWS				
Electric Entry Door is Standard. Add Option #2056 if Manual is Desired				
Passenger Door Electric (standard)	05	20163		1
Passenger Door 36" ROUGH OPENING (STANDARD)	05	2063		1
Exterior Passenger Entrance Door Key	05	8133		1
Solid Window(s) EACH Replace T-Slide(s) Enter Specific Instructions in Row Below	05	20187		1
STREET SIDE REAR		**NOTE**		1
INTERIOR				1
Driver Coat Hook	05	8769		1
LUGGAGE RACK / STORAGE				1
Driver Storage in Cab Overhead with Lock	05	20192		1
PARATRANSIT OPTIONS				1
Double W/C Doors w/ Windows, LED Interior Light, Leaf Spring, LED Exterior Lighting	05	20206		1
IS THE LIFT IN THE FRONT OR REAR OF THE UNIT?				1
BRAUN LIFTS				1
Braun Century NCL917-2 800# Lift (33"x51")	05	8744		1
LIFT FAST IDLE WITH 403 INTERLOCK				1
Intermotive Gateway 508-F Ford E or 517-F Transit Fast Idle with Lift Interlock	05	99		1
Q Straint W.C. Securement Kits, Accessories				1
Q10007 - 4 QRT 360 Retractr Tie Down L track & Q8-6326-A1 Comb-Lap/Shldr	05	8826		2

Q5-7580-4 18" Blue Webbing Loop (each)		05	20250		8
Q5-6327 84" Postural Belt with Padding - Black Webbing		05	20251		1
Q-Straint Belt Cutter (ship loose)		05	8179		1
Miscellaneous Accessories					1
Priority Seating Sign **Required for ADA Compliance**		05	8104		1
Tool Box Wheelchair Belt Storage		05	20257		1
SAFETY OPTIONS					
5 Lb Fire Extinguisher		05	8089		1
16 Unit First Aid Kit		05	8090		1
Body Fluid Kit		05	20264		1
Emergency Triangle Kit		05	8091		1
Back-Up Alarm SAE Type B 107 db(A) Ecco 575		05	2880		1
STANDARD ROSCO STSK4750 BACK-UP CAMERA SYSTEM W/ 7" REARVIEW MONITOR / MIRROR COMBO		**05**	**STD**		**1**
Interior Convex Mirror 6"x9"		05	20276		1
Red Light Over Emergency Exit Ea: **ON:**	**SIDE & REAR EGRESS WINDOWS**	05	8155		3
Yellow "Standee" Line		05	8802		1
GRAB RAIL / STANCHION / PANELS					
Ceiling Grab Rail - Install on **Both Sides**		05	99		1
Left Hand Entry Vertical Grab Rail - 1 1/4"			**STD**		1
1 1/4" Dual Entry Grab Rails Parallel to Entrance Steps (both sides)		05	8130		1
Stanchion and Modesty Panel at Entry Door			**STD**		1
SEATING - DRIVER					1
SHIELD Sport 2.0 Recliner RH Adjustable LeMans Arm, 2 Way Adjustable Lumbar		05	99		1
FREEDMAN SHIELD DRIVER SEAT FABRICS					1
Driver Seat Cover - Level 4 Ice Pinstripe; Mor-Care; Leathermate		05	2043		1
SEATING - PASSENGER					1
STD RIGID SEATS					1
Mid High Double Seat		05	8067		8
PASSENGER SEAT FABRICS					1
Seat Cover - Level 4 Ice Pinstripe; Mor-Care; Leathermate		05	2074		16
SEAT OPTIONS					1
Anti-Vandal Grab Handle, Black Ea **on:**	**ALL SEAT EXCEPT AGINST REAR WALL**	05	2311		16
Black US Armrest - Each - **on:**		05	2077		8
Flame Block Material on Underside of Seat (each)		05	2884		16
SEAT BELTS					1
Seat Belt, Freedman USR Retractable (Per Person)		05	2282		16
Seat Belt Extension, 12" (P/N 56410) FOR USR SEAT BELTS		05	8771		2

SUMMARY OF STANDARD WARRANTIES

(Provide complete warranty information and parchment with proposal)

Warranty	Miles	Years	Warranty Details
Body Structure	100,000	5	See attached Warranty Info
Chassis	36,000	3	See attached Warranty Info
Engine	60,000	5	See attached Warranty Info
Transmission	60,000	5	See attached Warranty Info
Air conditioner	Unlimited	2	See attached Warranty Info
Lift/Ramp	Unlimited	5	See attached Warranty Info
EV Battery	N/A	N/A	N/A
EV Conversion/Installation	N/A	N/A	N/A
CNG Warranty (Install and tanks)	N/A	N/A	N/A

Metropolitan Transit System

Agenda Item No. 7

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

MTS Excess Liability Insurance Renewals

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to purchase an Excess Liability Insurance Program, effective March 1, 2023, that results in a not to exceed amount of $3,196,218 based on the expiring coverage structure of $70M excess of a $5M Self Insured Retention (SIR).

Budget Impact

The *approximate* annual breakdown of insurance cost between MTS cost centers is noted within the table below, representing a $316,742 (11.0%) increase in cost over the expiring 2022-23 excess liability program:

COMBINED EXCESS LIABILITY INSURANCE PREMIUM COST ALLOCATION				
MTS	SDTC	SDTI	SD&AE	TOTAL
$383,546	$1,422,316	$1,358,393	$31,963	$3,196,218

These amounts will be included in the Risk Department budget for each division. MTS would be responsible for the first $5,000,000 for any claim before the excess liability insurance program would contribute. The MTS Liability Reserve currently includes $5,000,000 to cover such contingencies. The annual Risk Department budget also includes funds for estimated claims payments. The Liability Reserve is intended for extraordinary claims that are not within the annual budget for such costs.

DISCUSSION:

Each year MTS purchases insurance to protect against various risks. Today's proposed action addresses our insurance policies for general liability coverage. These policies renew on March 1 every year. The nature of the insurance market and negotiations for new policies is such that insurance companies and their underwriters generally will not provide a policy quote to MTS's

brokers, Alliant Insurance Services (Alliant), until shortly before the renewal date. Often, this process takes place in the final two weeks before a new policy commences.

General Liability Insurance (Excess Liability)

MTS's general liability insurance policy covers various areas of potential risk to MTS and its wholly owned entities (San Diego Transit Corp (SDTC), San Diego Trolley, Inc. (SDTI), and San Diego & Arizona Eastern Railway (SD&AE)). Primarily, this includes bodily injury, property damage and other damage claims that are inherent in the operation of our bus and rail transit services. Historically, MTS's insurance coverage has been structured so that MTS is directly responsible for a self-insured (SIR) layer, the amount of which has varied over the years based on insurance market conditions and our own independent actuarial projections of the ultimate expected cost in the retained layer. Only if a lawsuit or claim exceeds, or is reasonably expected to exceed this $5M SIR, does MTS's excess liability coverage step in. MTS keeps an insurance reserve of $5M specifically for this. The MTS Risk Department internally manages and resolves liability claims, either directly or by overseeing litigation handled by outside counsel.

Coverage limits purchased have also varied over the years based on insurance market conditions, third party requirements, and perceptions of a reasonable maximum foreseeable loss. Currently, MTS purchases $70M in insurance limits for its operations. No ***single*** insurer will provide these limits, so coverage is purchased in a "layered and quota share" arrangement with numerous insurers both domestic and abroad (London/Bermuda). The total $75M ($70M plus $5M retention) upper limit is set by MTS's Shared Use Agreement with North County Transit District (NCTD) and Burlington Northern Santa Fe Railroad (BNSF), which governs the shared light and heavy rail operations on the railroad right-of-way between Santa Fe Depot and Oceanside. Under that agreement, MTS is required to maintain its $75M limit, NCTD is required to maintain $295M, and BNSF is required to maintain $200M in coverage. The difference in limits purchased is based on the historical difference in perceived risk between light rail operations (MTS) and heavy rail operations, in this case, those of NCTD, Amtrak (operating under NCTD's rights), and BNSF.

While MTS is under no obligation to carry a specific limit of coverage for its bus (or other) operational activities. Historically MTS has carried the same limits of coverage as it has for rail operations, for the sake of consistency, and as it has been financially efficient to do so.

The Excess Insurance Market for Transit Risks

Rates for excess liability coverage are generally based on a combination of passenger counts, revenue miles, operating revenue, construction costs, loss history, self-insured retention, and current market conditions.

Beginning in 2020, unfavorable insurance market conditions (catastrophic weather-related losses and extreme jury verdicts) began causing widespread disruptions in the availability of commercial insurance. For MTS, and other public transit agencies, the difficult market conditions had been felt most notably in the Excess Liability Market. Recently, demand for limits of coverage had outstripped supply relative to past market cycles, and prices increased accordingly. Specific loss activity of MTS also put pressure on rates. However, over the past twelve months, excess casualty prices have moderated.

For our 2023 renewal, Alliant sought various options for limits and retentions to combat expected price increases and potential narrowing of the terms and conditions of coverage. After reviewing

various options, MTS staff is recommending no change to the amounts of coverage and program structure. Pricing has increased 11% over last year's program. This is mostly attributable to inflationary trends and increased ridership (which increases MTS's exposure to risk).

A coverage structure chart depicting the carriers and layering of the coverage program is provided below:

Excess Liability - Carrier Participation	
$75M	$25M X $45M X $5M SIR Lloyd's of London Convex - 20% /Hiscox - 20% /Aspen - 20% /AEGIS- 20% /Ascot - 20%
$50M	$10M X $35M X $5M SIR Lloyd's of London Canopius 4444 - 50% / Ascot 1414 - 50%
$40M	$10M X $25M X $5M SIR Great American Assurance Company
$30M	$5M X $20M X $5M SIR Underwriters at Lloyd's MAP - 60% / Arcadian - 40%
$25M	$10M X $10M X $5M SIR Underwriters at Lloyd's Hiscox 9930 - 50% / Inigo 1301 - 50%
$15M	$5M X $5M X $5M SIR Allied World National Assurance Company
$10M	$5M X $5M SIR Princeton Excess & Surplus Lines Insurance Company
$5M	***$5M Self Insured Retention***

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to purchase an Excess Liability Program, effective March 1, 2023, that results in a not to exceed amount of $3,196,218 based on the expiring coverage structure of $70M excess of a $5M SIR.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Metropolitan Transit System

Agenda Item No. 8

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2022

SUBJECT:

Investment Report – Quarter Ending December 31, 2022

INFORMATIONAL ONLY

Budget Impact

None.

DISCUSSION:

Attachment A comprises a report of the San Diego Metropolitan Transit System (MTS) investments as of December 31, 2022. The combined total of all investments has increased quarter to quarter from $214.6M to $225.5M. This $10.9M increase is attributable to $17.7M in Federal Transit Administration (FTA) capital draws, $15.4M in American Rescue Plan Act of 2021 (ARPA), partially offset by $18.5M in capital expenditures, as well as normal timing differences between other payments and receipts.

The first column provides details about investments restricted for capital improvement projects and PRONTO Stored Value.

The second column, unrestricted investments, reports the working capital for MTS operations allowing payments for employee payroll and vendors' goods and services.

MTS remains in compliance with Board Policy 30 and is able to meet expenditure requirements for a minimum of the next six months as required.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachment: A. Investment Report for the Quarter Ending December 31, 2022

San Diego Metropolitan Transit System
Investment Report
December 31, 2022

Institution / Issuer	Function	Investment Type	Restricted	Unrestricted	Total	Avg. Rate of Return		Benchmark
J.P. Morgan Chase	Operating Funds	Depository Bank	-	54,924,941	54,924,941	0.80%	*	0.380% WSJ Money Market
U.S. Bank - Retention Trust Account	Restricted for Capital Support	Depository Bank	8,531,874	-	8,531,874	N/A	**	-
Local Agency Investment Fund (LAIF)	Restricted (Stored Value)	Investment Pool	4,688,530		4,688,530	2.173%		6.808% S&P US T-Bill 0-3 Mth Index
San Diego County Treasurer's Office	State Grant Funds	Investment Pool	17,273,913	5,557,196	22,831,108	2.970%		6.808% S&P US T-Bill 0-3 Mth Index
Subtotal: Restricted for Capital Support / Stored Value			**30,494,316**	**5,557,196**	**36,051,512**			
Local Agency Investment Fund (LAIF)	Investment of Surplus Funds	Investment Pool	-	60,464,489	60,464,489	2.173%		6.808% S&P US T-Bill 0-3 Mth Index
San Diego County Treasurer's Office	Investment of Surplus Funds	Investment Pool	-	74,017,219	74,017,219	2.970%		6.808% S&P US T-Bill 0-3 Mth Index
Subtotal: Investment Surplus Funds			-	**134,481,708**	**134,481,708**			
Grand Total Cash and Investments			**$ 30,494,316**	**$ 194,963,845**	**$ 225,458,160**			

*-The .80% is an annual percentage yield on the average daily balance that exceeds $30 million
** - Per trust agreements, interest earned on retention account is allocated to trust beneficiary (contractor)

Metropolitan Transit System

Agenda Item No. 9

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

Printing Timetables – Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2686.0-23 (in substantially the same format as Attachment A) with Neyenesch Printers, Inc., (Neyenesch), a certified Small Business (SB), for the provision of printing timetables for a period of three (3) years, in the amount of $375,731.09.

Budget Impact

The total cost of this contract is estimated to be $375,731.09. The project will be funded by Operating Budget account 902010-571220 - Administration Timetables

DISCUSSION:

MTS Bus Operations, ACCESS & Americans with Disabilities Act (ADA) Service and Trolley Operations connect people to work, school, shopping, medical appointments, cultural sites and various events. Timetables inside each mode of service are an important piece of the information customers need to ride each day.

Contractor will print timetables for distribution by MTS to bus and trolley riders. The services include providing all the necessary labor, equipment, printing materials and supplies and delivering the timetables to various designated MTS locations.

On October 21, 2022 MTS issued a Request for Proposals (RFP) for printing timetables services. A single proposal was received by the due date of December 05, 2022 from Neyenesch located in San Diego.

On December 6, 2022, to ascertain that the solicitation was not restrictive, MTS emailed a survey to all the firms that had downloaded the RFP on PlanetBids asking them their reason/s for not proposing. The results indicated that neither the RFP nor MTS's procurement processes played a role in their decision not to respond. MTS then moved forward with proposal evaluations.

An evaluation committee consisting of MTS Bus Contract Operations, Marketing and Finance staff met and scored the proposals based on the following technical and cost criteria:

1.	Qualifications of the Firm or Individual	15%
2.	Staffing, Organization, and Management Plan	15%
3.	Work Plan	25%
4.	Contractor Responsiveness and Flexibility	15%
5.	Cost	30%
		Total 100%

The evaluation results are summarized below:

MTS Independent Cost Estimate (ICE)	Neyenesch Proposal	Technical Score	Cost Score	Total Score (Max 100)
$387,652.07 ($359,769.90 + CA sales tax $27,882.17)	$375,731.09 ($348,706.35 + CA sales tax $27,024.74)	57.67	30.00	87.67

Neyenesch has provided printing services for MTS for over 30 years and has been a great partner. Comparing the Neyenesch's proposal to MTS's ICE, the agency saves $11,920.98 or 3.08% over the 3 years, a cost that staff deems to be fair and reasonable.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. G2686.0-23 (in substantially the same format as Attachment A) with Neyenesch, a certified SB, for the provision of printing timetables for a period of three (3) years, in the amount of $375,731.09.

/s/ Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft Agreement, MTS Doc. No. G2686.0-23
B. Scope of Work
C. Cost Form

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. G2686.0-23

PRINTING TIMETABLES

THIS AGREEMENT is entered into this _____ day of _____, 2023 in the State of California by and between San Diego Metropolitan Transit System ("MTS"), a California public agency, and the following, hereinafter referred to as "Contractor":

Name: Neyenesch Printers, Inc

Address: 2750 Kettner Blvd

San Diego, CA 92101
City State Zip

Form of Business: Corporation
(Corporation, Partnership, Sole Proprietor, etc.)

Email: kandy@neyensch.com

Telephone: 619-488-8315

Authorized person to sign contracts Kandy Neyenesch (Name) Chief Financial Officer (Title)

The Contractor agrees to provide services as specified in the conformed Scope of Work/Technical Specification (Exhibit A), Contractor's Cost/Pricing Form (Exhibit B), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit C) and Forms (Exhibit D).

The contract term is for up to three (3) years effective April 1, 2023 to March 31, 2026.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $375,731.09 ($348,706.35 + CA sales tax $27,024.74) without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	NEYENESCH PRINTERS, INC
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

SCOPE OF WORK/TECHNICAL SPECIFICATIONS

1.1. INTRODUCTION

San Diego Metropolitan Transit System is soliciting proposals from experienced and qualified firms to print timetables for distribution to its customers. One (1) contract will be awarded from RFP.

Contractor will provide timetable printing services including but not limited to the necessary labor, equipment, materials, supplies, press cleaning and set up for the following:

A. Group A - MTS Bus Timetables

B. Group B - MTS Trolley Timetables

Bus and Trolley services connect people to work, school, shopping, medical appointments, cultural sites and events. The printed timetables are an important piece of the information customers need to ride the bus and trolley.

The agreement will be for three (3) years effective May 1, 2023 to April 30, 2026.

1.2. TASKS TO BE PERFORMED

Contractor shall be responsible for the following tasks:

A. Upon receipt of artwork from MTS, Contractor shall prepare proofs and plates necessary for the printing of timetables within specified time frame.

B. Print with proofs, fold, package, and deliver timetables to the locations shown in this scope of work.

1.3. ALL-INCLUSIVE COSTS

On the cost proposal (Attachment 1), unit costs shall be all-inclusive (with the exception of sales tax), including but not limited to labor, printing costs, supplies, press cleaning and setup, and all other production costs.

The unit cost shall include the production of “blue line” quality proofs (clean, crisp, press quality proofs) following any changes to art, map, or copy for approval by MTS. There shall be no additional charge for subsequent blue lines, which are required for approval unless they are required as the result of changes by MTS. All plate/proof charges shall be incorporated into the cost proposal.

If MTS has a requirement to produce a new timetable, for a route not included in the annual quantities section of the specifications, the unit price for production of that timetable shall be consistent with routes of equivalent function and scale.

The cost shall include courier service and/or delivery of all printed items to the locations specified by MTS in section 5.11.

MTS will not pay additional delivery costs so proposers should propose accordingly.

MTS has provided estimated yearly quantities. These quantities are for proposing purposes only, and do not reflect actual amounts to be printed. The estimated quantities do not commit MTS to authorize any printing services. Amounts may be more or less than indicated and will depend on MTS's actual needs. Attachment 2 shows a breakdown of estimates.

1.4. TRIM SIZE SPECIFICATIONS

A. MTS Bus Timetables

Bus schedules are printed in three (3) different flat sizes:

i. 11" x 17" – forty (41) timetables at this size
ii. 8.5" x 11" – thirty-five (34) timetables at this size
iii. 11" x 21" – one (1) timetable at this size

All timetables are folded to 3.625" x 4.25".

B. MTS Trolley Timetable

The Trolley timetable flat size is 14.5" x 21.25" and fold to 3.625" x 4.25".

FOLDING NOTE: All of the above pieces fold down to 3.625" w x 4.25"h so they can all be displayed in uniform display rack together.

1.5. PAPER REQUIREMENTS

A. MTS Bus Timetables

All bus timetables will be printed on 50 lb. White Offset Uncoated paper.

The stock needs to have decent opacity so there is little to no show through as they print 2-sided, and fold with a clean line. MTS will accept either regular or recycled paper.

B. MTS Trolley Timetables

The Trolley timetables will be printed on 40 lb. White Offset Uncoated paper.

The stock needs to have decent opacity so there is little to no show through as they print 2-sided, and fold with a clean line. MTS will accept either regular or recycled paper.

1.6. INK

A. MTS Bus Timetables

MTS bus timetables will be printed using two colors: 1) Black; 2) One solid PMS uncoated ink, color to be determined by MTS.

All timetables will print (2/2).

Each order can include timetables using different PMS colors. For example, an order may include 12 timetables that print Black & Solid PMS 186 Red, plus 20 other timetables that print Black & Solid PMS 3005 Blue.

B. MTS Trolley Timetables

The Trolley timetables print in four (4) color process printing; 4/4. Ink coverage would be considered “medium”.

1.7. ORDERING

MTS will initiate all the order placements.

A. Service Changes

MTS conducts three (3) scheduled system service changes per year (January, June and September). During these periods, MTS introduces new Trolley and Bus route and schedule changes to passengers. Newly designed timetables are required to communicate and market these changes. During these scheduled service change periods, MTS will require that all ordered timetables be delivered two (2) weeks or ten (10) business days prior to the effective service change date. It is imperative that schedules arrive on time to adequately provide passengers the necessary information.

B. Reorders

Not all MTS Trolley and Bus routes change every scheduled service change. Routes that do not change may require reorders of existing timetables when the current inventory is depleted. The lead time for these orders is two (2) weeks or ten (10) business days from the time the order is placed by MTS.

1.8. SPECIAL ORDERS

When and if service changes occur, MTS reserves the right to request different size schedules with different color combinations. With written notice, MTS may request an emergency order to print timetables and delivery within five (5) business days.

1.9. QUANTITY OF ORDERS

A master list of each route and estimated number of printed copies required will be sent with each order. The schedules change approximately three (3) times per year and major change periods could entail changes from 0 to 94 routes. Reasonable notice will be given in cases where large quantities of paper are to be ordered.

1.10. PACKAGING

All MTS Bus and Trolley timetables must be packaged in bundles of fifty (50) copies in bust proof bands, string, or rubber bands. All boxes used for the packaging of schedules must be the standard size of 18" x 12" x 8" or 11” x 9” x 8” in order to fit in existing storage bins. Packaging of timetables shall not exceed 1,000 timetables per box.

Each box must be identified with a taped-on sample of the schedule and quantity. Each box must be clearly labeled with the following information below:

A. Specific timetable

B. Delivery location

C. Delivery date

1.11. DELIVERIES

Deliveries must be made between the hours of 7:30 a.m. and 4:00 p.m., Monday through Friday, to destinations in San Diego County as specified by MTS. Below is the current list of delivery locations which MTS reserves the right to add or subtract locations at any time.

Kearny Mesa Division (KMD) **(San Diego Transit)** Attn: Gregorio Romero 4630 Ruffner Street San Diego, CA 92111	**Imperial Avenue Division (IAD)** **(San Diego Transit)** Attn: Jessica Duarte 100 16th Street San Diego, CA 92101
East County Division (Transdev) Attn: Edgar Gonzalez 544 Vernon Way El Cajon, CA 92020	**Copley Park Division** Attn: Geri Kaarstad 7490 Copley Park Place San Diego, CA 92111
South Bay Division (Transdev) Attn: Claudia Valley 3620 Main Street Chula Vista, CA 91911	**San Diego Trolley Warehouse** Attn: Storeroom Manager 1341 Commercial Street San Diego, CA 92113
Tele-Information - Mills Building Attn: Luz Gallo 1255 Imperial Ave, 8th Floor San Diego, CA 92101	**Transit Store – Mills Building** Attn: Brianne Graham 1255 Imperial Ave, 1st Floor San Diego, CA 92101

1.12. PAYMENT TERMS

Unless otherwise stated in the specifications or cost forms, one hundred (100%) of the contract price for each unit or units of material or equipment furnished and delivered under these specifications, will be paid to the Contractor within thirty (30) days after delivery to and acceptance by MTS of the unit or units ordered, as herein provided, and after the statements covering the unit or units have been presented to MTS by the Contractor.

Cash discounts as shown on the bid form shall be accepted at the option of MTS. Otherwise, the terms will be Net thirty (30) from acceptance. Payment terms less than ten (10) days from acceptance will not be considered. ***Advanced Payment is Not Allowable***

1.13. INVOICES

Invoices must be sent to the MTS Accounting Department, via email at ap@sdmts.com. All invoices must have the Purchase Order and contract number clearly displayed to ensure timely payment. MTS will not pay on packing slips, receiving documents, delivery documents, or other similar documents. Invoices must be submitted for payment.

Contractor must also indicate if any of the invoiced amount is for service or work provided by a subcontractor and indicate the amount that will be paid to the subcontractor. Contractors must also comply with the prompt payment requirements in Section 16 Prompt Progress Payments of the Standard Conditions.

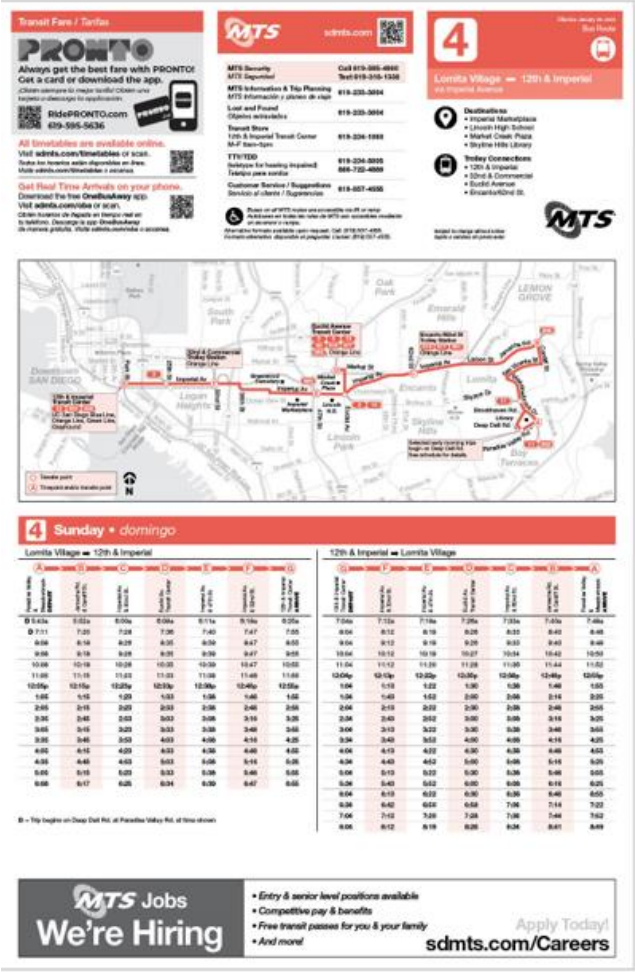
1.14. TRANSITION

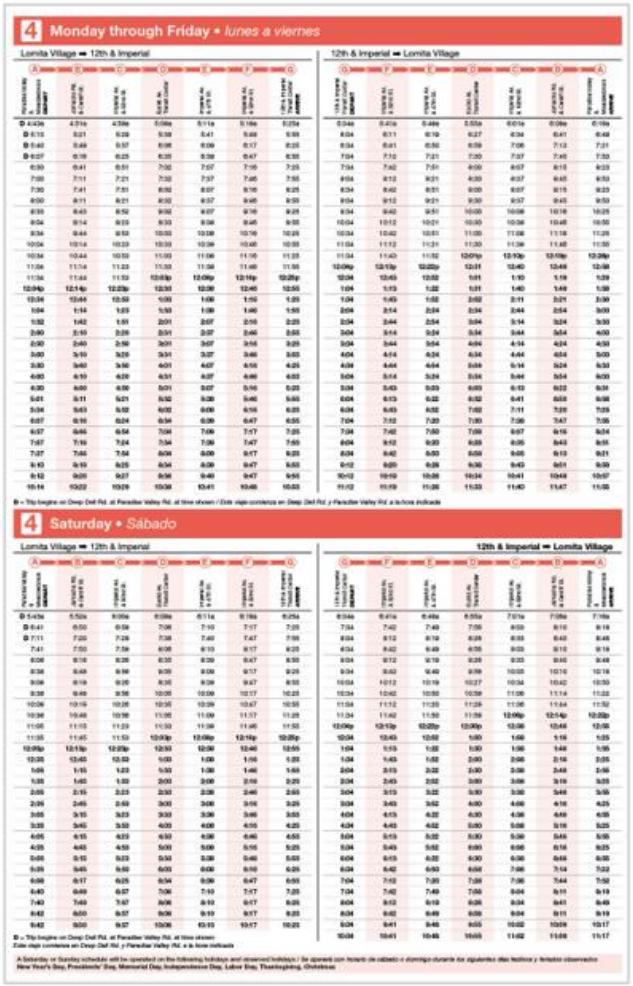
After contract execution, MTS and selected Contractor will hold a “New Account Meeting” with all department supervisors to review the entirety of the project.

Contractor will designate personnel that will be assigned to MTS’s account to respond to all questions, ensure that MTS projects are expedited throughout the entire production process and delivered on time.

1.15. EXAMPLE LAYOUT

Example Layout (11x17)





PROPOSER NAME: NEYENESCH PRINTERS

ADDENDUM NO. 1

Printing Timetables

PROPOSERS TO ONLY FILL OUT THE CELLS IN

MTS TIMETABLE SPECIFICATIONS			Year One Price Break per Timetable via Quantities				
ROUTE	PAPER SIZE	No. of Colors	1-9,999	10,000-19,999	20,000-24,999	25,000 - 34,999	35,000 - 49,999
Trolley	14.5" x 21.25"	4	$ 0.22	$ 0.20	$ 0.20	$ 0.20	$ 0.20
Bus Route	11" x 21"	2	$ 0.18	$ 0.18	$ 0.18	$ 0.18	$ 0.18
Bus Route	11" x 17"	2	$ 0.18	$ 0.18	$ 0.18	$ 0.18	$ 0.18
Bus Route	8.5 x 11"	2	$ 0.10	$ 0.10	$ 0.10	$ 0.10	$ 0.10

Year One

Paper Size	# of Colors	Order Quantity 1- 9,999			10,000 - 19,999			20,000 - 24,999			35,000 - 49,999			TOTAL
		Unit Price	Yearly Quantity	Total	Unit Price	Yearly Quantity	Total	Unit Price	Yearly Quantity	Total	Unit Price	Yearly Quantity	Total	
14.5" x 21.25"	4										0.20	36,225	$ 7,331.94	
11" x 21"	2				0.18	11,550	$ 2,127.51							
11" x 17"	2	0.18	140,700	$ 25,973.22	0.18	257,250	$ 46,819.50							
8.5" x 11"	2	0.10	139,650	$ 13,965.00	0.10	97,650	$ 9,765.00	0.10	42,000	$ 4,200.00				
Totals				$ 39,938.22			$ 58,712.01			$ 4,200.00			$ 7,331.94	$ 110,182.17

MTS TIMETABLE SPECIFICATIONS			Year Two Price Break per Timetable via Quantities				
ROUTE	PAPER SIZE	No. of Colors	1-9,999	10,000-19,999	20,000-24,999	25,000 - 34,999	35,000 - 49,999
Trolley	14.5" x 21.25"	4	$ 0.23	$ 0.21	$ 0.21	$ 0.21	$ 0.21
Bus Route	11" x 21"	2	$ 0.19	$ 0.19	$ 0.19	$ 0.19	$ 0.19
Bus Route	11" x 17"	2	$ 0.19	$ 0.19	$ 0.19	$ 0.19	$ 0.19
Bus Route	8.5 x 11"	2	$ 0.11	$ 0.11	$ 0.11	$ 0.11	$ 0.11

Year Two

Paper Size	# of Colors	Quantity Ordered 1- 9,999			10,000 - 19,999			20,000 - 24,999			35,000 - 49,999			TOTAL
		Unit Price	Yearly Quantity	Total	Unit Price	Yearly Quantity	Total	Unit Price	Yearly Quantity	Total	Unit Price	Yearly Quantity	Total	
14.5" x 21.25"	4										0.21	36,225	$ 7,698.54	
11" x 21"	2				0.19	11,550	$ 2,238.39							
11" x 17"	2	0.19	140,700	$ 27,267.66	0.19	257,250	$ 49,855.05							
8.5" x 11"	2	0.11	139,650	$ 14,663.25	0.11	97,650	$ 10,253.25	0.11	42,000	$ 4,410.00				
Totals				$ 41,930.91			$ 62,346.69			$ 4,410.00			$ 7,698.54	$ 116,386.14

MTS TIMETABLE SPECIFICATIONS			Year Three Price Break per Timetable via Quantities				
ROUTE	PAPER SIZE	No. of Colors	1-9,999	10,000-19,999	20,000-24,999	25,000 - 34,999	35,000 - 49,999
Trolley	14.5" x 21.25"	4	$ 0.24	$ 0.22	$ 0.22	$ 0.22	$ 0.22
Bus Route	11" x 21"	2	$ 0.20	$ 0.20	$ 0.20	$ 0.20	$ 0.20
Bus Route	11" x 17"	2	$ 0.20	$ 0.20	$ 0.20	$ 0.20	$ 0.20
Bus Route	8.5 x 11"	2	$ 0.11	$ 0.11	$ 0.11	$ 0.11	$ 0.11

Year Three														TOTAL
Paper Size	# of Colors	Quantity Ordered												
		1- 9,999			10,000 - 19,999			20,000 - 24,999			35,000 - 49,999			
		Unit Price	Yearly Quantity	Total	Unit Price	Yearly Quantity	Total	Unit Price	Yearly Quantity	Total	Unit Price	Yearly Quantity	Total	
14.5" x 21.25"	4										0.22	36,225	$ 8,081.80	
11" x 21"	2				0.20	11,550	$ 2,350.43							
11" x 17"	2	0.20	140,700	$ 28,632.45	0.20	257,250	$ 52,350.38							
8.5" x 11"	2	0.11	139,650	$ 15,361.50	0.11	97,650	$ 10,741.50	0.11	42,000	$ 4,620.00				
Totals				$ 43,993.95			$ 65,442.30			$ 4,620.00			$ 8,081.80	$ 122,138.05

OVERALL 3 YEAR TOTAL	**$ 348,706.35**
CA Sales Tax	$ 27,024.74
OVERALL TOTAL INCLUDING TAX	$ 375,731.09

Metropolitan Transit System

Agenda Item No. 10

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

Hazardous and Universal Waste Management and Trauma Scene Clean-Up Services for San Diego Trolley, Inc. (SDTI) & San Diego Transit Corporation (SDTC) – Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2676.0-23 (in substantially the same format as Attachment A) with Clean Harbors Environmental Services, Inc. ("Clean Harbors") for the provision of Hazardous Waste and Trauma Scene Clean-Up Services for five (5) years for up to $1,912,145.96.

Budget Impact

The total cost of this contract is estimated to be $1,912,145.96 (Attachment C). The project will be funded by the SDTC and SDTI operating budgets. Although costs are incurred on an as-needed basis, the estimated costs over the 5-year contract period are as follows:

Contract Term	**Hazardous Waste**		**Trauma Scene Clean-Up Services**		**Total Amount**	
Agency	SDTC	SDTI	SDTC	SDTI	SDTC	SDTI
YEAR 1	$84,830.13	$233,156.41	$15,705.00	$15,580.00	$100,535.13	$248,736.41
YEAR 2	$84,830.13	$233,156.41	$15,705.00	$15,580.00	$100,535.13	$248,736.41
YEAR 3	$93,527.47	$256,976.04	$17,315.84	$17,177.84	$110,843.31	$274,153.88
YEAR 4	$98,201.02	$269,647.05	$18,179.43	$18,034.93	$116,380.45	$287,681.98
YEAR 5	$103,114.01	$283,402.86	$19,089.19	$18,937.19	$122,203.20	$302,340.05
Total	**$464,502.77**	**$1,276,338.77**	**$85,994.46**	**$85,309.96**	**$550,497.23**	**$1,361,648.73**
					GRAND TOTAL (5 Years)	**$1,912,145.96**

DISCUSSION:

MTS and North County Transit District (NCTD) jointly solicited proposals to secure a multiyear contract for Hazardous Waste and Trauma Scene Clean-Up Services. MTS generates waste streams, including but not limited to hazardous, universal and regulated medical waste in the maintenance and servicing of buses and rail cars. MTS is the lead agency for this solicitation.

MTS Policy No. 52, "Procurement of Goods and Services", requires a formal competitive process for procurements and service contracts over $150,000.00. On November 1, 2022, MTS issued a Request for Proposals (RFP) from qualified proposers to provide Hazardous Waste and Trauma Scene Clean-Up Services for five (5) years.

On December 2, 2022, a total of five (5) proposals were received and all five (5) proposals were deemed responsive and responsible.

Proposer Name	**Firm Certification**
Clean Harbors Environmental Services, Inc. ("Clean Harbors")	N/A
Environmental Management Technologies ("EMT")	N/A
HCI Environmental ("HCI")	N/A
NRC Environmental Services ("NRC")	N/A
Ocean Blue Environmental Services ("Ocean Blue")	Minority Business Enterprise (MBE), Small Business (SB), Woman-Owned Business (WBE)

An evaluation committee consisting of representatives from the MTS Finance, Environmental Health & Safety, and NCTD Quality Control departments met and scored the proposals based on the following evaluation criteria:

Evaluation Criteria	Total Possible Points
Qualifications of the Firm	20
Staffing, Organization, and Management Plan	25
Work Plan	30
Cost and Price	25
Total	**100**

The table below represents each Proposer's initial scores and rankings:

Proposer Name	Initial Cost	Technical Score	Cost Score	Total Score (Maximum total score: 100)	Ranking
Clean Harbors	$1,929,519.76	67.00	22.01	89.01	1
NRC	$1,916,700.53	65.00	21.84	86.84	2
Ocean Blue	$3,720,341.48	64.67	12.31	76.97	3
HCI	$1,797,989.09	48.00	25.00	73.00	4
EMT	$1,642,030.24	37.00	12.10	49.10	5

The committee invited the two proposers that were within the competitive range, Clean Harbors, and NRC, for interviews. Interviews were held on January 18, 2023, at which proposers were asked to make a presentation of their firm's services and provide clarifications on their proposal to MTS.

Following the interviews, MTS requested for a Best and Final Offer (BAFO) from both firms, which were received on January 20, 2023. The committee met a second time to re-evaluate and rescore the proposals based on the additional information gained during the interviews and the BAFO.

The table below reflects the final scores and rankings:

Proposer Name	Revised Cost	Technical Score	Cost Score	Total Score (Maximum total score: 100)	Ranking
Clean Harbors	$1,912,145.96	67.00	25.00	92.00	1
NRC	$1,916,700.53	65.00	24.58	89.58	2

Based on the objectives of this procurement, consideration of the evaluation criteria and Clean Harbors' technical and price proposals, the evaluation team determined that Clean Harbors presented the best value proposal to MTS.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. G2676.0-23 (in substantially the same format as Attachment A) with Clean Harbors for the provision of Hazardous Waste and Trauma Scene Clean-Up Services for SDTI/SDTC for SDTI/SDTC for five (5) years for up to $1,912,145.96.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft Agreement, MTS Doc. No. G2676.0-23
B. Scope of Work
C. Cost Form

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. G2676.0-23

HAZARDOUS AND UNIVERSAL WASTE MANAGEMENT AND TRAUMA SCENE CLEAN-UP SERVICES

THIS AGREEMENT is entered into this _____ day of _____, 2023 in the State of California by and between San Diego Metropolitan Transit System ("MTS"), a California public agency, and the following, hereinafter referred to as "Contractor":

Name: Clean Harbors Environmental Services, Inc.

Address: 42 Longwater Drive, P.O. Box 9149

Norwell MA 02061
City State Zip

Form of Business: Corporation
(Corporation, Partnership, Sole Proprietor, etc.)

Email: curtisg@cleanharbors.com

Telephone: 781.792.5370

Authorized person to sign contracts George L Curtis (Name) Executive Vice President (Title)

The Contractor agrees to provide services as specified in the conformed Scope of Work/Technical Specification (Exhibit A), Contractor's Cost/Pricing Form (Exhibit B), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit C), Federal Requirements (Exhibit D), and Forms (Exhibit E), and Forms (Exhibit F).

The contract term is for five (5) years effective April 1, 2023 through March 31, 2028.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $1,912,145.96 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

1. SCOPE OF WORK/TECHNICAL SPECIFICATIONS

1.1. INTRODUCTION

1.1.1. MTS

The San Diego Metropolitan Transit System "MTS" is a special district, with authority to provide public transportation services throughout San Diego County. MTS operates primarily light rail vehicle (LRV) and bus service. MTS generates waste streams including but not limited to hazardous, universal and regulated medical waste in the maintenance and servicing of buses and rail cars.

MTS maintains various service areas throughout San Diego County. The Agreement will cover the routine removal and disposal and analysis (as needed) of hazardous and universal waste at two (2) bus facilities (Imperial Avenue Division (IAD) and Kearny Mesa Division (KMD); and one (1) Trolley Yard. Due to the amount of hazardous and universal waste generated, the three (3) facilities are currently classified as Large Quantity Generators (LQG). Due to the large area of operation, on occasion, MTS may require waste management of non-routine waste streams services throughout the County of San Diego or as agreed upon by MTS.

1.1.2. NCTD

North County Transit District "NCTD" offers bus and rail services that are a vital part of San Diego's regional transportation network and connect with services offered by MTS. NCTD moves more than 12 million passengers annually by providing public transportation for greater North San Diego County. The family of transit services offered by NCTD includes commuter rail service (Coaster), light rail (Sprinter), bus system (Breeze), rural and on-demand service (Flex), and paratransit (Lift).

In this joint procurement, NCTD is seeking to award its own Agreement to a contractor to provide hazardous and biohazardous cleanup and disposal services at various NCTD facilities. NCTD and MTS are separate legal entities and will each have their own Agreement with Contractor.

1.1.3. JOINT NEEDS

Each agency's Agreement will cover the services discussed in this Scope of Work, and include cleanup, disposal, and removal of biohazardous waste at trauma scenes.

The ideal Contractor will be a firm that possesses all of the requisite licenses, permits, materials, equipment and personnel (Transporters, Emergency Responders and Technicians) to assist MTS and NCTD (the "Agencies" or individually "Agency", as applicable) and their respective project managers with hazardous and universal waste management to ensure the agencies remain compliant to applicable laws, regulations and reporting requirements, including but not limited to California State Department of Toxic Substance Control (DTSC) and Federal Environmental Protection Agency (EPA) regulations pertaining to the storage and transport. For the purposes of

this solicitation, hazardous waste will refer to hazardous waste, universal waste, and biohazardous waste.

Typical right-of-way cleanup and removal for the Agencies will include illegally dumped waste that is hazardous to people, animals, and the environment, spills, dead animals, and trespasser strike trauma cleanup. Additionally, some of the Agencies' properties may contain encampments and may contain biohazardous material such as syringes, feces, urine, personal hygiene items and other material which could pose a health threat that will need to be managed and removed. Typical facilities clean up and removal will include oil fuel, grease, solvents, paints, and coolant. Facilities clarifier services, oil/water separator, lift station/sewer and any spilled fluid and debris pumping/cleanup will be required. Disposal of batteries, appliances and various lighting lamps will be needed as well. The Contractor will work on its own in the field and/or in conjunction with the Agencies' staff or designees.

The Contractor shall provide all labor, materials, and equipment required for all work, including removing and disposing of collected waste, procuring all necessary materials, and performing all other work necessary in accordance with the Scope of Work.

1.2. DEFINITION OF TERMS/ACRONYMS

Contractor	A firm that has entered into Agreements with MTS and NCTD for the removal and disposal of hazardous, universal, biohazardous waste, and/or trauma scene clean up.
Subcontractor	A firm that enters into a legal agreement with the Contractor to provide services, on behalf of the Contractor, as specified in the Scope of Work. The Subcontractor can be a Transporter, Emergency Responder, Treatment Storage and Disposal Facility (TSDF) or a Laboratory.
Transporter	The firm responsible for transporting waste from an Agency's facility or incident, to a recycling or disposal facility. The transporter could either be the Contractor or a Subcontractor. The secondary transporter shall perform the work should the primary transporter be unable to provide services.
Emergency Responder	The firm responsible for remediation of hazardous material and biohazard incidents. The emergency responder shall respond to incidents, remediate the scene, and transport any waste generated to an approved TSDF. The work of the emergency responder may be conducted by the Contractor or its subcontractor. There will be a primary emergency responder and a secondary emergency responder. The secondary emergency responder shall perform the work should the primary be unable to provide service.

Treatment, Storage, and Disposal Facility (TSDF)	The firm that is licensed to accept hazardous waste. The TSDF shall properly and lawfully handle, treat, bulk, or dispose of the Agencies' hazardous waste.
Laboratory	The firm that shall perform chemical analysis of waste when needed.

1.3. LICENSE REQUIREMENT

Contractor must adhere to all federal, state and local license requirements, and possess and maintain the applicable permits required per federal, state and local regulations. Contractor must also show a history of compliance to federal, state, and local regulations.

1.4. GENERAL REQUIREMENTS

1. The Contractor shall submit a list of at least three (3) current clients/references.

2. The operator of the transporting vehicle shall not, at any time discharge solid or liquid waste material onto the Agencies' property, sanitary sewer or storm drain systems.

3. The operator of the transporting vehicle shall notify the Project Manager, or designated facility representative, when work is completed and ready for final inspection.

4. All regulations, including but not limited to Department of Toxic Substances Control and Department of Transportation regulations, pertaining to the transporting of hazardous materials must be implicitly followed.

5. Contractor must provide copies of all applicable licenses and permits at the time of its renewal or modification. It is the Agencies' prerogative to periodically review the status of compliance at any time during the term of the Agreement.

6. After award of the Agreement, Contractor technicians and representatives shall be required to attend Roadway Worker Protection (RWP) training and any other safety training, as required by the Agencies at no additional cost to Agencies. The Agencies' respective Project Managers shall coordinate the training date and time at the designated facility.

7. All costs associated with the storage, packaging, analysis, transportation, disposal and documentation of waste must be in the per unit disposal fee. The per unit disposal fee shall include all associated fees including, but not limited to, any of the following charges:

    a. Labor
    b. Travel time
    c. Fuel/truck/transport fees
    d. Supplies including containers and personal protective equipment (PPE)
    e. Documentation fees

1.5. SCOPE OF SERVICES

The requirements of this scope of services are intended to assure that all waste streams are handled and disposed of in a legal manner by fully qualified, licensed and permitted Contractor and its subcontractors, which shall limit and reduce the liability in the transportation and disposal of such wastes.

1.6. SCOPE OF WORK – HAZARDOUS AND UNIVERSAL WASTE

1.6.1. HAZARDOUS WASTE REMEDIATION

The Transporter shall package, analyze, transport and dispose of hazardous waste generated by the Agencies. The Agencies' respective Project Managers will contact the Contractor to schedule pick-ups of hazardous waste at various facilities by a Transporter. Contractor shall pick up waste within five (5) business days of contact by the Agency. The Agency will provide an inventory of the material that is to be transported. The Transporter must be fully registered and permitted by the California Department of Toxic Substances Control (DTSC) and have an Environmental Protection Agency (EPA) identification (ID) number. The Transporter shall not transfer custody of any waste to a Transporter or TSDF that does not hold a valid registration.

The Transporter shall follow all of the Uniform Hazardous Waste Manifest procedures as outlined in California Code of Regulation (CCR) Title 22, 6623.20. The Transporter shall have a manifest in his or her possession at all times while transporting hazardous waste. Hazardous waste must be delivered to the authorized facility designated on the manifest. The Contractor shall keep a copy of the signed manifest for three (3) years.

Vehicles, containers, and equipment used for transporting hazardous waste must be in sound condition and designed or maintained to contain hazardous waste. Vehicles must be supplied with a spill kit, at all times. Waste containers must be securely fastened while inside the vehicle to minimize the risk of shifting during transport. If a discharge or spill of hazardous waste occurs during transportation, the Transporter shall take appropriate immediate action and will be responsible for the discharge cleanup at no cost to the Agency.

The Contractor shall provide a qualified and licensed secondary waste Transporter that can be called upon to transport waste in the event that the primary Transporter cannot perform the service. The secondary Transporter must meet all of the qualifications outlined herein.

1.7. ROUTINE REMEDIATION TASKS

Contractor shall package, analyze, remove, transport, and dispose of industrial hazardous waste generated by the Agencies. Waste streams may include, but shall not be limited to the following:

- Aerosols

- Oily Absorbent Materials (Oil Soaked Rags or absorbent)
- Sludge (Debris, Oil, and Grease waste)
- Water and oil mixtures
- Contaminated Gasoline
- HVAC R134 Refrigerant, including other types of refrigerants
- Brake Grindings
- Waste oils (Non-Recyclable)
- Anti-freeze
- Waste Paint: Latex and oil base liquids, Paint Sludge, and Paint Soaked Solids
- Drained and Oil & Fuel Filters
- Universal Wastes including, but not limited to:
    - Fluorescent Lighting Tubing
    - Light Emitting Diode (LED) lighting
    - Lithium Ion Batteries
    - Alkaline (dry filled) Batteries
    - Alkaline (wet filled) Batteries
    - Electronic Lamps, including but not limited to fluorescent light (bulbs, tubes, compact, HID), metal halide, sodium vapor, etc.
    - Mercury containing wastes, including mercury switches from appliances and vehicles
- Electrical ballast: polychlorinated biphenyl (PCB), and non-PCB
- Leaking Ballast (PCB)
- Ballast (HID)
- Regulated Medical Waste (primarily sharps and other infected items)
- Paint booth filter
- Waste paint containing lead
- Silica Sand
- Rock/Dirt/Soil contaminated with Oil
- Clarifier, oil-water separator pumping
- Septic pumping
- Household appliance disposal
- Pressure washing
- Treated wood waste disposal (ties)
- Encampment cleanup
- E-waste (not batteries)

1.8. EMERGENCY RESPONSE

Hazardous material incidents related to Agencies' vehicles, equipment, and facilities are primarily managed by the Agencies' staff members. At the respective Agency's discretion, Contractor shall ensure that the designated Emergency Responder shall respond to hazardous

material incidents at the Agency and emergency sites within one (1) hour of notification by the Agency's respective Project Manager or designee. The Emergency Responder must be available, 24-hours a day, seven days a week, 365 days a year.

Contractor's trained personnel shall be deployed with appropriate equipment to respond to hazardous material releases. An estimated ten (10) hours will be used to remediate hazardous material incidents per year for MTS. NCTD estimates one hundred and twenty (120) hours will be used to remediate hazardous material incidents per year. These are estimates only for the Agencies.

With regard to emergency responses, time is of the essence. The emergency response team (primary or secondary) shall respond to hazardous material incidents at an Agency's facilities and emergency sites within one (1) hour of notification by the Project Manager or designee, 24-hours a day, seven days a week, 365 days a year.

Note: In the event the Contractor is not able to meet the emergency response time and not able to perform the emergency service (including other services required and covered within the scope), the Agency may request quotes from other firms and issue a separate Purchase Order (PO).

Hazardous material incidents will require the remediation of vehicle fluids such as, but not limited to, the release of diesel fuel, engine oil, hydraulic fluid, and antifreeze on public rights-of-way and Agency facilities. These incidents shall require the Contractor to respond to the location with trained personnel, including personnel trained to perform confined space entry, if necessary. The trained personnel shall be expected to remediate the incident using absorbent materials including but not limited to booms, clay and absorbent pads. The Agency Project Manager or designee may also request power wash equipment, water tankers and vacuum trucks to respond to the location to perform washing, flushing, and vacuuming of contaminated storm drains.

The Agencies organize and oversee multiple homeless encampment clean up events on their Right-of-Way or Agency properties. In some occasions, hazardous substances (household cleaning products, fuels, or regulated medical waste) may be found. Contractor might be called out to as an emergency response to remediate, transport and dispose of the hazardous waste substances.

All waste generated during the remediation of a hazardous material incident shall be packaged and labeled in accordance with federal, state and local environmental regulations. Furthermore, Transporters hauling hazardous waste shall have the hazardous waste manifested and the vehicles properly placarded in accordance with Department of Transportation regulations.

1.9. TREATMENT, STORAGE, AND DISPOSAL FACILITY (TSDF)

The Contractor shall not cross international borders to deliver waste outside of the United

States. Contractor shall propose the TSDF for each of the waste streams identified in the scope to the Agency Project Manager or designee for approval. The TSDF shall meet all of the qualifications outlined herein and perform all waste management activities in accordance with 40 CFR Parts 264/265 subpart A-E.

The TSDF must have a valid permit to engage in hazardous waste management. The permit authorizes the types of waste the TSDF can accept and the treatment, storage and/or disposal activities that can be conducted. The permit also outlines the operating conditions and record keeping procedures that the TSDF must follow to ensure that wastes will be handled according to EPA rules. The TSDF must operate in a manner to prevent release. The TSDF must adhere to the regulations outlined in the Land Disposal Restrictions program. The TSDF will notify the Agency of final disposal of the waste. This shall include a certificate of recycling if applicable.

1.10. LABORATORY SERVICES

Laboratory analysis shall be conducted by an independent Laboratory that carries current National Environmental Laboratory Accreditation Program (NELAP) and state of California certifications for each test method. The Laboratory shall be certified by the State of California and NELAP.

Laboratory samples may be in a solid, liquid or sludge form. Laboratory services shall include pickup, sample extraction, transportation, delivery, analysis and reporting.

All waste stream profiles shall be included to determine each appropriate profile including non-routine “Lab Pack” services. Approximately two (2) Lab Pack services are estimated to be requested annually. Agency does not guarantee the amount of samples that may be submitted.

The Laboratory shall meet all of the qualifications outlined herein.

1.11. NON-ROUTINE REMEDIATION “LAB PACK”

Contractor shall package, analyze, remove, transport, and dispose of hazardous waste gathered by Agency.

1.12. DISPOSAL METHOD REFERENCE

Agency policy is to promote recycling and reuse as disposal options over other disposal methods whenever more than one method is authorized by regulations for a particular type of waste. Contractor shall adhere to this policy in providing the services under this Contract. Accordingly, Contractor shall utilize the following disposal methods, prioritized from the highest to lowest:

1) Recycling/ Reuse (treatment may be needed to make waste recyclable),
2) Alternative fuel,
3) Destructive Incineration,

4) Treatment (treatment for acceptable sewer discharge),
5) Bioremediation,
6) Class I Landfill Disposal.

1.13. GENERAL REQUIREMENTS

A. The Transporter must report at prearranged times and facilities for scheduled hazardous waste pickups as directed by the Agency Project Manager or designee. Agency reserves the right to perform a single pickup or multiple pickups on the same day and at various facilities. In either instance, the disposal cost will be based on the contracted rate.

B. The Contractor shall provide Agency Project Manager with a sample of liquid or solid waste collected from an Agency facility whenever requested by the Agency Project Manager.

C. The Transporter shall ensure that hazardous waste drums are properly labeled and marked; trucks transporting hazardous waste shall be properly placarded in accordance with Department of Transportation and Department of Toxic Substances Control regulations.

D. Contractor shall provide documentation of proper disposal including, but not limited to completed manifests, certificate of recycling, and bill of lading.

E. Contractor shall haul waste within five (5) business days of notification and contact Authorized Waste Contact within one (1) hour of site arrival.

F. Disposal vehicles shall have a spill kit with adequate supplies readily available in the event of a spill.

G. The Contractor or its subcontractor may remove and transport the waste for removal and transportation services. In either case, only a fully licensed and permitted hazardous waste Transporter meeting all federal, state, and local regulations for the transportation of hazardous wastes shall be allowed to perform the services.

H. The operator of the transporting vehicle shall report to an Authorized Waste Contact. Authorized Waste Contacts will be provided upon award. Transporter's driver must possess a State of California "B" driver's license for transporting waste materials in drums. Also, the Transporter's driver must possess a State of California "A" driver's license for transporting waste materials in Transporter tanker trucks.

I. Each hazardous waste shipment shall be accompanied by a Uniform Hazardous Waste Manifest. Contractor shall prepare and complete a separate Uniform Hazardous Waste Manifest for each hazardous waste pickup. Agency will provide the Environmental Protection Agency Identification (EPA ID) Number for each facility to the Contractor.

J. When applicable, the removal of universal waste from Agency facilities shall be documented on a Bill of Lading in accordance with Department of Transportation and Department of Toxic Substances Control regulations.

K. As required, shipment shall be accompanied with a Land Disposal Restriction (LDR). The operator of the transporting vehicle shall complete the LDR in accordance with Title 49, Code of Federal Regulations, Section 268 Subpart C or revisions.

L. Prior to transporting the hazardous waste from a facility, the operator of the transporting vehicle shall provide the Project Manager or designated facility representative with one (1) legible signed copy of the completed Uniform Hazardous Waste Manifest. In the event of a universal waste disposal, the operator shall provide a signed copy of the bill of lading.

M. The Transporter shall submit legible copies of the Uniform Hazardous Waste Manifest completed by generator, hauler and TSDF facility operator, to public agencies within thirty (30) days of the transportation of hazardous wastes.

N. The Transporter shall be registered with Chemical Emergency Center (CHEMTREC) or another recognized emergency call center. The 24-hour emergency response number shall be placed on every Uniform Hazardous Waste Manifest.

O. Contractor shall profile the waste streams initially and as requested by Project Manager. This shall include providing the appropriate technical name description(s) for disposal of hazardous waste material. Laboratory analysis may be required in order to classify the waste See Section 5.4.1, item #5 for additional requirements regarding the testing Laboratory.

P. The operator of the transporting vehicle must have a California Department of Motor Vehicle (DMV) Hazardous Materials/Waste Certificate endorsement and must present this certificate to the Project Manager or designated facility representative upon request.

Q. Contractor must ensure that sufficient quantity of storage containers are provided to temporarily store waste on customer's site. Storage containers shall be leak-resistant and fitted with a pre-printed label (indicating the appropriate waste stream for the container), cover, band strap, and filler cap (if applicable).

R. Hauling shall be scheduled with an Authorized Waste Contact. Only Authorized Waste Contacts are authorized to sign waste manifests and only the specified waste listed on the manifests shall be transported.

1.14. QUALIFICATIONS OF THE WASTE TRANSPORTERS

1. The Transporter shall be fully licensed and permitted for the transportation of hazardous waste and universal waste. The Transporter and subcontractor/s (if any) must comply

with federal, state and local licensing requirements.

2. The Transporter must be in compliance with all federal, state and local regulations for transporting and disposing of hazardous and universal waste and biohazardous waste.

3. The Transporter shall have adequate certified personnel to perform the required scope of work within the projected schedule.

4. The Transporter's employees shall have completed and provide evidence all required training.

5. The Transporter's vehicles shall comply with California Code of Regulations, Title 13 and the California Vehicle Code.

6. Agency may request, as necessary, Transporter to submit a current "MISTER" report from the California Highway Patrol.

7. The Transporter must have at least five (5) years of experience conducting required services of similar scope.

1.15. QUALIFICATIONS OF THE TSDF

1. The TSDF shall be properly licensed and permitted for the treatment, storage, and disposal of the Agencies' hazardous waste and universal waste.

2. The TSDF shall have the necessary capacity for disposal of Agencies' hazardous waste and universal waste.

3. The TSDF staff shall have the required license, permits and employee training to perform the required work.

4. The TSDF shall have the required general liability coverage and pollution coverage.

5. The TSDF shall have a monitoring plan to ensure waste streams are properly treated and/or disposed.

6. The TSDF for any waste stream shall be located within the borders of the United States.

7. The approved TSDF cannot be changed unless the Contractor makes a request in writing; and it is approved by Agency.

5.15.1 QUALIFICATION OF THE LABORATORY

Laboratory staff shall have the licenses/certifications to perform analyses of the substance types generally described in this Scope of Work.

5.15.2 QUALIFICATIONS OF THE EMERGENCY REPONDER

1. The Emergency Responder shall be fully licensed and permitted for the transportation of hazardous waste, medical waste and universal waste. The Emergency Responder and subcontractor/s (if any) must comply with federal, state and local licensing requirements.

2. The Emergency Responder shall be in compliance with all federal, state and local regulations for transporting and disposing of hazardous waste and universal waste.

3. The Emergency Responder shall have certified personnel to perform the required scope of work within the projected schedule and said personnel must be properly trained.

5.15.3 SPILLS, CONTAINMENT AND CLEAN-UP

The Contractor shall be solely responsible for any and all spills and leaks during the performance a resulting contract, which occur as a result of, or are contributed to, by the actions of its agents, employees, or subcontractors. The Contractor shall clean-up such spills or leaks to the satisfaction of the onsite Agency representative and in a manner that complies with applicable local, state and federal laws and regulations. The clean-up shall be at no additional cost to the Agency. The Contractor shall report all such spills or leaks regardless of their quantity to the applicable Agency immediately upon discovery. A written follow-up report shall be submitted no later than 24 hours after the initial telephone report. The written report shall be at a minimum include the following:

A. Description of item spilled (including identity, quantity, manifest no, etc.)
B. Whether the amount spilled is EPA/state reportable, and if so whether it was reported.
C. Exact time and location of spill including description of the area involved.
D. Containment procedures initiated.
E. Summary of all communications the contractor had with included but not limited to press, government officials, MTS, NCTD, and any third-party agency.
F. Description of clean-up procedures employed or to be employed at the site including the disposal location of spill residue.
G. Work orders shall have the following information.
    1) Description of the specific services performed
    2) Staff titles and hours worked
    3) Methods and Materials used
    4) Name and address of disposal facilities
H. Contractor shall be required to provide a 24-hour emergency contact. This person(s) shall have authority to provide what is needed in an emergency. Failure to respond may be grounds for default or termination.
I. Contractor shall furnish the labor force and equipment necessary to meet the needs of each Agency. Cost estimates for identified work items, including labor, equipment, materials and supplies to be used, shall be furnished to the applicable Agency for review/ authorization prior to commencement of work.

1.16. SCOPE OF WORK – TRAUMA SCENE CLEANUP

Trauma scene incidents requiring the Emergency Responder to provide personnel and equipment occur approximately twenty-five (25) times annually for MTS. An estimated 200 hours per year will be used to cleanup trauma scene incidents for MTS. Trauma scene incidents requiring the Emergency Responder to provide personnel and equipment occur approximately twenty-five (25) times annually for NCTD. An estimated 384 hours per year will be used to cleanup trauma scene incidents for NCTD. These are estimates only for the Agencies.

Contractor shall respond to a request for a trauma scene cleanup with all the necessary tools, materials, equipment, containers, personal protective gear, traffic control equipment, and personnel to efficiently, and effectively clean the location.

Agency requires that the Contractor provide a qualified and licensed secondary emergency responder that can be called upon to respond to Agency incidents in the event that the primary responder cannot perform the service. The secondary emergency responder must meet all of the qualifications outlined herein.

5.16.1 EMERGENCY RESPONSE

1. Biohazardous waste incidents shall require the cleanup of, but not limited to, blood and tissue at a trauma scene on public highways, rail rights-of-way and Agency facilities. These incidents shall require the Contractor to respond to the scene with trained personnel and equipment. The Contractor shall be expected to clean and disinfect the scene including the public highway, railroad ties, tracks, rail ballast, underground rail stations and tunnels. The Contractor shall comply with all provisions of the Medical Waste Management Act and revisions.

2. With regard to emergency responses, time is of the essence. The emergency response team (primary or secondary) shall be expected to respond to biohazardous waste incidents at Agency facilities, public highways, rail rights-of- way and other emergency sites within one (1) hour of notification by the Agency Project Manager or designee, 24-hours a day, seven days a week, 365 days a year.

   Note: In the event the Contractor is not able to meet the emergency response time and not able to perform the emergency service (including other services required and covered within the scope), Agency may request quotes from other firms and issue a separate Purchase Order (PO).

3. The Contractor shall clean and disinfect rail/bus equipment at the trauma scene and/or at the Agency rail or bus facility, as directed by the Project Manager or authorized delegate. A list of authorized delegates will be provided upon award.

4. All waste material, contaminated with blood and/or tissue, generated in the cleanup of

a trauma scene shall be packaged and labeled in accordance with federal, state and local health department regulations. Furthermore, waste material shall be transported by a registered medical waste Transporter to a permitted medical waste treatment facility.

5.16.2. GENERAL REQUIREMENTS

1. Contractor or the subcontractor responsible for Trauma Scene Cleanup shall be fully licensed and permitted for the transportation of medical waste. Trauma Scene Cleanup Contractor responsibilities must be carried out in compliance with federal, state and local licensing requirements.

2. Contractor or the subcontractor responsible for Trauma Scene Cleanup shall be in compliance with all federal, state and local regulations for transporting and disposing of trauma scenes. Treatment shall be by a Registered Treatment Facility with California Department of Public Health.

3. Contractor or the subcontractor responsible for Trauma Scene Cleanup shall have certified personnel to perform the required scope of work within the projected schedule and said personnel must be properly trained.

4. Contractor or the subcontractor responsible for Trauma Scene Cleanup shall be responsible for removal and transportation services. In either case, only a certified trauma scene waste management practitioner meeting all federal, state, and local regulations for the transportation of hazardous wastes shall be allowed to perform the services.

5. The operator of the transporting vehicle shall report to an Authorized Waste Contact. Authorized Waste Contacts will be provided upon award. Also, the Transporter's driver must possess a State of California "A" driver's license for transporting waste materials.

6. Each hazardous waste shipment shall be accompanied by a tracking document. Contractor shall prepare and complete a separate tracking document for each hazardous waste pickup. Agency will provide the Environmental Protection Agency Identification (EPA ID) Number for each facility to the Contractor.

1.17. CONTRACTOR QUALIFICATIONS

Contractor and subcontractors shall maintain current permits and licensing throughout the life of the Agreement. Should any permit, license, or certification be revoked or expire, the Contractor must notify Agency immediately.

Contractor, subcontractors and Waste Handlers must maintain a spill response plan. Contractor must ensure that Waste Handlers must have **HAZWOPER training**. As new staff is added during the Agreement term, Contractor shall submit new staff training records to MTS attention: **MTS Environmental Health Safety Specialist**, contact information to be provided. For NCTD,

such records shall be sent to: Contact information to be provided.

The Agency Project Manager or representative may inspect and audit the TSDF and Transporter at a mutually agreed upon time prior to the award of Agreement. Agency personnel may also inspect and audit the facilities on an annual basis. Table 2 outlines the minimum qualifications that must be maintained throughout the term of the Agreement. Contactor that handles Agency waste or responds to Agency incidents must be minimally qualified.

Table 2: Minimum Qualifications

Description	TYPE								
	Contractor	Primary Transporter	Secondary Transporter	Primary Emergency Responder	Secondary Emergency Responder	TDSF	Contractor	Primary Contractor Transporter	Secondary Contractor Transporter
Certificate of Liability Insurance	X	X	X	X	X	X	X	X	X
DMV Motor Carrier Permit	X	X	X	X	X		X	X	X
DTSC: Hazardous Waste Transporter Registration		X	X	X	X				
DOT: Hazardous Materials Certificate of Registration		X	X	X	X			X	X
CA Department of Highway Patrol: Hazardous Materials Transportation License		X	X	X	X				
Trauma scene waste management practitioner certification				X	X				
Medical waste transporter certification				X	X				
State EPA DTSC: Hazardous Waste Facility Permit						X			
State-specific environmental permits or permits to operate for facilities outside of California						X			
EPA: Identification Number		X	X	X	X	X			

Note: Contractor shall notify and provide any changes or updates (as applicable) to the above list and send to MTS, attention**, MTS Environmental Health Safety Specialist**, contact information to be provided. For NCTD, such records shall be sent to: Contact information to be provided.

1.18. LOCATIONS. Below is a listing of Agency facilities that will require hazardous waste disposal and trauma clean-up services. Agencies reserve the right to add or remove facilities

during the life of the Agreement. The locations shall also include all areas maintained and owned by the Agency.

A. MTS locations of services provided under the Agreement will be in MTS jurisdiction as shown in ATT 2 (MTS Jurisdiction Boundary Map). Below are the three MTS industrial locations that require hazardous waste pick (routine services):

MTS: SAN DIEGO TRANSIT CORPORATION (SDTC)	
Imperial Avenue Division (IAD)	100 16th Street, San Diego, CA 92101
Kearny Mesa Division (KMD)	4630 Ruffner Street, San Diego, CA 92111

MTS: SAN DIEGO TROLLEY, INC. (SDTI)	
Trolley Yard	1535 Newton Avenue, San Diego, 92113

B. NCTD locations of services provided under the Agreement will be:

1. Railroad Right-of-Way

   A. San Diego Subdivision: (60.1-mile section of Los Angeles – San Diego – San Luis Obispo Rail Corridor (LOSSAN Corridor) from the Orange County Line (MP 207.4) south to the City of San Diego's Santa Fe Depot (MP 267.5)), average of 100' wide, with sections up to 200' wide.
   B. Escondido Subdivision (22-mile section Oceanside (MP 99.3) Escondido (MP 121.66)), average of 100' wide, with sections up to 200' wide.

2. <u>Type A Facilities – Operations and Maintenance</u>

   A. BREEZE Bus Operations Facility – West Division
   B. BREEZE Bus Operations Facility – East Division
   C. SPRINTER Maintenance Facility
   D. COASTER Maintenance Facility

3. <u>Type B Facilities – Passenger Stations and Transit Centers</u>

   A. COASTER Stations
      1. Carlsbad Village Station
      2. Carlsbad Poinsettia Station
      3. Encinitas Station
      4. Solana Beach Station
      5. Sorrento Valley Station

6. Santa Fe Depot

B. SPRINTER Stations
   1. Coast Highway Station
   2. Crouch Street Station
   3. El Camino Real Station
   4. Rancho Del Oro Station
   5. College Boulevard Station
   6. Melrose Drive Station
   7. Vista Civic Center
   8. Buena Creek Station
   9. Palomar College Station
   10. San Marcos Civic Center Station
   11. Cal State University San Marcos Station
   12. Nordahl Road Station

C. Transit Centers
   1. Oceanside Transit Center
   2. San Luis Rey Transit Center
   3. Escondido Transit Center
   4. Vista Transit Center
   5. Palomar College Transit Center

4. Type C Facilities – Office Buildings

   A. 810 Mission Avenue, Oceanside (General Administration Office)
   B. 311 South Tremont Street, Oceanside (Tremont Building)
   C. 501 Mission, Oceanside

5. Type D Facilities – Miscellaneous

   San Marcos Lots (Rancheros Drive & Woodland Parkway)
   Additionally, please see a map of NCTD's service area here: NCTDSystemMap.pdf (gonctd.com)

1.19. SAFETY AND UNIFORMS

Contractor shall be responsible to perform all services in a safe manner. Agencies reserve the right to stop all work, at any time, if unsafe practices are observed. All Contractor representatives shall adhere to the Contractor's health and safety plan and observe the following requirements:

1. Steel-toed safety shoes shall be worn on Agency properties at all times;

2. Reflective safety vests shall be worn at all times while on Agency properties;

3. The posted 10 MPH speed limit and stop signs shall be adhered to by all Contractor vehicles;

4. Smoking is strictly prohibited on all Agency facilities except at clearly marked designated smoking areas;

5. Personal cell phone usage is prohibited at an agency response site;

6. The use of cell phone is not allowed if services are performed around the rail track. Contractor shall abide by California Public Utilities Commission (CPUC), General Order 172 - Prohibited Use of a Personal Electronic Device.

7. Contractor shall not discharge waste or any other material into Agencies' tanks, drains, sumps, bins, clarifiers, storm drains or onto Agency property;

8. Contractor vehicles shall be clearly identified with signage indicating Contractor's business name and telephone number(s);

9. Contractor employees or representative entering Agency properties shall wear uniforms and/or badges that clearly indicate Contractor's business name and employee name;

10. Contractor technicians and representatives shall be required to attend, at no cost, Agency Rail Safety Training, prior to performing any services. Contractor personnel will not be allowed to perform services without this training, and

11. Contractor technicians and representatives shall be required to attend, at no cost, Agency Environmental Management System Training, prior to performing any services.

1.20. CONTRACTOR DELIVERABLES

Training

Contractor staff working on or near rail right-of-way including MTS Trolley Yard or NCTD rail sites, shall complete annual Roadway Worker Protection Training.

Contractor shall be available to perform service on a 24-hour, seven day per week, 365 day a year basis. Contractor shall provide ad hoc reports as requested by Agency.

1.21. AGENCY RESPONSIBILITIES

1. Access shall be provided to Contractor to facilities for applicable services;
2. Contractor badges shall be provided to authorized Contractor employees upon commencement of Agreement;
3. A valid EPA ID of each serviced location shall be provided;

4. Agency will indicate what type of waste, location, and quantities on hand for each routine service call; and authorize disposal facilities.

1.22. ACCEPTANCE AND ACCURACY OF SERVICES

Contractor shall be solely responsible for providing timely and accurate documentation throughout the term of the Agreement. Contractor shall be responsible for all additional costs due to inaccurate and/or incorrect profiling of waste streams due to Contractor negligence. If Contractor is unable to haul waste within five (5) business days of notification, Agency may coordinate for another Contractor to haul the waste at the Contractor's expense. At no time shall either Agency pay for Contractor's or its subcontractors' negligence and Contractor shall be solely responsible for re-documentation and re-profiling of any and all documents that are found to be inaccurate.

1.23. PERIOD OF PERFORMANCE

The term of the agreement shall be for five (5) years period effective April 1, 2023 through March 31, 2028.

1.24. TRANSITION

In the event there is a need to transition from the current contractor to a new Contractor, the process will be as shown below:

MTS:

A. Current MTS Agreement terminates on March 31, 2023.

B. On or about February 1, 2023 current contractor shall start a transition of the services to new Contractor, without any interruption of or adverse impact on services (at a minimum, 60 days prior to termination of current agreement).

NCTD

A. NCTD anticipates awarding the contract on January 19, 2023.

The current and new Contractor shall coordinate and select a time that has the least impact to client services.

1.25. DISENTANGLEMENT

1.25.1. DISENTANGLEMENT PROCESS:

1. The Disentanglement process for the Agreement awarded from this RFP shall begin on any of the following dates:

   - the date designated by Agency not earlier than sixty (60) days prior to the end of current term, that Agency has elected not to exercise option year/s;

- the date Agency notifies Contractor that no funds or insufficient funds have been appropriated so that the Agreement shall be terminated for convenience;

- the date any Termination Notice is delivered, if Agency or Contractor elects to terminate any or all of the services pursuant to the Agreement.

2. Contractor shall be required to perform its Disentanglement obligations on an expedited basis, as determined by Agency, if Agency terminates the Agreement for cause.

3. Contractor shall be required to provide full cooperation. Information shall be complete and detailed to enable Agency or designee to fully assume and continue a smooth transition with no interruption of services.

1.25.2. GENERAL OBLIGATIONS

1. All services related to Disentanglement shall be deemed a part of the base services and shall be performed by Contractor at no additional cost to Agency. Contractor's obligation to provide the services shall not cease until Disentanglement is satisfactory to Agency, and delivered in writing.

2. Contractor shall provide all information regarding the services, including data conversion, files, interface specifications, training staff assuming responsibility, and related professional services (if applicable).

3. Contractor shall provide for the prompt and orderly conclusion of all work including documentation of work in process to assure an orderly transition to Agency or designee.

1.25.3. DELIVERY OF DOCUMENTATION:

Contractor shall deliver to Agency or designee all documentation and data related to the service, in format as requested by Agency, and Contractor shall destroy all copies not turned over to Agency, all at no cost to Agency.

1.26. PRICING

Proposers shall provide pricing for all line items and for all years using the Cost Proposal Forms, which are included in this solicitation. Failure to do so may deem the proposal as non-responsive. The estimated quantities are for bidding purposes only, not actual amounts to be used. The estimated quantities do not commit the Agencies to authorize any orders/usage to be executed. Actual usage may vary more or less than the cost proposal forms suggest.

Pricing submitted shall be firm fixed price and must be inclusive of all costs, including but not limited to, transportation containers, fuel, recycling, hauler, facility, travel, insurance, etc.

1.27. PAYMENT

MTS

MTS shall process an invoice for payment within thirty (30) days from invoice date. Contractor shall reference the MTS 10-digit PO number on all invoices, and shall submit an itemized invoice along with supporting delivery receipts to the following email address: AP@sdmts.com

NCTD

NCTD's invoice process is set forth in its Agreement.

Both Agencies

NOTE: ***ADVANCED PAYMENT IS NOT ALLOWABLE.***

The following documents are required with any invoice prior to approval for payment:

A. Service order that includes number of containers removed from each facility.
B. Uniform Hazardous Waste Manifest with all appropriate legal signatures, including those of the TSDF facility within thirty (30) days of pickup, as applicable.
C. Land Disposal Restriction form with required information and signatures, as applicable.

MTS COST PROPOSAL FORMS
HAZARDOUS AND UNIVERSAL WASTE MANAGEMENT AND TRAUMA SCENE CLEAN-UP SERVICES RFP
MTS DOC. NO. G2676.0-23

SAN DIEGO TRANSIT CORP. (SDTC) -- Rev.4

I. HAZARDOUS AND UNIVERSAL WASTE

For each waste stream or category include all costs per unit. If not applicable or is a "no charge" to MTS, indicate so with **N/A** or **zero ($0.00)**. MTS does not guarantee that it will generate any or all of the items listed below. The prices will be used as a reference for base prices in each waste category for the contract period.

ROUTINE WASTE				YEAR 1 (4/1/23 - 3/31/24)		YEAR 2 (4/1/24 - 3/31/25)		YEAR 3 (4/1/25 - 3/31/26)		YEAR 4 (4/1/26 - 3/31/27)		YEAR 5 (4/1/27 - 3/31/28)	
#	DESCRIPTION	ESTIMATED ANNUAL QTY*	UNIT OF MEASURE (UOM)	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST
1	Absorbent material (clay, rags, dirt, booms) with oil, diesel, and /or antifreeze)	20	55 Gallon	$232.68	$4,653.60	$232.68	$4,653.60	$256.53	$5,130.60	$269.36	$5,387.20	$282.83	$5,656.60
2	Absorbent material (clay, rags, dirt, booms) with gasoline, paint, solvent and/or thinner	10	55 Gallon	$425.63	$4,256.30	$425.63	$4,256.30	$469.26	$4,692.60	$492.72	$4,927.20	$517.36	$5,173.60
3	Waste engine fuels and lubricants, including but not limited to diesel fuel, brake fluid, engine oil, transmission fluid, gear, HVAC and hydraulic oil	10	55 Gallon	$216.22	$2,162.20	$216.22	$2,162.20	$238.38	$2,383.80	$250.30	$2,503.00	$262.82	$2,628.20
4	Engine filters with oil	10	55 Gallon	$283.75	$2,837.50	$283.75	$2,837.50	$312.84	$3,128.40	$328.48	$3,284.80	$344.90	$3,449.00
5	Gasoline	0	55 Gallon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Aerosol cans	10	55 Gallon	$382.50	$3,825.00	$382.50	$3,825.00	$421.71	$4,217.10	$442.80	$4,428.00	$464.94	$4,649.40
7	Biological waste	4	55 Gallon	$454.00	$1,816.00	$454.00	$1,816.00	$500.54	$2,002.16	$525.57	$2,102.28	$551.85	$2,207.40
8	Sharps	4	55 Gallon	$454.00	$1,816.00	$454.00	$1,816.00	$500.54	$2,002.16	$525.57	$2,102.28	$551.85	$2,207.40
9	Lithium Ion batteries	100	Pound	$10.78	$1,078.00	$10.78	$1,078.00	$11.89	$1,189.00	$12.48	$1,248.00	$13.10	$1,310.00
10	Alkaline (Dry filled) Batteries	300	Pound	$1.98	$594.00	$1.98	$594.00	$2.18	$654.00	$2.29	$687.00	$2.40	$720.00
11	Alkaline wet filled batteries	0	Pound	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12	Paint and paint related, lacquer thinner and reducer	10	55 Gallon	$257.65	$2,576.50	$257.65	$2,576.50	$284.06	$2,840.60	$298.26	$2,982.60	$313.17	$3,131.70
13	Sludge solids, Oily Water, and Grease	4	55 Gallon	$343.91	$1,375.64	$343.91	$1,375.64	$379.17	$1,516.68	$398.13	$1,592.52	$418.04	$1,672.16
14	Paint material lab packs	4	55 Gallon	$331.42	$1,325.68	$331.42	$1,325.68	$365.39	$1,461.56	$383.66	$1,534.64	$402.84	$1,611.36
15	Paint Material Totes/Boxes (flammable)	0	Tote	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16	Paint Related Material Totes/Boxes (water Based Paint)	0	Tote	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	Paint Booth Filters	6	55 Gallon	$539.13	$3,234.78	$539.13	$3,234.78	$594.39	$3,566.34	$624.11	$3,744.66	$655.32	$3,931.92
18	Ballasts (non-BCP)	600	Pound	$1.37	$822.00	$1.37	$822.00	$1.51	$906.00	$1.59	$954.00	$1.67	$1,002.00
19	Tritium Exit Signs	0	Each	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20	Hazardous Waste Liquid (Non-RCRA)	4	55 Gallon	$255.94	$1,023.76	$255.94	$1,023.76	$282.18	$1,128.72	$296.29	$1,185.16	$311.10	$1,244.40
21	Anti-freeze	10	55 Gallon	$244.59	$2,445.90	$244.59	$2,445.90	$269.66	$2,696.60	$283.14	$2,831.40	$297.30	$2,973.00
22	Fluorescent Lights	600	Linear Foot	$0.58	$348.00	$0.58	$348.00	$0.64	$384.00	$0.67	$402.00	$0.70	$420.00
23	LED	1,400	Linear Foot	$0.96	$1,344.00	$0.96	$1,344.00	$1.06	$1,484.00	$1.11	$1,554.00	$1.17	$1,638.00
24	Mercury Vapor, Low and High – Pressure Sodium Lamps (HID) (not to exceed 250 lamps)	4	55 Gallon	$766.13	$3,064.52	$766.13	$3,064.52	$844.66	$3,378.64	$886.89	$3,547.56	$931.23	$3,724.92
25	Silica Sand	0	55 Gallon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26	Ballasts (PCB)	10	55 Gallon	$340.50	$3,405.00	$340.50	$3,405.00	$375.41	$3,754.10	$394.18	$3,941.80	$413.89	$4,138.90
27	Leaking ballasts (PCB)	10	55 Gallon	$879.63	$8,796.30	$879.63	$8,796.30	$969.79	$9,697.90	$1,018.28	$10,182.80	$1,069.19	$10,691.90
28	Dirt/ Sand/ Rock Contaminated with Oil	0	Yards	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
29	Refrigerant - R12	0	Pound	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
30	Refrigerant - R22	0	Pound	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
31	HVAC Refrigerant - R134A	0	Pound	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
32	Refrigerant - 407	0	Pound	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
33			**Subtotal**		$52,800.68		$52,800.68		$58,214.96		$61,122.90		$64,181.86
34			**CA 7.75% Sales Tax**		$4,092.05		$4,092.05		$4,511.66		$4,737.02		$4,974.09
35			**TOTAL**		**$56,892.73**		**$56,892.73**		**$62,726.62**		**$65,859.92**		**$69,155.95**

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MTS COST PROPOSAL FORMS
HAZARDOUS AND UNIVERSAL WASTE MANAGEMENT AND TRAUMA SCENE CLEAN-UP SERVICES RFP
MTS DOC. NO. G2676.0-23

SAN DIEGO TRANSIT CORP. (SDTC) -- Rev.4

II. LAB PACK				YEAR 1 (4/1/23 - 3/31/24)		YEAR 2 (4/1/24 - 3/31/25)		YEAR 3 (4/1/25 - 3/31/26)		YEAR 4 (4/1/26 - 3/31/27)		YEAR 5 (4/1/27 - 3/31/28)	
#	DESCRIPTION - LAB PACK (PACKAGING/TRANSPORT/DISPOSAL - all inclusive of Analysis and labor)	ESTIMATED ANNUAL QTY*	UNIT OF MEASURE (UOM)	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST
1	Acids - Inorganics	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
2	Acids - Organic	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
3	Acids - Oxidizing	2	55 Gallon	$589.07	$1,178.14	$589.07	$1,178.14	$649.44	$1,298.88	$681.92	$1,363.84	$716.01	$1,432.02
4	Aerosols - Corrosive	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
5	Aerosols - Flammable	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
6	Base - Inorganics	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
7	Base - Organics	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
8	Base - Oxidizing	2	55 Gallon	$589.07	$1,178.14	$589.07	$1,178.14	$649.44	$1,298.88	$681.92	$1,363.84	$716.01	$1,432.02
9	Class 9 Non-RCRA Liquid	0	55 Gallon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	Class 9 Non-RCRA Solid	0	55 Gallon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11	Flammable Liquid	2	55 Gallon	$404.06	$808.12	$404.06	$808.12	$445.48	$890.96	$467.75	$935.50	$491.14	$982.28
12	Flammable Solid	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
13	Mercury Containing Device	2	5 gallon	$928.43	$1,856.86	$928.43	$1,856.86	$1,023.59	$2,047.18	$1,074.77	$2,149.54	$1,128.51	$2,257.02
14	Oil Based Paint & Related	2	55 Gallon	$358.66	$717.32	$358.66	$717.32	$395.42	$790.84	$415.19	$830.38	$435.95	$871.90
15	Organic Peroxide	2	5 gallon	$360.93	$721.86	$360.93	$721.86	$397.93	$795.86	$417.82	$835.64	$438.71	$877.42
16	Oxidizer - Neutral	2	55 Gallon	$589.07	$1,178.14	$589.07	$1,178.14	$649.44	$1,298.88	$681.92	$1,363.84	$716.01	$1,432.02
17	PCB Containing Paint	2	55 Gallon	$901.19	$1,802.38	$901.19	$1,802.38	$993.56	$1,987.12	$1,043.24	$2,086.48	$1,095.40	$2,190.80
18	PCB Waste - other	2	55 Gallon	$1,014.69	$2,029.38	$1,014.69	$2,029.38	$1,118.70	$2,237.40	$1,174.63	$2,349.26	$1,233.36	$2,466.72
19	Poison - Liquids	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
20	Poison - Solids	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
21	Reactive	2	55 Gallon	$1,184.94	$2,369.88	$1,184.94	$2,369.88	$1,306.40	$2,612.80	$1,371.72	$2,743.44	$1,440.30	$2,880.60
22	Category 9 Asbestos	2	55 Gallon	$333.69	$667.38	$333.69	$667.38	$367.89	$735.78	$386.29	$772.58	$405.60	$811.20
23	Toxic	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
24	Latex Paint & Rinses	2	95 Gallons	$715.05	$1,430.10	$715.05	$1,430.10	$788.34	$1,576.68	$827.76	$1,655.52	$869.15	$1,738.30
25	Empty Gas/Gas Cylinder	2	≤ 300 ft³	$296.24	$592.48	$296.24	$592.48	$326.60	$653.20	$342.93	$685.86	$360.08	$720.16
26	Empty drums	2	55 Gallon	$90.80	$181.60	$90.80	$181.60	$100.11	$200.22	$105.11	$210.22	$110.37	$220.74
27			**Subtotal**		$25,927.98		$25,927.98		$28,585.48		$30,014.94		$31,515.60
28			**CA 7.75% Sales Tax**		$2,009.42		$2,009.42		$2,215.37		$2,326.16		$2,442.46
29			**TOTAL**		**$27,937.40**		**$27,937.40**		**$30,800.85**		**$32,341.10**		**$33,958.06**

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MTS COST PROPOSAL FORMS
HAZARDOUS AND UNIVERSAL WASTE MANAGEMENT AND TRAUMA SCENE CLEAN-UP SERVICES RFP
MTS DOC. NO. G2676.0-23

SAN DIEGO TRANSIT CORP. (SDTC) -- Rev.4

III. EMERGENCY RESPONSE (TRAUMA SCENE CLEAN UP/CHEMICAL SPILLS)

Fill in each line item for trauma scene clean-up services to include all costs per unit of measure. If not applicable or is a "no charge" to MTS, indicate so with **N/A** or **zero ($0.00)**. MTS does not guarantee that it will generate any or all of the items listed below. The prices will be used as a reference for base prices for the contract period.

EMERGENCY RESPONSE (TRAUMA SCENE CLEAN UP/CHEMICAL SPILLS) (LABOR/PERSONNEL - all inclusive of all materials/equipment/transportation/disposal/etc.)				YEAR 1 (4/1/23 - 3/31/24)		YEAR 2 (4/1/24 - 3/31/25)		YEAR 3 (4/1/25 - 3/31/26)		YEAR 4 (4/1/26 - 3/31/27)		YEAR 5 (4/1/27 - 3/31/28)	
#	DESCRIPTION	ESTIMATED ANNUAL QTY*	UNIT OF MEASURE (UOM)	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST
1	Supervisor	8	Hour	$95.00	$760.00	$95.00	$760.00	$104.74	$837.92	$109.97	$879.76	$115.47	$923.76
2	Technician	150	Hour	$75.00	$11,250.00	$75.00	$11,250.00	$82.69	$12,403.50	$86.82	$13,023.00	$91.16	$13,674.00
3	Technician - Overtime/Holiday	30	Hour	$95.00	$2,850.00	$95.00	$2,850.00	$104.74	$3,142.20	$109.97	$3,299.10	$115.47	$3,464.10
4	Admins	8	Hour	$50.00	$400.00	$50.00	$400.00	$55.13	$441.04	$57.88	$463.04	$60.78	$486.24
5	Admins - Overtime/Holiday	1	Hour	$70.00	$70.00	$70.00	$70.00	$77.18	$77.18	$81.03	$81.03	$85.09	$85.09
6	Disposal Charge	150	Pound	$2.50	$375.00	$2.50	$375.00	$2.76	$414.00	$2.89	$433.50	$3.04	$456.00
7			**TOTAL**		**$15,705.00**		**$15,705.00**		**$17,315.84**		**$18,179.43**		**$19,089.19**

#	DESCRIPTION	TOTALS (YEAR 1)	TOTALS (YEAR 2)	TOTALS (YEAR 3)	TOTALS (YEAR 4)	TOTALS (YEAR 5)
1	ROUTINE WASTE	$56,892.73	$56,892.73	$62,726.62	$65,859.92	$69,155.95
2	LAB PACK	$27,937.40	$27,937.40	$30,800.85	$32,341.10	$33,958.06
3	EMERGENCY RESPONSE (TRAUMA SCENE CLEAN UP/CHEMICAL SPILLS)	$15,705.00	$15,705.00	$17,315.84	$18,179.43	$19,089.19
4	**TOTALS**	**$100,535.13**	**$100,535.13**	**$110,843.31**	**$116,380.45**	**$122,203.20**

MTS COST PROPOSAL FORMS - continued
HAZARDOUS AND UNIVERSAL WASTE MANAGEMENT AND TRAUMA SCENE CLEAN-UP SERVICES RFP
MTS DOC. NO. G2676.0-23

SAN DIEGO TROLLEY, INC. (SDTI) -- Rev.4

I. HAZARDOUS AND UNIVERSAL WASTE

For each waste stream or category include all costs per unit. If not applicable or is a "no charge" to MTS, indicate so with **N/A** or **zero ($0.00)**. MTS does not guarantee that it will generate any or all of the items listed below. The prices will be used as a reference for base prices in each waste category for the contract period.

ROUTINE WASTE				YEAR 1 (4/1/23 - 3/31/24)		YEAR 2 (4/1/24 - 3/31/25)		YEAR 3 (4/1/25 - 3/31/26)		YEAR 4 (4/1/26 - 3/31/27)		YEAR 5 (4/1/27 - 3/31/28)	
#	DESCRIPTION	ESTIMATED ANNUAL QTY*	UNIT OF MEASURE (UOM)	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST
1	Absorbent material (clay, rags, dirt, booms) with oil, diesel, and /or antifreeze)	20	55 Gallon	$232.68	$4,653.60	$232.68	$4,653.60	$256.52	$5,130.40	$269.35	$5,387.00	$282.83	$5,656.60
2	Absorbent material (clay, rags, dirt, booms) with gasoline, paint, solvent and/or thinner	12	55 Gallon	$425.63	$5,107.56	$425.63	$5,107.56	$469.25	$5,631.00	$492.71	$5,912.52	$517.36	$6,208.32
3	Waste engine fuels and lubricants, including but not limited to diesel fuel, brake fluid, engine oil, transmission fluid, gear, HVAC and hydraulic oil	18	55 Gallon	$216.22	$3,891.96	$216.22	$3,891.96	$238.38	$4,290.84	$250.30	$4,505.40	$262.82	$4,730.76
4	Engine filters with oil	10	55 Gallon	$283.75	$2,837.50	$283.75	$2,837.50	$312.83	$3,128.30	$328.48	$3,284.80	$344.90	$3,449.00
5	Gasoline	18	55 Gallon	$216.22	$3,891.96	$216.22	$3,891.96	$238.38	$4,290.84	$250.30	$4,505.40	$262.81	$4,730.58
6	Aerosol cans	12	55 Gallon	$382.50	$4,590.00	$382.50	$4,590.00	$421.70	$5,060.40	$442.79	$5,313.48	$464.94	$5,579.28
7	Biological waste	4	55 Gallon	$454.00	$1,816.00	$454.00	$1,816.00	$500.54	$2,002.16	$525.56	$2,102.24	$551.85	$2,207.40
8	Sharps	4	55 Gallon	$454.00	$1,816.00	$454.00	$1,816.00	$500.54	$2,002.16	$525.56	$2,102.24	$551.85	$2,207.40
9	Alkaline batteries (wet filled)	30,000	Pound	$2.27	$68,100.00	$2.27	$68,100.00	$2.50	$75,000.00	$2.62	$78,600.00	$2.76	$82,800.00
10	Alkaline batteries (dry filled)	500	Pound	$1.98	$990.00	$1.98	$990.00	$2.18	$1,090.00	$2.30	$1,150.00	$2.41	$1,205.00
11	Lithium Ion batteries	0	Pound	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12	Paint and paint related, lacquer thinner and reducer	12	55 Gallon	$257.65	$3,091.80	$257.65	$3,091.80	$284.06	$3,408.72	$298.26	$3,579.12	$313.17	$3,758.04
13	Sludge solids, Oily Water, and Grease	12	55 Gallon	$343.91	$4,126.92	$343.91	$4,126.92	$379.17	$4,550.04	$398.13	$4,777.56	$418.04	$5,016.48
14	Paint material lab packs	12	55 Gallon	$331.42	$3,977.04	$331.42	$3,977.04	$365.39	$4,384.68	$383.66	$4,603.92	$402.84	$4,834.08
15	Paint Material Totes/Boxes (flammable)	12	Tote	$1,138.41	$13,660.92	$1,138.41	$13,660.92	$1,255.10	$15,061.20	$1,317.86	$15,814.32	$1,383.75	$16,605.00
16	Paint Related Material Totes/Boxes (water Based Paint)	12	Tote	$1,138.41	$13,660.92	$1,138.41	$13,660.92	$1,255.10	$15,061.20	$1,317.86	$15,814.32	$1,383.75	$16,605.00
17	Paint Booth Filters	12	55 Gallon	$539.13	$6,469.56	$539.13	$6,469.56	$594.39	$7,132.68	$624.11	$7,489.32	$655.32	$7,863.84
18	Ballasts (non-BCP)	900	Pound	$1.37	$1,233.00	$1.37	$1,233.00	$1.51	$1,359.00	$1.59	$1,431.00	$1.67	$1,503.00
19	Tritium Exit Signs	12	Each	$319.22	$3,830.64	$319.22	$3,830.64	$351.94	$4,223.28	$369.54	$4,434.48	$388.02	$4,656.24
20	Hazardous Waste Liquid (Non-RCRA)	12	55 Gallon	$255.94	$3,071.28	$255.94	$3,071.28	$282.18	$3,386.16	$296.29	$3,555.48	$311.10	$3,733.20
21	Anti-freeze	12	55 Gallon	$244.59	$2,935.08	$244.59	$2,935.08	$269.66	$3,235.92	$283.14	$3,397.68	$297.30	$3,567.60
22	Fluorescent Lights	8,000	Linear Foot	$0.58	$4,640.00	$0.58	$4,640.00	$0.64	$5,120.00	$0.67	$5,360.00	$0.70	$5,600.00
23	LED	3,000	Linear Foot	$0.96	$2,880.00	$0.96	$2,880.00	$1.06	$3,180.00	$1.11	$3,330.00	$1.17	$3,510.00
24	Mercury Vapor, Low and High – Pressure Sodium Lamps (HID) (not to exceed 250 lamps)	12	55 Gallon	$766.13	$9,193.56	$766.13	$9,193.56	$844.66	$10,135.92	$886.89	$10,642.68	$931.23	$11,174.76
25	Silica Sand	12	55 Gallon	$247.43	$2,969.16	$247.43	$2,969.16	$272.79	$3,273.48	$286.43	$3,437.16	$300.75	$3,609.00
26	Ballasts (PCB)	12	55 Gallon	$340.50	$4,086.00	$340.50	$4,086.00	$375.41	$4,504.92	$394.18	$4,730.16	$413.89	$4,966.68
27	Leaking ballasts (PCB)	12	55 Gallon	$879.63	$10,555.56	$879.63	$10,555.56	$969.79	$11,637.48	$1,018.28	$12,219.36	$1,069.19	$12,830.28
28	Dirt/ Sand/ Rock Contaminated with Oil	10	Yards	$135.87	$1,358.70	$135.87	$1,358.70	$149.79	$1,497.90	$157.28	$1,572.80	$165.14	$1,651.40
29	Refrigerant - R12	0	Pound	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
30	Refrigerant - R22	0	Pound	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
31	HVAC Refrigerant - R134A	0	Pound	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
32	Refrigerant - 407	0	Pound	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
33			**Subtotal**		$189,434.72		$189,434.72		$208,778.68		$219,052.44		$230,258.94
34			**CA 7.75% Sales Tax**		$14,681.19		$14,681.19		$16,180.35		$16,976.56		$17,845.07
35			**TOTAL**		**$204,115.91**		**$204,115.91**		**$224,959.03**		**$236,029.00**		**$248,104.01**

MTS COST PROPOSAL FORMS - continued
HAZARDOUS AND UNIVERSAL WASTE MANAGEMENT AND TRAUMA SCENE CLEAN-UP SERVICES RFP
MTS DOC. NO. G2676.0-23

SAN DIEGO TROLLEY, INC. (SDTI) -- Rev.4

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II. LAB PACK				YEAR 1 (4/1/23 - 3/31/24)		YEAR 2 (4/1/24 - 3/31/25)		YEAR 3 (4/1/25 - 3/31/26)		YEAR 4 (4/1/26 - 3/31/27)		YEAR 5 (4/1/27 - 3/31/28)	
#	DESCRIPTION - LAB PACK (PACKAGING/TRANSPORT/DISPOSAL - all inclusive of Analysis and labor)	ESTIMATED ANNUAL QTY*	UNIT OF MEASURE (UOM)	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST
1	Acids - Inorganics	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
2	Acids - Organic	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
3	Acids - Oxidizing	2	55 Gallon	$589.07	$1,178.14	$589.07	$1,178.14	$649.44	$1,298.88	$681.92	$1,363.84	$716.01	$1,432.02
4	Aerosols - Corrosive	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
5	Aerosols - Flammable	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
6	Base - Inorganics	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
7	Base - Organics	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
8	Base - Oxidizing	2	55 Gallon	$589.07	$1,178.14	$589.07	$1,178.14	$649.44	$1,298.88	$681.92	$1,363.84	$716.01	$1,432.02
9	Class 9 Non-RCRA Liquid	2	55 Gallon	$404.06	$808.12	$404.06	$808.12	$445.47	$890.94	$467.74	$935.48	$491.13	$982.26
10	Class 9 Non-RCRA Solid	2	55 Gallon	$404.06	$808.12	$404.06	$808.12	$445.47	$890.94	$467.74	$935.48	$491.13	$982.26
11	Flammable Liquid	2	55 Gallon	$404.06	$808.12	$404.06	$808.12	$445.48	$890.96	$467.75	$935.50	$491.14	$982.28
12	Flammable Solid	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
13	Mercury Containing Device	2	5 gallon	$928.43	$1,856.86	$928.43	$1,856.86	$1,023.59	$2,047.18	$1,074.77	$2,149.54	$1,128.51	$2,257.02
14	Oil Based Paint & Related	2	55 Gallon	$358.66	$717.32	$358.66	$717.32	$395.42	$790.84	$415.19	$830.38	$435.95	$871.90
15	Organic Peroxide	2	5 gallon	$360.93	$721.86	$360.93	$721.86	$397.93	$795.86	$417.82	$835.64	$438.71	$877.42
16	Oxidizer - Neutral	2	55 Gallon	$589.07	$1,178.14	$589.07	$1,178.14	$649.44	$1,298.88	$681.92	$1,363.84	$716.01	$1,432.02
17	PCB Containing Paint	2	55 Gallon	$901.19	$1,802.38	$901.19	$1,802.38	$993.56	$1,987.12	$1,043.24	$2,086.48	$1,095.40	$2,190.80
18	PCB Waste - other	2	55 Gallon	$1,014.69	$2,029.38	$1,014.69	$2,029.38	$1,118.70	$2,237.40	$1,174.63	$2,349.26	$1,233.36	$2,466.72
19	Poison - Liquids	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
20	Poison - Solids	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
21	Reactive	2	55 Gallon	$1,184.94	$2,369.88	$1,184.94	$2,369.88	$1,306.40	$2,612.80	$1,371.72	$2,743.44	$1,440.30	$2,880.60
22	Category 9 Asbestos	2	55 Gallon	$333.69	$667.38	$333.69	$667.38	$367.89	$735.78	$386.29	$772.58	$405.60	$811.20
23	Toxic	2	55 Gallon	$460.81	$921.62	$460.81	$921.62	$508.04	$1,016.08	$533.45	$1,066.90	$560.12	$1,120.24
24	Latex Paint & Rinses	2	95 Gallons	$715.05	$1,430.10	$715.05	$1,430.10	$788.34	$1,576.68	$827.76	$1,655.52	$869.15	$1,738.30
25	Empty Gas/Gas Cylinder	0	$\leq$ 300 ft^3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26	Empty drums	2	55 Gallon	$90.80	$181.60	$90.80	$181.60	$100.11	$200.22	$105.11	$210.22	$110.37	$220.74
27			**Subtotal**		$26,951.74		$26,951.74		$29,714.16		$31,200.04		$32,759.96
28			**CA 7.75% Sales Tax**		$2,088.76		$2,088.76		$2,302.85		$2,418.00		$2,538.90
29			**TOTAL**		**$29,040.50**		**$29,040.50**		**$32,017.01**		**$33,618.04**		**$35,298.86**

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MTS COST PROPOSAL FORMS - continued
HAZARDOUS AND UNIVERSAL WASTE MANAGEMENT AND TRAUMA SCENE CLEAN-UP SERVICES RFP
MTS DOC. NO. G2676.0-23

SAN DIEGO TROLLEY, INC. (SDTI) -- Rev.4

III. EMERGENCY RESPONSE (TRAUMA SCENE CLEAN UP/CHEMICAL SPILLS)

Fill in each line item for trauma scene clean-up services to include all costs per unit of measure. If not applicable or is a "no charge" to MTS, indicate so with **N/A** or **zero ($0.00)**. MTS does not guarantee that it will generate any or all of the items listed below. The prices will be used as a reference for base prices for the contract period.

EMERGENCY RESPONSE (TRAUMA SCENE CLEAN UP/CHEMICAL SPILLS) (LABOR/PERSONNEL - all inclusive of all materials/equipment/transportation/disposal/etc.)				YEAR 1 (4/1/23 - 3/31/24)		YEAR 2 (4/1/24 - 3/31/25)		YEAR 3 (4/1/25 - 3/31/26)		YEAR 4 (4/1/26 - 3/31/27)		YEAR 5 (4/1/27 - 3/31/28)	
#	DESCRIPTION	ESTIMATED ANNUAL QTY*	UNIT OF MEASURE (UOM)	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST	UNIT COST	EXTENDED COST
1	Supervisor	8	Hour	$95.00	$760.00	$95.00	$760.00	$104.74	$837.92	$109.97	$879.76	$115.47	$923.76
2	Technician	150	Hour	$75.00	$11,250.00	$75.00	$11,250.00	$82.69	$12,403.50	$86.82	$13,023.00	$91.16	$13,674.00
3	Technician - Overtime/Holiday	30	Hour	$95.00	$2,850.00	$95.00	$2,850.00	$104.74	$3,142.20	$109.97	$3,299.10	$115.47	$3,464.10
4	Admins	8	Hour	$50.00	$400.00	$50.00	$400.00	$55.13	$441.04	$57.88	$463.04	$60.78	$486.24
5	Admins - Overtime/Holiday	1	Hour	$70.00	$70.00	$70.00	$70.00	$77.18	$77.18	$81.03	$81.03	$85.09	$85.09
6	Disposal Charge	100	Pound	$2.50	$250.00	$2.50	$250.00	$2.76	$276.00	$2.89	$289.00	$3.04	$304.00
7			**TOTAL**		**$15,580.00**		**$15,580.00**		**$17,177.84**		**$18,034.93**		**$18,937.19**

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#	DESCRIPTION	TOTALS (YEAR 1)	TOTALS (YEAR 2)	TOTALS (YEAR 3)	TOTALS (YEAR 4)	TOTALS (YEAR 5)
1	ROUTINE WASTE (HAZMAT)	$204,115.91	$204,115.91	$224,959.03	$236,029.00	$248,104.01
2	LAB PACK (HAZMAT)	$29,040.50	$29,040.50	$32,017.01	$33,618.04	$35,298.86
3	EMERGENCY RESPONSE (TRAUMA SCENE CLEAN UP/CHEMICAL SPILLS)	$15,580.00	$15,580.00	$17,177.84	$18,034.93	$18,937.19
4	**TOTALS**	**$248,736.41**	**$248,736.41**	**$274,153.88**	**$287,681.98**	**$302,340.05**

Metropolitan Transit System

Agenda Item No. 11

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

C Street & Broadway Wye Sicas S7 And Wheel Counter Replacement - Work Order

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute Work Order MTS Doc. No. PWL355.0-22, WOA355-AE-11 (in substantially the same format as Attachment A), with Psomas, in the amount of $299,610.15 to provide engineering design review for the C Street and Broadway Wye – Sicas S7 and wheel counter replacement.

Budget Impact

The total cost of this contract is estimated to be $299,610.15. The project is funded by the Capital Improvement Program (CIP) 2005118801 – Signal Upgrade - Sicas7 & H&K Design.

DISCUSSION:

This project aims to replace the existing axle counter system provided by Siemens with a system provided by Frauscher FAdC Axle Counter System, and replace the existing Sicas S7 vital logic controller with an ElectrologIXS Controller. This project is necessary to ensure safe and efficient movement of trains through the C street interlocking and Broadway Wye.

Under the proposed work order, Psomas shall update existing AutoCAD drawings files of the existing signaling system. The drawing updates shall include, but not be limited to, 1) current track layout plans, 2) case circuit plans, and 3) all other signaling system plans requiring updates to accurately reflect the modifications required for complete revisions. Final improvement plans will accurately reflect the addition of all circuits required and reflect the final configuration of the circuits.

On September 15, 2021, MTS issued a solicitation for On-Call Architectural and Engineering (A&E) Design Services by Requesting Statements of Qualifications (RFSQ) from firms with

expertise in a variety of A&E design and related consulting services separated into the following three (3) categories:

Category A: Comprehensive/Full Service - Five (5) prime contracts
Category B: Small Business (SB) Set Aside- Three (3) prime contracts awarded to a certified SB or a Disadvantaged Business Enterprise (DBE) certified firm, (which is also considered to be a SB)
Category C: Specialty Prime – Up to Five (5) specialty service contracts

As a result of the RFSQ, seven (7) firms were selected to perform various Architectural and Engineering (A&E) services. For projects requiring A&E Services, work orders are issued to these firms.

MTS staff reviewed the approved A&E firms in Category A, and utilizing the direct award process, selected Psomas, to perform the requisite services, as their subconsultant Global Signal Group, Inc. performed multiple signal design projects for MTS in the past and therefore has special knowledge and expertise that will maximize value to MTS for this project.

Psomas's proposed amount of $299,610.15 is comparable to MTS's Independent Cost Estimate (ICE) of $287,062.88, and thus was determined to be fair and reasonable. Psomas will utilize the following subcontractor:

Subcontractor Name	Classification	Value of Services
Global Signals Group, Inc.	SB	$271,904.68

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Work Order MTS Doc. No. PWL355.0-22, WOA55-AE-11 (in substantially the same format as Attachment A), Psomas, in the amount of $299,610.15 to provide engineering design review for the C Street and Broadway Wye – Sicas S7 and wheel counter replacement.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachment: A. Draft Work Order MTS Doc No. WOA355-AE-11

Metropolitan Transit System

February 16, 2023

MTS Doc. No. PWL355.0-22
Work Order No. WOA355-AE-11

Mrs. Sarah Curran, PE
Vice President
Psomas
401 B Street, Suite 1600
San Diego, CA 92101

Dear Mrs. Curran:

Subject: MTS DOC. NO. PWL355.0-22, WORK ORDER WOA355-AE-11, GENERAL ENGINEERING SERVICES FOR SIGNAL UPGRADE – SICAS7 & H&K DESIGN

This letter shall serve as our agreement for Work Order WOA355-AE-11 to MTS Doc. No. PWL355.0-22, for professional services under the General Engineering Consultant Agreement, as further described below.

SCOPE OF SERVICES

This Work Order shall provide design services for the C Street and Broadway Wye – Sicas S7 and wheel counter replacement. (Attachment A).

SCHEDULE

The Scope of Services, as described above, shall be for a period of seven (7) months from the date of the Notice to Proceed.

PAYMENT

Payment shall be based on actual costs in the amount not to exceed $299,610.15 without prior authorization of MTS (Attachment B).

Please sign below, and return the document to the Contracts Specialist at MTS. All other terms and conditions shall remain the same and in effect.

Sincerely,

Sharon Cooney
Chief Executive Officer

Accepted:

Sarah Curran, Vice President
Psomas

Date:

Attachments: Attachment A, Scope of Services
Attachment B, Negotiated Fee Proposal

ATTACHMENT A
SCOPE OF SERVICES

PSOMAS

Balancing the Natural and Built Environment

January 18, 2023

Steve Augustyn
Senior Procurement Specialist
SAN DIEGO METROPOLITAN TRANSIT SYSTEM (MTS)
1255 Imperial Avenue, Suite 1000
San Diego, CA 92101

Subject: **Proposal for Professional Services – Revision 1**
WOA355-AE-11
Signal Upgrade – SICAS7 & H&K Design

Dear Steve:

Psomas is pleased to submit the attached revised proposal to provide professional services for the subject project. Based on the information provided to us, we have developed the attached Work Plan and associated fee to meet the project requirements, as we understand them, as described in Attachment "A" and Attachment "B" respectively (attached).

We look forward to working with you on this important project.

Sincerely,

PSOMAS

Sarah Curran, P.E.
Vice President
Enclosures

401 B Street
Suite 1600
San Diego, CA 92101

Tel 619.961.2800
www.Psomas.com

I. PROJECT DESCRIPTION

This project aims to replace the existing axle counter system provided by Siemens with a system provided by Frauscher FAdC Axle Counter System and replace the existing Sicas S7 vital logic controller with an ElectrologIXS Controller

Consultant shall prepare complete design plans and software to replace with the new axle counter system and ElectrologIXS Controller to ensure safe and efficient movement of trains through the C street interlocking and Broadway Wye. Consultant design shall maintain the existing operation as part of the new ElectrologIXS Software.

Consultant shall update existing AutoCAD drawings files of the existing signaling system. The drawing updates shall include, but not be limited to, 1) current track layout plans, 2) case circuit plans, and 3) all other signaling system plans requiring updates to accurately reflect the modifications required for complete revisions described in this document. Final improvement plans shall accurately reflect the addition of all circuits required and reflect the final configuration of the circuits.

It is assumed that the final as-builts shall be completed by MTS and the construction contractor shall complete a set of red lines to facilitate the final as-built process.

Demolition plans shall show the removal of existing circuits and removal or reconfiguration of existing case circuits.

Consultant shall work with construction contractor to determine a schedule and time for the cut-over and tie-in of the new system elements and shall support the uploading of the new software for testing by the construction contractor.

II. SCOPE OF WORK

The scope of work shall consist of the following tasks and deliverables:

Task 1A - Project Management and Coordination (Psomas)

1A.1 Provide project management services including the requirements for invoicing, scheduling, monthly project progress reports, and administration of the Consultant's team.

1A.2 Arrange and facilitate project-related meetings.

1A.3 Implement a project schedule to complete the Scope of Work

1A.4 Provide QA/QC on all deliverables.

Task 1B - Project Management and Coordination (Global Signals)

1B.1 Provide project management services including the requirements for invoicing and monthly project progress reports

1B.2 Attend weekly meetings.

1B.3 Coordinate with the project team.

1B.4 Prepare Construction Cost Estimate

Task 2 – Hardware Circuit Design

2.1 Provide the hardware design required to support the new track circuit(s), the new ElectrologIXS vital controller, as well as other modifications necessary to deliver power to these new system elements. Provide demolition plans using existing CAD drawings detailing those items that are to be removed from service.

Task 3 – Software Data Design

3.1 Provide ElectrologIXS Data design for both C street and Broadway Wye location to maintain the existing operations currently, while interfacing with new Frauscher FAdC Axle Counter System. Providing Bit List being send/receive between ElectrologIXS and both Frauscher and Quest QLCP. ElectrologIXS software development shall be designed and align as much as possible to the latest standard practice Mid-Coast/Blue line, where practical.
3.2 Software Simulation Testing shall be undertaken prior to final cut-over.

Task 4 – Specifications

4.1 Update the standard specifications. Modify standard specifications to provide project specific standards where necessary and retain those specifications that are relevant.

Task 5 – HMI Panels, Blue Line SCADA (Turn Backs, CPU Health) and Switch 37 Electric lock Circuit design

5.1 Provide HMI panel and logic design for multiple locations to include Stadium, M4 and Baltimore Junction. Provide office indications for turn backs on the blueline as well as a health indication from all interlocking locations. Verify electric lock logic is consistent with other locations and alter as necessary to bring consistent with other MTS locations.

III. PERIOD OF PERFORMANCE
Design work shall be completed in seven (7) months from the date of the Notice to Proceed.. Software modificaitons with commisioning and testing shall be coordinated with constrction contractor.

IV. DELIVERABLES
Prepare develop 50%, and 95% and final stamped signal modifications design plans, specifications and construction estimate.

Develop software logic and install in signal controllers to obtain desired functionality described in this document.

V. SCHEDULE OF SERVICES/MILESTONES/DELIVERABLES

A. Tasks Schedule

Task	Begin/End Dates
Field Survey	Anticipate NTP: January (1-2 Days).
Signal Modification Plans	1/06/2022-06/28/2023
50% Design	Anticipated 50% completion: End of Jan
95% Design	Anticipated 95% completion: End of June
100% Final Design & Specifications (Stamped)	End Of July

B. Milestones/Deliverables Schedule

Milestone/Deliverable	Due Date
50% Signal Design Plans	Anticipated 50% completion: End of Jan
95% Signal Design Plans	Anticipated 95% completion: End of June
100% Signal Design Plans	Anticipated completion: End July
Software Modifications	Anticipated completion: End July

VI. MATERIALS TO BE PROVIDED BY MTS AND/OR THE OTHER AGENCY

We will need the following items/resources from MTS;

- Signal/Communications keys for access
- Current As-built circuit plan in CAD format for all affected locations.
- CAD plans (if available) shall be provided
- Current As-built conduit plan CAD/pdf format for surrounding locations around Broadway Wye, America Plaza, C street, and India Street.
- New IP Addresses for new ElectrologIXS, Frauscher System and QLCP.
- Chasis ID For new ElectrologIXS
- New Fiber Core Allocation for the ElectrologIXS and access to new QLCP.
- Current As Built S7 data shall be provided for Broadway Wye and C Street.
- Current As Built H&K Programming for Broadway Wye and C Street
- Title block and border shall be provided to GSG.
- Standard Specifications and special provisions for MTS construction work
- Software for all Milestones on Blueline

VII. SPECIAL CONDITIONS

Any condition listed below applies solely to this Work Order and does not otherwise alter the Agreement or other Work Orders.

Not Applicable.

VIII. MTS ACCEPTANCE OF SERVICES:

Contractor shall not be compensated at any time for unauthorized work outside of this Work Order. Contractor shall provide notice to MTS' Project Manager upon 100% completion of this Work Order. Within five (5) business days from receipt of notice of Work Order completion, MTS' Project Manager shall review, for acceptance, the 100% completion notice. If Contractor provides final service(s) or final work product(s) which are found to be unacceptable due to Contractors and/or Contractors subcontractors negligence and thus not 100% complete by MTS' Project Manager, Contractor shall be required to make revisions to said service(s) and/or work product(s) within the Not to Exceed (NTE) Budget. MTS reserves the right to withhold payment associated with this Work Order until the Project Manager provides written acceptance for the 100% final completion notice. Moreover, 100% acceptance and final completion will be based on resolution of comments received to the draft documents and delivery of final documentation which shall incorporate all MTS revisions and comments.

Monthly progress payments shall be based on hours performed for each person/classification identified in the attached Fee Schedule and shall at no time exceed the NTE. Contractor shall only be compensated for actual performance of services and at no time shall be compensated for services for which MTS does not have an accepted deliverable or written proof and MTS acceptance of services performed.

IX. DEFICIENT WORK PRODUCT

Throughout the construction management and/or implementation phases associated with the services rendered by the Contractor, if MTS finds any work product provided by Contractor to be deficient (i.e., not meeting the professional standard of care) and the deficientcy delays any portion of the project, Contractor shall bear the full burden of their deficient work and shall be responsible for taking all corrective actions to remedy their deficient work product including but not limited to the following:

- Revising provided documents,

At no time will MTS be required to correct any portion of the Contractors deficient work product and shall bear no costs or burden associated with Contractors deficient performance and/or work product.

X. DELIVERABLE REQUIREMENTS

Contractor will be required to submit any and all documentation required by the Scope of Work. The deliverables furnished shall be of a quality reasonably acceptable to MTS. The criteria for acceptance shall be a product of neat appearance, well-organized, and procedurally, technically and grammatically correct. MTS reserves the right to request a change in the format if it doesn't satisfy MTS's needs. All work products will become the property of MTS. MTS reserves the right to disclose any reports or material provided by the Contractor to any third party.

Contractor shall provide with each task, a work plan showing the deliverables schedule as well as other relevant date needed for Contractor's work control, when and as requested by MTS.

Contractor's computer data processing and work processing capabilities and data storage should be compatible with Windows compatible PC's, text files readable in Microsoft Word, and standard and customary electronic storage. Contractor shall maintain backup copies of all data conveyed to MTS.

Contractor shall provide MTS with hard copy or electronic versions of reports and/or other material as requested by MTS.

XI. PRICING

Except where otherwise noted herein, pricing shall be firm and fixed for the duration of the Work Order and any subsequent Change Orders/Amendments to the Work Order. There shall be no escalation of rates or fees allowed.

XII. ADDITIONAL INFORMATION

List additional information as applicable to the specific Work Order scope of services.

XIII. PREVAILING WAGE

Prevailing wage rates apply to certain personnel for these services? ☐ Yes ■ No

If yes, please list classification subject to prevailing wage rates:

ATTACHMENT B
NEGOTIATED FEE PROPOSAL

Work Order Estimate Summary

Total Hours = **181**

Total Costs = **$27,705.47**

Consultant/Subconsultant: **Psomas**

Work Order Title: **SIGNAL UPGRADE - SICAS7 & H&K DESIGN**

MTS Doc. No.: **PWG355.0-22**

Work Order No.: **WOA355-AE-11**

Attachment: B

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Engineer - Principal	Contract Manager	Task Manager	CADD - Senior	Engineer - 2	Engineer - 3	Admin				Total Hours	Totals
				$ 236.83	$ 169.77	$ 209.90	$ 125.80	$ 144.42	$ 188.23	$ 100.92					
1	**Task 1A**	**Project Management (PSOMAS)**													
	Invoicing, scheduling, progress reports and administration				4	14		14		52				84	$10,887.40
	Meetings facilitation and minutes				4	8		8						20	$3,513.64
	Project schedule				3	7		7						17	$2,989.55
	Quality Control			4	4	18		34						60	$10,314.88
		Subtotals (Hours) =	N/A	4	15	47		63		52				181	$27,705.47
		Subtotals (Costs) =		$947.32	$2,546.55	$9,865.30		$9,098.46		$5,247.84				**181**	**$27,705.47**
2	**Task 1B**	**Project Management and Coordination (GSG)**													
	Project management / Invoicing														
	Weekly Meetings														
	Coordination and Interface														
	Construction Estimate														
		Subtotals (Hours) =	N/A												
		Subtotals (Costs) =													
3	**Task 3**	**Hardware Circuit Design**													
	C Street Design														
	Broadway Wye Design														
	Power Calculations														
	Site Survey														
		Subtotals (Hours) =	N/A												
		Subtotals (Costs) =													
4	**Task 4**	**Software Data Design**													
	C Street Programming														
	Broadway Wye Programming														
	Line Circuit Programming														
	QLCP Programming														
	Software Install														
		Subtotals (Hours) =	N/A												
		Subtotals (Costs) =													
5	**Task 5**	**Specifications**													
	Specifications														
	Construction Estimate														
	PE Review and Stamp														
		Subtotals (Hours) =	N/A												
		Subtotals (Costs) =													
5	**Task 6**	**HMI Panels, SCADA (Turnbacks / CPU Health) SW 37 Design**													
	HMI Panels and associated software programming														
	Sicas S7 SCADA Indications (Turn backs and CPU Health														
	Switch 37 Electric Lock circuit design														
	Site Survey and CRC Verification														
	Field Testing - Drawing redlines														
		Subtotals (Hours) =	N/A												$ -
		Subtotals (Costs) =													
		Totals (Summary) =												**181**	**$27,705.47**
		Total (Hours) =	N/A	4	15	47		63		52				181	
		Total (Costs) =		$947.32	$2,546.55	$9,865.30		$9,098.46		$5,247.84					$27,705.47
		Percentage of Total (Hours) =	N/A	2%	8%	25.97%		34.81%		29%				100%	
		Percentage of Total (Costs) =		3%	9%	35.61%		32.84%		19%					100%

Metropolitan Transit System

Agenda Item No. 12

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

Security Services – Contract Amendment

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2359.5-20 (in substantially the same format as Attachment A), with Inter-Con Security Services (Inter-Con), in the amount of $5,273,494 for Inter-Con contracted employee wage increases for the provision of security services through December 31, 2026.

Executive Committee Recommendation

At its February 9, 2023 meeting, the Executive Committee voted 6 to 0 (Board Members Fletcher, Whitburn, Elo-Rivera, Hall, Bush, and Moreno in favor) to recommend that the Board of Directors approve the staff recommendation.

Budget Impact

The total cost of this contract is estimated to be $71,443,503.

Base Period			Original	Amended	Change
Year 1	Calendar Year	2022	12,552,054	11,982,252	(569,802)
Year 2	Calendar Year	2023	12,821,879	14,052,485	1,230,606
Year 3	Calendar Year	2024	13,202,690	14,603,094	1,400,403
Base Period Totals			**38,576,624**	**40,637,831**	**2,061,207**
Option Period					
Year 4	Calendar Year	2025	13,594,809	15,175,383	1,580,573
Year 5	Calendar Year	2026	13,998,576	15,630,290	1,631,714
Option Period Totals			**27,593,385**	**30,805,672**	**3,212,287**
Grand Total			**66,170,009**	**71,443,503**	**5,273,494**

Funding will be included in each respective fiscal year's operating budget. Attachment B displays a further projected cost breakdown for calendar years 2022 through 2026.

DISCUSSION:

MTS provides uniformed security personnel at various locations throughout MTS's service area to provide a safe environment for patrons and employees alike. These security personnel have the capability to respond to disturbances and emergencies affecting both trolley and bus services within the MTS service area.

A high-quality security team offers a physical presence serving as a visual and physical deterrent to suspicious and illegal behavior including assault, vandalism and graffiti activities as well as ambassadors of goodwill to MTS passengers. Security personnel also work closely with MTS Code Compliance Inspectors to conduct fare inspections.

MTS awarded a Security Services contract with Inter-Con in July 2021 with the term of the agreement spanning from January 2022 through December 2026.

As the cost of living increases have affected the nation and region, the hiring and retention of security personnel, our front-line employees, has become a growing challenge. Competition for labor, the higher cost of living in San Diego, and a job market that has seen unprecedented wage increases has made attracting new and retaining security personnel extremely difficult at the current contract wage rates.

Over the past several months, Inter-Con and MTS staff have discussed and negotiated wage increases for Inter-Con security personnel and the resulting contract impacts for MTS. Today's proposed action would approve additional funding to increase contract security pay rates through the contract expiration date of December 31, 2026.

The following table reflects the proposed increase in employee wage rates for the current calendar year 2023. Billable rates to MTS include a 47.6% overhead factor to incorporate employer costs such as health benefits, retirement costs, payroll taxes, etc. Year 2 wages shall be increased as follows, which results in a net 9.6% increase of 2023 wage rates:

Security Personnel	CY 2023 Original	CY 2023 Amended	Change
Armed Security	20.59	22.00	1.41
Unarmed Officer	16.48	20.00	3.52
Armed Lieutenant - Salaried	28.83	29.00	0.17
Armed Sergeant	23.17	24.00	0.83
Armed Captain - Salaried	44.56	45.00	0.44
Dispatch / CCTV Officer - Step A	17.50	21.00	3.50
Dispatch / CCTV Officer - Step B	18.02	21.00	2.98
Administrative - Salaried	25.74	26.00	0.26
Trainer - Salaried	28.83	29.00	0.17
Event Staff	15.45	15.45	-

* Inter-Con billable rates to MTS include a 47.6% overhead rate

Wage rates will increase by an additional 4% for Year 3, 4% for Year 4, and 3% for Year 5.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. G2359.5-20 (in substantially the same format as Attachment A), with Inter-Con, in the amount of $5,273,494 for Inter-Con contracted employee wage increases for the provision of security services through December 31, 2026.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft Agreement, MTS Doc. No. G2359.5-20
B. Cost Proposal Form

Amendment 5

February 16, 2023 MTS Doc No. G2359.5-20

SECURITY SERVICES

Inter-Con Security Systems, Inc. dba Inter-Con Security
36TNeil Martau
Chief Administrative Officer
210 S. De Lacey Avenue
Pasadena, CA, 91105

This shall serve as Amendment No.5 to the original agreement G2359.0-20 as further described below.

SCOPE

Pursuant to the Scope of Work of the San Diego Metropolitan Transit System (MTS) both parties agree to a wage increase on all security personnel. Wages rates shall be increased as follows:

- Year 2 (January 1, 2023 through December 31, 2023)

Security Personnel	CY 2023 Original	CY 2023 Amended	Change
Armed Security - Step A	20.59	22.00	1.41
Armed Lieutenant - Salaried	28.83	29.00	0.17
Armed Sergeant - Step A	23.17	24.00	0.83
Unarmed Officer - Step A	16.48	20.00	3.52
Dispatch / CCTV Officer - Step A	17.50	21.00	3.50
Dispatch / CCTV Officer - Step B	18.02	21.00	2.98
Armed Captain - Salaried	44.56	45.00	0.44
Administrative - Salaried	25.74	26.00	0.26
Trainer - Salaried	28.83	29.00	0.17
Event Staff	15.45	15.45	-

* Inter-Con billable rates to MTS include a 47.6% overhead rate

- Year 3 (January 1, 2024 through December 31, 2024) – **4%**
- Year 4 (January 1, 2025 through December 31, 2025) – **4%**
- Year 5 (January 1, 2026 through December 31, 2026) – **3%**

SCHEDULE

There shall be no change to the schedule of the contract.

PAYMENT

This contract amendment shall authorize additional costs not to exceed $5,273,494 ($2,061,207 for base years and $3,212,287 for option years, if exercised) as reflected below:

Base Period			Original	Amended	Change
Year 1	Calendar Year	2022	12,552,054	11,982,252	(569,802)
Year 2	Calendar Year	2023	12,821,879	14,052,485	1,230,606
Year 3	Calendar Year	2024	13,202,690	14,603,094	1,400,403
Base Period Totals			**38,576,624**	**40,637,831**	**2,061,207**
Option Period					
Year 4	Calendar Year	2025	13,594,809	15,175,383	1,580,573
Year 5	Calendar Year	2026	13,998,576	15,630,290	1,631,714
Option Period Totals			**27,593,385**	**30,805,672**	**3,212,287**
Grand Total			**66,170,009**	**71,443,503**	**5,273,494**

The total value of this contract including this amendment shall be in the amount of $40,665,279. This amount shall not be exceeded without prior written approval from MTS.

Please sign and return the copy to the Contract Specialist at MTS. All other terms and conditions shall remain the same and in effect. Retain the other copies for your records.

Sincerely,

Sharon Cooney, Chief Executive Officer

Agreed:

46T36TNeil Martau, 48TChief Administrative Officer
Inter-Con Security Systems, Inc. dba Inter-Con Security

Date: _____

Attachment A	Proposed Amendment - EmployEe Wage Increase					
	Year 1*	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Armed Security		6,483,315	6,742,648	7,012,354	7,222,724	27,461,041
Armed Lieutenant - Salaried		267,068	277,751	288,861	297,527	1,131,208
Armed Sergeant		957,762	996,073	1,035,916	1,066,993	4,056,745
Unarmed Officer		3,745,097	3,894,901	4,050,697	4,172,218	15,862,912
Dispatch / CCTV Officer - Step A		644,648	670,434	697,251	718,169	2,730,501
Dispatch / CCTV Officer - Step B		64,465	67,043	69,725	71,817	273,050
Armed Captain - Salaried		138,139	143,664	149,411	153,893	585,107
Administrative - Salaried		319,254	332,024	345,305	355,664	1,352,248
Trainer - Salaried		89,023	92,584	96,287	99,176	377,069
Provide hourly rate for event staff		227,951	237,069	246,552	253,949	965,521
Bodycam Reclass from Base to Fixed (Amend 3)**		(88,612)	(88,612)	(88,612)	(88,612)	(354,448)
Overtime		877,204	903,257	930,083	957,707	3,668,250
Actual + Projection	11,650,573					
Total Wages	**11,650,573**	**13,725,314**	**14,268,836**	**14,833,830**	**15,281,225**	**58,109,205**
Weapons & Ammo	25,287	26,038	26,811	27,607	28,427	134,169
Vehicle Equipment	11,130	11,461	11,801	12,151	12,512	59,055
Visiologix Bodycameras	24,164	24,882	25,621	26,382	27,166	128,215
Equipment Add (Amendment 2)	1,855	1,910	1,967	2,025	2,085	9,842
Fixed Equipment	**62,436**	**64,290**	**66,200**	**68,166**	**70,190**	**331,282**
Auto Insurance	63,188	65,065	66,997	68,987	71,036	335,274
Auto Insurance Add (Amendment 2)	10,532	10,844	11,167	11,498	11,840	55,881
Fixed Insurance	**73,720**	**75,909**	**78,164**	**80,485**	**82,876**	**391,155**
(Optional) Cost for Bodycam video storage	41,552	42,787	44,057	45,366	46,713	220,475
Bodycam Reclass from Base to Fixed (Amend 3)**	-	88,612	88,612	88,612	88,612	354,448
On The Job Training (OJT) (Amendment 1)	100,000	-	-	-	-	100,000
Fixed Other	**141,552**	**131,399**	**132,669**	**133,978**	**135,325**	**674,923**
Profit	**53,971**	**55,574**	**57,224**	**58,924**	**60,674**	**286,366**
After Proposed Amendment Grand Total	**11,982,252**	**14,052,485**	**14,603,094**	**15,175,383**	**15,630,290**	**71,443,503**
Current Contract Grand Total	**12,552,054**	**12,821,879**	**13,202,690**	**13,594,809**	**13,998,576**	**66,170,009**
Net Change After Proposed Amendment	**(569,802)**	**1,230,606**	**1,400,403**	**1,580,573**	**1,631,714**	**5,273,494**

**Year 1 wage total reflects actual costs incurred*

***Note that Bodycam cost was moved from variable cost catogory to fixed with Amendment 3*

Attachment A	Current Contract					
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Armed Security	5,893,923	6,068,972	6,249,221	6,434,823	6,625,937	31,272,876
Armed Lieutenant - Salaried	257,859	265,518	273,403	281,523	289,885	1,368,188
Armed Sergeant	897,902	924,570	952,030	980,305	1,009,420	4,764,227
Unarmed Officer	2,996,077	3,085,061	3,176,687	3,271,035	3,368,185	15,897,045
Dispatch / CCTV Officer - Step A	521,858	537,357	553,316	569,750	586,672	2,768,953
Dispatch / CCTV Officer - Step B	53,721	55,316	56,959	58,651	60,393	285,039
Armed Captain - Salaried	132,828	136,773	140,835	145,018	149,325	704,780
Administrative - Salaried	306,975	316,092	325,480	335,147	345,101	1,628,796
Trainer - Salaried	85,953	88,506	91,134	93,841	96,628	456,063
Provide hourly rate for event staff	221,376	227,951	234,721	241,693	248,871	1,174,612
Bodycam Reclass from Base to Fixed (Amend 3)	-	-	-	-	-	-
Overtime	851,902	877,204	903,257	930,083	957,707	4,520,152
Actual + Projection						
Total Wages	**12,220,375**	**12,583,320**	**12,957,045**	**13,341,869**	**13,738,122**	**64,840,731**
Weapons & Ammo	25,287	26,038	26,811	27,607	28,427	134,169
Vehicle Equipment	11,130	11,461	11,801	12,151	12,512	59,055
Visiologix Bodycameras	24,164	24,882	25,621	26,382	27,166	128,215
Equipment Add (Amendment 2)	1,855	1,910	1,967	2,025	2,085	9,842
Fixed Equipment	**62,436**	**64,290**	**66,200**	**68,166**	**70,190**	**331,282**
Auto Insurance	63,188	65,065	66,997	68,987	71,036	335,274
Auto Insurance Add (Amendment 2)	10,532	10,844	11,167	11,498	11,840	55,881
Fixed Insurance	**73,720**	**75,909**	**78,164**	**80,485**	**82,876**	**391,155**
(Optional) Cost for Bodycam video storage	41,552	42,787	44,057	45,366	46,713	220,475
Bodycam Reclass from Base to Fixed (Amend 3)	-	-	-	-	-	-
On The Job Training (OJT) (Amendment 1)	100,000	-	-	-	-	100,000
Fixed Other	**141,552**	**42,787**	**44,057**	**45,366**	**46,713**	**320,475**
Profit	**53,971**	**55,574**	**57,224**	**58,924**	**60,674**	**286,366**
Grand Total	**12,552,054**	**12,821,879**	**13,202,690**	**13,594,809**	**13,998,576**	**66,170,009**

Metropolitan Transit System

Agenda Item No. 13

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

San Diego Transit Corporation (SDTC) Pension Investment Status (Jeremy Miller, Representative with RVK Inc. and Larry Marinesi)

INFORMATION ONLY

Budget Impact

None at this time.

DISCUSSION:

MTS was created by state statute in 1975. Over the following two decades, MTS assumed responsibility for all public transit services within our jurisdictional area. This was achieved by MTS bringing three distinct entities under the MTS umbrella: MTS (administration employees such as Human Resources, Finance, Planning, Marketing, Legal, Internal Audit, IT, Security, Capital Projects, and the Executive Office), San Diego Trolley, Inc. (SDTI) (employees operating and maintaining the trolley system), and San Diego Transit Corporation (SDTC) (employees operating and maintaining the bus system). Members of the MTS Board also serve as members of the governing boards for SDTI and SDTC. MTS Board meetings are considered consolidated meetings of all three entities.

MTS and SDTI employees participate in the statewide California Public Employee Retirement System (CalPERS). However, legacy SDTC employees participate in a private retirement plan that was created before the City of San Diego transferred the SDTC entity to MTS.

Today's presentation will relate to the private SDTC Employee Retirement Plan (Plan) that MTS is responsible for. The Plan has a pool of investments to fund the current and future pension benefit of the Plan members. In 2012, the Plan was closed to new members.

The Plan's investment advisor, Jeremy Miller from RVK, will provide the Board of Directors with an update as to the performance of the Plan as well as general capital market performance. RVK's pension investment performance analysis (Attachment A) for the Plan as of June 30, 2022 includes assets with a market value of $177.5 million. During fiscal year 2022, the Plan's assets decreased by approximately $27.6 million, primarily due to negative market investment

performance and benefit payments to retirees.

The Plan's ten products achieved a combined investment return of -10.80% for the year. The Plan's returns over the past three, five and ten years were 2.8%, 4.0% and 5.0% respectively. Since inception (10/1/1982), the Plan's investments have returned 8.5%. The current actuarial target for the Plan is 6.0%.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachment: A. RVK Pension Investment Performance Analysis

RVK

Quarterly Investment Performance Analysis

San Diego Transit Corporation Employees Retirement Plan

Period Ended: June 30, 2022

Table Of Contents

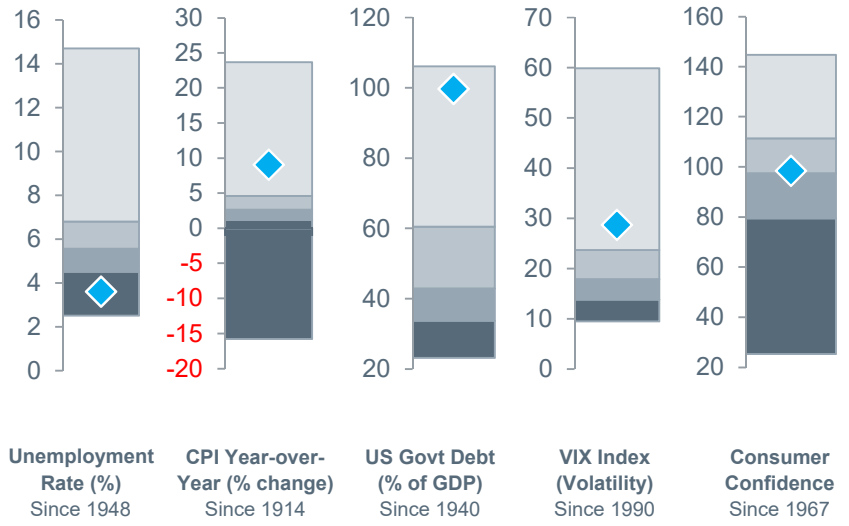
Capital Markets Review

Capital Markets Review **As of June 30, 2022**

Second Quarter Economic Environment

Continued rising inflation, accelerated tightening of global monetary policy and falling economic growth estimates led to most major indices ending negative in Q2. Inflation continued to rise in the US as the Consumer Price Index (CPI) rose to 9.1% at the end of June, spurred on by supply chain disruptions tied with the war in Ukraine and China's zero-COVID policy. The OECD's June Economic Outlook report now forecasts global inflation to end the year near 9%. Central banks continued to tighten monetary policy with the Federal Open Market Committee raising the federal funds rate by 0.75% in June which followed a 0.50% increase in May. Following the June CPI release, a 1.0% increase at the FOMC meeting in July is now the most likely scenario based on probabilities implied by traders. Forecasters are increasingly citing a rising risk of a recession in the US however the data is less clear. The Atlanta Fed's GDP Nowcast indicates a modest contraction of growth in Q2, with declining residential investment and private inventory overhang as key negative effects. However, manufacturing and services Purchasing Managers' indexes (PMIs) indicate expansion. The unemployment rate ended June at 3.6% as non-farm payroll growth averaged just under 375k per month. According to the latest JOLTS survey, the US currently has roughly two job openings for every unemployed individual. The Atlanta Fed's wage tracker also lists average annual wage growth at 6.7% based on a 3-month moving average.

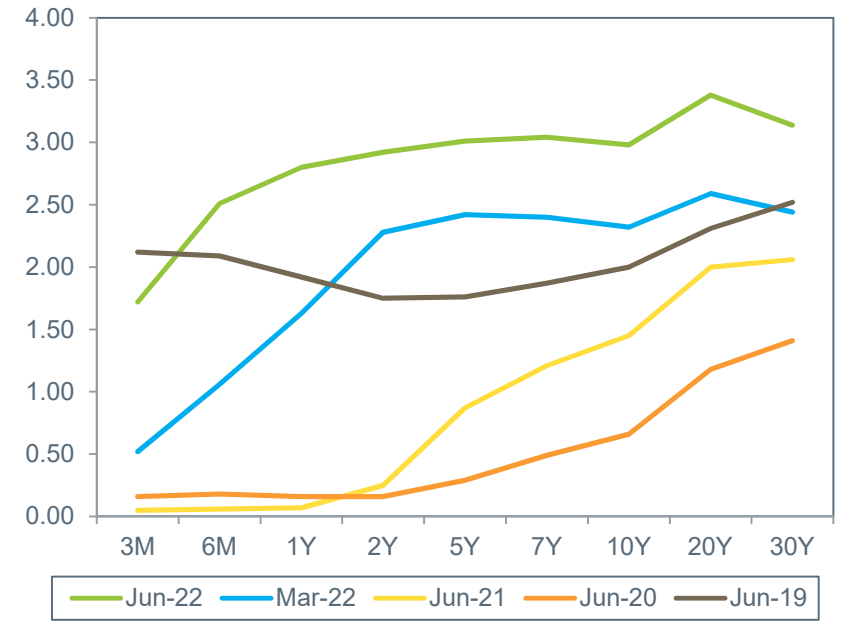
Key Economic Indicators



Economic Indicators	Jun-22		Mar-22	Jun-21	Jun-19	20 Yr
Federal Funds Rate (%)	1.58	▲	0.33	0.08	2.40	1.30
Breakeven Infl. - 5 Yr (%)	2.62	▼	3.43	2.50	1.54	1.86
Breakeven Infl. - 10 Yr (%)	2.34	▼	2.83	2.34	1.70	2.04
CPI YoY (Headline) (%)	9.1	▲	8.5	5.4	1.6	2.2
Unemployment Rate (%)	3.6	–	3.6	5.9	3.6	6.1
Real GDP YoY (%)	1.6	▼	3.5	12.2	2.1	1.9
PMI - Manufacturing	53.0	▼	57.1	60.9	51.5	53.5
USD Total Wtd Idx	121.05	▲	115.22	112.61	114.58	103.10
WTI Crude Oil per Barrel ($)	105.8	▲	100.3	73.5	58.5	64.4
Gold Spot per Oz ($)	1,807	▼	1,937	1,770	1,410	1,086

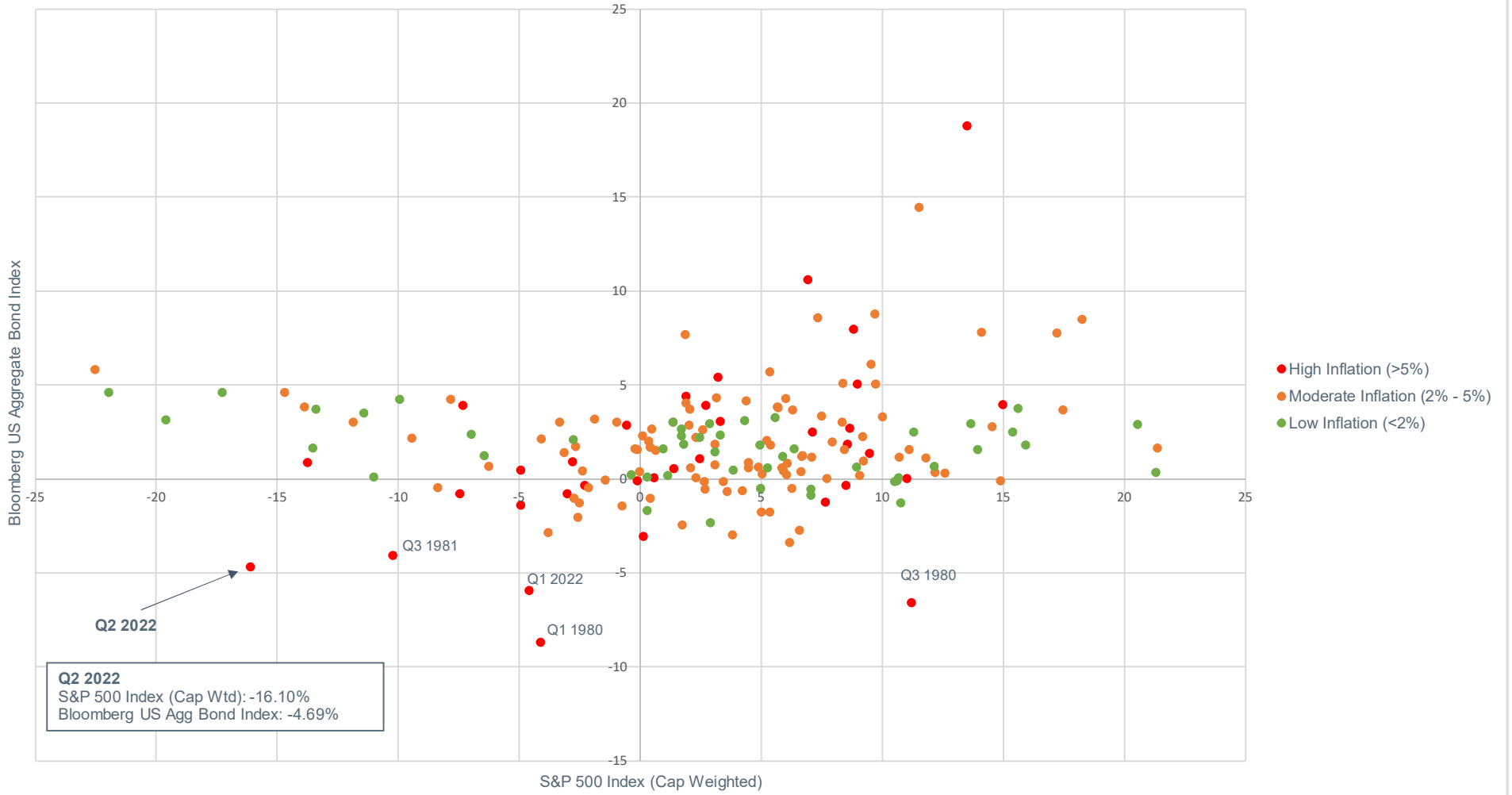
Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	-16.10	-19.96	-10.62	11.31	12.96
Russell 2000	-17.20	-23.43	-25.20	5.17	9.35
MSCI EAFE (Net)	-14.51	-19.57	-17.77	2.20	5.40
MSCI EAFE SC (Net)	-17.69	-24.71	-23.98	1.72	7.18
MSCI Emg Mkts (Net)	-11.45	-17.63	-25.28	2.18	3.06
Bloomberg US Agg Bond	-4.69	-10.35	-10.29	0.88	1.54
ICE BofAML 3 Mo US T-Bill	0.11	0.15	0.17	1.11	0.64
NCREIF ODCE (Gross)	4.77	12.49	29.51	10.54	11.16
FTSE NAREIT Eq REIT (TR)	-16.97	-20.20	-6.27	5.30	7.39
HFRI FOF Comp	-3.88	-6.53	-5.45	3.63	3.75
Bloomberg Cmdty (TR)	-5.66	18.44	24.27	8.39	-0.82

Treasury Yield Curve (%)



Treasury data courtesy of the US Department of the Treasury. Economic data courtesy of Bloomberg Professional Service.

Quarterly Equity & Fixed Income Returns Since 1976



Bloomberg US Aggregate Bond Index: Worst Quarters and Subsequent Performance

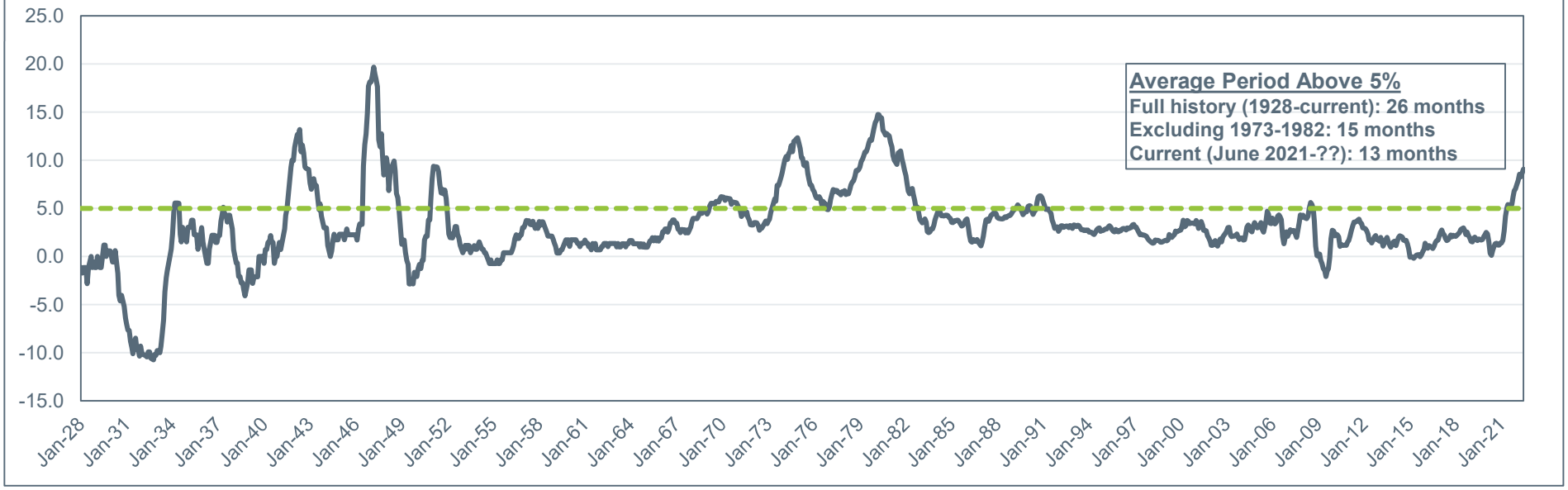
Quarter Ended	Quarter Return	YTW at Quarter End	Subsequent Quarter Return	Subsequent Year Return	Subsequent 3 Year Return Annualized
Mar-1980	-8.71%	14.10	18.79%	13.05%	17.88%
Sep-1980	-6.60%	12.43	1.36%	-2.58%	15.05%
Mar-2022	-5.93%	2.92	-4.69%	?	?
Jun-2022	-4.69%	3.72	?	?	?
Sep-1981	-4.07%	16.50	10.58%	35.22%	19.35%
Mar-2021	-3.38%	1.61	1.83%	-4.15%	?
Dec-1979	-3.08%	11.19	-8.71%	2.67%	13.12%

Inflation data provided by the Federal Reserve Economic Database.
Yield to Worst data provided by Barclays Live.

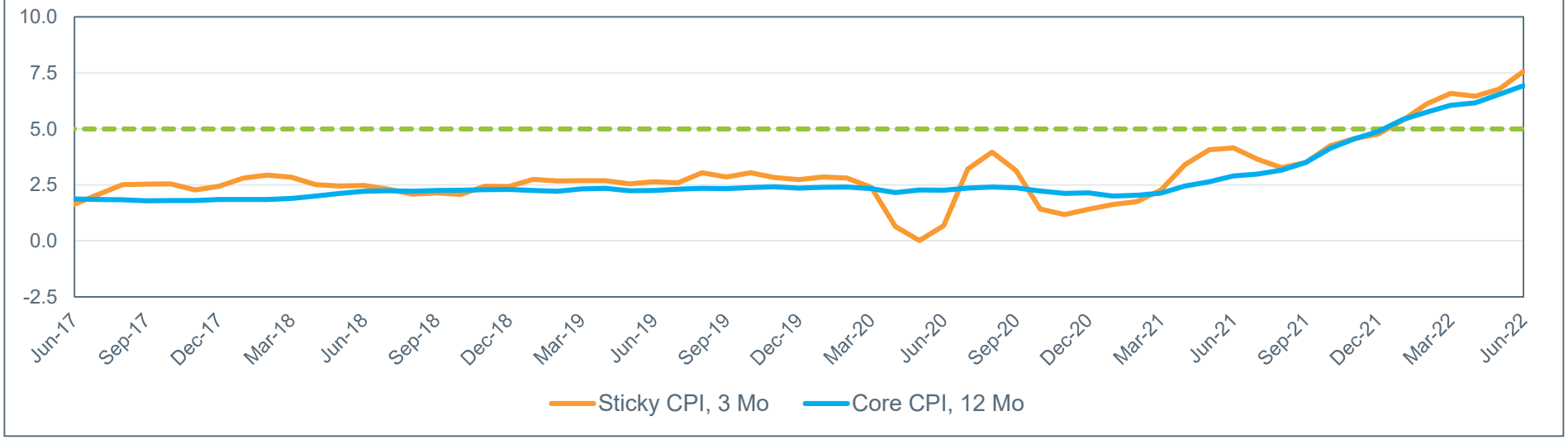
Current Inflation in Context

As of June 30, 2022

Historical US CPI (12 Month, %)



"Core" and "Sticky" US CPI (%)
5 Years Ending Jun 30, 2022



As of June 30, 2022. Sources: US Bureau of Labor Statistics, Federal Reserve Bank of Cleveland, and Federal Reserve Bank of Atlanta.
Core CPI is represented by the Revised FRB Cleveland Trimmed Mean, 12-month. Sticky CPI is represented by the FRB Atlanta Sticky-Price Index, 3-month.

Second Quarter Review

Broad Market

US equity markets were down sharply in Q2 in the midst of increasing concerns of a looming recession as the Fed acted to respond to sustained, elevated levels of inflation. With declines affecting all sectors, investors fled to defensive stocks as these were comparatively resilient. Likewise, investors in energy stocks benefited as the sector was buoyed by commodity prices.

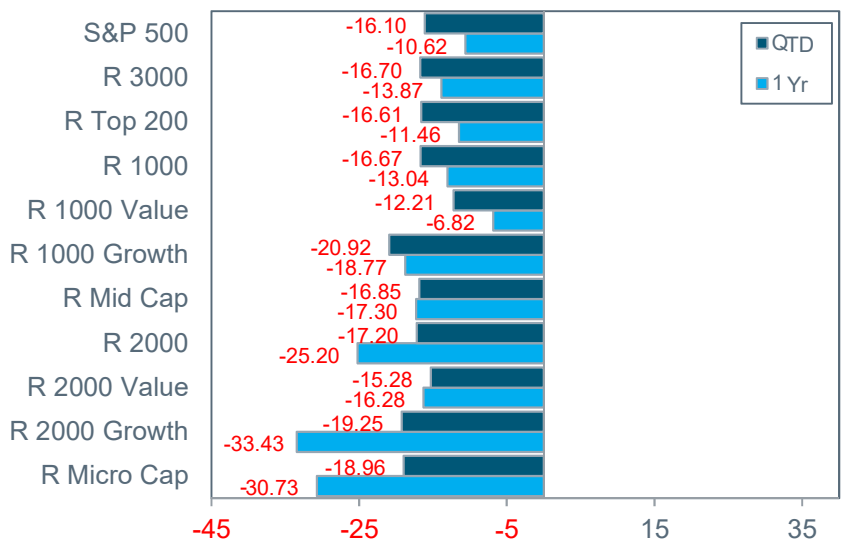
Market Cap

There was significant outperformance of value stocks over growth stocks, with the Russell 1000 Value and Russell 2000 Value indexes outperforming their growth counterparts by 8.7% and 4.0%, respectively.

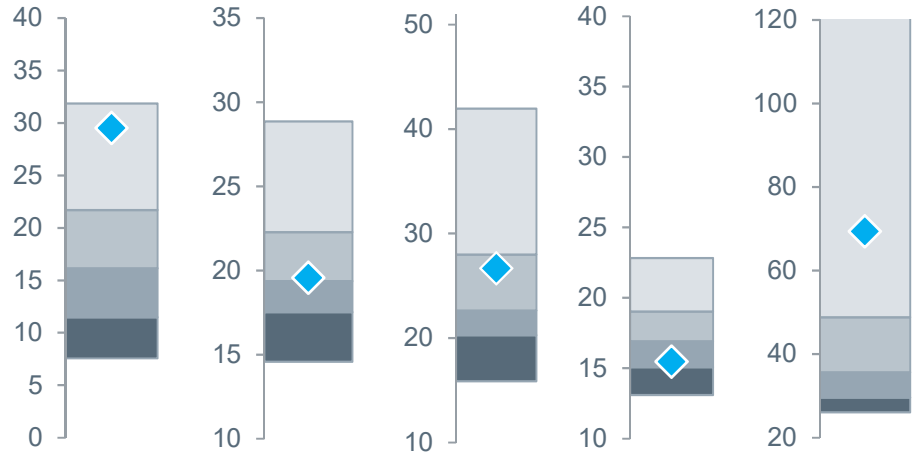
Style and Sector

Active management performed well in Q2, with the exception of large-cap growth managers. Small- and mid-cap core and value managers had an exceptionally strong Q2 with a majority outpacing their respective benchmarks by significant margins.

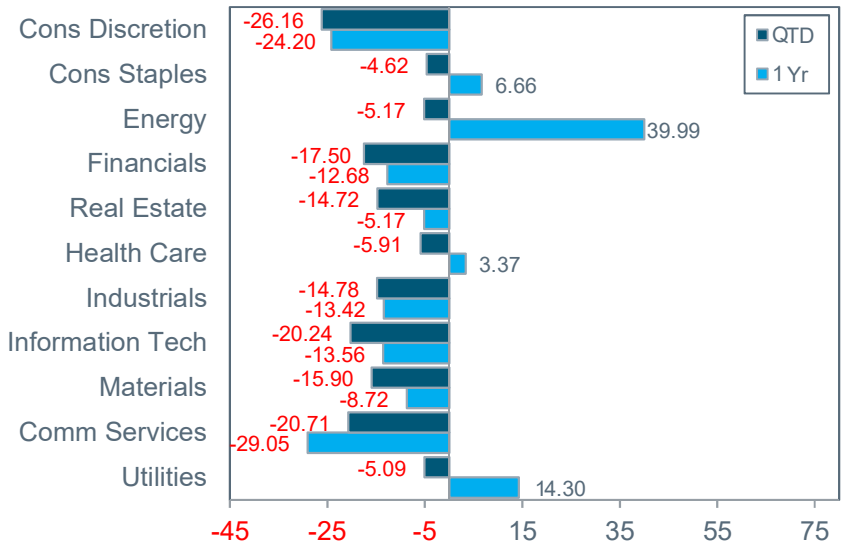
Style and Capitalization Market Performance (%)



Valuations



S&P 500 Index Sector Performance (%)



Valuation data courtesy of Bloomberg Professional Service and Robert J. Shiller, *Irrational Exuberance*, Second Edition.
P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.

Second Quarter Review

Developed Markets

Developed International markets fared better than the domestic market, albeit still finishing Q2 in negative territory with the MSCI EAFE Index notching a -14.5% return for the period. Value stocks remained in favor with continued outperformance over growth stocks, while large-cap stocks outperformed small-cap stocks. All developed market countries and sectors were negative for the quarter, with the Asia-Pacific region and information technology sector leading markets lower.

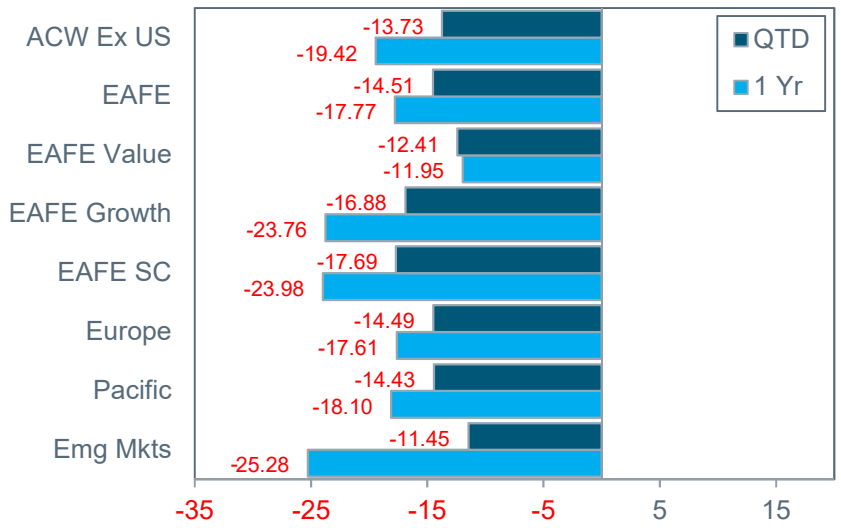
Emerging Markets

Emerging markets outperformed developed in Q2 with the MSCI EM Index returning -11.4%. Nearly all emerging market countries experienced negative returns.

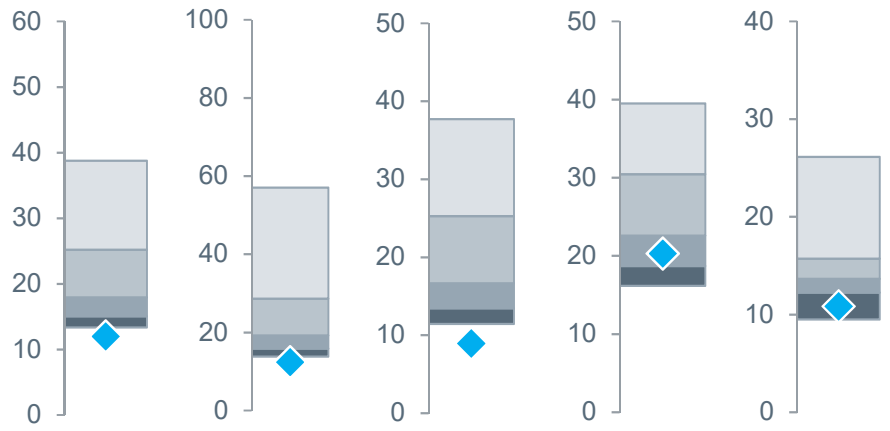
Market Cap & Style

In international markets, value stocks outperformed growth, while large-cap stocks outperformed small-cap. In emerging markets, value stocks outperformed growth, and large-cap stocks outperformed small-cap.

MSCI Style and Capitalization Market Performance (%)

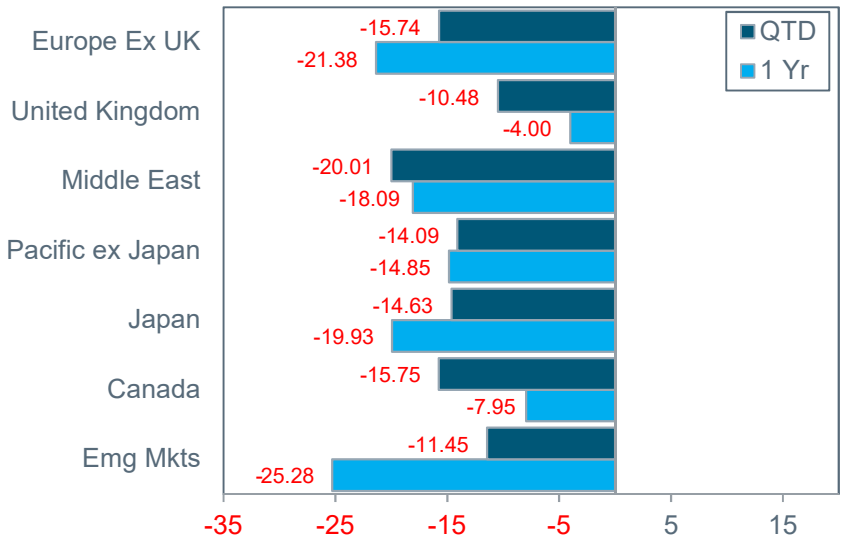


Valuations



Intl Equity	Developed Intl Equity	Developed Intl Value Equity	Developed Intl Growth Equity	Emerging Markets Equity
MSCI ACW x US	MSCI EAFE	MSCI EAFE Val	MSCI EAFE Grth	MSCI EM
12M P/E	12M P/E	12M P/E	12M P/E	12M P/E
Since 1995	Since 1995	Since 1995	Since 1995	Since 1995

MSCI Region Performance (%)



Valuation data courtesy of Bloomberg Professional Service.
P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.
All returns are shown net of foreign taxes on dividends.

Fixed Income Review **As of June 30, 2022**

Second Quarter Review

Broad Market

In Q2, Treasury yields rose 66 basis points from 2.32% to 2.98% with an intra-quarter high of 3.49%, as measured by the 10-year US Treasury yield. The Federal Reserve hiked the Federal Funds rate by 75 basis points over the quarter, the largest single increase since 1994. The Bloomberg US Aggregate ended the quarter down with an overall return of -4.7%.

Credit Market

While fixed income broadly experienced negative absolute performance over the quarter, widening credit spreads presented additional headwinds to corporate credit. US Investment Grade credit detracted -6.9%, while US High Yield returned -9.8%, as measured by the Bloomberg US Credit Index and Bloomberg US High Yield index, respectively.

Emerging Market Debt

Foreign fixed income experienced headwinds from the Russia-Ukraine war, inflationary concerns, and mixed central bank policy. These factors led to a -11.4% return in Q2 for the JPM EMBI Global Diversified Index.

Valuations

US Treasury Bonds
10-Yr US Treasury Yields
Since 1953

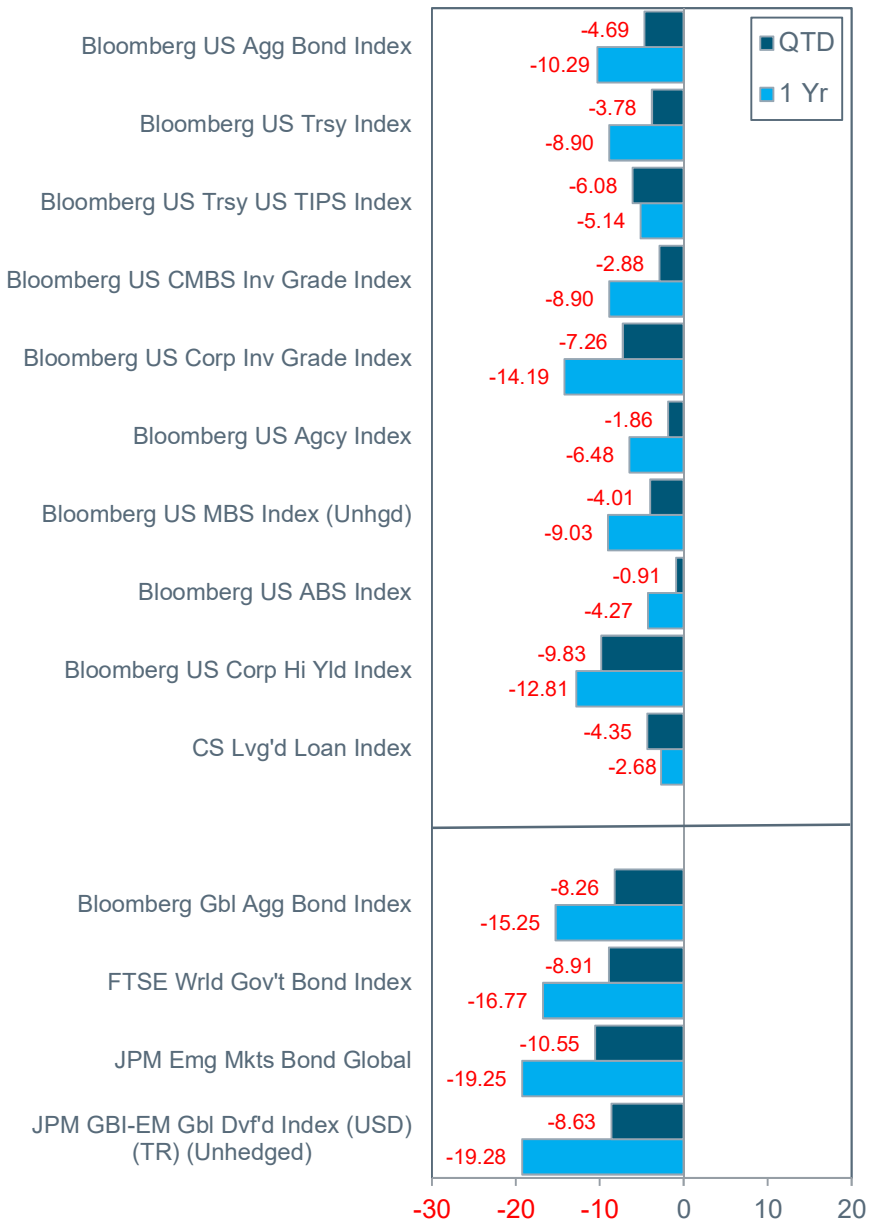
US Aggregate Bonds
Bloomberg US Agg Spreads
Since 2000

US Corporate Bonds
Bloomberg US Corp Spreads
Since 1989

US Credit Bonds
Bloomberg US Credit Spreads
Since 2000

US High-Yield Bonds
Bloomberg US Corp:HY Spreads
Since 2000

Fixed Income Performance (%)



Valuation data courtesy of Bloomberg Professional Service.
Valuations shown represent the 5th through 95th percentiles to minimize the effect of outliers.

Second Quarter Review - Absolute Return

General Market - Hedge Funds

Dispersion continues to be the theme across the hedge fund landscape. Although the HFRI Asset Weighted Composite returned 0.3% during the quarter, its year-to-date return remained positive at 2.1%. By contrast, the Equal Weighted Index, which is dominated by long/short equity strategies ("ELS"), returned -4.9% in Q2, led lower by ELS managers returning -8.3%. Prime brokerage data indicates that the 1st half of 2022 was one of the strongest on record for short alpha, as higher interest rates tend to structurally benefit short sellers.

General Market - Global Tactical Asset Allocation (GTAA)

Global Tactical Asset Allocation (GTAA) strategies that RVK follows closely generated disparate performance in Q2. Although overall performance was negative, nearly all managers outperformed a US centric blend of 60% equity and 40% fixed income. The top performing long-biased GTAA strategies tended to emphasize relative undervaluation in their asset allocation processes, while underperformers tended to hold larger allocations to US equity and non-USD fixed income.

Second Quarter Review - Real Assets

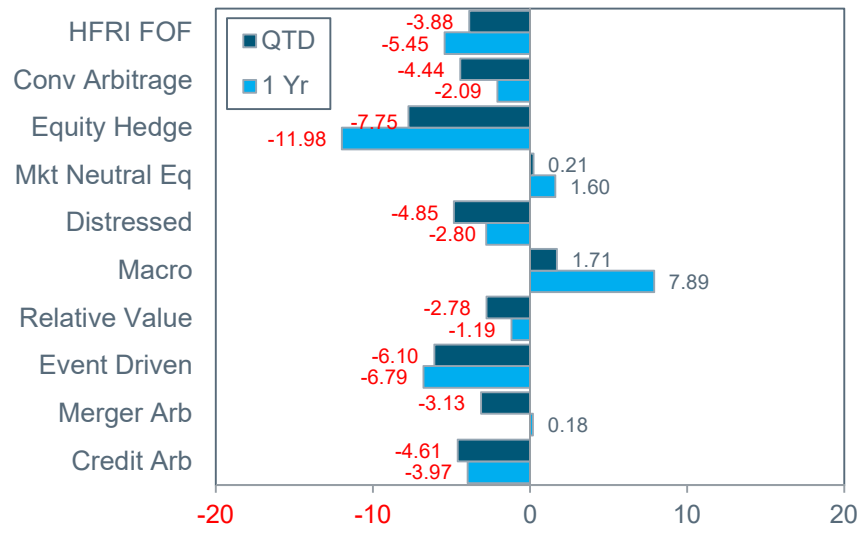
General Market - Diversified Inflation Strategies (DIS)

After responding positively to record inflationary pressures in Q1, DIS posted losses ranging from negative mid-single digit to negative low double-digit. Manager allocations to inflation sensitive assets were affected by cross currents of Fed rate hikes combined with changing market estimates of future economic growth. During the Q2, nearly all inflation sensitive asset classes were negative except for energy commodities. Managers with larger TIPS allocations tended to outperform peers, especially in cases where shorter duration TIPS were targeted.

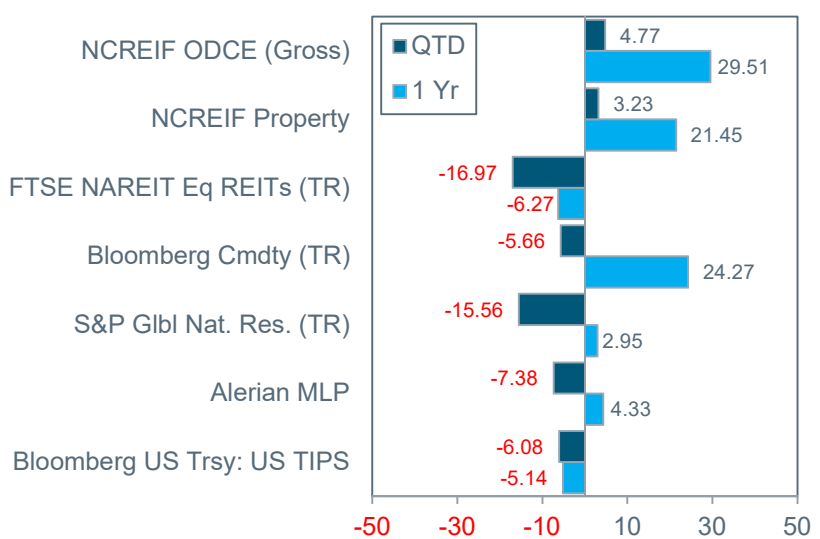
General Market - Real Estate

Core private real estate generated 4.8% return in Q2, as reported by the NFI-ODCE Index, with the total return comprising of 0.9% income and 3.9% price appreciation. As income return trends at the lower end of historical levels, the price appreciation return remains elevated. Investors in publicly traded real estate significantly underperformed their private market counterparts by a meaningful margin.

HFRI Hedge Fund Performance (%)

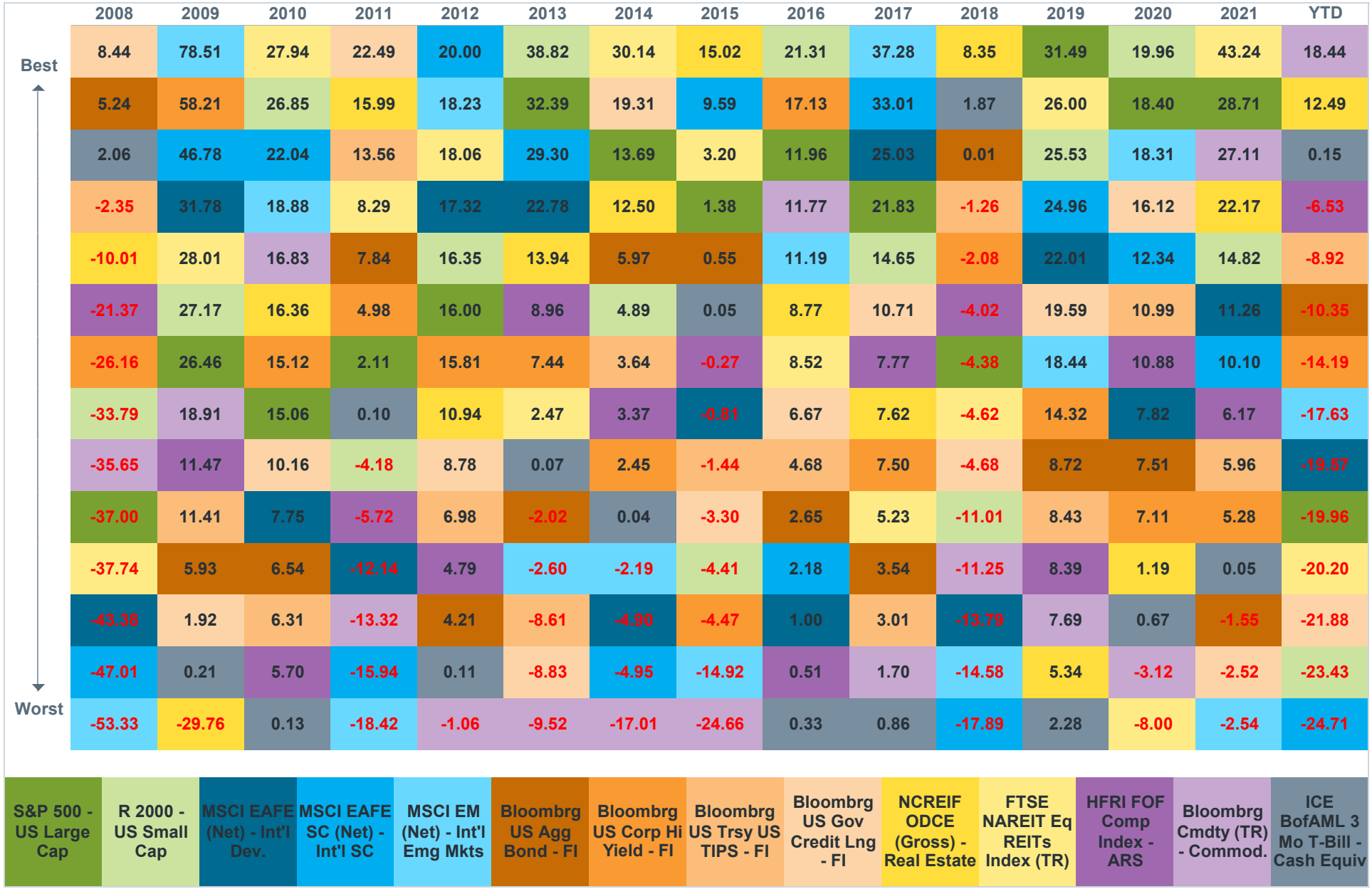


Real Asset Performance (%)



Annual Asset Class Performance

As of June 30, 2022



NCREIF ODCE (Gross) performance is reported quarterly; performance is shown N/A in interim-quarter months.

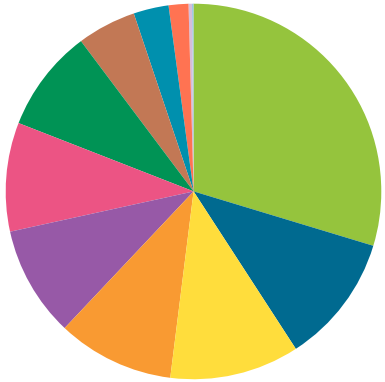
Total Fund

San Diego Transit Corporation Employees Retirement Plan
AA by Manager, AA vs. Target, and Schedule of Investable Assets

As of June 30, 2022

Asset Allocation by Manager

June 30, 2022 : $177,508,436

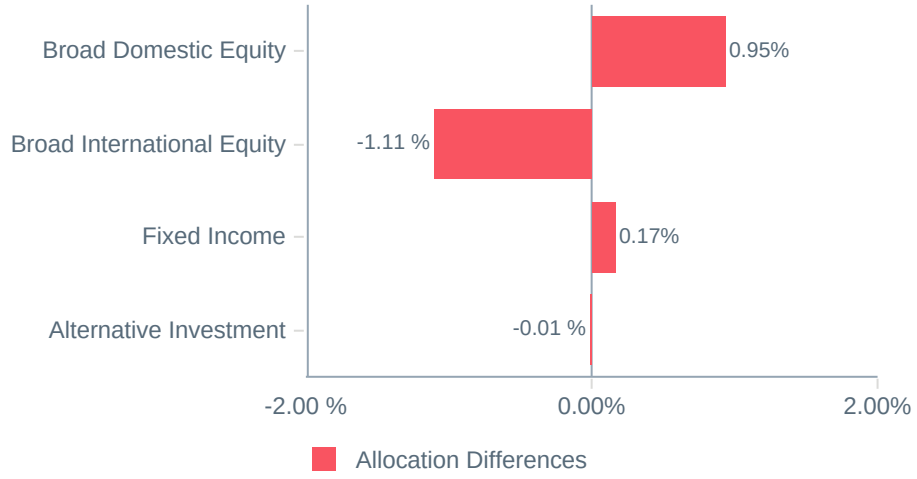


	Market Value ($)	Allocation (%)
Vanguard Tot Bd;Inst (VBTIX)	52,671,976	29.67
Analytic US Low Volatility (CF)	19,798,364	11.15
PIMCO:All Ast Ath;Inst (PAUIX)	19,787,230	11.15
Westwood Qual ACp;Ultra (WQAUX)	17,865,489	10.06
MFS Intl Grth Cl 2 (CIT)	16,898,612	9.52
PIMCO:RAE GlxUS;Inst (PZRIX)	16,639,170	9.37
GMO:Bchmk-Fr All;III (GBMFX)	15,693,113	8.84
Vanguard Infl-Prot;Adm (VAIPX)	9,007,101	5.07
Newton TBC US SMID Cap Grth Eq (CF)	5,373,638	3.03
Fidelity US Sustainability Index Fund (FITLX)	3,020,877	1.70
Contribution Account	522,500	0.29
Disbursement Account	222,892	0.13
PAAMCO Pacific Hedged Strategy (CF)	7,474	0.00

Asset Allocation vs. Target Allocation

	Market Value ($)	Allocation (%)	Target (%)
Broad Domestic Equity	46,058,368	25.95	25.00
Broad International Equity	33,537,782	18.89	20.00
Fixed Income	62,424,469	35.17	35.00
Alternative Investment	35,487,818	19.99	20.00
Total Fund	177,508,436	100.00	100.00

Asset Allocation vs. Target Allocation Differences



Schedule of Investable Assets

Periods Ending	Beginning Market Value ($)	Net Cash Flow ($)	Gain/Loss ($)	Ending Market Value ($)	% Return
FYTD	205,101,490	-5,889,201	-21,703,853	177,508,436	-10.80

Performance shown is gross of fees. Allocations shown may not sum up to 100% exactly due to rounding. Fiscal year ends 06/30. The market value shown for PAAMCO represents illiquid special purpose vehicle (SPV) assets. BNYM PE US SMID Cap Grth Eq NL has been rebranded as Newton TBC US SMID Cap Grth Eq.

San Diego Transit Corporation Employees Retirement Plan
Schedule of Investable Assets - San Diego Transit Total Fund

10 Years Ending June 30, 2022

Periods Ending	Beginning Market Value ($)	Net Cash Flow ($)	Gain/Loss ($)	Ending Market Value ($)	% Return	Unit Value
Jun-2012	-	-	-	142,447,048	N/A	100.00
Sep-2012	142,447,048	-2,751,113	6,531,104	146,227,039	4.63	104.63
Dec-2012	146,227,039	-153,825	3,519,575	149,592,790	2.41	107.16
Mar-2013	149,592,790	-1,845,785	6,076,266	153,823,271	4.10	111.55
Jun-2013	153,823,271	-1,800,069	-2,920,203	149,103,000	-1.92	109.41
Sep-2013	149,103,000	-565,655	6,045,813	154,583,158	4.07	113.86
Dec-2013	154,583,158	-606,833	5,049,931	159,026,256	3.28	117.59
Mar-2014	159,026,256	-813,836	2,781,901	160,994,321	1.79	119.70
Jun-2014	160,994,321	-1,348,034	5,563,384	165,209,671	3.47	123.86
Sep-2014	165,209,671	-424,471	-4,150,003	160,635,197	-2.52	120.74
Dec-2014	160,635,197	-866,442	-16,263	159,752,492	-0.01	120.72
Mar-2015	159,752,492	-1,164,342	3,562,860	162,151,010	2.23	123.41
Jun-2015	162,151,010	-2,510,007	-363,657	159,277,346	-0.24	123.11
Sep-2015	159,277,346	-439,611	-8,862,389	149,975,346	-5.58	116.24
Dec-2015	149,975,346	-1,233,556	1,697,383	150,439,174	1.12	117.54
Mar-2016	150,439,174	-1,514,509	3,383,938	152,308,602	2.29	120.24
Jun-2016	152,308,602	-2,860,078	4,196,826	153,645,350	2.65	123.42
Sep-2016	153,645,350	-533,720	3,576,792	156,688,421	2.33	126.30
Dec-2016	156,688,421	-1,245,718	-400,351	155,042,353	-0.25	125.98
Mar-2017	155,042,353	-1,038,006	5,678,897	159,683,244	3.68	130.62
Jun-2017	159,683,244	-1,664,483	4,171,462	162,190,222	2.62	134.04
Sep-2017	162,190,222	-138,740	4,913,052	166,964,534	3.03	138.10
Dec-2017	166,964,534	-1,212,085	5,463,783	171,216,232	3.28	142.63
Mar-2018	171,216,232	-1,131,419	-1,268,345	168,816,469	-0.74	141.58
Jun-2018	168,816,469	-2,482,287	544,570	166,878,752	0.32	142.04
Sep-2018	166,878,752	-350,977	2,298,753	168,826,529	1.38	144.00
Dec-2018	168,826,529	-1,086,426	-9,842,880	157,897,222	-5.84	135.60
Mar-2019	157,897,222	-1,369,668	11,292,906	167,820,461	7.18	145.34
Jun-2019	167,820,461	-2,517,216	5,552,667	170,855,911	3.33	150.18
Sep-2019	170,855,911	-339,285	950,495	171,467,121	0.56	151.02
Dec-2019	171,467,121	-1,298,990	7,350,456	177,518,587	4.31	157.52
Mar-2020	177,518,587	-1,048,375	-24,536,027	151,934,186	-13.92	135.59
Jun-2020	151,934,186	-2,520,038	17,156,564	166,570,712	11.35	150.98
Sep-2020	166,570,712	-396,885	6,006,502	172,180,329	3.61	156.42
Dec-2020	172,180,329	-827,691	16,536,620	187,889,258	9.64	171.51
Mar-2021	187,889,258	6,388,977	5,096,857	199,375,092	2.65	176.06
Jun-2021	199,375,092	-2,283,526	8,009,925	205,101,490	4.03	183.15
Sep-2021	205,101,490	-752,997	-2,118,196	202,230,297	-1.04	181.25
Dec-2021	202,230,297	-1,245,110	5,115,791	206,100,979	2.54	185.85
Mar-2022	206,100,979	-1,430,158	-7,500,394	197,170,427	-3.65	179.07
Jun-2022	197,170,427	-2,460,936	-17,201,055	177,508,436	-8.77	163.36
	142,447,048	**-43,883,925**	**78,945,313**	**177,508,436**	**5.03**	**163.36**

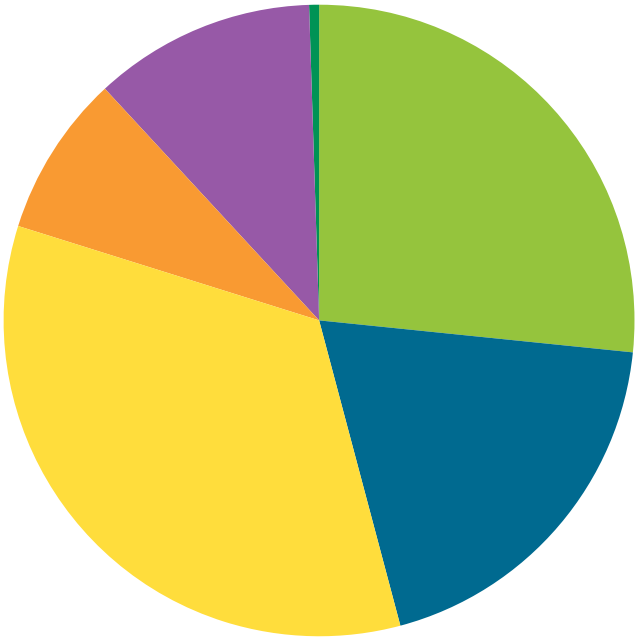
The last row shown in bold at the end of the table contains aggregate values pertaining to the period specified in the header. Performance shown is gross of fees. Calculation is based on quarterly periodicity.

San Diego Transit Corporation Employees Retirement Plan
Asset Allocation by Segment
San Diego Transit Total Fund

As of June 30, 2022

Asset Allocation by Segment

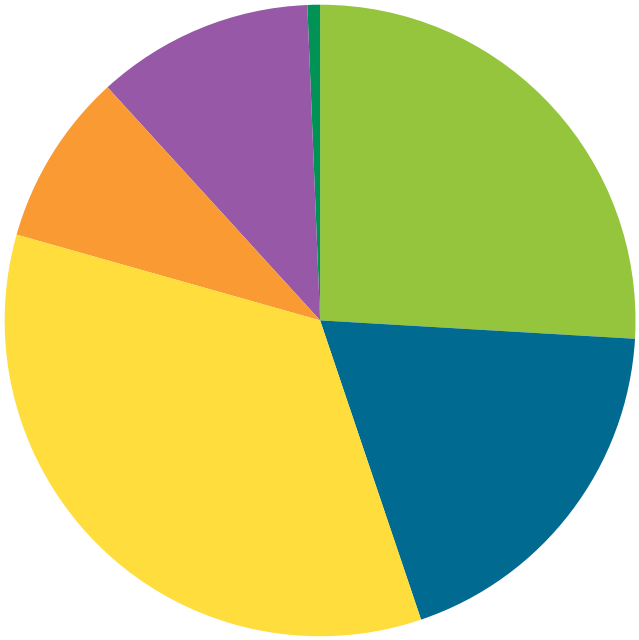
March 31, 2022 : $197,170,427



Segments	Market Value ($)	Allocation (%)
Domestic Equity	52,467,363	26.61
International Equity	37,948,080	19.25
Domestic Fixed Income	67,002,807	33.98
Alternative Investment	16,312,750	8.27
Real Return	22,431,827	11.38
Cash Equivalent	1,007,601	0.51

Asset Allocation by Segment

June 30, 2022 : $177,508,436

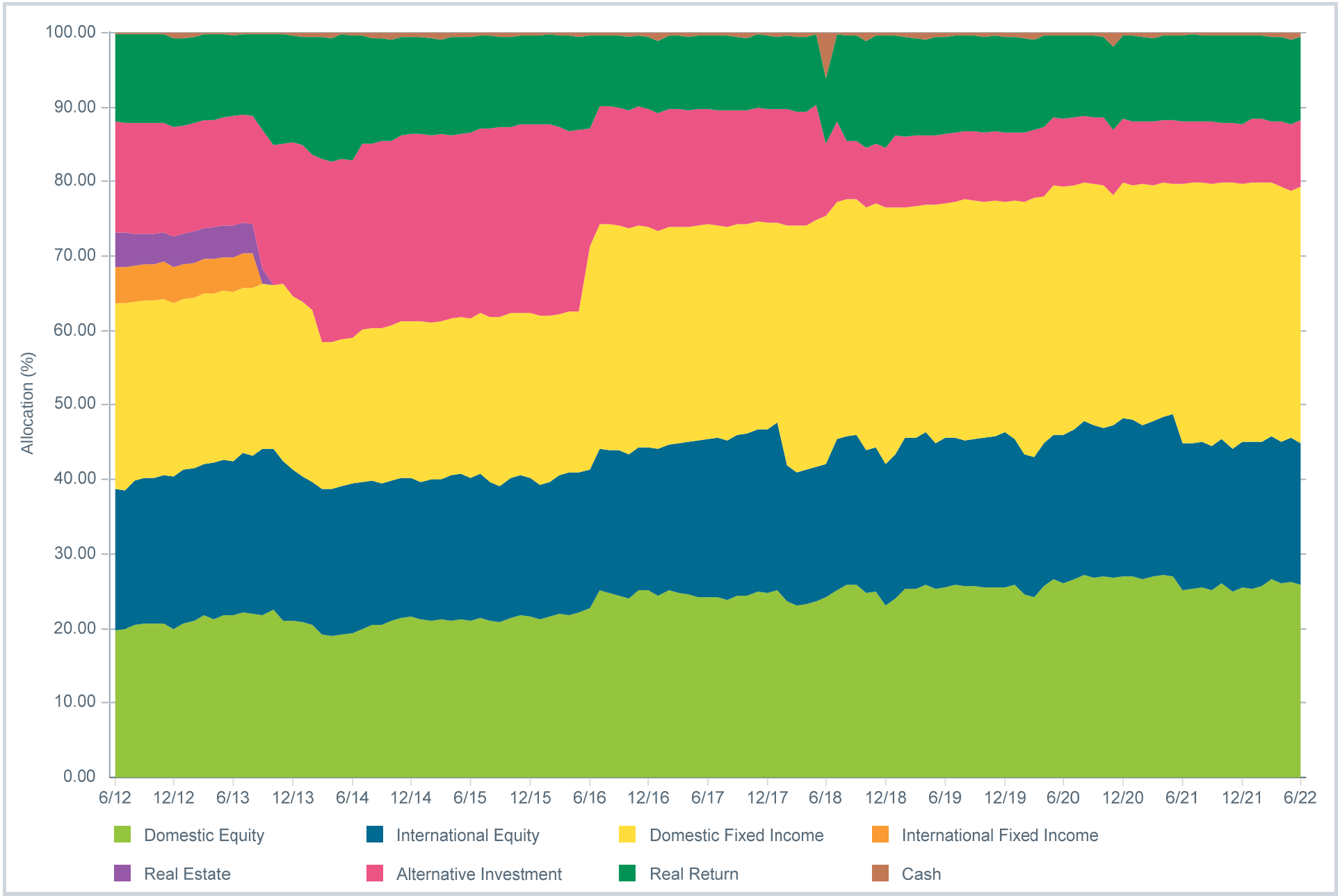


Segments	Market Value ($)	Allocation (%)
Domestic Equity	46,017,633	25.92
International Equity	33,536,279	18.89
Domestic Fixed Income	61,356,472	34.57
Alternative Investment	15,693,113	8.84
Real Return	19,761,510	11.13
Cash Equivalent	1,143,429	0.64

Allocations shown may not sum up to 100% exactly due to rounding. Alternative Investment includes Absolute Return strategies. Domestic Fixed Income includes Vanguard Infl-Prot;Adm (VAIPX). US Equity includes Fidelity US Sustainability Index Fund (FITLX). Cash Equivalent includes accrued income and uninvested cash.

San Diego Transit Corporation Employees Retirement Plan
Historical Asset Allocation by Segment
San Diego Transit Total Fund

10 Years Ending June 30, 2022



San Diego Transit Corporation Employees Retirement Plan
Asset Allocation ($000)

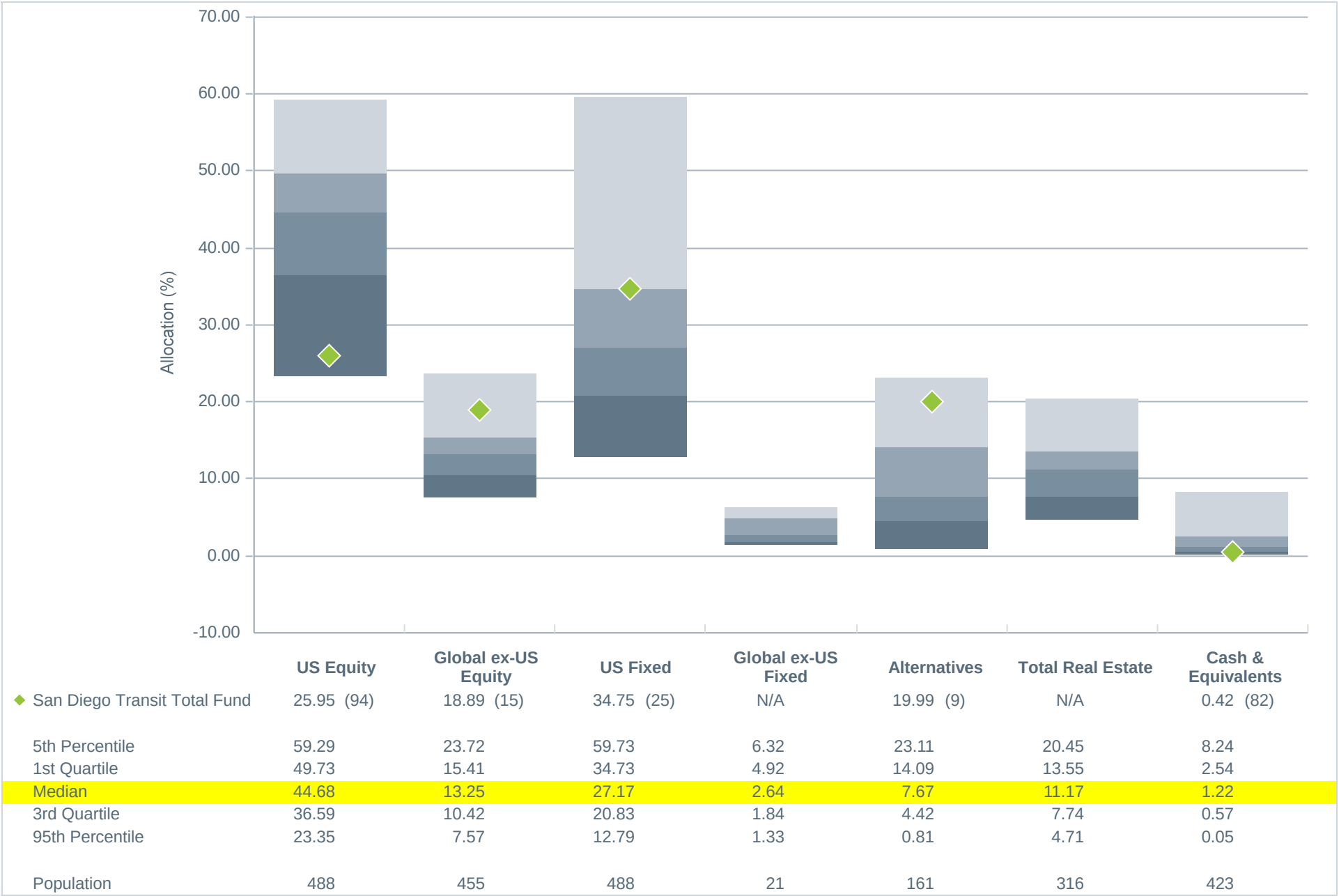
As of June 30, 2022

	Domestic Equity		International Equity		Domestic Fixed Income		Alternative Investment		Real Return		Cash Equivalent		Total Fund	
	($)	%	($)	%	($)	%	($)	%	($)	%	($)	%	($)	%
Broad Domestic Equity														
Westwood Qual ACp;Ultra (WQAUX)	17,865	100.00	-	-	-	-	-	-	-	-	-	0.00	17,865	10.06
Fidelity US Sustainability Index Fund (FITLX)	3,021	100.00	-	-	-	-	-	-	-	-	-	0.00	3,021	1.70
Analytic US Low Volatility (CF)	19,758	99.80	-	-	-	-	-	-	-	-	40	0.20	19,798	11.15
Newton TBC US SMID Cap Grth Eq (CF)	5,374	100.00	-	-	-	-	-	-	-	-	-	0.00	5,374	3.03
Total	**46,018**	**99.91**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**41**	**0.09**	**46,058**	**25.95**
Broad International Equity														
PIMCO:RAE GlxUS;Inst (PZRIX)	-	-	16,638	99.99	-	-	-	-	-	-	1	0.01	16,639	9.37
MFS Intl Grth Cl 2 (CIT)	-	-	16,898	100.00	-	-	-	-	-	-	-	0.00	16,899	9.52
Total	**-**	**-**	**33,536**	**100.00**	**-**	**-**	**-**	**-**	**-**	**-**	**2**	**0.00**	**33,538**	**18.89**
TOTAL EQUITY	**46,018**	**57.81**	**33,536**	**42.13**	**-**	**-**	**-**	**-**	**-**	**-**	**42**	**0.05**	**79,596**	**44.84**
Fixed Income														
Vanguard Tot Bd;Inst (VBTIX)	-	-	-	-	52,567	99.80	-	-	-	-	105	0.20	52,672	29.67
Vanguard Infl-Prot;Adm (VAIPX)	-	-	-	-	8,789	97.58	-	-	-	-	218	2.42	9,007	5.07
Contribution Account	-	-	-	-	-	-	-	-	-	-	522	100.00	522	0.29
Disbursement Account	-	-	-	-	-	-	-	-	-	-	223	100.00	223	0.13
Total	**-**	**-**	**-**	**-**	**61,356**	**98.29**	**-**	**-**	**-**	**-**	**1,068**	**1.71**	**62,424**	**35.17**
TOTAL FIXED INCOME	**-**	**-**	**-**	**-**	**61,356**	**98.29**	**-**	**-**	**-**	**-**	**1,068**	**1.71**	**62,424**	**35.17**
Alternative Investment														
PIMCO:All Ast Ath;Inst (PAUIX)	-	-	-	-	-	-	-	-	19,762	99.87	26	0.13	19,787	11.15
GMO:Bchmk-Fr All;III (GBMFX)	-	-	-	-	-	-	15,693	100.00	-	-	-	-	15,693	8.84
PAAMCO Pacific Hedged Strategy (CF)	-	-	-	-	-	-	-	-	-	-	7	100.00	7	0.00
Total	**-**	**-**	**-**	**-**	**-**	**-**	**15,693**	**44.22**	**19,762**	**55.69**	**33**	**0.09**	**35,488**	**19.99**
TOTAL ALTERNATIVES	**-**	**-**	**-**	**-**	**-**	**-**	**15,693**	**44.22**	**19,762**	**55.69**	**33**	**0.09**	**35,488**	**19.99**
SAN DIEGO TRANSIT TOTAL FUND	**46,018**	**25.92**	**33,536**	**18.89**	**61,356**	**34.57**	**15,693**	**8.84**	**19,762**	**11.13**	**1,143**	**0.64**	**177,508**	**100.00**

Allocations shown may not sum up to 100% exactly due to rounding. BNYM PE US SMID Cap Grth Eq NL has been rebranded as Newton TBC US SMID Cap Grth Eq.

San Diego Transit Corporation Employees Retirement Plan
All Public Plans (<$500M) (Custom PG)
Plan Sponsor TF Asset Allocation

As of June 30, 2022

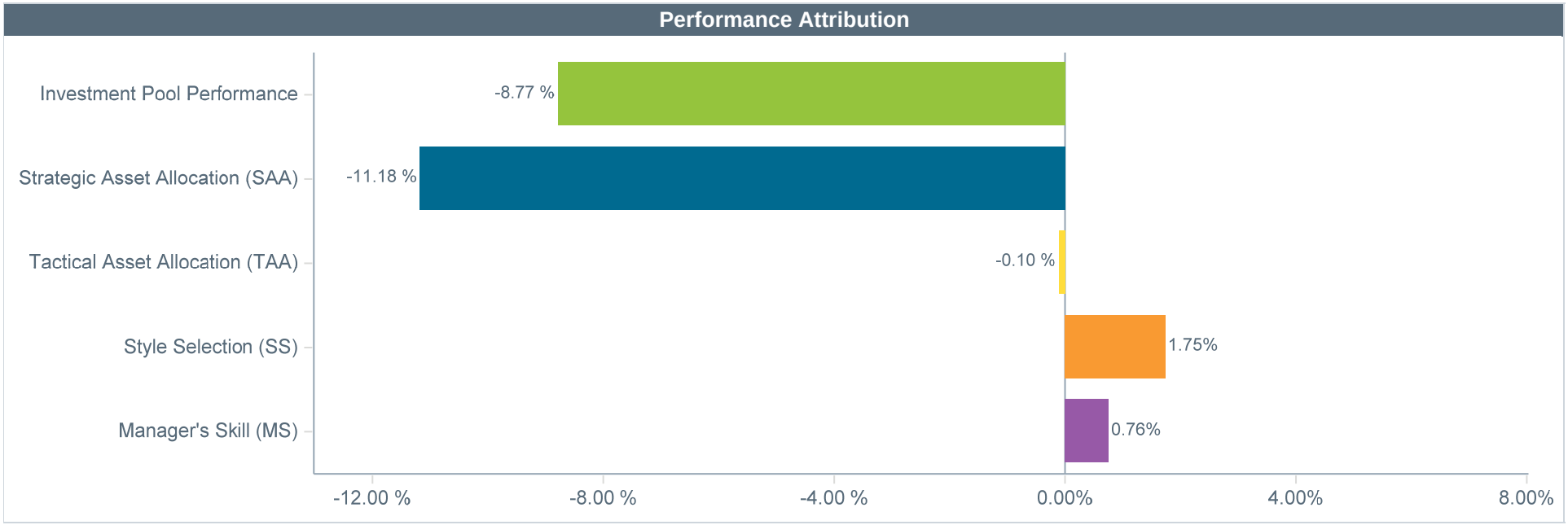


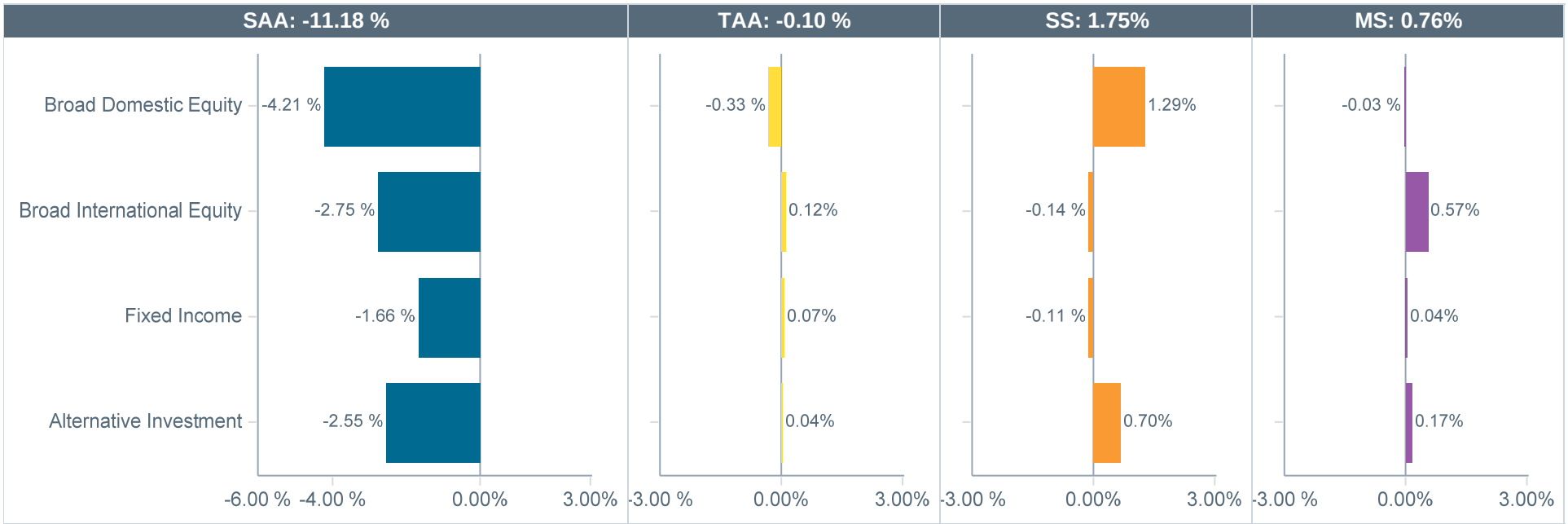
	US Equity	Global ex-US Equity	US Fixed	Global ex-US Fixed	Alternatives	Total Real Estate	Cash & Equivalents
◆ San Diego Transit Total Fund	25.95 (94)	18.89 (15)	34.75 (25)	N/A	19.99 (9)	N/A	0.42 (82)
5th Percentile	59.29	23.72	59.73	6.32	23.11	20.45	8.24
1st Quartile	49.73	15.41	34.73	4.92	14.09	13.55	2.54
Median	44.68	13.25	27.17	2.64	7.67	11.17	1.22
3rd Quartile	36.59	10.42	20.83	1.84	4.42	7.74	0.57
95th Percentile	23.35	7.57	12.79	1.33	0.81	4.71	0.05
Population	488	455	488	21	161	316	423

Parentheses contain percentile ranks. Alternative Investment includes Absolute Return strategies. US Fixed Income includes Vanguard Infl-Prot;Adm (VAIPX).
US Equity includes Fidelity US Sustainability Index Fund (FITLX). Cash consists of both the Contribution & Disbursement Accounts.

San Diego Transit Corporation Employees Retirement Plan
Total Fund Attribution - IDP

Quarter To Date Ending June 30, 2022





Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.

San Diego Transit Corporation Employees Retirement Plan
Asset Allocation & Performance

As of June 30, 2022

	Allocation		Performance (%)									
	Market Value ($)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	10 Years	2021	2020	2019
San Diego Transit Total Fund	**177,508,436**	**100.00**	**-8.77**	**-12.10**	**-10.80**	**-10.80**	**2.84**	**4.04**	**5.03**	**8.36**	**8.88**	**16.17**
Policy Index			-11.18	-16.13	-13.92	-13.92	3.09	4.37	5.12	8.87	13.05	19.02
Difference			2.41	4.03	3.12	3.12	-0.25	-0.33	-0.09	-0.51	-4.17	-2.85
Domestic Equity	**46,058,368**	**25.95**	**-12.14**	**-12.73**	**-8.36**	**-8.36**	**7.36**	**8.28**	**11.14**	**16.35**	**13.11**	**28.24**
Russell 3000 Index			-16.70	-21.10	-13.87	-13.87	9.77	10.60	12.57	25.66	20.89	31.02
Difference			4.56	8.37	5.51	5.51	-2.41	-2.32	-1.43	-9.31	-7.78	-2.78
International Equity	**33,537,782**	**18.89**	**-11.47**	**-16.27**	**-16.13**	**-16.13**	**3.35**	**4.52**	**7.13**	**12.03**	**9.68**	**22.67**
MSCI ACW Ex US Index (USD) (Net)			-13.73	-18.42	-19.42	-19.42	1.35	2.50	4.83	7.82	10.65	21.51
Difference			2.26	2.15	3.29	3.29	2.00	2.02	2.30	4.21	-0.97	1.16
Fixed Income	**62,424,469**	**35.17**	**-4.86**	**-10.25**	**-10.18**	**-10.18**	**-0.79**	**0.95**	**1.59**	**-1.42**	**7.74**	**8.66**
Bloomberg US Agg Bond Index			-4.69	-10.35	-10.29	-10.29	-0.94	0.88	1.54	-1.55	7.51	8.72
Difference			-0.17	0.10	0.11	0.11	0.15	0.07	0.05	0.13	0.23	-0.06
Alternative Investment	**35,487,818**	**19.99**	**-8.28**	**-10.33**	**-9.65**	**-9.65**	**1.56**	**2.33**	**2.00**	**10.98**	**2.11**	**9.71**
Alternative Investment Custom Index			-12.74	-17.66	-15.41	-15.41	2.63	3.63	3.62	8.78	14.05	18.55
Difference			4.46	7.33	5.76	5.76	-1.07	-1.30	-1.62	2.20	-11.94	-8.84

Performance shown is gross of fees. The Alternative Investment performance shown is a blend of gross and net of fees, due to gross of fees performance for PAAMCO Pacific Hedged Strat (CF) being unavailable. Inception dates shown represent the first full month following initial funding. Fiscal year ends 06/30.

San Diego Transit Corporation Employees Retirement Plan
Comparative Performance

As of June 30, 2022

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
San Diego Transit Total Fund	**-8.77**	**-12.10**	**-10.80**	**-10.80**	**2.84**	**4.04**	**4.12**	**5.03**	**8.36**	**8.88**	**16.17**
Policy Index	-11.18	-16.13	-13.92	-13.92	3.09	4.37	4.32	5.12	8.87	13.05	19.02
Difference	2.41	4.03	3.12	3.12	-0.25	-0.33	-0.20	-0.09	-0.51	-4.17	-2.85
All Public Plans (<$500M) (Custom PG) Median	-10.29	-14.50	-10.53	-10.53	5.48	6.30	6.28	7.59	13.27	12.76	19.25
Rank	21	20	53	53	95	96	97	97	93	91	86
Westwood Qual ACp;Ultra (WQAUX) (1)	**-10.76**	**-11.66**	**-4.43**	**-4.43**	**9.10**	**9.06**	**8.45**	**11.59**	**23.36**	**9.02**	**28.56**
Russell 3000 Val Index (2)	-12.41	-13.15	-7.46	-7.46	6.82	7.01	7.60	10.39	25.37	2.87	26.26
Difference	1.65	1.49	3.03	3.03	2.28	2.05	0.85	1.20	-2.01	6.15	2.30
IM U.S. All Cap Value Equity (SA+CF) Median	-12.42	-14.41	-8.67	-8.67	7.85	8.35	8.40	11.14	26.27	7.69	27.12
Rank	24	31	16	16	35	31	49	40	69	40	37
Fidelity US Sustainability Index Fund (FITLX)	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
MSCI US ESG Leaders Index (USD) (Gross)	-15.95	-20.90	-10.53	-10.53	11.34	11.91	11.25	12.74	31.73	18.84	31.66
Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IM U.S. Large Cap Equity (MF) Median	-16.24	-21.44	-12.94	-12.94	9.96	11.29	11.00	13.14	26.35	21.54	31.82
Rank	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Analytic US Low Volatility (CF)	**-8.53**	**-9.01**	**-3.14**	**-3.14**	**6.73**	**7.98**	**8.51**	**N/A**	**15.69**	**6.63**	**28.79**
MSCI US Min Vol Index (USD) (Net)	-9.27	-12.78	-3.67	-3.67	5.75	8.97	9.81	10.91	20.43	5.09	27.09
Difference	0.74	3.77	0.53	0.53	0.98	-0.99	-1.30	N/A	-4.74	1.54	1.70
Russell 1000 Index	-16.67	-20.94	-13.04	-13.04	10.17	11.00	10.78	12.82	26.45	20.96	31.43
Difference	8.14	11.93	9.90	9.90	-3.44	-3.02	-2.27	N/A	-10.76	-14.33	-2.64
IM U.S. Large Cap Core Equity (SA+CF) Median	-15.06	-19.06	-10.55	-10.55	9.83	10.68	10.43	12.83	27.83	17.26	29.99
Rank	7	9	11	11	93	93	90	N/A	98	89	62
Newton TBC US SMID Cap Grth Eq (CF)	**-26.84**	**-35.50**	**-38.95**	**-38.95**	**4.46**	**10.60**	**9.62**	**12.31**	**-3.24**	**70.19**	**40.61**
Russell 2500 Grth Index	-19.55	-29.45	-31.81	-31.81	3.68	7.53	7.05	10.88	5.04	40.47	32.65
Difference	-7.29	-6.05	-7.14	-7.14	0.78	3.07	2.57	1.43	-8.28	29.72	7.96
IM U.S. SMID Cap Growth Equity (SA+CF) Median	-19.66	-28.28	-24.78	-24.78	6.64	10.23	9.38	12.11	16.62	44.80	31.91
Rank	95	87	88	88	69	43	38	40	90	12	5
PIMCO:RAE GlxUS;Inst (PZRIX)	**-11.09**	**-13.42**	**-15.09**	**-15.09**	**2.00**	**2.30**	**3.25**	**5.73**	**12.77**	**2.30**	**16.57**
FTSE RAFI Dvl'd Ex US 1000 Index	-13.10	-14.07	-12.61	-12.61	3.36	3.21	3.72	6.39	16.13	3.61	18.85
Difference	2.01	0.65	-2.48	-2.48	-1.36	-0.91	-0.47	-0.66	-3.36	-1.31	-2.28
MSCI ACW Ex US Val Index (USD) (Net)	-11.90	-11.79	-12.77	-12.77	0.56	1.23	1.72	3.76	10.46	-0.77	15.72
Difference	0.81	-1.63	-2.32	-2.32	1.44	1.07	1.53	1.97	2.31	3.07	0.85
IM ACWI Ex US Value (SA+CF) Median	-11.90	-15.29	-15.94	-15.94	2.09	2.52	3.33	6.07	11.05	6.52	21.34
Rank	31	38	36	36	54	58	52	54	36	68	83

Performance shown is gross of fees and client specific. Fiscal year ends 06/30. Manager inception dates shown represent the first full month following initial funding.

San Diego Transit Corporation Employees Retirement Plan
Comparative Performance

As of June 30, 2022

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
MFS Intl Grth Cl 2 (CIT)	**-11.85**	**-18.89**	**-17.13**	**-17.13**	**4.20**	**6.65**	**7.28**	**N/A**	**10.61**	**16.51**	**28.56**
MSCI ACW Ex US Grth Index (USD) (Net)	-15.71	-24.79	-25.80	-25.80	1.62	3.43	3.86	5.71	5.09	22.20	27.34
Difference	3.86	5.90	8.67	8.67	2.58	3.22	3.42	N/A	5.52	-5.69	1.22
IM ACWI Ex US Growth (SA+CF) Median	-15.98	-26.22	-24.88	-24.88	2.60	4.46	4.68	6.96	9.00	22.14	29.57
Rank	3	12	4	4	23	18	14	N/A	35	81	62
Vanguard Tot Bd;Inst (VBTIX)	**-4.73**	**-10.35**	**-10.45**	**-10.45**	**-0.91**	**0.88**	**N/A**	**N/A**	**-1.77**	**7.80**	**8.77**
Vanguard Spl B US Agg Flt Adj Index	-4.73	-10.46	-10.38	-10.38	-0.91	0.90	1.45	1.56	-1.58	7.75	8.87
Difference	0.00	0.11	-0.07	-0.07	0.00	-0.02	N/A	N/A	-0.19	0.05	-0.10
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	-4.85	-10.35	-10.29	-10.29	-0.44	1.29	1.89	2.03	-1.21	8.52	9.20
Rank	46	49	61	61	88	92	N/A	N/A	91	72	73
Vanguard Infl-Prot;Adm (VAIPX)	**-6.01**	**-8.56**	**-4.94**	**-4.94**	**3.11**	**3.23**	**2.88**	**1.76**	**5.78**	**11.07**	**8.32**
Bloomberg US Trsy US TIPS Index	-6.08	-8.92	-5.14	-5.14	3.04	3.21	2.82	1.73	5.96	10.99	8.43
Difference	0.07	0.36	0.20	0.20	0.07	0.02	0.06	0.03	-0.18	0.08	-0.11
IM U.S. TIPS (SA+CF) Median	-6.10	-8.88	-5.11	-5.11	3.13	3.25	2.87	1.82	5.92	11.01	8.43
Rank	35	37	42	42	51	63	49	70	71	30	68

Performance shown is gross of fees and client specific. Fiscal year ends 06/30. Manager inception dates shown represent the first full month following initial funding.

San Diego Transit Corporation Employees Retirement Plan
Comparative Performance

As of June 30, 2022

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
PIMCO:All Ast Ath;Inst (PAUIX)	**-11.67**	**-13.80**	**-11.43**	**-11.43**	**2.74**	**2.93**	**3.40**	**2.81**	**16.57**	**5.58**	**8.62**
All Asset Custom Index (Eql Wtd) (3)	-7.62	-11.00	-8.65	-8.65	2.73	3.81	4.01	3.85	6.46	9.89	12.97
Difference	-4.05	-2.80	-2.78	-2.78	0.01	-0.88	-0.61	-1.04	10.11	-4.31	-4.35
HFRI FOF: Cnsvt Index	-1.53	-1.38	0.28	0.28	4.70	4.07	3.13	3.84	7.62	6.47	6.30
Difference	-10.14	-12.42	-11.71	-11.71	-1.96	-1.14	0.27	-1.03	8.95	-0.89	2.32
Consumer Price Index+5%	4.33	8.90	14.51	14.51	10.22	9.07	8.30	7.72	12.39	6.43	7.40
Difference	-16.00	-22.70	-25.94	-25.94	-7.48	-6.14	-4.90	-4.91	4.18	-0.85	1.22
GMO:Bchmk-Fr All;III (GBMFX)	**-3.55**	**-5.25**	**-7.16**	**-7.16**	**0.43**	**1.90**	**2.39**	**N/A**	**3.91**	**-1.60**	**12.53**
60% MSCI ACW (Net)/40% Bbrg US Agg Idx	-11.36	-16.28	-13.43	-13.43	3.66	4.83	5.00	6.04	10.20	13.49	19.41
Difference	7.81	11.03	6.27	6.27	-3.23	-2.93	-2.61	N/A	-6.29	-15.09	-6.88
HFRI FOF: Cnsvt Index	-1.53	-1.38	0.28	0.28	4.70	4.07	3.13	3.84	7.62	6.47	6.30
Difference	-2.02	-3.87	-7.44	-7.44	-4.27	-2.17	-0.74	N/A	-3.71	-8.07	6.23
Consumer Price Index+5%	4.33	8.90	14.51	14.51	10.22	9.07	8.30	7.72	12.39	6.43	7.40
Difference	-7.88	-14.15	-21.67	-21.67	-9.79	-7.17	-5.91	N/A	-8.48	-8.03	5.13

The Policy Index is calculated monthly and currently consists of 25% Russell 3000 Index, 20% MSCI ACW Ex US Index (USD) (Net), 35% Bloomberg US Agg Bond Index, and 20% of the 60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx. For the full historical composition, please see the Addendum.

BNYM PE US SMID Cap Grth Eq NL has been rebranded as Newton TBC US SMID Cap Grth Eq.

Performance shown for Alternative Investment Custom Index represents 60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx from 07/2018 through present; HFRI FOF: Cnsvt Index from 01/1990 through 06/2018.

Performance shown for Westwood Qual ACp:Ultra (WQAUX) (1) represents Westwood Qual ACp;Ultra (WQAUX) from 10/2021 through present; Westwood All Cap Value (CF) from 08/2011 through 09/2021; beginning of month market value weighted average of Westwood LargeCap Value (CF) and Westwood SMidCap Equity (CF) from 07/2008 through 07/2011; Westwood LargeCap Value (CF) from 10/2004 through 06/2008; beginning of month market value weighted average of Westwood LargeCap Value (CF) and Westwood SmallCap Growth (CF) from 01/1997 through 09/2004; and Westwood LargeCap Value (CF) from 07/1986 through 12/1996.

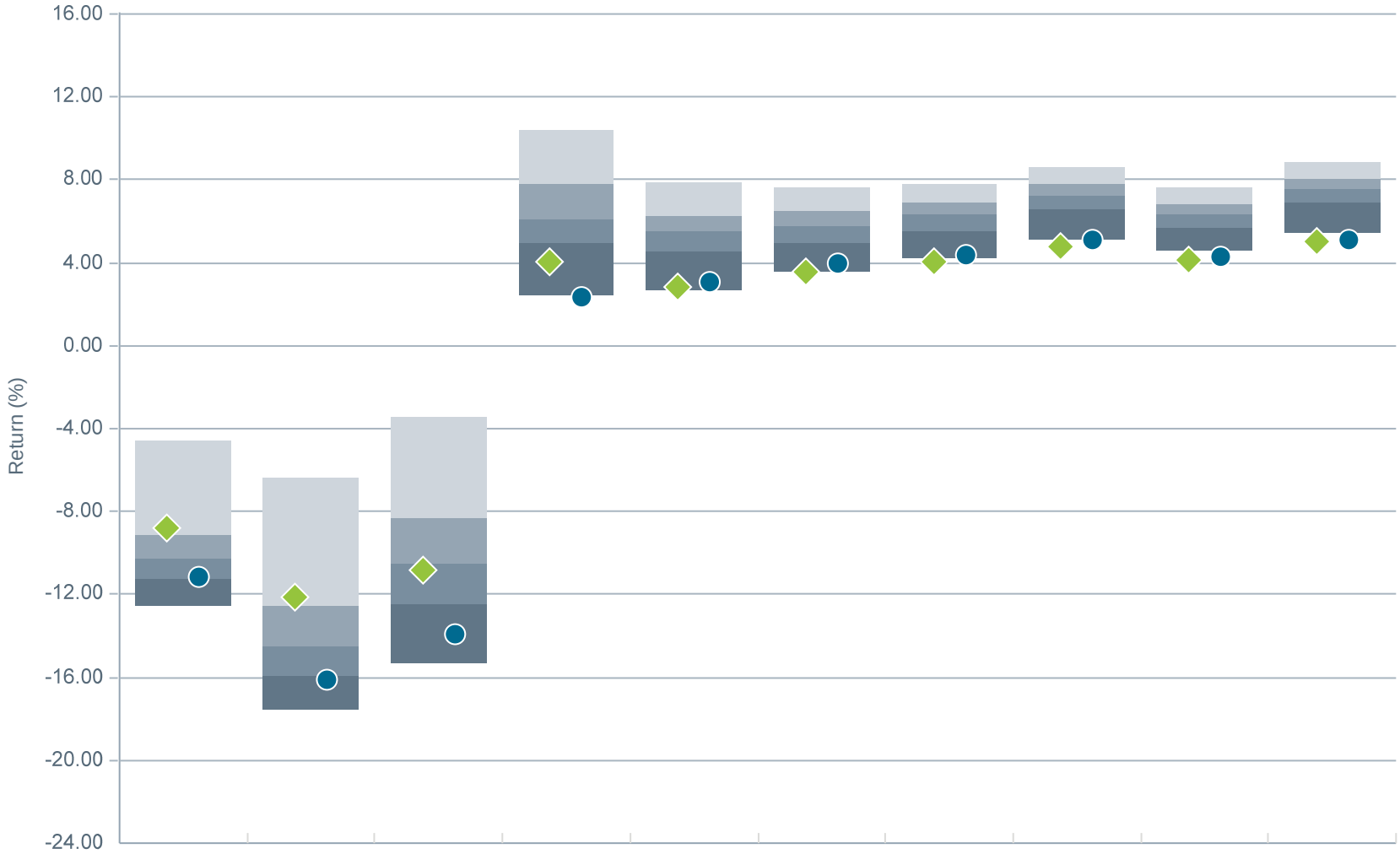
Performance shown for Russell 3000 Val Index (2) represents Russell 3000 Val Index from 08/2011 through present; beginning of month market value weighted average of Westwood LargeCap Value (CF) and Westwood SMidCap Equity (CF) applied to the Russell 1000 Val Index and Russell 2500 Val Index, respectively, from 07/2008 through 07/2011; Russell 1000 Val Index from 10/2004 through 06/2008; beginning of month market value weighted average of Westwood LargeCap Value (CF) and Westwood SmallCap Growth (CF) applied to the Russell 1000 Val Index and Russell 2000 Grth Index, respectively, from 01/1997 through 09/2004; and Russell 1000 Val Index from 07/1986 through 12/1996.

Performance shown for All Asset Custom Index (Eql Wtd) (3) represents All Asset Custom Index (Eql Wtd) from 01/2014 through present; and All Asset Composite Index from 10/1997 through 12/2013.

Performance shown is gross of fees and client specific. Fiscal year ends 06/30. Manager inception dates shown represent the first full month following initial funding.

San Diego Transit Corporation Employees Retirement Plan
Plan Sponsor Peer Group Analysis
All Public Plans (<$500M) (Custom PG)

As of June 30, 2022

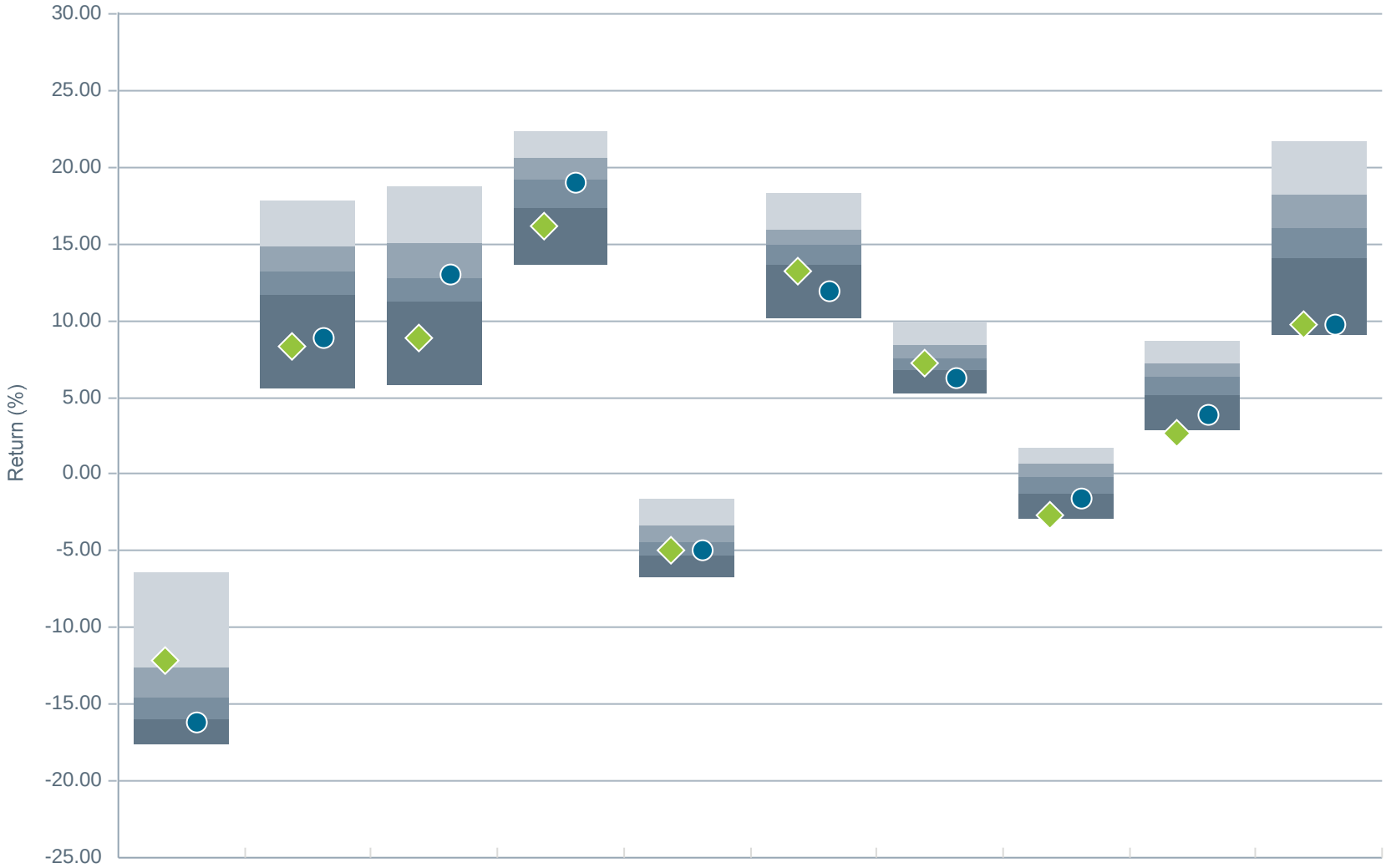


	QTD	CYTD	1 Year	2 Years	3 Years	4 Years	5 Years	6 Years	7 Years	10 Years
San Diego Transit Total Fund	-8.77 (21)	-12.10 (20)	-10.80 (53)	4.02 (85)	2.84 (95)	3.56 (96)	4.04 (96)	4.78 (97)	4.12 (97)	5.03 (97)
Policy Index	-11.18 (72)	-16.13 (79)	-13.92 (90)	2.35 (96)	3.09 (94)	3.99 (94)	4.37 (94)	5.10 (96)	4.32 (96)	5.12 (97)
Median	-10.29	-14.50	-10.53	6.10	5.48	5.78	6.30	7.22	6.28	7.59
Population	290	288	285	276	270	265	258	251	243	219

Performance shown is gross of fees. Parentheses contain percentile ranks.

San Diego Transit Corporation Employees Retirement Plan
Plan Sponsor Peer Group Analysis
All Public Plans (<$500M) (Custom PG)

As of June 30, 2022



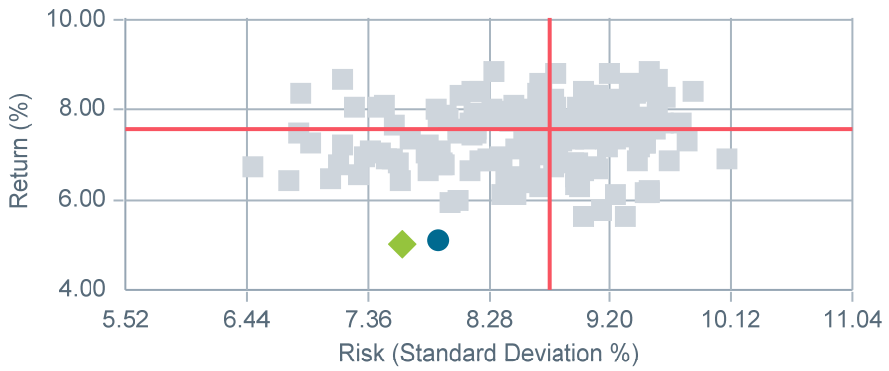
	YTD	2021	2020	2019	2018	2017	2016	2015	2014	2013
San Diego Transit Total Fund	-12.10 (20)	8.36 (93)	8.88 (91)	16.17 (86)	-4.93 (67)	13.21 (82)	7.19 (62)	-2.64 (94)	2.66 (97)	9.74 (94)
Policy Index	-16.13 (79)	8.87 (92)	13.05 (47)	19.02 (54)	-5.00 (69)	11.91 (92)	6.26 (84)	-1.57 (80)	3.86 (90)	9.78 (94)
Median	-14.50	13.27	12.76	19.25	-4.44	14.93	7.52	-0.17	6.38	16.01
Population	288	360	392	436	382	365	381	361	331	329

Performance shown is gross of fees. Parentheses contain percentile ranks.

San Diego Transit Corporation Employees Retirement Plan
San Diego Transit Total Fund vs. All Public Plans (<$500M) (Custom PG)

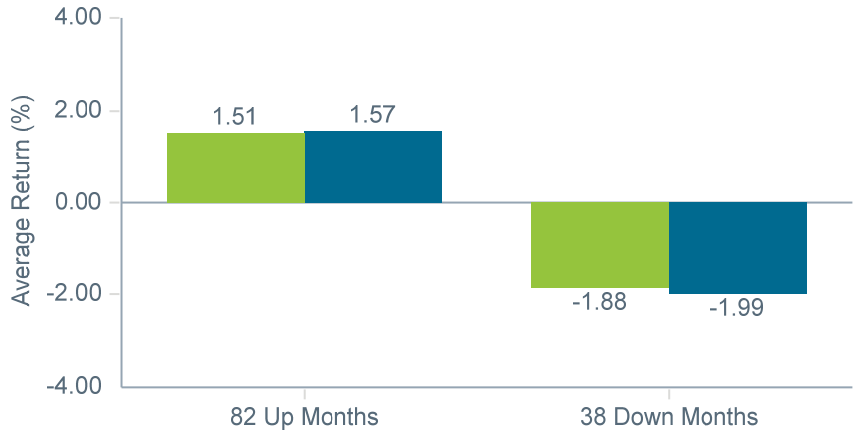
As of June 30, 2022

Plan Sponsor Scattergram - 10 Years

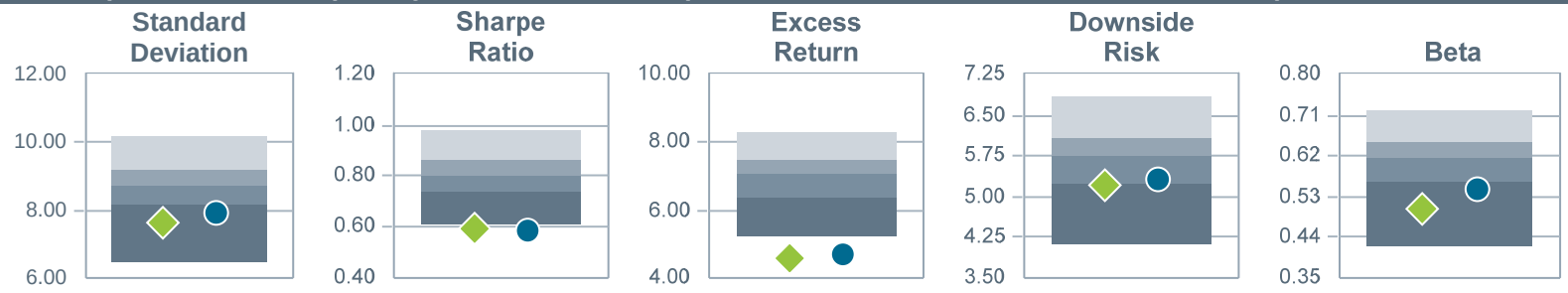


	Return	Standard Deviation
San Diego Transit Total Fund	5.03	7.63
Policy Index	5.12	7.89
Median	7.59	8.74

Up/Down Markets - 10 Years



Plan Sponsor Peer Group Analysis - Multi Statistics (Excess Return vs. Risk Free, Beta vs. S&P 500)



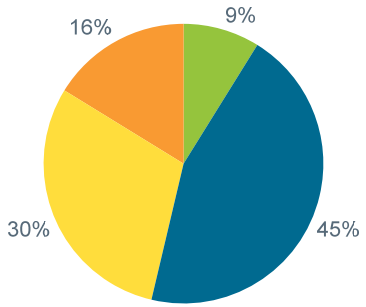
	10 Years	10 Years	10 Years	10 Years	10 Years
San Diego Transit Total Fund	7.63 (85)	0.60 (96)	4.57 (97)	5.21 (78)	0.50 (89)
Policy Index	7.89 (81)	0.59 (97)	4.67 (97)	5.33 (72)	0.55 (83)
Median	8.74	0.81	7.09	5.75	0.62
Population	219	219	219	219	219

Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

San Diego Transit Corporation Employees Retirement Plan
Total Fund Thematic and Liquidity Analysis

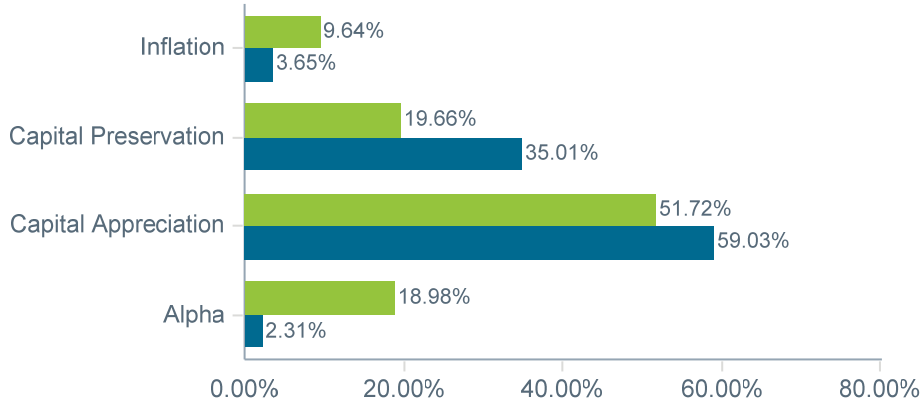
As of June 30, 2022

Asset Allocation by Theme



Alpha
Capital Appreciation
Capital Preservation
Inflation

Thematic Analysis - March 1, 1997 to June 30, 2022



San Diego Transit Total Fund
Policy Index

Asset Allocation by Liquidity

Liquid
Less Liquid

RVK Liquidity Rating	**90**

Correlation Matrix - 10 Years

	A	B	C	D
A	1.00			
B	0.60	1.00		
C	-0.14	-0.15	1.00	
D	0.54	0.74	-0.03	1.00

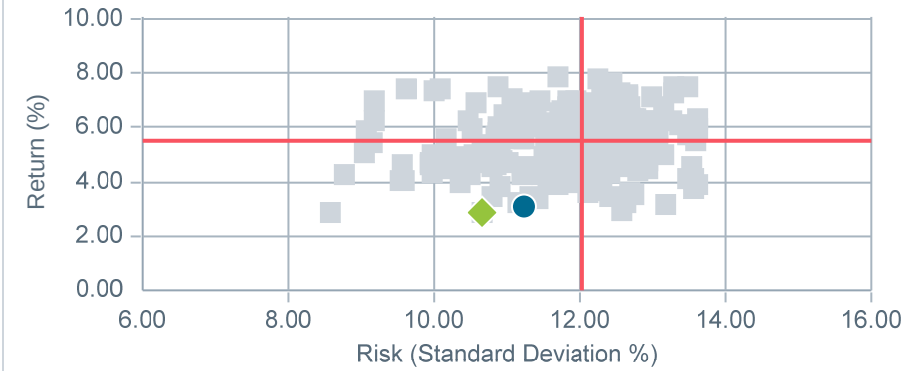
A	=	HFRI EH: Equity Market Neutral Index (Alpha)
B	=	MSCI ACW Index (USD) (Gross) (Capital Appreciation)
C	=	Bloomberg US Gov't Bond Index (Capital Preservation)
D	=	Real Return Custom Index (Inflation)

Asset Allocation by Theme is based on dedicated manager allocations; as such, thematic allocations are approximations. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating. Please see the Glossary for additional information regarding liquidity, thematic and custom index descriptions.

San Diego Transit Corporation Employees Retirement Plan
Plan Sponsor Scattergrams
All Public Plans (<$500M) (Custom PG)

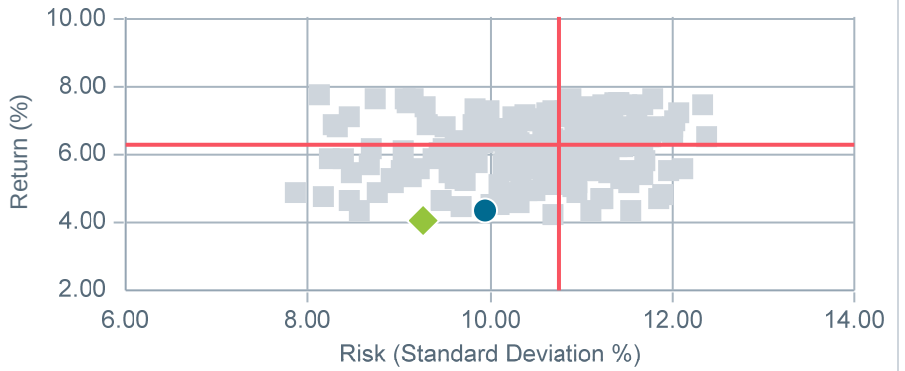
As of June 30, 2022

3 Years



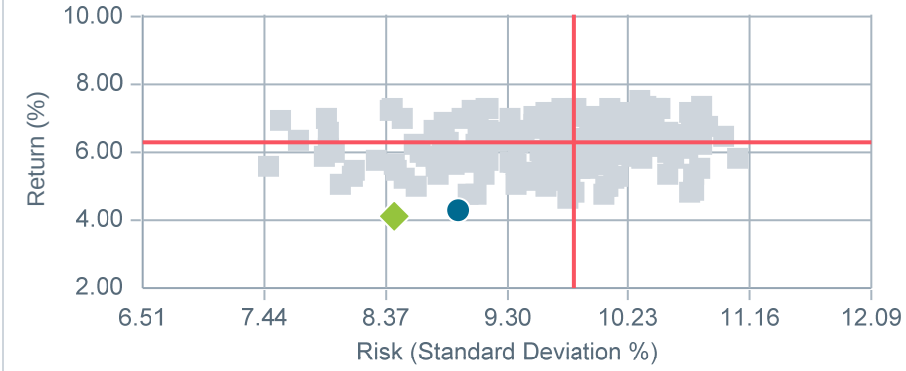
	Return	Standard Deviation
San Diego Transit Total Fund	2.84	10.66
Policy Index	3.09	11.22
Median	5.48	12.03

5 Years



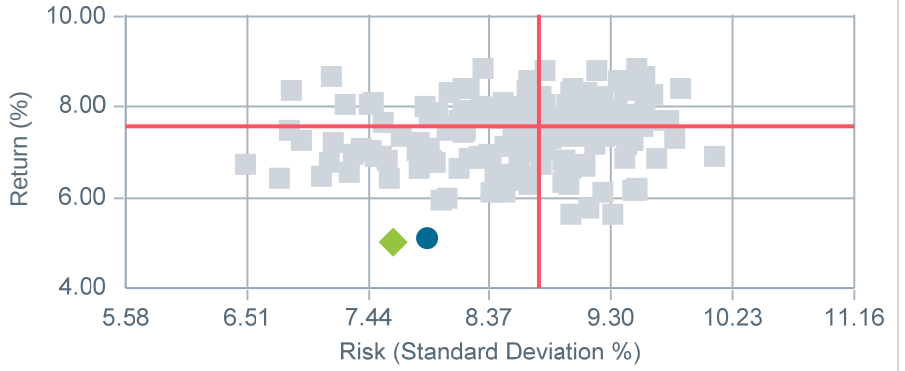
	Return	Standard Deviation
San Diego Transit Total Fund	4.04	9.26
Policy Index	4.37	9.94
Median	6.30	10.76

7 Years



	Return	Standard Deviation
San Diego Transit Total Fund	4.12	8.44
Policy Index	4.32	8.92
Median	6.28	9.80

10 Years



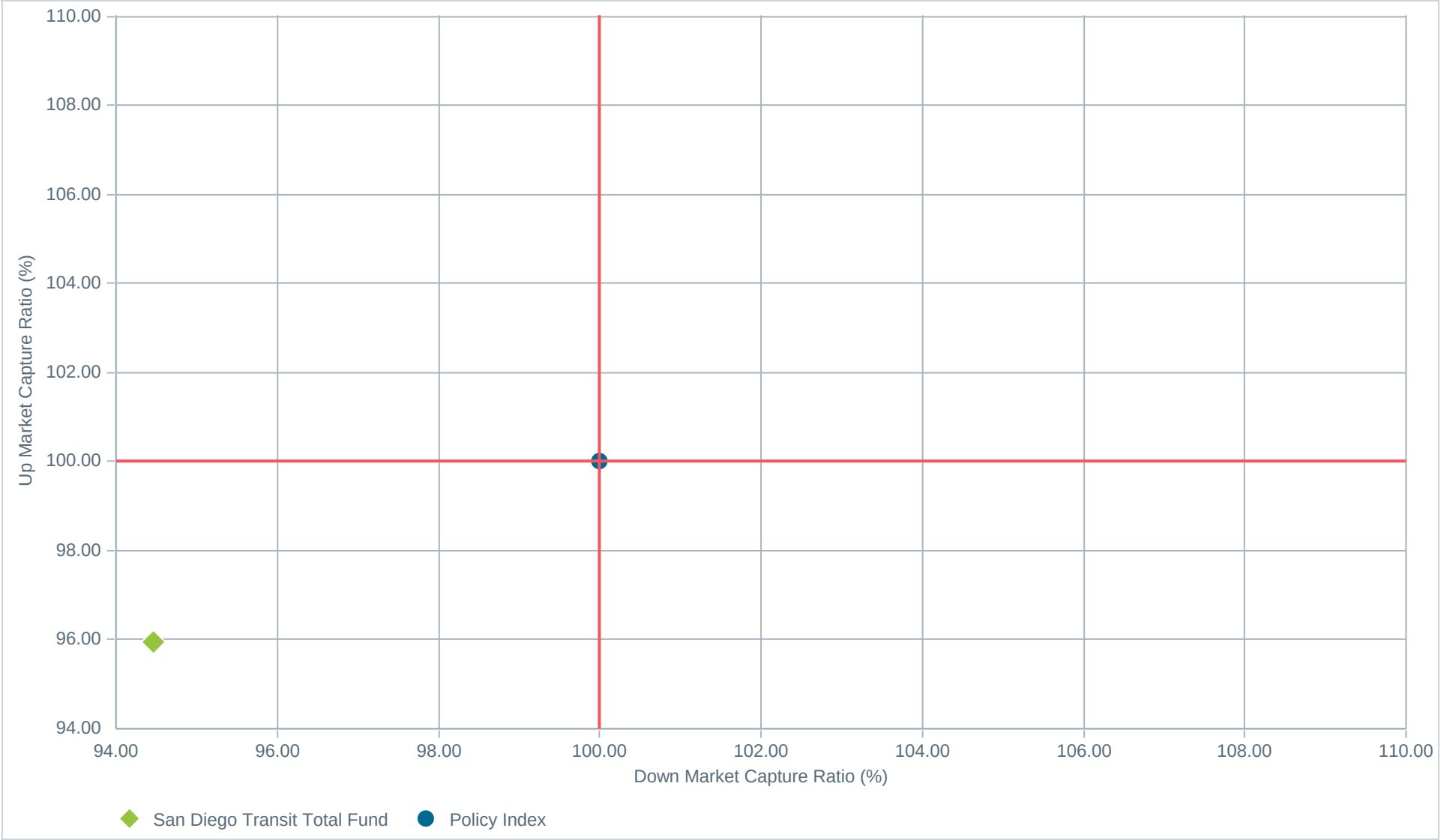
	Return	Standard Deviation
San Diego Transit Total Fund	5.03	7.63
Policy Index	5.12	7.89
Median	7.59	8.74

Performance shown is gross of fees. Calculation is based on monthly periodicity.

San Diego Transit Corporation Employees Retirement Plan
Up/Down Markets Versus Policy Index

10 Years Ending June 30, 2022

	Full Period Return		Months Benchmark Up(82)				Months Benchmark Down(38)			
			Portfolio Ahead		Portfolio Behind		Portfolio Ahead		Portfolio Behind	
	Portfolio	Benchmark	No. Months	Average Ahead	No. Months	Average Behind	No. Months	Average Ahead	No. Months	Average Behind
San Diego Transit Total Fund	5.03	5.12	40	0.25	42	-0.37	18	0.60	20	-0.33
Policy Index	5.12	5.12	82	0.00	0	0.00	38	0.00	0	0.00



Performance shown is gross of fees. Calculation is based on monthly periodicity.

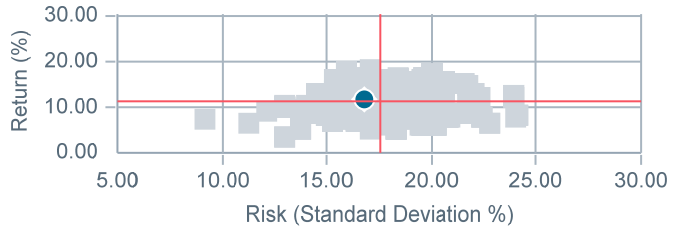
Investment Manager Profiles

Manager: Fidelity US Sustain Idx (FITLX) **As of June 30, 2022**
Benchmark: MSCI US ESG Leaders Index (USD) (Gross)
Peer Group: IM U.S. Large Cap Equity (MF)

Performance

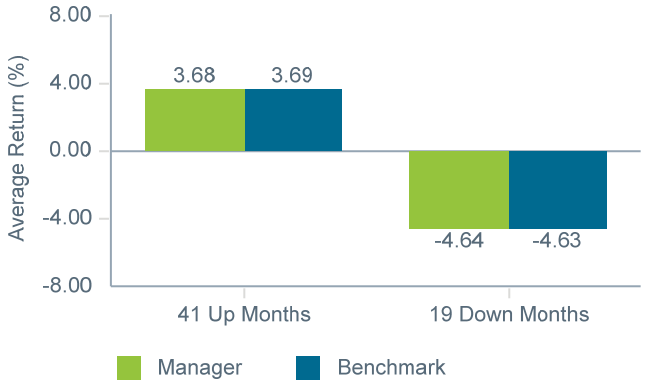
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	**-15.99**	**-10.64**	**11.20**	**11.76**	**N/A**	**N/A**	**31.57**	**18.67**	**31.53**	**-3.28**	**N/A**
Benchmark	-15.95	-10.53	11.34	11.91	11.25	12.74	31.73	18.84	31.66	-3.11	20.56
Difference	-0.04	-0.11	-0.14	-0.15	N/A	N/A	-0.16	-0.17	-0.13	-0.17	N/A
Peer Group Median	-16.24	-12.94	9.96	11.29	11.00	13.14	26.35	21.54	31.82	-3.52	24.06
Rank	47	37	25	42	N/A	N/A	7	61	53	47	N/A
Population	1,741	1,680	1,512	1,420	1,265	1,110	1,669	1,652	1,646	1,682	1,637

Peer Group Scattergram - 5 Years

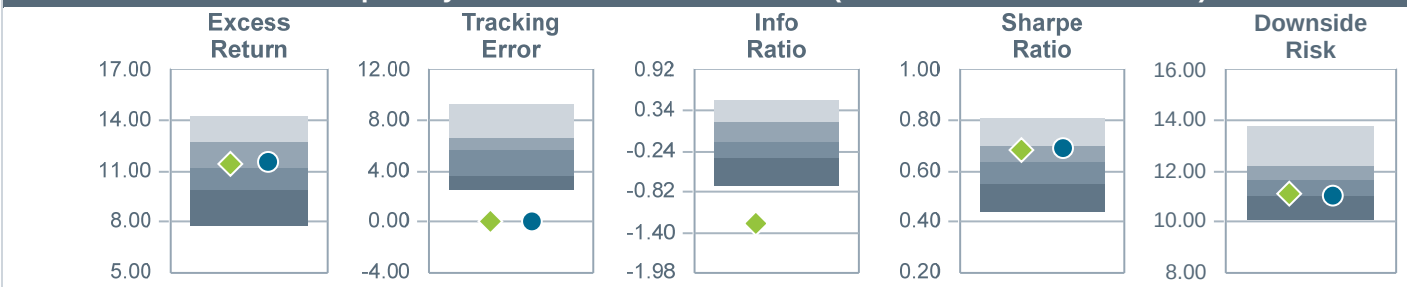


	Return	Standard Deviation
Manager	11.76	16.74
Benchmark	11.91	16.74
Median	11.29	17.54

Up/Down Markets - 5 Years



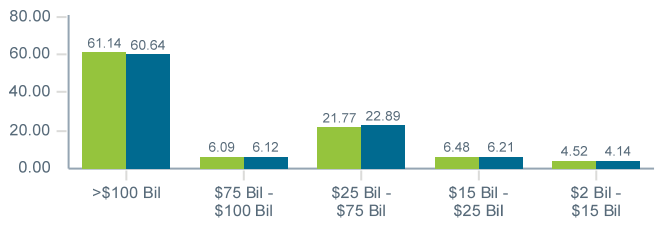
Peer Group Analysis - Multi Statistics - 5 Years (Excess Return vs. Risk Free)



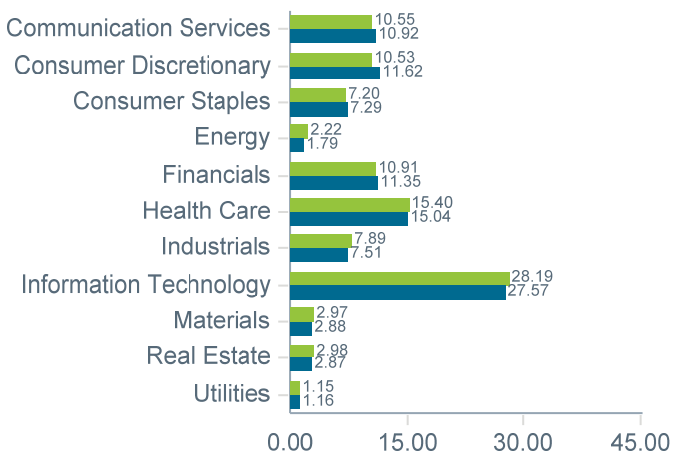
	Excess Return		Tracking Error		Info Ratio		Sharpe Ratio		Downside Risk	
Manager	11.48	(44)	0.10	(100)	-1.26	(100)	0.68	(37)	11.10	(75)
Benchmark	11.61	(42)	0.00	(100)	N/A		0.69	(33)	11.08	(76)
Median	11.20		5.67		-0.11		0.64		11.66	

Portfolio Characteristics and Dist. of Market Cap (%)

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap ($M)	442,270	443,380
Median Mkt. Cap ($M)	25,843	27,158
Price/Earnings Ratio	20.57	20.64
Price/Book Ratio	4.77	4.75
5 Yr. EPS Growth Rate (%)	18.68	18.09
Current Yield (%)	1.68	1.69
Beta (5 Years, Monthly)	1.00	1.00
Number of Securities	278	268
Active Share	5.04	N/A



Sector Weights (%)



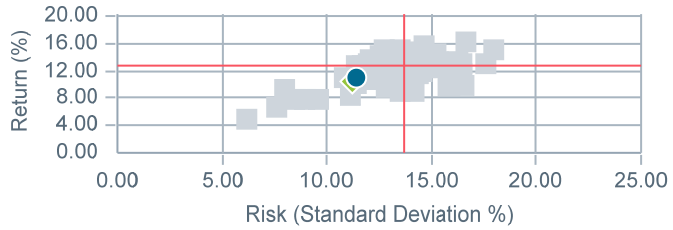
Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Manager: Analytic US Low Volatility (CF) **As of June 30, 2022**
Benchmark: MSCI US Min Vol Index (USD) (Net)
Peer Group: IM U.S. Large Cap Core Equity (SA+CF)

Performance

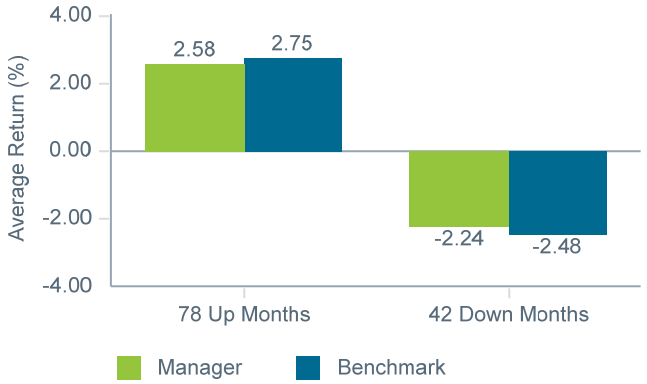
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	**-8.53**	**-3.04**	**6.85**	**8.11**	**8.64**	**10.58**	**15.90**	**6.78**	**28.89**	**-4.71**	**13.45**
Benchmark	-9.27	-3.67	5.75	8.97	9.81	10.91	20.43	5.09	27.09	0.87	18.41
Difference	0.74	0.63	1.10	-0.86	-1.17	-0.33	-4.53	1.69	1.80	-5.58	-4.96
Peer Group Median	-15.06	-10.55	9.83	10.68	10.43	12.83	27.83	17.26	29.99	-5.15	21.86
Rank	7	11	93	92	89	89	98	89	62	43	95
Population	180	180	175	169	162	148	205	226	253	276	299

Peer Group Scattergram - 10 Years

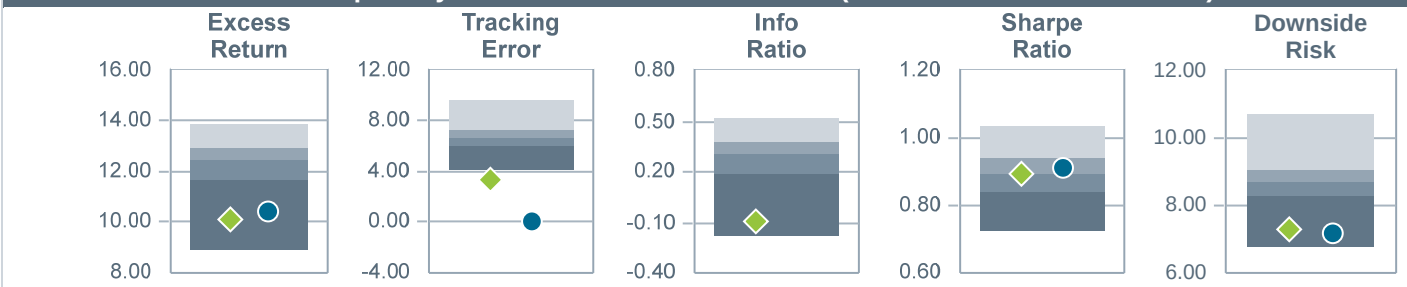


	Return	Standard Deviation
Manager	10.58	11.23
Benchmark	10.91	11.40
Median	12.83	13.74

Up/Down Markets - 10 Years



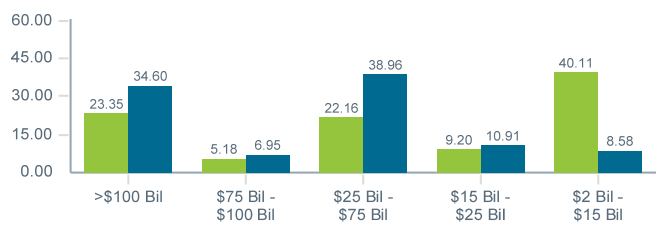
Peer Group Analysis - Multi Statistics - 10 Years (Excess Return vs. Risk Free)



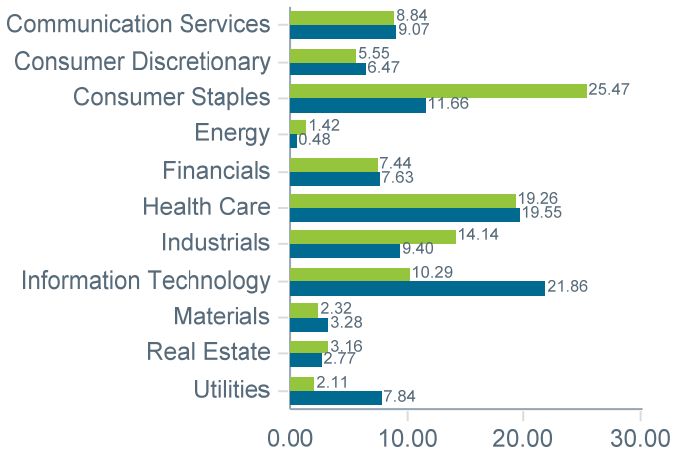
	Excess Return		Tracking Error		Info Ratio		Sharpe Ratio		Downside Risk	
Manager	10.10	(92)	3.45	(98)	-0.09	(93)	0.90	(52)	7.28	(94)
Benchmark	10.41	(87)	0.00	(100)	N/A		0.91	(44)	7.18	(94)
Median	12.48		6.67		0.30		0.90		8.68	

Portfolio Characteristics and Dist. of Market Cap (%)

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap ($M)	119,263	161,935
Median Mkt. Cap ($M)	18,975	41,341
Price/Earnings Ratio	17.84	21.20
Price/Book Ratio	3.60	4.14
5 Yr. EPS Growth Rate (%)	12.35	14.90
Current Yield (%)	2.20	1.87
Beta (5 Years, Monthly)	0.94	1.00
Number of Securities	127	173
Active Share	70.05	N/A



Sector Weights (%)



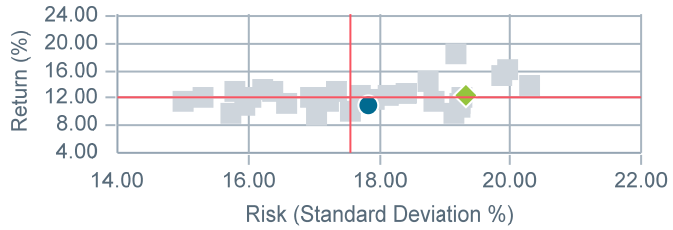
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Analytic Low Volatility has moved away from Utilities and Real Estate as they have become high beta sectors.

Manager: BNYM Newton PE US SMID Cap Grth Eq NL (CF) **As of June 30, 2022**
Benchmark: Russell 2500 Grth Index
Peer Group: IM U.S. SMID Cap Growth Equity (SA+CF)

Performance

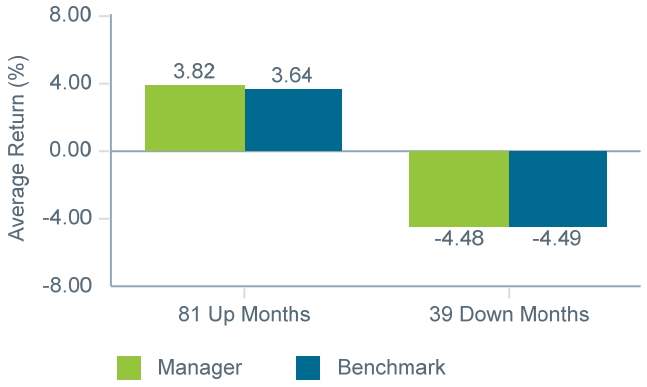
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	**-26.84**	**-39.14**	**4.34**	**10.53**	**9.57**	**12.27**	**-3.57**	**70.19**	**40.59**	**-0.86**	**27.32**
Benchmark	-19.55	-31.81	3.68	7.53	7.05	10.88	5.04	40.47	32.65	-7.47	24.46
Difference	-7.29	-7.33	0.66	3.00	2.52	1.39	-8.61	29.72	7.94	6.61	2.86
Peer Group Median	-19.66	-24.78	6.64	10.23	9.38	12.11	16.62	44.80	31.74	-4.67	24.93
Rank	95	88	70	44	41	42	90	12	5	26	38
Population	58	55	52	45	38	29	59	60	59	63	62

Peer Group Scattergram - 10 Years

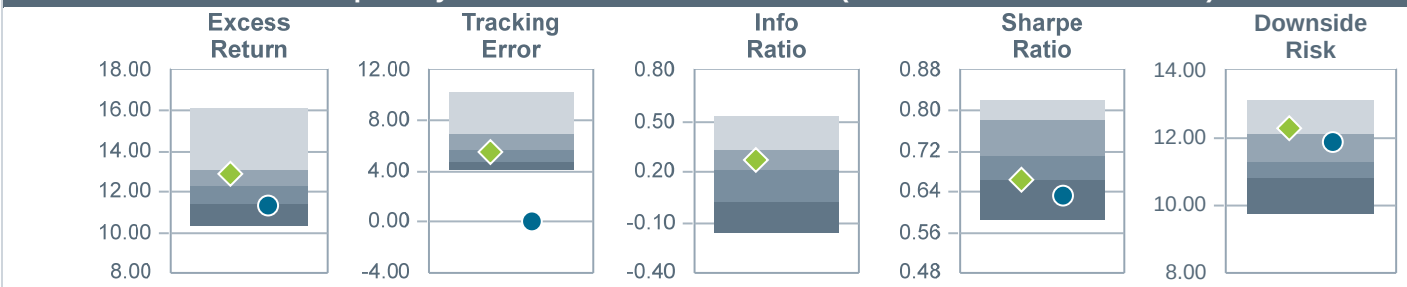


	Return	Standard Deviation
Manager	12.27	19.34
Benchmark	10.88	17.84
Median	12.11	17.56

Up/Down Markets - 10 Years



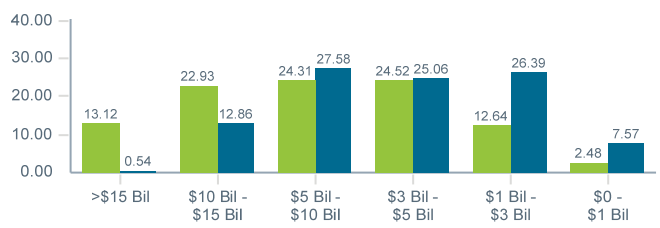
Peer Group Analysis - Multi Statistics - 10 Years (Excess Return vs. Risk Free)



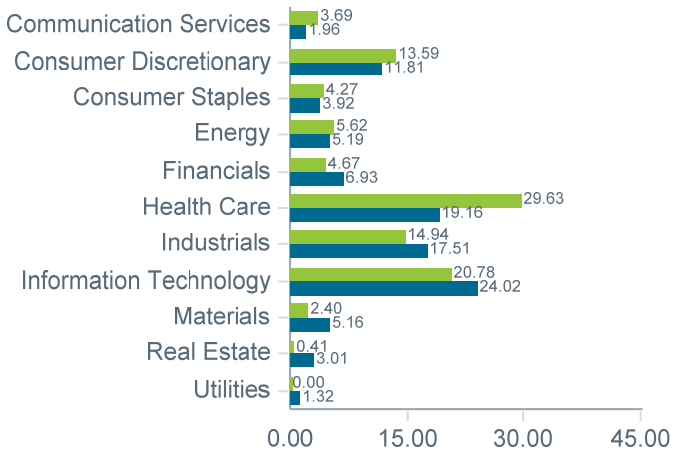
	Excess Return		Tracking Error		Info Ratio	Sharpe Ratio		Downside Risk	
Manager	12.86	(34)	5.61	(55)	0.27 (33)	0.66	(75)	12.32	(21)
Benchmark	11.35	(82)	0.00	(100)	N/A	0.63	(84)	11.89	(33)
Median	12.28		5.75		0.21	0.71		11.31	

Portfolio Characteristics and Dist. of Market Cap (%)

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap ($M)	8,720	5,208
Median Mkt. Cap ($M)	4,374	1,457
Price/Earnings Ratio	32.10	18.71
Price/Book Ratio	3.74	4.20
5 Yr. EPS Growth Rate (%)	18.51	21.44
Current Yield (%)	0.21	0.81
Beta (5 Years, Monthly)	1.09	1.00
Number of Securities	93	1,371
Active Share	92.32	N/A



Sector Weights (%)



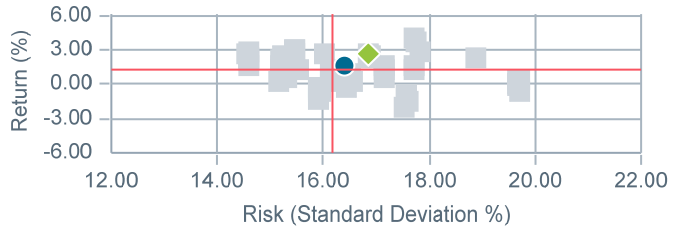
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. BNYM PE US SMID Cap Grth Eq NL has been rebranded as Newton TBC US SMID Cap Grth Eq.

Manager: PIMCO:RAE GlxUS;Inst (PZRIX) **As of June 30, 2022**
Benchmark: MSCI ACW Ex US Val Index (USD) (Net)
Peer Group: IM ACWI Ex US Value (MF)

Performance

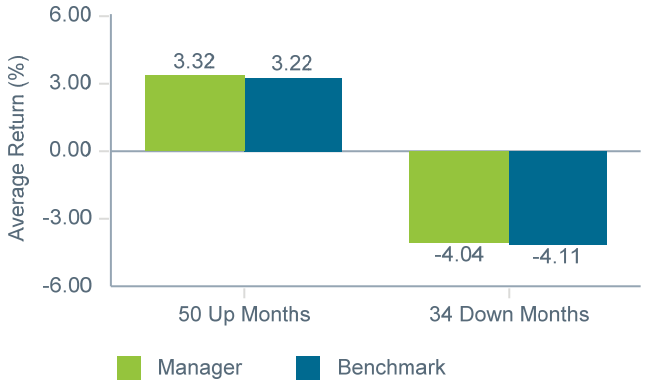
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	**-11.22**	**-15.58**	**1.43**	**1.73**	**2.68**	**N/A**	**12.12**	**1.73**	**15.94**	**-14.91**	**25.97**
Benchmark	-11.90	-12.77	0.56	1.23	1.72	3.76	10.46	-0.77	15.72	-13.97	22.66
Difference	0.68	-2.81	0.87	0.50	0.96	N/A	1.66	2.50	0.22	-0.94	3.31
Peer Group Median	-11.56	-15.58	1.07	1.12	1.22	3.65	10.01	3.69	17.82	-16.03	22.88
Rank	23	51	33	23	17	N/A	33	58	72	12	23
Population	62	62	62	62	57	44	62	67	68	68	72

Peer Group Scattergram - 7 Years

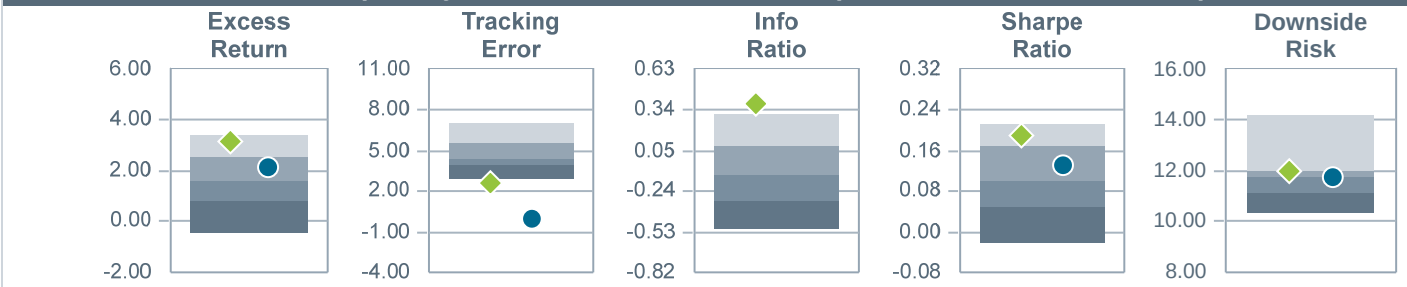


	Return	Standard Deviation
Manager	2.68	16.86
Benchmark	1.72	16.39
Median	1.22	16.16

Up/Down Markets - 7 Years



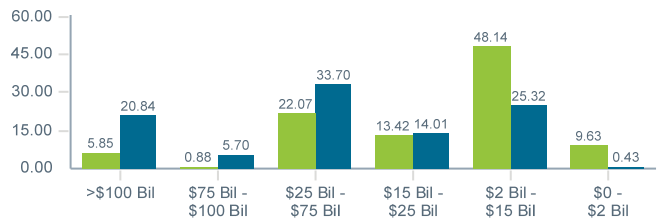
Peer Group Analysis - Multi Statistics - 7 Years (Excess Return vs. Risk Free)



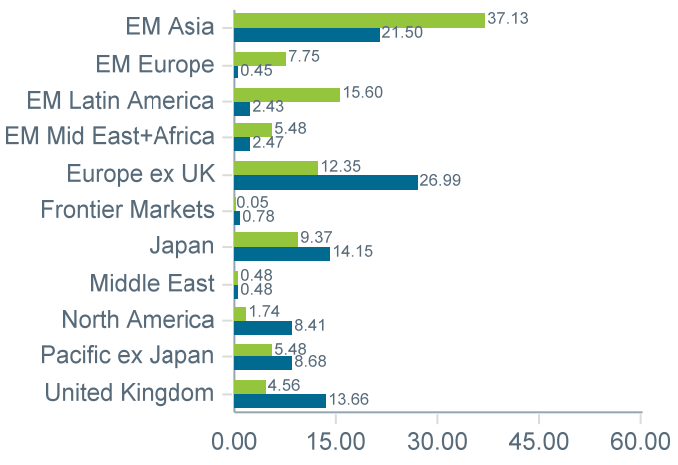
	Excess Return		Tracking Error		Info Ratio	Sharpe Ratio		Downside Risk	
Manager	3.21	(11)	2.67	(99)	0.38 (2)	0.19	(17)	11.97	(33)
Benchmark	2.19	(33)	0.00	(100)	N/A	0.13	(31)	11.73	(51)
Median	1.59		4.31		-0.12	0.10		11.75	

Portfolio Characteristics and Dist. of Market Cap (%)

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap ($M)	25,862	64,202
Median Mkt. Cap ($M)	4,977	8,006
Price/Earnings Ratio	6.05	8.98
Price/Book Ratio	1.69	1.74
5 Yr. EPS Growth Rate (%)	12.86	12.79
Current Yield (%)	5.95	5.03
Beta (5 Years, Monthly)	1.03	1.00
Number of Securities	717	1,310
Active Share	80.09	N/A



Region Weights (%)



Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

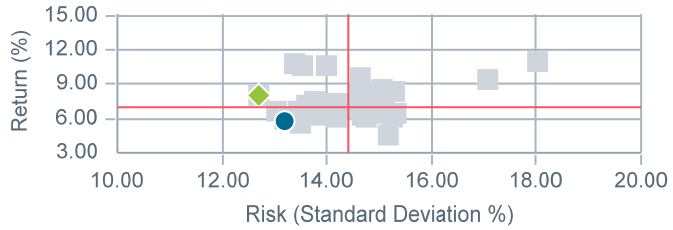
Manager: MFS Intl Grth Cl 2 (CIT)
Benchmark: MSCI ACW Ex US Grth Index (USD) (Net)
Peer Group: IM ACWI Ex US Growth (SA+CF)

As of June 30, 2022

Performance

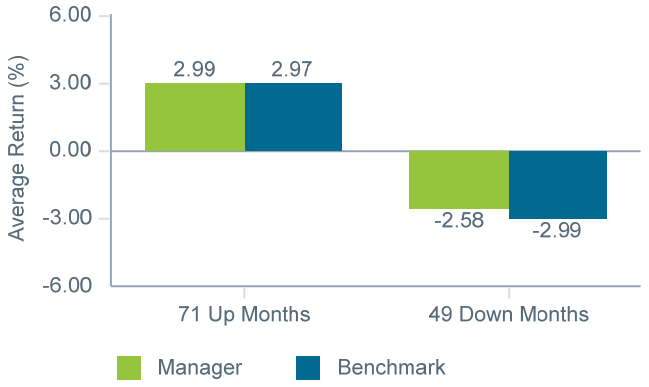
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	**-11.86**	**-17.17**	**4.20**	**6.66**	**7.31**	**8.06**	**10.58**	**16.55**	**28.62**	**-7.97**	**34.00**
Benchmark	-15.71	-25.80	1.62	3.43	3.86	5.71	5.09	22.20	27.34	-14.43	32.01
Difference	3.85	8.63	2.58	3.23	3.45	2.35	5.49	-5.65	1.28	6.46	1.99
Peer Group Median	-15.98	-24.88	2.60	4.46	4.68	6.96	9.00	22.14	29.57	-13.78	32.56
Rank	3	4	23	18	14	23	35	81	61	9	38
Population	51	51	51	51	50	46	52	53	55	58	64

Peer Group Scattergram - 10 Years

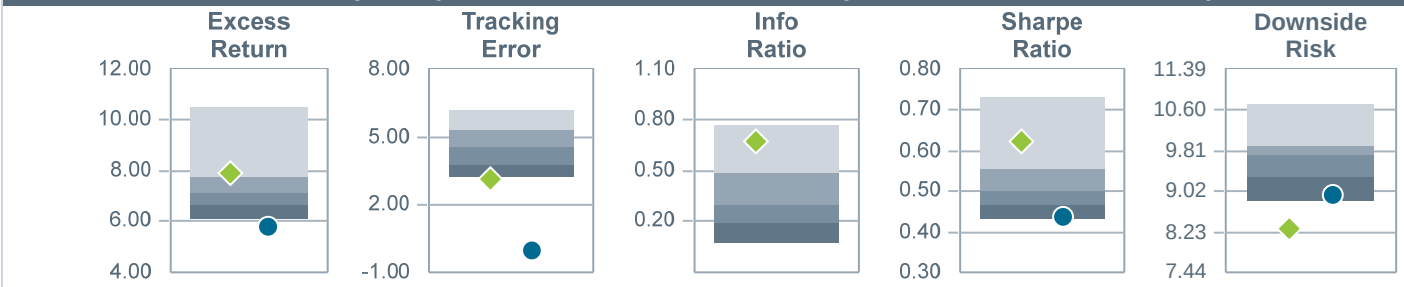


	Return	Standard Deviation
Manager	8.06	12.71
Benchmark	5.71	13.21
Median	6.96	14.43

Up/Down Markets - 10 Years



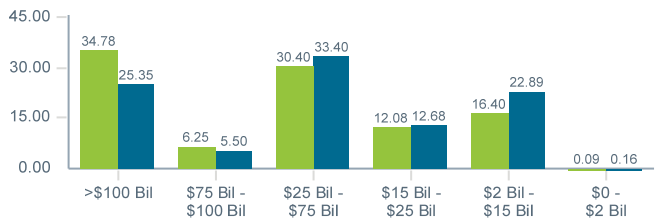
Peer Group Analysis - Multi Statistics - 10 Years (Excess Return vs. Risk Free)



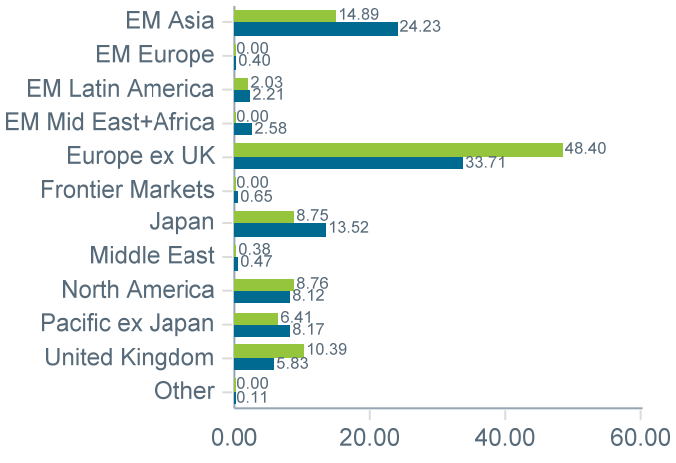
	Excess Return	Tracking Error	Info Ratio	Sharpe Ratio	Downside Risk
Manager	7.95 (24)	3.15 (98)	0.68 (7)	0.62 (11)	8.31 (100)
Benchmark	5.80 (98)	0.00 (100)	N/A	0.44 (93)	8.94 (90)
Median	7.14	4.55	0.30	0.50	9.74

Portfolio Characteristics and Dist. of Market Cap (%)

	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap ($M)	111,792	89,620
Median Mkt. Cap ($M)	25,034	8,855
Price/Earnings Ratio	19.28	17.63
Price/Book Ratio	2.86	3.18
5 Yr. EPS Growth Rate (%)	12.53	16.72
Current Yield (%)	2.07	1.87
Beta (5 Years, Monthly)	0.92	1.00
Number of Securities	82	1,311
Active Share	78.71	N/A



Region Weights (%)



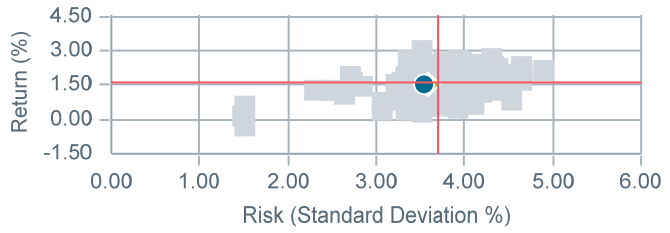
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Manager: Vanguard Tot Bd;Inst (VBTIX) **As of June 30, 2022**
Benchmark: Vanguard Spl B US Agg Flt Adj Index
Peer Group: IM U.S. Broad Market Core Fixed Income (MF)

Performance

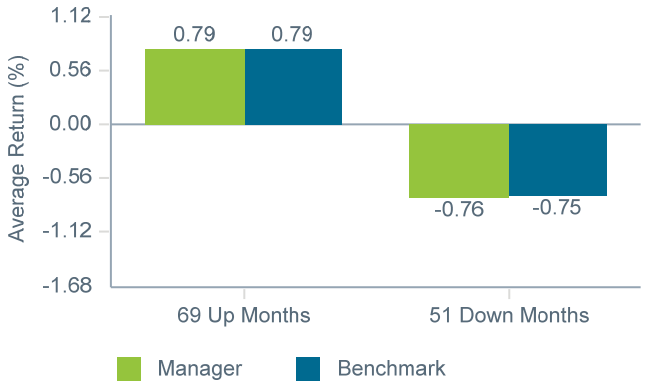
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	**-4.71**	**-10.39**	**-0.92**	**0.86**	**1.41**	**1.50**	**-1.65**	**7.74**	**8.73**	**-0.01**	**3.57**
Benchmark	-4.73	-10.38	-0.91	0.90	1.45	1.56	-1.58	7.75	8.87	-0.08	3.63
Difference	0.02	-0.01	-0.01	-0.04	-0.04	-0.06	-0.07	-0.01	-0.14	0.07	-0.06
Peer Group Median	-5.35	-11.17	-0.93	0.80	1.37	1.60	-1.33	8.15	8.76	-0.62	3.60
Rank	17	23	50	42	46	56	64	64	52	19	53
Population	516	504	476	437	386	317	511	508	529	523	513

Peer Group Scattergram - 10 Years

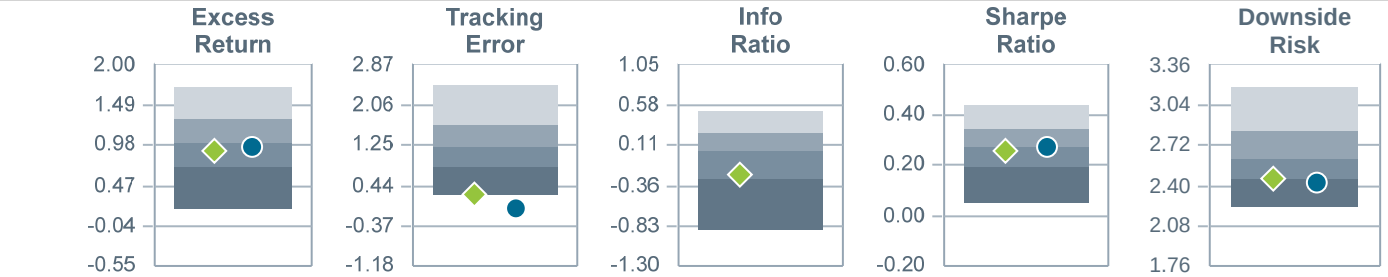


	Return	Standard Deviation
Manager	1.50	3.58
Benchmark	1.56	3.55
Median	1.60	3.70

Up/Down Markets - 10 Years



Peer Group Analysis - Multi Statistics - 10 Years (Excess Return vs. Risk Free)

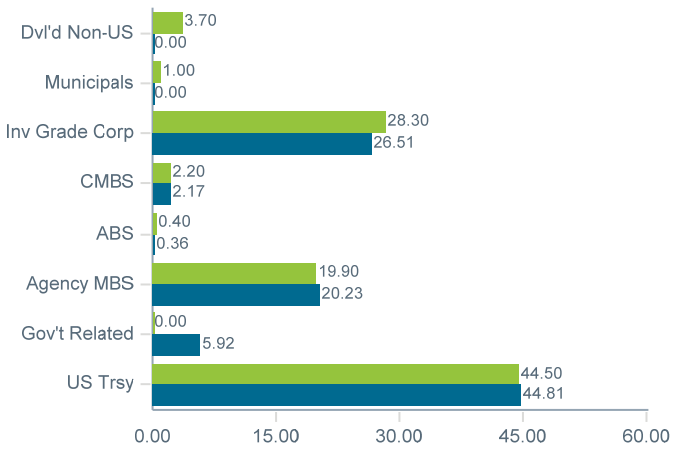


	Excess Return	Tracking Error	Info Ratio	Sharpe Ratio	Downside Risk
Manager	0.92 (57)	0.25 (97)	-0.23 (71)	0.26 (56)	2.46 (73)
Benchmark	0.97 (52)	0.00 (100)	N/A	0.28 (49)	2.43 (79)
Median	1.02	1.22	0.04	0.27	2.61

Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	6.86	6.48
Spread Duration	N/A	6.45
Avg. Maturity	8.81	8.69
Avg. Quality	Aa2	Aa2/Aa3
Yield To Maturity (%)	1.72	3.72
Coupon Rate (%)	2.59	2.50
Current Yield (%)	N/A	N/A
Holdings Count	10,162	12,563

Sector Distribution (%)



Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.
Benchmark consists of Bloomberg US Agg Bond Index through 12/31/09; and Bloomberg US Agg Flt Adj Index thereafter.

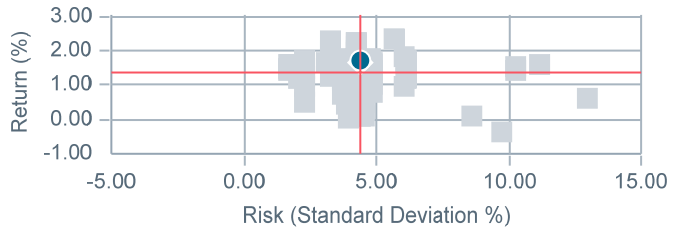
Manager: Vanguard Infl-Prot;Adm (VAIPX)
Benchmark: Bloomberg US Trsy US TIPS Index
Peer Group: IM U.S. TIPS (MF)

As of June 30, 2022

Performance

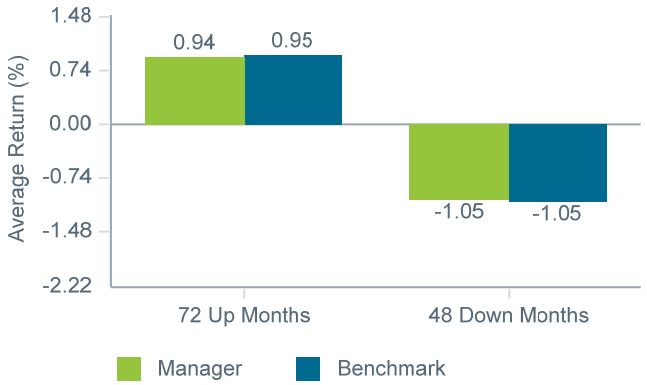
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	**-6.06**	**-5.07**	**2.98**	**3.11**	**2.75**	**1.65**	**5.68**	**10.96**	**8.16**	**-1.39**	**2.91**
Benchmark	-6.08	-5.14	3.04	3.21	2.82	1.73	5.96	10.99	8.43	-1.26	3.01
Difference	0.02	0.07	-0.06	-0.10	-0.07	-0.08	-0.28	-0.03	-0.27	-0.13	-0.10
Peer Group Median	-6.09	-5.34	2.89	2.87	2.35	1.37	5.26	9.70	7.41	-1.57	2.60
Rank	48	44	44	27	17	22	31	27	31	44	34
Population	202	196	189	176	153	116	201	199	214	221	222

Peer Group Scattergram - 10 Years

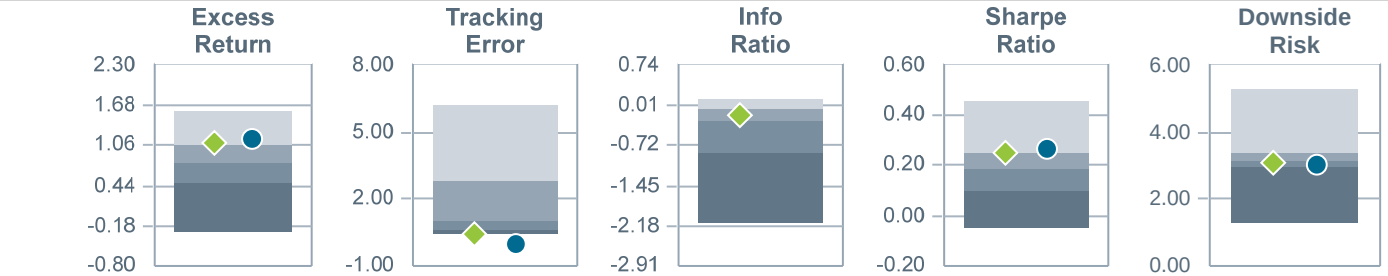


	Return	Standard Deviation
Manager	1.65	4.37
Benchmark	1.73	4.39
Median	1.37	4.36

Up/Down Markets - 10 Years



Peer Group Analysis - Multi Statistics - 10 Years (Excess Return vs. Risk Free)

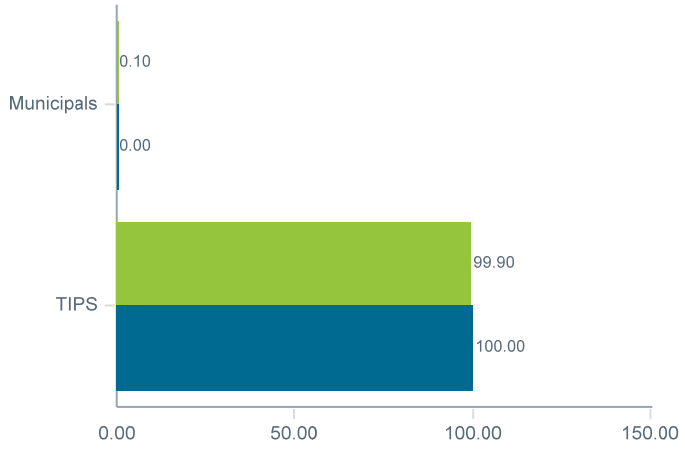


	Excess Return	Tracking Error	Info Ratio	Sharpe Ratio	Downside Risk
Manager	1.09 (23)	0.47 (86)	-0.17 (41)	0.25 (26)	3.07 (59)
Benchmark	1.17 (15)	0.00 (100)	N/A	0.27 (22)	3.05 (66)
Median	0.80	1.04	-0.28	0.19	3.13

Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	6.75	5.05
Spread Duration	N/A	5.05
Avg. Maturity	7.18	7.38
Avg. Quality	Aaa	Aaa
Yield To Maturity (%)	2.91	3.38
Coupon Rate (%)	0.66	0.63
Current Yield (%)	-0.23	N/A
Holdings Count	54	46

Sector Distribution (%)



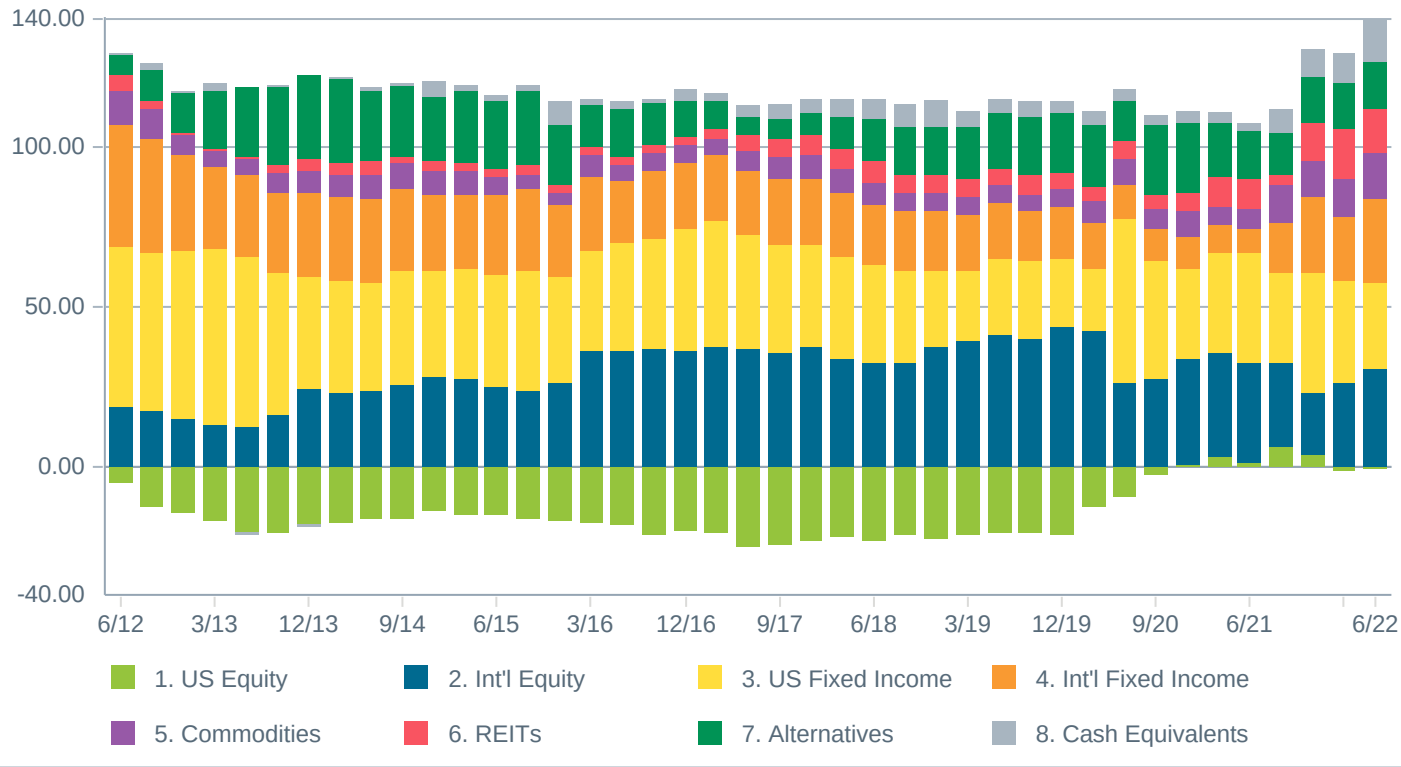
Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Manager: PIMCO:All Ast Ath;Inst (PAUIX) **As of June 30, 2022**
Benchmark: All Asset Custom Index (Eql Wtd)

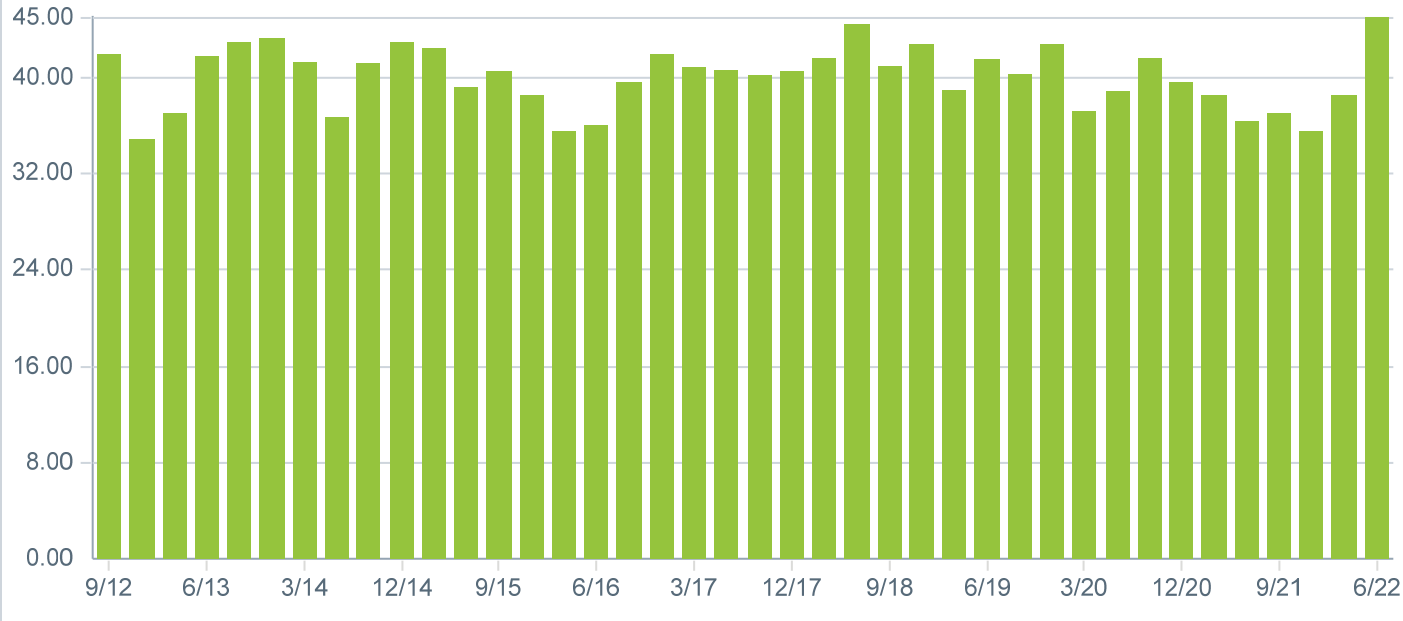
Performance

	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	**-11.90**	**-12.28**	**1.77**	**1.97**	**2.44**	**1.83**	**15.51**	**4.59**	**7.62**	**-6.14**	**12.04**
Benchmark	-7.62	-8.65	2.73	3.81	4.01	4.32	6.46	9.89	12.97	-1.62	8.94
Difference	-4.28	-3.63	-0.96	-1.84	-1.57	-2.49	9.05	-5.30	-5.35	-4.52	3.10

Historical Asset Allocation (%) - 10 Years



% Leverage on Net Assets - 10 Years



Performance shown is net of fees and product specific. Manager may use leverage up to one-half of net assets. This is accomplished through a line of credit from external banks, the proceeds of which are used to gain incremental exposure to the desired underlying fund(s). Current gross exposures sum to 146.00% due to the use of 46.00% leverage on net assets. Historical Commodities and REITs allocations shown are available at a one-quarter lag due to the disclosure guidelines set by the investment manager for the underlying fund strategies. Please see the Addendum for custom index definition.

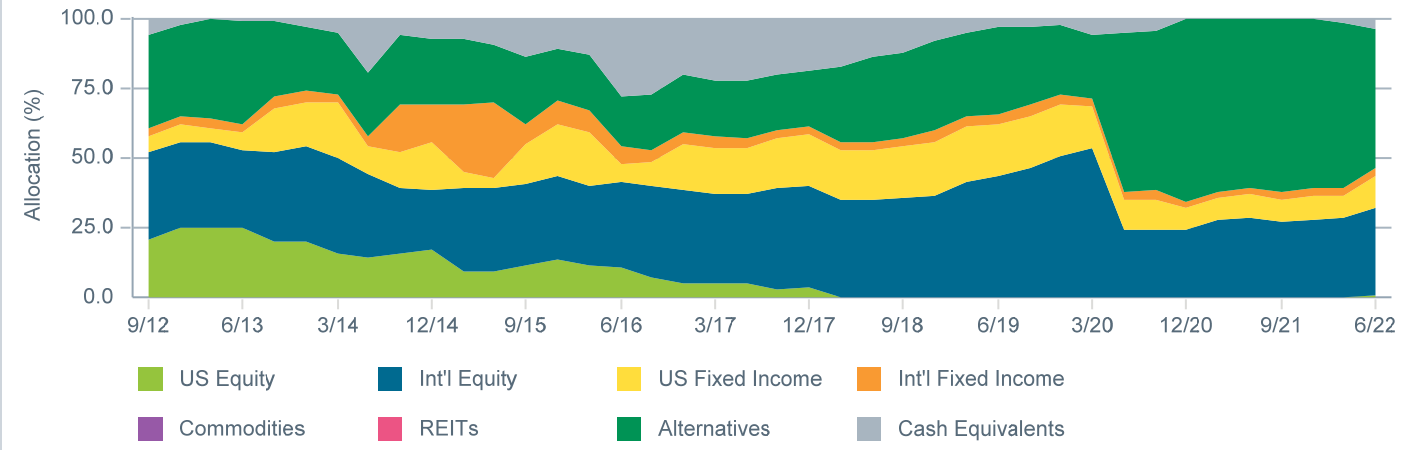
Manager: GMO:Bchmk-Fr All;III (GBMFX) **As of June 30, 2022**

Benchmark: 60% MSCI ACW (Net)/40% Bbrg US Agg Idx

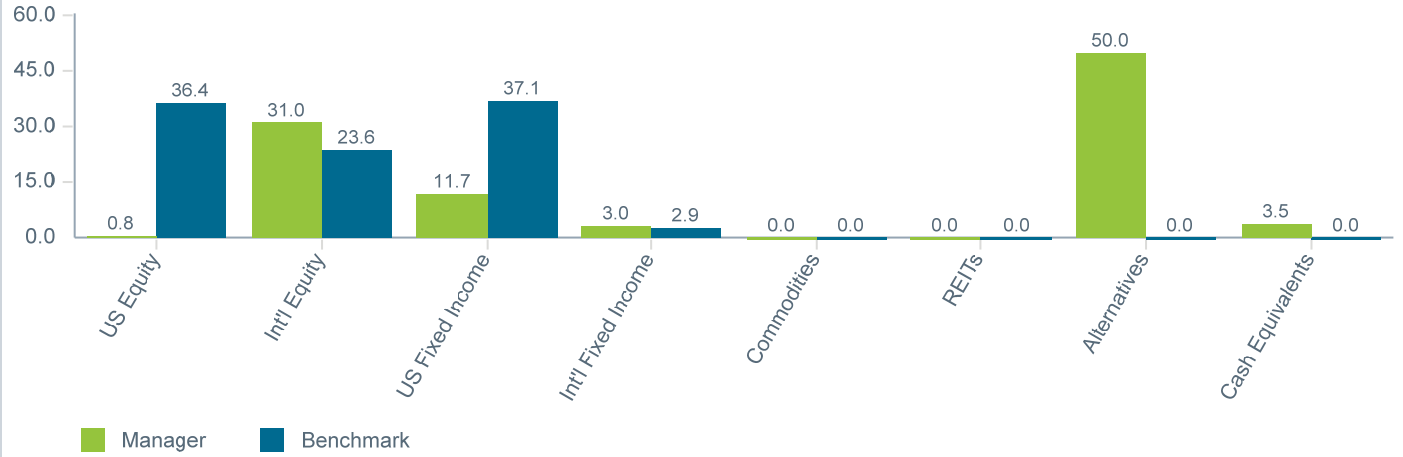
Performance

	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	**-3.80**	**-8.07**	**-0.48**	**0.99**	**1.47**	**2.82**	**2.96**	**-2.49**	**11.62**	**-5.35**	**13.04**
Benchmark	-11.36	-13.43	3.66	4.83	5.00	6.04	10.20	13.49	19.41	-5.52	15.41
Difference	7.56	5.36	-4.14	-3.84	-3.53	-3.22	-7.24	-15.98	-7.79	0.17	-2.37

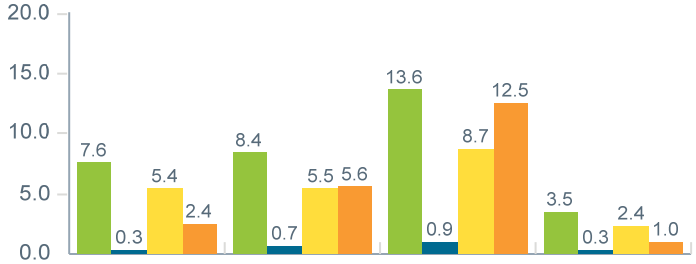
Historical Asset Allocation - 10 Years



Asset Allocation vs. Benchmark



Historical Statistics - 10 Years



	Manager	Benchmark	S&P 500 Index (Cap Wtd)	Bloomberg US Agg Bond Index
Standard Deviation	7.56	8.37	13.65	3.48
Sharpe Ratio	0.32	0.67	0.92	0.28
Downside Risk	5.40	5.51	8.68	2.39
Excess Return	2.44	5.59	12.54	0.95

Actual Correlation - 10 Years

	Actual Correlation
60% MSCI ACW (Net)/40% Bbrg US Agg Idx	0.80
S&P 500 Index (Cap Wtd)	0.73
Russell 2000 Index	0.67
MSCI EAFE Index (USD) (Net)	0.82
MSCI Emg Mkts Index (USD) (Net)	0.84
Bloomberg US Agg Bond Index	0.14
Bloomberg US Trsy US TIPS Index	0.27
Wilshire US REIT Index	0.51
HFRI FOF Comp Index	0.73
Bloomberg Cmdty Index (TR)	0.47
ICE BofAML 3 Mo US T-Bill Index	-0.18
Cons Price Index (Unadjusted)	-0.08

Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Allocation to Int'l Eq includes Emg Mkts. Allocation to US Fixed Inc includes ABS/Struct'd Products and Hi Yld/Distr'd Debt. Allocation to Int'l Fixed Inc includes Emg Debt. Allocation to Alts includes Merger Arbitrage, Systematic Global Macro, Relative Value Interest Rates & FX (Global); Emg Mks, Cyclical Focus and Special Opp vs. S&P 500; US Small Value vs. Russell 2000; Dvlp'd ex-US, Dvlp'd ex-US Small Value and ACWI ex-US Equity Ext vs. EAFE.

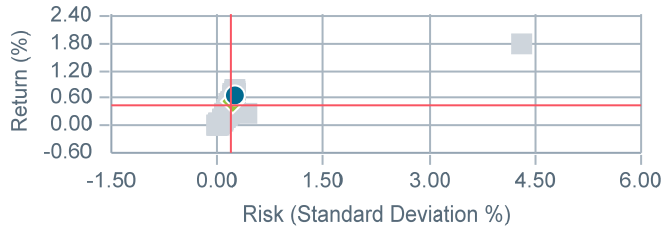
Manager: Fidelity IMM:Govt;I (FIGXX)
Benchmark: ICE BofAML 3 Mo US T-Bill Index
Peer Group: IM U.S. Taxable Money Market (MF)

As of June 30, 2022

Performance

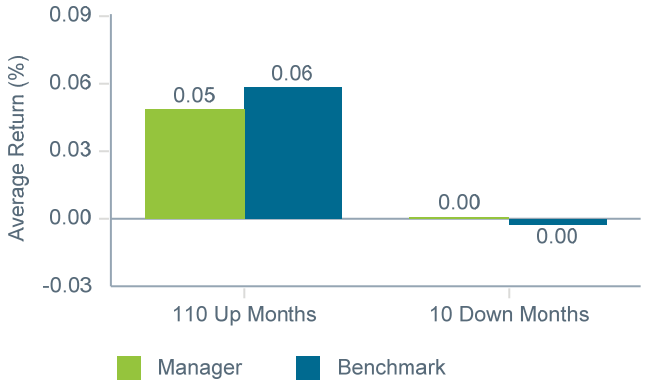
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	**0.13**	**0.14**	**0.48**	**0.95**	**0.76**	**0.53**	**0.01**	**0.35**	**2.09**	**1.72**	**0.75**
Benchmark	0.11	0.17	0.63	1.11	0.89	0.64	0.05	0.67	2.28	1.87	0.86
Difference	0.02	-0.03	-0.15	-0.16	-0.13	-0.11	-0.04	-0.32	-0.19	-0.15	-0.11
Peer Group Median	0.10	0.11	0.42	0.85	0.63	0.45	0.01	0.30	1.90	1.53	0.55
Rank	35	33	28	24	22	23	55	37	21	23	25
Population	800	765	708	661	565	531	768	789	793	817	831

Peer Group Scattergram - 10 Years

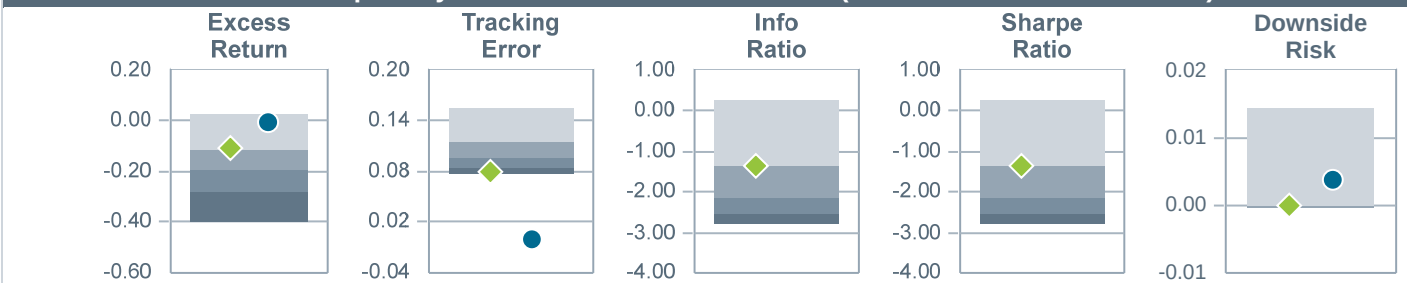


	Return	Standard Deviation
Manager	0.53	0.22
Benchmark	0.64	0.25
Median	0.45	0.20

Up/Down Markets - 10 Years

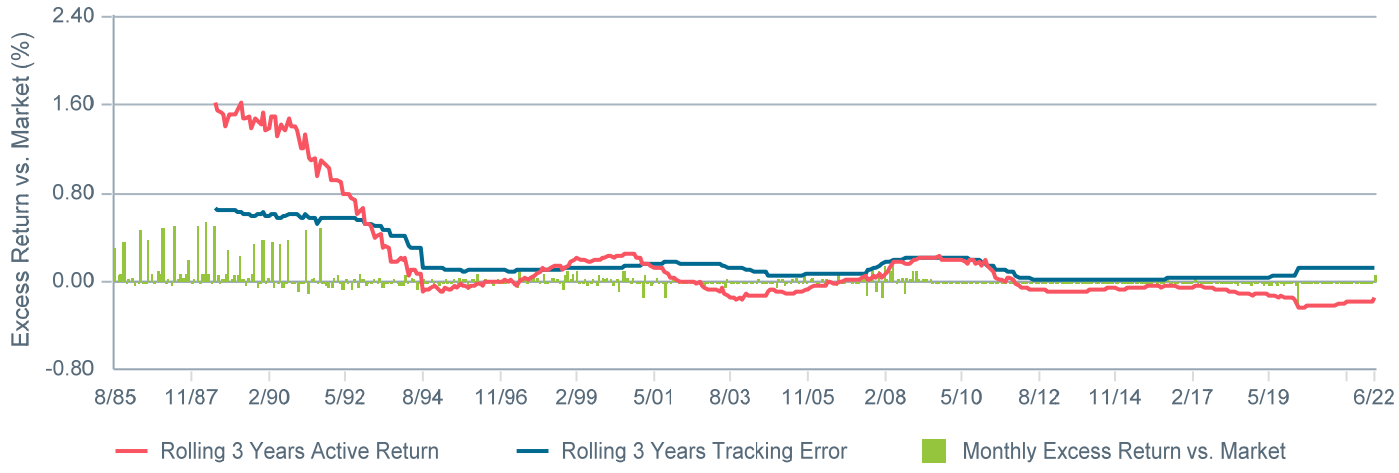


Peer Group Analysis - Multi Statistics - 10 Years (Excess Return vs. Risk Free)



	Excess Return	Tracking Error	Info Ratio	Sharpe Ratio	Downside Risk
Manager	-0.11 (23)	0.08 (90)	-1.34 (25)	-1.34 (25)	0.00 (14)
Benchmark	0.00 (7)	0.00 (100)	N/A	N/A	0.00 (13)
Median	-0.19	0.10	-2.12	-2.12	0.00

Rolling Return - Since Inception



Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Addendum & Glossary

Performance Related Comments

- Performance versus (SA+CF) peer groups or plan sponsor peer groups is shown gross of fees, while performance versus (MF) peer groups is shown net of fees.
- PIMCO:All Ast Ath;Inst (PAUIX) performance prior to 08/2011 is represented by PIMCO:All Asset;Inst (PAAIX).
- Vanguard Infl-Prot;Adm (VAIPX) performance prior to 05/2019 is represented by Vanguard Infl-Prot;Inst (VIPIX) and prior to 06/2012 is represented by Vanguard Infl-Prot;Adm (VAIPX).
- PIMCO:RAE Fnd GlxUS;Inst (PZRIX) performance prior to 06/2015 is represented by Research Affiliates Global AC Ex-US, L.P.
- Fiscal year ends 06/30.

Manager Transition Comments

- Vanguard Energy Idx; Adm (VENAX) was liquidated in 04/2022.
- Fidelity US Sustainability Index Fund (FITLX) was funded in 04/2022.
- During 10/2021, Westwood All Cap Val (CF) transitioned to Westwood Qual ACp;Ultra (WQAUX).
- Hussman Inv:Strat TR (HSTRX) was liquidated in 01/2019.
- In 07/2018, PAAMCO Pacific Hedged Strategy (CF) began the liquidation process with an initial distribution. Market value for PAAMCO Pacific Hedged Strategy (CF) represents residual assets held by the manager in the form of cash equivalents for auditing purposes. Additional distributions were received in 09/2018, 01/2019, 08/2019 and 11/2019.
- WTC-CIF Diversified Inflation Hedges (CF) was liquidated in 07/2016, and Vanguard Energy Idx;Adm (VENAX) was funded with the proceeds.
- JPMorgan Core Bond Trust (CF), PIMCO: Tot Rtn;Inst (PTTRX), and NHIT Strategic Alpha (CF) were liquidated in 06/2016, and Vanguard Tot Bd;Inst (VBTIX) was funded with the proceeds.
- As of 07/01/2015, Loomis Sayles Trust Company renamed all trusts by replacing "Loomis Sayles" with "NHIT."
- Research Affiliates Global AC Ex-US, L.P. transitioned to PIMCO:RAE Fnd GlxUS;Inst (PZRIX) during 06/2015.
- GMO:Bchmk-Fr All;III (GBMFX) was funded in 03/2014.
- Cohen&Steers Inst RS (CSRIX) was liquidated during 10/2013. The proceeds were transitioned into PIMCO: All Ath;Inst (PAUIX).
- Loomis Sayles World Bond Trust (CF) was liquidated during 09/2013. The proceeds were transitioned into Loomis Sayles Strategic Alpha (CF).
- TT Int'l Inv Tr Active Int'l Eq (CF) was liquidated and the proceeds were used to fund MFS International Growth (CF) in 02/2013.
- Rainier Large Cap Equity (SA) was liquidated and the proceeds were used to fund Analytic US Low Volatility Equity (CF) at the end of 09/2012.
- Enhanced RAFI Global AC Ex-US, L.P. (CF) and Loomis Sayles Strategic Alpha (CF) were funded in 02/2012.
- Artio Int'l Equity II Group Trust (CF) and Loomis Sayles:Strat Alp;Y (LASYX) were liquidated in 01/2012.
- Loomis Sayles:Strat Alp;Y (LASYX) was funded in 02/2011.
- The Contribution Account was added on 10/2011.
- Hussman Inv:Strat TR (HSTRX) was funded in 09/2011.
- Westwood Large Cap Value (CF) and Westwood SMidCap Equity (CF) were liquidated in 07/2011, and the funds were used to purchase Westwood All Cap Value (CF).
- PIMCO:All Asset;Inst (PAAIX) transferred to PIMCO:All Ast Ath;Inst (PAUIX) in 07/2011.
- Vanguard Infl-Prot;Adm (VAIPX) was funded in 07/2010.
- Brandes Global Equity (CF) was liquidated in 09/2009. The proceeds were used to fund Artio Int'l Equity II Group Trust (CF).
- Vanguard Explorer;Adm (VEXRX) was liquidated in 03/2009. The proceeds were used to fund The Boston Co. SMid Cap Growth (CF).
- GMO US SMid Value Fund (GMSUX) was liquidated in 06/2008. The proceeds were used to fund Westwood SMidCap Equity (CF).
- Loomis Sayles:Gl Bd;Inst (LSGBX) was sold at the end of 06/2008 to transition into Loomis Sayles World Bond Trust (CF), thus historical data prior to 07/2008 is from (LSGBX).
- UBS Dynamic Alpha;P (BNAYX) was liquidated in 05/2008. The proceeds were used to purchase PIMCO:All Asset;Inst (PAAIX) and Wellington Diversified Inflation Hedge (CF).
- Nicholas-Applegate Global Select Fund (NACHX) was liquidated in 10/2007. The proceeds were used to fund TT Int'l Investment Trust Active Int'l Equity (CF).
- TCW Large Cap Growth (SA) was liquidated in 08/2007. The proceeds were used to fund Rainier Large Cap Equity (SA).
- UBS Dynamic Alpha;P (BNAYX) and PAAMCO Pacific Hedged Strategies Portfolio (CF) were both funded in 05/2007.
- Kayne Anderson (SA) was liquidated in 03/2006. The proceeds were used to purchase GMO US SMid Value Fund (GMSUX).
- Brandes Global Equity (SA) was sold at the end of 12/2005 to transition into the Brandes Global Equity (CF) equivalent, and thus historical data prior to 01/2006 is from the (SA) vehicle.

Miscellaneous Comments

- The PIMCO All Asset All Authority Fund currently consists of the following underlying strategies which have been provided by the investment manager on a quarter lag and classified by RVK into eight broad Real Return categories:
  1. *Equity - Nat. Resources*: None
  2. *Commodities:* Commodity Real Return Strategy Fund, CommoditiesPLUS Strategy Fund
  3. *Inflation Linked Bonds:* Real Return Fund, Real Return Asset Fund
  4. *Floating Rate Bonds:* Senior Floating Rate Fund
  5. *REITs:* Real Estate Real Return Strategy Fund, Mortgage Opportunities Fund
  6. *Nominal Bonds:* Low Duration Fund, Extended Duration Fund, Investment Grade Corporate Bond Fund, Long Term US Government Fund, Total Return Fund, Emerging Markets Currency Fund, Diversified Income Fund, Emerging Local Bond Fund, High Yield Fund, High Yield Spectrum Fund, Income Fund, Long Duration Total Return Fund
  7. *Equity - Non Real:* RAE Fundamental EM Fund, RAE Fundamental PLUS EMG Fund, RAE Low Volatility PLUS EMG Fund, RAE Worldwide Long/Short PLUS Fund, RAE Low Volatility PLUS Fund, StockPLUS Short Fund, RAE Fundamental PLUS Intl Fund, RAE Low Volatility PLUS Intl Fund, StocksPLUS International Fund (USD-Hedged), StocksPLUS International Fund (Unhedged), RAE Fundamental International Fund
  8. *Other (Includes Cash):* TRENDS Managed Futures Strategy Fund, RAE Fundamental Advantage PLUS Fund, Government Money Market Fund, Net Short Duration Instruments

Custom Index Comments

- The **Policy Index** is a static custom index that is calculated monthly and consists of
  - From 05/2020 through present: **25%** Russell 3000 Index, **20%** MSCI ACW Ex US Index (USD) (Net), **35%** Bloomberg US Agg Bond Index, & **20%** of the 60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx.
  - From 07/2018 through 04/2020: **25%** Russell 3000 Index, **20%** MSCI ACW Ex US Index (USD) (Net), **32.5%** Bloomberg US Agg Bond Index, & **22.5%** of the 60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx.
  - From 04/2018 through 06/2018: **25%** Russell 3000 Index, **20%** MSCI ACW Ex US Index (USD) (Net), **32.5%** Bloomberg US Agg Bond Index, & **22.5%** HFRI FOF:Cnsvt Index
  - From 12/2011 through 03/2018: **20%** Russell 3000 Index, **20%** MSCI ACW Ex US Index (USD) (Net), **25%** Bloomberg US Agg Bond Index, **20%** Real Return Actual Allocation Index, & **15%** HFRI FOF:Cnsvt Index
  - From 08/2011 through 11/2011: **22.5%** Russell 3000 Index, **22.5%** MSCI ACW Ex US Index (USD) (Net), **25%** Bloomberg US Agg Bond Index, **20%** Real Return Actual Allocation Index, & **10%** HFRI FOF:Cnsvt Index
  - From 07/2010 through 07/2011: **20%** S&P 500 Index (Cap Wtd), **5%** Russell 2500 Index, **12.5%** MSCI ACW Ex US Index (USD) (Net), **12.5%** MSCI EAFE Index (USD) (Net), **20%** Bloomberg US Agg Bond Index, **5%** Bloomberg US Trsy: US TIPS Index, **5%** FTSE Wrld Gov't Bond Index, **4%** FTSE NAREIT Eq REITs TR Index, **6%** All Asset Composite Index, **6%** Wellington Dvf'd Infl Hedge Comp Index, & **4%** HFRI FOF:Cnsvt Index
  - From 10/2009 through 06/2010: **20%** S&P 500 Index (Cap Wtd), **15%** Russell 2500 Index, **7.5%** MSCI ACW Ex US Index (USD) (Net),**7.5%** MSCI EAFE Index (USD) (Net), **27.5%** Bloomberg US Agg Bond Index, **5%** FTSE Wrld Gov't Bond Index, **5%** FTSE NAREIT Eq REITs TR Index, **4.5%** All Asset Composite Index, **4.5%** Wellington Dvf'd Infl Hedge Comp Index, & **3.5%** HFRI FOF:Cnsvt Index
  - From 06/2008 through 09/2009: **20%** S&P 500 Index (Cap Wtd), **15%** Russell 2500 Index, **7.5%** MSCI World Index (USD) (Net), **7.5%** MSCI EAFE Index (USD) (Net), **27.5%** Bloomberg US Agg Bond Index, **5%** FTSE Wrld Gov't Bond Index, **5%** FTSE NAREIT Eq REITs TR Index, **4.5%** All Asset Composite Index, **4.5%** Wellington Dvf'd Infl Hedge Comp Index, & **3.5%** HFRI FOF:Cnsvt Index
  - From 11/2007 through 05/2008: **20%** S&P 500 Index (Cap Wtd), **15%** Russell 2500 Index, **7.5%** MSCI World Index (USD) (Net), **7.5%** MSCI EAFE Index (USD) (Net), **27.5%** Bloomberg US Agg Bond Index, **5%** FTSE Wrld Gov't Bond Index, **5%** FTSE NAREIT Eq REITs TR Index, **9%** Consumer Price Index+5%, & **3.5%** HFRI FOF:Cnsvt Index
  - From 06/2007 through 10/2007: **20%** S&P 500 Index (Cap Wtd), **15%** Russell 2500 Index, **15%** MSCI World Index (USD) (Net), **27.5%** Bloomberg US Agg Bond Index, **5%** FTSE Wrld Gov't Bond Index, **5%** FTSE NAREIT Eq REITs TR Index, **9%** Consumer Price Index+5%, & **3.5%** HFRI FOF:Cnsvt Index
  - From 04/2006 through 05/2007: **25%** S&P 500 Index (Cap Wtd), **15%** Russell 2500 Index, **15%** MSCI World Index (USD) (Net), **35%** Bloomberg US Agg Bond Index, **5%** FTSE Wrld Gov't Bond Index, & **5%** FTSE NAREIT Eq REITs TR Index
  - From 04/2005 through 03/2006: **25%** S&P 500 Index (Cap Wtd), **7.5%** Russell 2500 Index, **7.5%** Russell 2000 Index, **15%** MSCI World Index (USD) (Net), **35%** Bloomberg US Agg Bond Index, **5%** FTSE Wrld Gov't Bond Index, & **5%** FTSE NAREIT Eq REITs TR Index
  - From 01/2002 through 03/2005: **25.2%** S&P 500 Index (Cap Wtd), **4.2%** Russell 2500 Index, **4.2%** Russell 2000 Index, **26.4%** MSCI World Index (USD) (Net), **35%** Bloomberg US Agg Bond Index, & **5%** FTSE Wrld Gov't Bond Index
  - From 10/1998 through 12/2001: **35%** S&P 500 Index (Cap Wtd), **10%** Russell 2000 Index, **15%** MSCI EAFE Index (USD) (Net), **35%** Bloomberg US Agg Bond Index, & **5%** FTSE Wrld Gov't Bond Index
  - From 10/1996 through 09/1998: **27%** S&P 500 Index (Cap Wtd), **10%** Russell 2000 Index, **10%** MSCI EAFE Index (USD) (Net), **13%** MSCI World Index (USD) (Net), **36%** Bloomberg US Agg Bond Index, & **4%** FTSE Wrld Gov't Bond Index
  - From 01/1994 through 09/1996: **37%** S&P 500 Index (Cap Wtd), **10%** MSCI EAFE Index (USD) (Net),

13% MSCI World Index (USD) (Net), **36%** Bloomberg US Agg Bond Index, & **4%** FTSE Wrld Gov't Bond Index
- From 01/1989 through 12/1993: **50%** S&P 500 Index (Cap Wtd), **10%** MSCI EAFE Index (USD) (Net), & **40%** Bloomberg US Agg Bond Index
- From 07/1982 through 12/1988: **60%** S&P 500 Index (Cap Wtd) & **40%** Bloomberg US Agg Bond Index

- Performance shown for Alternative Investment Custom Index represents
  - From 07/2018 through present: 60% MSCI ACW (Net)/40% Bbrg Gbl Agg Idx
  - From 01/1990 through 06/2018: HFRI FOF: Cnsvt Index

- Performance shown for Westwood Qual ACp;Ultra (WQAUX) (**1**) represents
  - From 10/2021 through present: Westwood Qual ACp;Ultra (WQAUX)
  - From 08/2011 through 09/2021: Westwood All Cap Value (CF)
  - From 07/2008 through 07/2011: beginning of month market value weighted average of Westwood LargeCap Value (CF) and Westwood SMidCap Equity (CF)
  - From 10/2004 through 06/2008: Westwood LargeCap Value (CF)
  - From 01/1997 through 09/2004: beginning of month market value weighted average of Westwood LargeCap Value (CF) and Westwood SmallCap Growth (CF)
  - From 07/1986 through 12/1996: Westwood LargeCap Value (CF)

- Performance shown for Russell 3000 Val Index (**2**) represents
  - From 08/2011 through present: Russell 3000 Val Index
  - From 07/2008 through 07/2011: beginning of month market value weighted average of Westwood LargeCap Value (CF) and Westwood SMidCap Equity (CF) applied to the Russell 1000 Val Index and Russell 2500 Val Index, respectively
  - From 10/2004 through 06/2008: Russell 1000 Val Index
  - From 01/1997 through 09/2004: beginning of month market value weighted average of Westwood LargeCap Value (CF) and Westwood SmallCap Growth (CF) applied to the Russell 1000 Val Index and Russell 2000 Grth Index, respectively
  - From 07/1986 through 12/1996: Russell 1000 Val Index

- Performance shown for All Asset Custom Index (Eql Wtd) **(3)** represents
  - From 01/2014 through present: All Asset Custom Index (Eql Wtd)
  - From 10/1997 through 12/2013: All Asset Composite Index

- The All Asset Custom Index (Eql Wtd) is an equal-weighted hybrid created independently by RVK specifically for PIMCO's All Asset strategies, and it consists of the following benchmarks:
  1. *Short Term Strategies*: ICE BofAML 1 Yr T-Bill Index
  2. *US Core and Long Maturity Bond Strategies*: Bloomberg US Agg Bond Index
  3. *EM and Gbl Bond Strategies*: PIMCO GLADI Index*
  4. *Crdt Strategies*: ICE BofAML US Hi Yld Master II Index
  5. *Inflation Related Strategies*: Bloomberg US Trsy US TIPS Index
  6. *US Equity Strategies*: Russell 3000 Index
  7. *Global Equity Strategies*: MSCI ACW Index (USD) (Net)
  8. *Alternative Strategies*: ICE BofAML 3 Mo US T-Bill Index+3%

  * Performance for the PIMCO Gbl Advantage Bond Index (London Close) prior to 01/01/2004 consists of the JPM EMBI Gbl Dvf'd Index (USD) (TR).

San Diego Transit Corporation Employees Retirement Plan
Fee Schedule

	Fee Schedule	Market Value As of 06/30/2022 ($)	Estimated Annual Fee ($)	Estimated Annual Fee (%)
Westwood Qual ACp;Ultra (WQAUX)	0.45 % of Assets	17,865,489	80,395	0.45
Fidelity US Sustainability Index Fund (FITLX)	0.11 % of Assets	3,020,877	3,323	0.11
Analytic US Low Volatility (CF)	0.40 % of First $20 M 0.30 % of Next $80 M 0.20 % Thereafter	19,798,364	79,193	0.40
Newton TBC US SMID Cap Grth Eq (CF)	0.90 % of First $25 M 0.75 % Thereafter	5,373,638	48,363	0.90
PIMCO:RAE GlxUS;Inst (PZRIX)	0.56 % of Assets	16,639,170	93,179	0.56
MFS Intl Grth Cl 2 (CIT)	0.75 % of Assets	16,898,612	126,740	0.75
Vanguard Tot Bd;Inst (VBTIX)*	0.04 % of Assets	52,671,976	18,435	0.03
PIMCO:All Ast Ath;Inst (PAUIX)	0.94 % of Assets	19,787,230	186,000	0.94
GMO:Bchmk-Fr All;III (GBMFX)	1.11 % of Assets	15,693,113	174,194	1.11
Vanguard Infl-Prot;Adm (VAIPX)	0.10 % of Assets	9,007,101	9,007	0.10
Contribution Account	0.18 % of Assets	522,500	941	0.18
Disbursement Account	0.18 % of Assets	222,892	401	0.18
San Diego Transit Total Fund		177,508,436	820,245	0.46

Mutual fund fees are sourced from Morningstar and/or the investment manager. BNYM PE US SMID Cap Grth Eq NL has been rebranded as Newton TBC US SMID Cap Grth Eq.
*The fee for Vanguard Tot Bd;Inst (VBTIX) is 0.035%.

Glossary

Active Return - The difference between the investment manager/composite performance relative to the performance of an appropriate market benchmark.

Active Share - Measures the degree to which the holdings of a fund differ from the holdings of the benchmark. Active share is calculated by taking the sum of the absolute value of the differences of the weight of each holding in the fund versus the weight of each holding in the benchmark and dividing by two.

Alpha - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. It is a measure of the portfolio's historical performance not explained by movements of the market or a portfolio's non-systematic return.

Alpha Ratio - A measure of a portfolio's non-systematic return per unit of downside risk. It is measured by dividing the alpha of a portfolio by the downside risk. The non-systematic return is a measure of a portfolio's historical performance not explained by movements of the market.

Average Quality - Bond quality ratings are reported using the investment managers' and the index providers' preferred rating agency. *Average Quality for managers unable to provide this statistic is instead provided by Morningstar; if unavailable on Morningstar, it has been estimated using a credit quality distribution provided by the manager.* There are two primary rating agencies in the US. *Moody's* assigns ratings on a system that employs up to four symbols (consisting of letters and numbers), such as, Aaa, Aa2, etc., with Aaa being the highest or safest rating. S*tandard & Poor's (S&P)* employs a system that uses + and - along with letters, such as AAA, AA+, etc. The two rating agencies' systems are summarized below:

S&P	Moody's	Explanation	S&P	Moody's	Explanation
Higher Credit Quality – Investment Grade			**Lower Credit Quality – Below Investment Grade**		
AAA	Aaa	Prime/Highest credit quality	BB+	Ba1	Speculative/Low credit quality
AA+	Aa1	High credit quality	BB	Ba2	
AA	Aa2		BB-	Ba3	
AA-	Aa3		B+	B1	Highly speculative
A+	A1	Upper-medium credit quality	B	B2	
A	A2		B-	B3	
A-	A3		CCC+	Caa1	Substantial credit/default risk
BBB+	Baa1	Lower-medium credit quality	CCC	Caa2	Extremely speculative
BBB	Baa2		CCC-	Caa3	
BBB-	Baa3		CC	Ca	Vulnerable to default
			C	Ca	
			D	C	In default

Benchmark Effect - The difference between the blended return of each respective managers' benchmark within a composite and the composite's benchmark return.

Beta - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of a portfolio's non-diversifiable or systematic risk.

Box Plots - A graphical representation of the distribution of observations. From top to bottom, the four boxes represent the spread between the maximum value and the minimum value in each quartile. A quartile represents the values that divide the observations into four quarters (i.e., 1st quartile, 2nd quartile, 3rd quartile, and 4th quartile). The median observation is where the 2nd quartile and 3rd quartile meet.

Buy and Hold Attribution - At the beginning of the time period under analysis, the manager and benchmark portfolios are broken down into segments (i.e., styles, sectors, countries, and regions) based on the desired type of attribution. The formula assumes zero turn-over to the manager and benchmark portfolios throughout the period and calculates the segment returns ("buy and hold returns") to arrive at performance attribution. Due to portfolio turnover, buy and hold attribution may not accurately represent quarterly performance relative to the benchmark. Country, region, sector, and style allocations are as of the date one quarter prior to the reporting date, and the returns shown are for those segments throughout the quarter reported. Due to disclosure guidelines set by each investment manager, equity characteristics shown are as of the most recent date available. The following is the methodology for segment classification:

- **Sector** - Attribution is calculated using the Global Industry Classification Standard (GICS), which is a detailed and comprehensive structure for sector and industry analysis. Stocks are classified by their primary sector as defined by S&P Capital IQ data. Attribution to "other" is the result of securities based in industries that do not fit into any GICS classification.
- **Country/Region** - Attribution is calculated using the Morgan Stanley Capital International (MSCI) region standards. Stocks are classified by their domicile country/region, as defined by S&P Capital IQ data, and thus may differ from the classification of the investment manager and/or index provider. Attribution to "other" is the result of securities based in countries/regions that do not fit into any MSCI classification.
- **Style** - Stocks are classified into the following style boxes: large/mid/small vs. growth/neutral/value. Stocks are classified along large/mid/small categories at the time of the Russell index rebalancing, using the index market cap boundaries as cutoff points. Stocks are classified along growth/neutral/value categories at the time of the Russell index rebalancing, using the price/book ratio as supplied by S&P Capital IQ. Stocks in the Russell 3000 Index portfolio are sorted by price/book ratio; names with the highest price/book ratio that make up 1/3 of the total market capitalization are assigned to the growth category, and names that make up the subsequent 1/3 of the total market capitalization are assigned to the neutral category, while the balance of the names are assigned to the value category. Stocks are unclassified when there is not enough data to determine a size and style metric.

Portfolio Characteristics and Buy and Hold Attribution reports utilize product-specific data for all mutual funds and commingled funds.

Capital Markets Review -

- **Breakeven Inflation** - Measures the expected inflation rate at each stated maturity by taking the difference between the real yield of the inflation-linked maturity curve and the yield of the closest nominal Treasury maturity.
- **Consumer Confidence** - Measures domestic consumer confidence as defined by the degree of optimism on the state of the economy that consumers express through saving and spending.
- **Consumer Price Index (CPI)** - Measures the change in the price level of consumer goods and services.

Glossary

Federal Funds Rate - The interest rate at which a depository institution lends funds maintained at the Federal Reserve to another depository institution overnight. It is one of the most influential interest rates in the US economy, since it affects monetary and financial conditions, which in turn have a bearing on key aspects of the broad economy including employment, growth and inflation.
Option-Adjusted Spread - Measures the flat spread of an index or bond to the Treasury yield curve after removing the effect of any embedded options.
Purchasing Managers Index (PMI) - Measures economic activity by surveying purchasing managers on a monthly basis as to whether business conditions have improved, worsened, or stayed the same.
Real Gross Domestic Product (Real GDP) - An inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year.
Unemployment Rate - The percentage of the total labor force that is unemployed but actively seeking employment.
US Dollar Total Weighted Index - Measures the value of the US Dollar relative to a basket of other world currencies. It is calculated as the weighted geometric mean of the dollar's value versus the EUR, GBP, CAD, SEK, CHF, and JPY.
VIX - Measures the implied volatility of S&P 500 Index options by looking at the market's expectation of the S&P 500 Index volatility over the next 30 day period. Commonly referred to as the "fear index" or the "fear gauge."

Cash Flow Effect – The composite's active return minus the sum of each managers' active return minus the benchmark effect.

Consistency - The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.

Convexity - A measure of the shape of the curve that describes the relationship between bond prices and bond yields.

Correlation - A statistical measure of the relationship between asset class returns. A value of 1.00 is a perfect correlation; that is, the asset classes always move in the same direction. A value of -1.00 indicates a perfect negative correlation, in which the asset classes always move in opposite directions of each other. A value of 0 indicates there is no relationship between the direction of returns of the two asset classes. Correlation calculations only consider the direction of changes relative to two variables and not the magnitude of those changes.

Coupon Rate - The percentage rate of interest paid on a bond or fixed income security; it is typically paid twice per year.

Current Yield - The annual income of a security divided by the security's current price.

Down Market Capture - Down market by definition is negative benchmark return and down market capture represents the ratio in % terms of the average portfolios return over the benchmark during the down market period. The lower the value of the down market capture the better the product's performance.

Downside Risk - A measure similar to standard deviation that focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative returns for the selected periodicity. The higher the factor, the riskier the product.

Earnings Per Share - It is backward looking, calculated using the one year current EPS divided by the one year EPS five years ago.

Effective Duration - The approximate percentage change in a bond's price for a 100 basis point change in yield.

Excess Return vs. Market - Average of the monthly arithmetic difference between the manager's return and the benchmark return over a specified time period, shown on an annualized basis.

Excess Return vs. Risk Free - Average of the monthly arithmetic difference between the manager's return and the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) over a specified time period, shown on an annualized basis.

Excess Risk - A measure of the standard deviation of a portfolio's performance relative to the risk-free return.

Expense Ratios - Morningstar is the source for mutual fund expense ratios.

Gain/Loss - The net increase or decrease in the market value of a portfolio excluding its Net Cash Flow for a given period.

Indices - All indices and related information are considered intellectual property and are licensed by each index provider. The indices may not be copied, used, or distributed without the index provider's prior written approval. Index providers make no warranties and bear no liability with respect to the indices, any related data, their quality, accuracy, suitability, and/or completeness.

Information Ratio - Measured by dividing the active rate of return by the tracking error. The higher the information ratio, the more value-added contribution by the manager.

Liability Driven Investing (LDI) - A method to optimally structure asset investments relative to liabilities. The change in liabilities is estimated by the Ryan Labs Generic PPA Index of appropriate duration for that Plan. This benchmark is based on generic data and is therefore an approximation. RVK is not an actuarial firm, and does not have actuarial expertise.
Estimated Funded Status - The estimated ratio of a Plan's assets relative to its future liabilities. This is calculated by dividing the Plan's asset market value by the estimated present value of its liabilities. The higher the estimated funded status, the better the Plan's ability to cover its projected benefit obligations. An estimated funded status of 100% indicates a Plan that is fully funded.
Estimated PV of Liabilities - An estimate of a Plan's future liabilities in present value terms. The beginning of the period liability is provided by the Plan's actuary. The period-end present value liability estimate provided in this report is derived by applying the estimated percentage change generated using the Ryan Labs Generic PPA Index with duration similar to that reported on the most recent actuarial valuation report.
Duration of Liabilities - The sensitivity of the value of a Plan's liabilities to changes in interest rates, as calculated by the Plan's actuary.
Duration of Assets - The dollar-weighted average duration of all the individual Plan assets.
Estimated Plan Hedge Ratio - The estimate of how well a Plan's investment portfolio is hedged against changes in interest rates - a primary driver of funded status movements. This is calculated by dividing the dollar-weighted values of both the Plan asset duration by the liability duration and

Glossary

multiplying by the estimated funded status. An estimated plan hedge ratio of zero indicates that the Plan's liabilities have not been hedged, whereas a value of one indicates fully hedged.

Modified Duration - The approximate percentage change in a bond's price for a 100 basis point change in yield, assuming the bonds' expected cash flows do not change.

Mutual Fund Performance - Whenever possible, manager performance is extended for any share class that does not have 10 years of history. Using Morningstar's methodology, a single ticker within the same fund family (often the oldest share class) is chosen to append historical performance.

Net Cash Flow - The sum, in dollars, of a portfolio's contributions and withdrawals. This includes all management fees and expenses only when performance shown is gross of fees.

Peer Groups -

Plan Sponsor Peer Groups - RVK utilizes the Mellon Analytical Solutions Trust Universe along with the Investment Metrics Plan Sponsor Universe. The combined Mellon Analytical Solutions Trust Universe and Investment Metrics Plan Sponsor Universe is used for comparison of total fund composite results and utilizes actual client performance compiled from consultant and custodian data. The Plan Sponsor Peer Group database includes performance and other quantitative data for over 2,100 plans which include corporate, endowment, foundation, public, and Taft Hartley plans.

Investment Manager Peer Groups - RVK utilizes Investment Metrics' Peer Groups for investment manager peer comparison and ranking. The Investment Metrics Peer Group database includes performance and other quantitative data for over 840 investment management firms and 29,000 investments products, across more than 160 standard peer groups. Mutual Fund Peer Groups are net of fees.

Percentile Rankings - Percentile rank compares an individual fund's performance with those of other funds within a defined peer group of managers possessing a similar investment style. Percentile rank identifies the percentage of a fund's peer group that has a higher return (or other comparative measurement) than the fund being ranked. Conversely, 100 minus the individual fund's ranking will identify the percentage of funds within the peer group that have a lower return than the fund being ranked.

1 - Highest Statistical Value 100 - Lowest Statistical Value

Example: American Funds AMCP;R-4 (RAFEX) is ranked in the 4th percentile within the IM US Equity Large-Cap Growth Funds (MF) Peer Group for the Sharpe Ratio. Within the IM US Equity Large-Cap Growth Funds peer group, 4% of the other funds performed better than American Funds AMCP;R-4 (RAFEX), while 96% of the funds performed worse.

Performance Methodology - RVK calculates performance for investment managers and composites using different methodologies.

Investment Managers - Performance is calculated for interim periods between all large external cash flows for a given month and geometrically linked to calculate period returns. An external cash flow is defined as cash, securities, or assets that enter or exit a portfolio. RVK defines a "large cash flow" as a net aggregate cash flow of ≥10% of the beginning-period portfolio market value or any cash flow that causes RVK calculated performance to deviate from manager/custodian reported performance in excess of 5 basis points for a given month.

Composites - The Modified Dietz methodology is utilized to calculate asset class, sub-asset class, and total fund composite performance. The Modified Dietz method calculates a time-weighted total rate of return that considers the timing of external cash flows; however, it does not utilize interim period performance to mitigate the impact of significant cash in- and outflows to the composite.

RVK calculates performance beginning with the first full month following inception. Since inception performance may vary from manager reported performance due to RVK using the first full month of returns as the inception date. Performance for both managers and composites is annualized for periods greater than one year.

Portfolio Characteristics - Due to disclosure guidelines set by each investment manager, portfolio characteristics shown are as of the most recent date available.

Price to Earnings Ratio - The ratio valuing a company's current share price relative to its trailing 12-month per-share earnings (EPS).

Private Equity Quartile Ranks - Private Equity quartile ranks are generated using vintage year peer group data provided by Thomson Reuters, and are based on each fund's annualized, since inception internal rate of return (IRR). Three Private Equity peer groups are available via Thomson Reuters: Buyout, Venture, and All Private Equity. Ranks are available quarterly, at a one-quarter lag.

R-Squared - The percentage of a portfolio's performance explained by the behavior of the appropriate benchmark. High R-Squared means a higher correlation of the portfolio's performance to the appropriate benchmark.

Return - Compounded rate of return for the period.

% Return - The time-weighted rate of return of a portfolio for a given period.

Risk Free Benchmark – ICE BofAML 3 Mo US T-Bill Index unless specified otherwise.

Glossary

RVK Liquidity Rating - A qualitative method for determining the relative amount of liquidity in a portfolio. The characteristics considered when determining relative liquidity include trading volume, gates for redemption, leverage, nature of transactions, and pricing mechanisms. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating.

Asset Class	RVK Liquidity Rating
Liquid Investments	
T-Bills and Treasurys	100
Cash Equivalents	98
TIPS	95
US Large Cap Equity	95
Diversified Real Return	93
Stable Value (Participant Directed)	91
Global Equity	90
Non-US Large Cap Equity	90
Global Tactical Asset Allocation	88
MLPs	85
US Mid Cap Equity	85
US SMid Cap Equity	85
US Small Cap Equity	85
REITs	85
Non-US Small Cap Equity	85
Emerging Markets Equity	85
Core Fixed Income	85
Core Plus Fixed Income	80

Asset Class	RVK Liquidity Rating
Less Liquid Investments	
Fixed Income Plus Sector	50
Stable Value (Plan Sponsor Directed)	50
Hedge Funds of Funds	35
Not Liquid Investments	
Core Real Estate	25
Core Plus Real Estate	15
Non-Core Real Estate	5
Private Equity Funds of Funds	5

Sector Allocation - Negative fixed income sector allocation reflects manager's use of derivatives, short selling, or interest rate swaps.

Sharpe Ratio - Represents the excess rate of return over the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise), divided by the standard deviation of the excess return to the risk free asset. The result is the absolute rate of return per unit of risk. The higher the value, the better the product's historical risk-adjusted performance.

Simple Alpha - The difference between the manager's return and the benchmark's return.

Spread Duration - The approximate percentage change in a bond's price for a 100 basis point change in its spread over a Treasury of the same maturity.

Standard Deviation - A statistical measure of the range of a portfolio's performance. The variability of a return around its average return over a specified time period.

Thematic Classification - Represents dedicated manager allocations; as such, thematic allocations are approximations. RVK categorizes the following asset classes as Alpha, Capital Appreciation, Capital Preservation, and Inflation:

Alpha	Capital Appreciation	Capital Preservation	Inflation
Absolute Return Strategies	Public Equity	Core Fixed Income	TIPS
Currency Overlay	Private Equity	CMBS Fixed Income	Bank Loans
	Preferred Securities	Asset Backed Fixed Income	Core Real Estate
	High Yield	Domestic Core Plus Fixed Income	Real Return
	Convertible Fixed Income	Mortgage Backed Fixed Income	Inflation Hedges
	TALF Funds	International Developed Fixed Income	REITs
	Distressed Debt	Cash Equivalents	Commodities
	Emerging Market Fixed Income	Stable Value	
	Value Added Real Estate		
	Opportunistic Real Estate		

Time Period Abbreviations - **QTD** - Quarter-to-Date. **CYTD** - Calendar Year-to-Date. **FYTD** - Fiscal Year-to-Date. **YOY** - Year Over Year.

Total Fund Attribution – The Investment Decision Process (IDP) model provides an approach to evaluating investment performance that applies to all asset classes and investment styles. The IDP model is based on a top-down hierarchy framework of investment decisions, with each decision contributing to the overall profit or loss. The IDP approach starts from the strategic asset allocation and follows the flow of the investments down to the manager's skill.

Strategic Asset Allocation (SAA) – The percentage return gained or lost from the long-term strategic asset allocation decision, the most significant determinant of long-term performance. SAA is the product of the target asset allocation multiplied by the corresponding benchmark returns.

Tactical Asset Allocation (TAA) – The percentage return gained or lost from not having been precisely allocated at the target asset allocation mix, whether by deviations that are tactical in nature or a by-product of moving towards the target mix. TAA is the product of the actual asset allocation multiplied by the broad asset class benchmarks, less the SAA.

Style Selection (SS) – The percentage return gained or lost from intentional style biases within each asset class (e.g. value rather than core or overweight to emerging markets relative to benchmark). SS is the product of the actual manager allocation within each asset class multiplied by their specific benchmark, less TAA.

Manager's Skill (MS) – The percentage return gained or lost from manager value added relative to their specific benchmark. MS is the product of the actual manager allocation multiplied by their achieved excess return.

Total Fund Beta - Total Fund Beta is calculated using the S&P 500 as the benchmark. It represents a measure of the sensitivity of the total fund to movements in the S&P 500 and is a measure of the Total Fund's non-diversifiable or systematic risk.

Glossary

Tracking Error - A measure of the standard deviation of a portfolio's performance relative to the performance of an appropriate market benchmark.

Treynor Ratio - Similar to Sharpe ratio, but focuses on beta rather than excess risk (standard deviation). Treynor ratio represents the excess rate of return over the risk-free rate (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) divided by the beta. The result is the absolute rate of return per unit of risk. The higher the value, the better historical risk-adjusted performance.

Unit Value - The dollar value of a portfolio, assuming an initial nominal investment of $100, growing at the compounded rate of %Return for a given period.

Up Market Capture - Up market by definition is positive benchmark return and up market capture represents the ratio in % terms of the average portfolio’s return over the benchmark during the up market period. The higher the value of the up market capture the better the product's performance.

Yield to Maturity - The rate of return achieved on a bond or other fixed income security assuming the security is bought and held to maturity and that the coupon interest paid over the life of the bond will be reinvested at the same rate of return. The 30-Day SEC Yield is similar to the Yield to Maturity and is reported for mutual funds.

Yield to Worst - The bond yield calculated by using the worst possible yield taking into consideration all call, put, and optional sink dates.

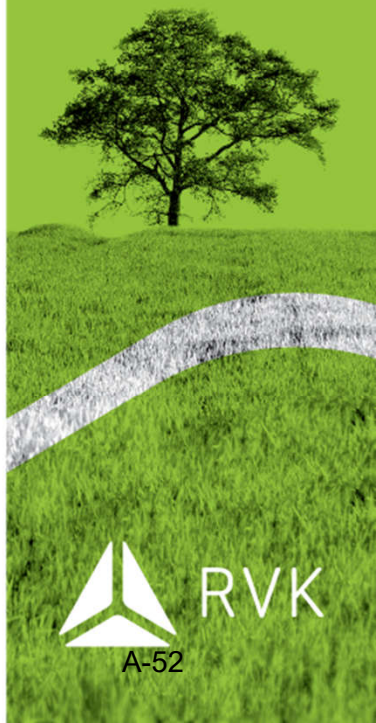
Exposure Slides

Exposures – Investment Managers

Allocations as of June 30, 2022

Asset Class	Manager	US Equity	Non-US Equity	Total Equity	Bonds & Cash	Inflation Assets	Other
EQUITY	Westwood Qual ACp;Ultra (WQAUX)	94%	-	94%	-	6%	-
	Fidelity US Sustainability Index Fund (FITLX)	93%	4%	97%	-	3%	-
	Analytic US Low Volatility Equity (CF)	96%	1%	97%	1%	3%	-
	BNYM Newton TBC US SMID Cap Grth Eq (CF)	92%	6%	98%	2%	-	-
	MFS Intl Grth Cl 2 (CIT)	1%	98%	98%	2%	-	-
	PIMCO:RAE Fnd GlxUS;Inst (PZRIX)	0%	100%	100%	-	0%	-
FIXED INCOME	Vanguard Tot Bd;Inst (VBTIX)	-	-	-	100%	-	-
	Vanguard Infl-Prot;Adm (VAIPX)	-	-	-	100%	-	-
ABSOLUTE RETURN	PIMCO:All Ast Ath;Inst (PAUIX)	6%	24%	30%	42%	16%	13%
	GMO:Bchmk-Fr All;III (GBMFX)	1%	31%	32%	18%	-	50%
	PAAMCO Pacific Hedged Strat (CF)	-	-	-	100%	-	-
CASH	Cont - Fidelity IMM:Govt;I (FIGXX)	-	-	-	100%	-	-
	Disb - Fidelity IMM:Govt;I (FIGXX)	-	-	-	100%	-	-

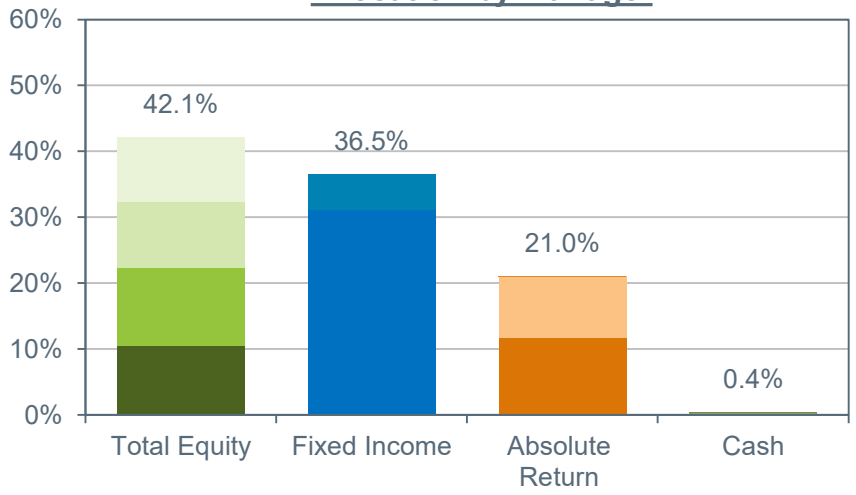
- Allocations shown may not sum up to 100% exactly due to rounding.
- Allocations reflecting 0% represent non-zero allocations less than 0.5%.
- Equity Assets Include High Yield and Distressed Debt.
- Inflation Assets Include Commodities, REITs, and TIPS.
- Bonds & Cash Include Fixed Income, Cash, and Cash Equivalents.
- "Other" Includes Alternatives, Merger Arbitrage, Special Opportunities, Systematic Global Macro, Cross-Sectional Rates, FX, Event Driven, Convertible Arbitrage, Relative Value, and Alpha Only.
- PAAMCO's Allocation is representative of residual assets held in cash equivalents.
- Exposure allocations may not sum up to 100% due to managers use of short-selling.
- During 04/2022, Vanguard Energy Idx; Adm (VENAX) was liquidated and Fidelity US Sustainability Index Fund (FITLX) was funded.



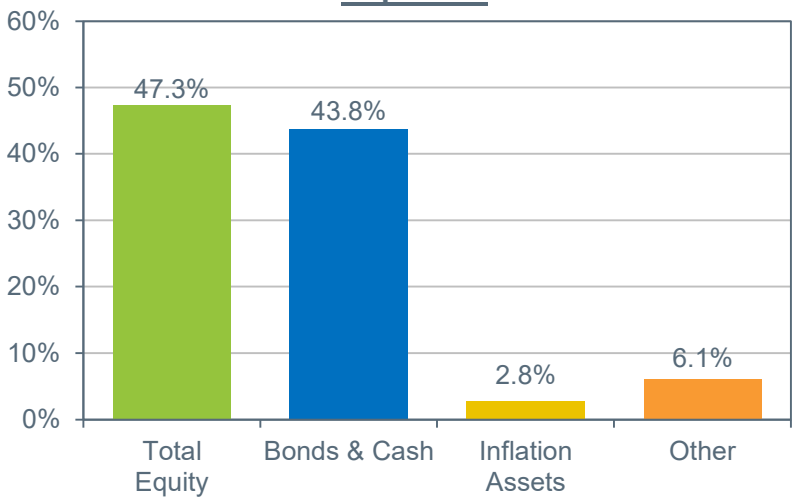
As of June 30, 2022

Exposures – Total Portfolio

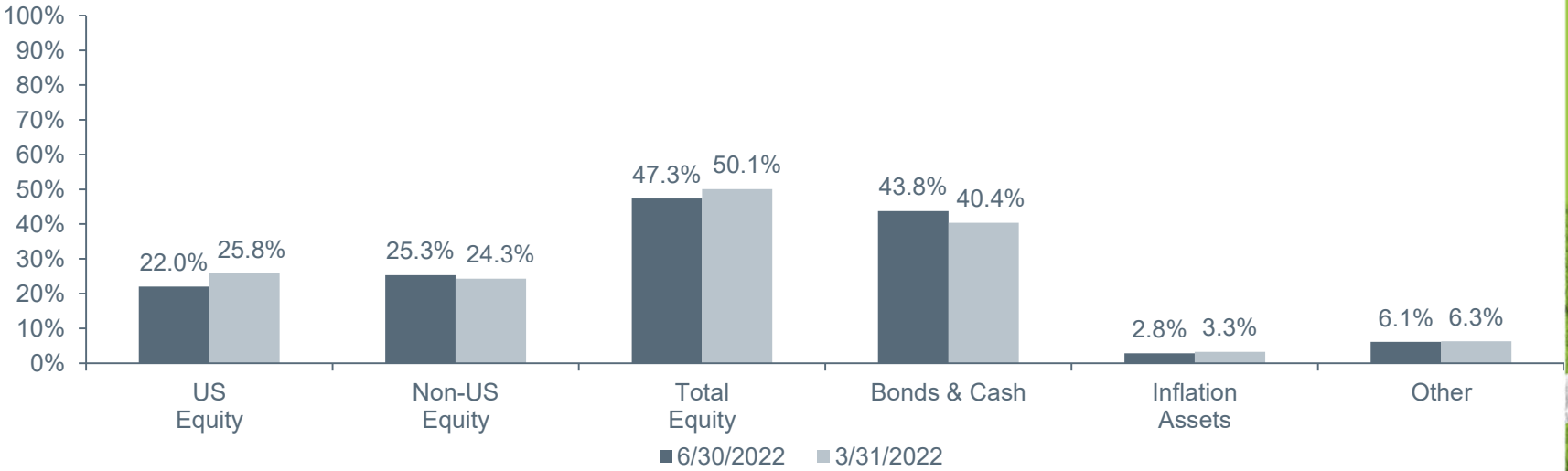
Allocation by Manager



Exposure



Exposure Detail



- Allocations may not sum up to 100% due to rounding.
- Exposure allocations may not sum up to 100% due to managers use of short-selling.
- TIPS account for 12.17% of Bonds & Cash.

PORTLAND BOISE CHICAGO NEW YORK

RVK

SDTC Pension Investment Status / Actuarial Valuation

MTS Board of Directors Meeting

February 16, 2023

Agenda Item No. 13

Background / Status of SDTC Pension Plan

- MTS Deferred Benefit (DB) Pension Plans
  - CalPERS (CA Public Employees Retirement System) – MTS & SDTI Employees
    - Manages pension benefits for more than 2 million CA members
  - SDTC (San Diego Transit Corporation) Pension Plan – SDTC Employees
    - Private Pension Plan – Funding of 3 Plans for ATU, IBEW and SDTC Non-Contract EEs
      - Approximately 1570 active & retired members
    - Comprised of Pension Board made up of representatives from ATU, IBEW, Management
    - Board responsible for retirement application review, investment oversight, and administration of the Plan
    - Funding of Plan shared by active employees and MTS each year. The total contribution amount based upon previous year's actuarial valuation report
    - In 2012, this Plan was closed to non-contract employees through a negotiated Collective Bargaining Agreement
      - Resulted in an MTS Board-approved plan of continuing benefit payments for retirees and active members hired up to that date. All new employees in Defined Contribution Plan
      - Achieving a 100% funded Plan within 25 years (2038)

Background / Status of SDTC Pension Plan

- SDTC Pension Plan
  - Pension Plan Direction
    - Continue paying benefits to retirees (and eligible active members) as membership continues to decrease given closed plan status
    - Achieve sustainability with 100% funded status by 2038
    - With market return volatility over time, reduce actuarial investment return target
    - Smooth out annual investment gains / losses over 5-year period to mitigate large swings in contribution levels
    - Above has proved successful:
      - Moved actuarial target from 7.5% target to 6.0% target in last 6 years.
      - Projected to be at 100% fully funded by 2038

Background / Status of SDTC Pension Plan

- SDTC Pension Plan
  - Each year (today's presentations), staff reviews with MTS Board:
    - Investment results for the previous fiscal year (RVK - Jeremy Miller)
      - -10.8% for FY 2022 (ending June 30, 2022)
        - +21.3% in FY 2021 (all gains and losses smoothed over 5-year period)
      - Focus of mitigating risk / diversification within the Plan given closed structure
    - Resulting actuarial analysis based on investment performance, other factors (Cheiron - Anne Harper)
      - Given investment return and analysis of membership, provide an update to next fiscal year's contribution levels
      - Contributions projected to increase $1.0M (5.8%) in FY24
      - Gradual increase of contributions over next five years followed by reduced contribution levels in subsequent years
      - Significant decrease of contributions in 2038 reducing by $12M+ (to just under $1M)
        - Unfunded Actuarial Liability (UAL) fully paid off and normal costs remain

San Diego Transit Corporation

Investment Manager Fiscal Year 2022 Update

February 2023

Investment Structure as of 6/30/2022

Asset Allocation vs. Target Allocation			
	Market Value ($)	Allocation (%)	Target (%)
Broad Domestic Equity	46,058,368	25.95	25.00
Broad International Equity	33,537,782	18.89	20.00
Fixed Income	62,424,469	35.17	35.00
Alternatives (Multi-Asset)	35,487,818	19.99	20.00
Total Fund	**177,508,436**	**100.00**	**100.00**

- Plan is diversified across four broad asset classes
- Goal is to maximize return, while assuming a prudent risk level
  - Closed Plan to non-management participants (2011/2012)
  - Risk Profile as measured by Volatility (higher % = riskier portfolio) has been meaningfully reduced since Plan closed
    - 6/30/2011: 3-Year Plan Risk = 16% Volatility (Percentile Rank: 31st of 100)
    - 6/30/2022: 3-Year Plan Risk = 11% Volatility (Percentile Rank: 81st of 100)
- Liability structure (mature plan, with net outflows) would suggest an Asset structure that is more conservative, diversified and liquid
  - Assets exist to satisfy the Liabilities, as capital preservation is necessary in mature plan, and thus less emphasis on equity allocation
  - Management fees meaningfully reduced through passive investing

RVK

Investment Details as of 6/30/2022

Asset Allocation Detail					
Fund	**Asset Class**	**Strategy**	**Market Value ($)**	**Allocation (%)**	**Target (%)**
Westwood All Cap Value	US Equity	Active	17,865,489	10.06	
Fidelity US Sustainability Index	US Equity	Passive	3,020,877	1.70	
Analytic US Low Volatility	US Equity	Active	19,798,364	11.15	
Newton TBC US SMID Growth	US Equity	Active	5,373,638	3.03	
Total US Equity			**46,058,368**	**25.95**	**25.00**
PIMCO RAE	Int'l Equity	Active	16,639,170	9.37	
MFS Int'l Growth	Int'l Equity	Active	16,898,612	9.52	
Total International Equity			**33,537,782**	**18.89**	**20.00**
Vanguard Total Bond	Fixed Income	Passive	52,671,976	29.67	
Vanguard Inflation-Protection	Fixed Income	Active	9,007,101	5.07	
Total Fixed Income[1]			**62,424,469**	**35.17**	**35.00**
PIMCO All Asset All Auth	GTAA	Active	19,787,230	11.15	
GMO Benchmark-Free	GTAA	Active	15,693,113	8.84	
Total Alternatives[2]			**35,487,817**	**19.99**	**20.00**
TOTAL FUND			**177,508,436**	**100.00**	**100.00**

[1] Includes residual cash in the Contribution & Disbursement Accounts

[2] Includes $7,474 in residual PAAMCO illiquid SPV assets

- Assets are allocated across 10 different products
- Product diversification reduces overall portfolio risks
- Allocation sizes for active managers are controlled, reducing concentration risks
- Direct Environmental, Social, Governance (ESG) allocation via Fidelity US Sustainability Index

RVK

FY 2022 Performance

- Significant market headwinds for both stocks and bonds, especially in the first two quarters of 2022
  - Market headwinds primary due to ***rapidly rising inflation and interest rates***
- Three of the four quarters of FY 2022 posted negative returns for the Plan
  - Q3 2021: -1.0% Q4 2021: 2.6% Q1 2022: -3.7% Q2 2022: -8.8%
- Plan returned -10.80% over the 2022 fiscal year
- Assumed Actuarial annual rate of return is 6.00%
- Underperformed the Actuarial rate by 16.80% in fiscal year 2022

RVK

Long Term Performance Details

As of 6/30/2022

	Allocation		Performance (%)				
	Market Value ($)	%	1 Year	5 Years	10 Years	40 Year	Inception Date
San Diego Transit Total Fund	177,508,436	100%	-10.80	4.04	5.03	8.46	10/01/1982
Domestic Equity	46,058,368	25.95%	-8.36	8.28	11.14		
International Equity	33,537,782	18.89%	-16.13	4.52	7.13		
Fixed Income	62,424,469	35.17%	-10.18	0.95	1.59		
Alternative Investment	35,487,818	19.99%	-9.65	2.33	2.00		

- Year to year returns will fluctuate significantly, some years above and some years below the Actuarial rate of return, but over the long-run the SDTC portfolio has outperformed the 6.00% Actuarial return hurdle

RVK

Investment Structure Summary

- Plan is well diversified across a variety of managers and broad asset classes
- Asset Allocation is more conservative by design given that the Plan is closed
  - Focus is on satisfying liabilities
  - Balance capital appreciation vs. capital preservation
- Management fees are kept low with the use of passive investments
- Portfolio is well positioned for the future given the liability structure of the Plan
- Fiscal Year 2023 return for the Plan is above 7% thus far

RVK

RVK

Metropolitan Transit System

Agenda Item No. 14

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

San Diego Transit Corporation (SDTC) Employee Retirement Plan's Actuarial Valuation as Of July 1, 2022 (Anne Harper With Cheiron Inc. And Larry Marinesi)

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors receive the SDTC Employee Retirement Plan's (Plan) Actuarial Valuation as of July 1, 2022 (Attachment A), and adopt the pension contribution amount of $18,946,198 for fiscal year 2024.

Executive Committee Recommendation

At its February 9, 2023 meeting, the Executive Committee voted 6 to 0 (Board Members Fletcher, Whitburn, Elo-Rivera, Hall, Bush, and Moreno in favor) to recommend that the Board of Directors approve the staff recommendation.

Budget Impact

Board adoption would result in the annual pension contribution of $18,946,198 for fiscal year 2024, consisting of both employer and employee contributions.

DISCUSSION:

The Actuarial Valuation of the Plan as of July 1, 2022 was completed in December 2022 by Cheiron, Inc., and the entire report is included as Attachment A. The purpose of the actuarial valuation is to measure, describe, and identify the following as of the valuation date:

- The financial condition of the Plan,
- Past and expected trends in the financial progress of the Plan, and
- Compute the total annual pension contribution amount.

The Plan's funding policy is to contribute an amount equal to the sum of:

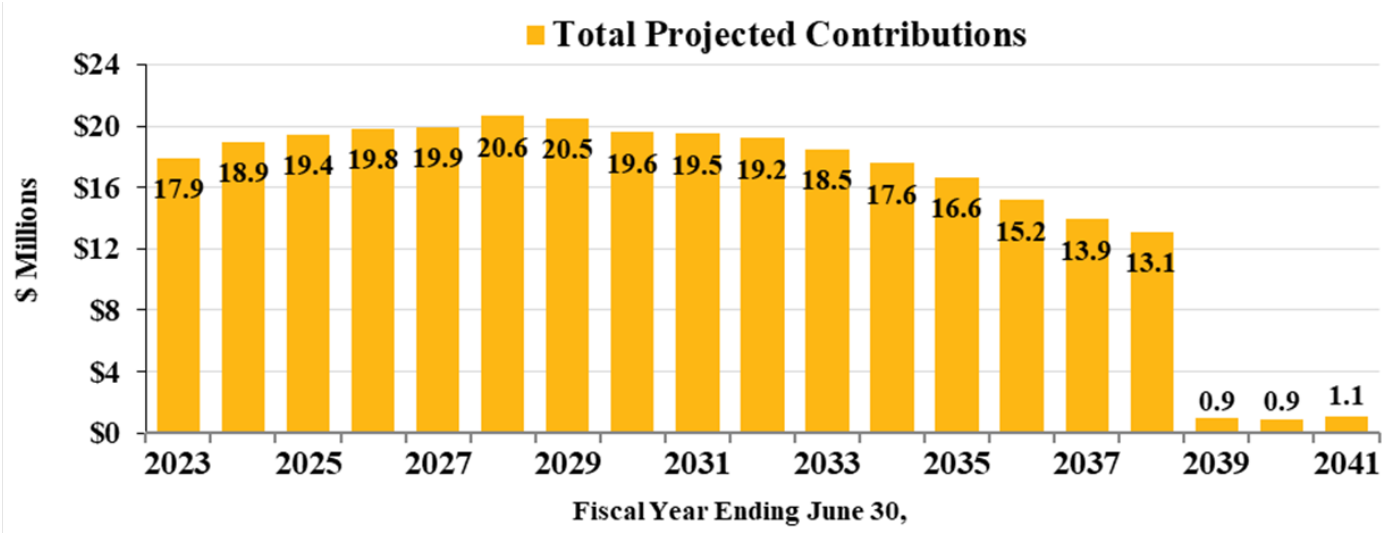
- The normal cost,
- Expected administrative expenses, and
- Amortization of the unfunded actuarial liability.

This valuation has calculated a total contribution of $18,946,198, an increase of 5.8% from fiscal year 2023, which would be used for the fiscal year 2024 budget.

As reflected in the following table, contributions are increasing year over year by approximately $1,044,000.

Total Contribution Reconciliation	
Fiscal Year 2022-2023, middle of the year	**17,901,804**
Change due to actuarial investment experience	505,208
Change due to liability experience	635,601
Changed due to effect of closed plan on benefits earned	(149,916)
Change due to other miscellaneous factors	53,501
Fiscal Year 2022-2023, middle of the year	**18,946,198**

Given the updated projected rates of return and the closed nature of the Plan, the Plan contributions are projected to continue to stabilize over the next few years, and the Unfunded Actuarial Liability will be fully paid off by fiscal year 2038.



Anne Harper of Cheiron, Inc. will provide an overview of the report in more detail and be available for any questions.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachment: A. Actuarial Valuation Report as of July 1, 2022

CHEIRON Classic Values, Innovative Advice

Celebrating 20 years

Retirement Plans of San Diego Transit Corporation

Actuarial Valuation Report as of July 1, 2022

Produced by Cheiron

December 2022

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Appendices

Via Electronic Mail

December 22, 2022

Mr. Larry Marinesi
San Diego Transit Corporation
1255 Imperial Avenue, Suite 1000
San Diego, California 92101-7490

Dear Mr. Marinesi,

At your request, we have conducted an actuarial valuation of the Retirement Plans of San Diego Transit Corporation ("Plan," "SDTC") as of July 1, 2022. This report contains information on the Plan's assets, liabilities, and contribution levels. It also contains an assessment and disclosures of the Plan's risks. In the Foreword, we refer to the general approach employed in the preparation of this report.

The purpose of this report is to present the results of the annual actuarial valuation of the Plans. This report is for the use of the Retirement Board and the San Diego Metropolitan Transit System ("MTS") Board and its auditors in preparing financial reports in accordance with applicable law and accounting requirements.

In preparing our report, we relied on information (some oral and some written) supplied by the plan administrator. This information includes, but is not limited to, the Plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

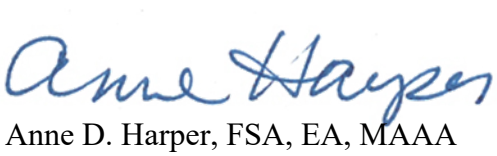
The assumptions used in calculating the liabilities found in this report reflect the results of an Experience Study approved by the Budget Development Committee in October 2021 and the San Diego Metropolitan Transit System's (MTS) Board of Directors in November 2021.

Future results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; changes in methods; and changes in plan provisions or applicable law.

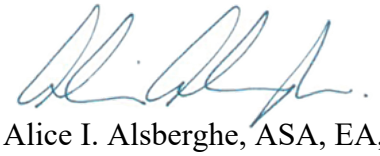
This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable law and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This report was prepared exclusively for the Retirement Board and MTS Board for the purposes described herein. Other uses of this valuation report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Sincerely,
Cheiron



Anne D. Harper, FSA, EA, MAAA
Principal Consulting Actuary



Alice I. Alsberghe, ASA, EA, MAAA
Consulting Actuary

Cheiron has performed the actuarial valuation of the Retirement Plans of San Diego Transit Corporation as of July 1, 2022. The valuation report is organized as follows:

- In Section I, the **Executive Summary,** we describe the purpose of an actuarial valuation, summarize the key results found in this valuation, and disclose important trends.

- The **Main Body** of the report presents details on the Plan's:

    - Section II – Assessment and Disclosure of Risk
    - Section III – Assets
    - Section IV – Liabilities
    - Section V – Contributions

- In the **Appendices,** we conclude our report with detailed information describing plan membership (Appendix A), actuarial assumptions and methods employed in the valuation (Appendix B), a summary of pertinent plan provisions (Appendix C), and a glossary of key actuarial terms (Appendix D).

Cheiron utilizes ProVal, an actuarial valuation application leased from Winklevoss Technologies (WinTech), to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal and have a basic understanding of it and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this report. The deterministic and stochastic projections shown in this report were developed using R-Scan, our proprietary stochastic projection tool for assessing probabilities of different outcomes. We have relied on Cheiron colleagues who developed the tool, and we have used the tool in accordance with its purpose.

The primary purpose of the actuarial valuation and this report is to measure, describe, and identify the following as of the valuation date:

- The financial condition of the Plan,
- Past and expected trends in the financial progress of the Plan, and
- The total contribution amount (employer and employee) to be made during Fiscal Year 2023-2024.

In the balance of this Executive Summary, we present (A) the basis upon which this year's valuation was completed, (B) the key results of this valuation including a summary of all key financial results, (C) changes in Plan cost, (D) an examination of historical trends, and (E) the future expected financial trends for the Plan.

A. Valuation Basis

This valuation determines total employer and employee contributions for the plan year.

The Plan's funding policy is to contribute an amount equal to the sum of:

- The normal cost under the Entry Age Normal Cost Method,
- Expected administrative expenses, and
- Amortization of the Unfunded Actuarial Liability (UAL) based on level dollar payments.

The employee will contribute according to the Plan schedules below. Member contribution rates in the future may change in response to collective bargaining. It will be the responsibility of the employer to contribute the remaining portion of the total contribution determined in this report.

- IBEW members contribute 8% of compensation (since April 2016)

- ATU drivers and clerical members contribute 8% of compensation (since December 2017)

- Non-contract members hired before July 1, 2013 contribute 8% of compensation (since January 2017)

- PEPRA: New Members must contribute half of the normal cost of the Plan, rounded to the nearest 0.25%. Currently, PEPRA members are contributing 7.75% of pay and the employer pays the remaining cost of the Plan. For the July 1, 2022 valuation, the PEPRA member rate has increased to 9.50% of compensation as a result of the demographic shifts and assumed COLA during retirement. The development of the PEPRA member rate can be found in Section V in the body of this report.

The SDTC Plans are closed to new entrants, except for Non-Contract members. A closed plan has very different dynamics as active plan membership declines and grows older and a larger portion of the Plan's liability shifts to payees. This dynamic shortens the investment horizon thus mitigating investment risk becomes more important. If the asset mix changes to reflect the expected pattern of benefit payments, it will become more conservative and the expected return on plan assets will decrease. Thus, adjusting the Plan's investment rate of return to be consistent with the expected trending decrease of future asset returns should continue to be monitored.

The true cost of the Plan is a function of actual Plan experience, not the actuarial assumptions. It is important to set realistic assumptions to mitigate the risk of Plan contribution volatility. In Section II of this report, we provide a detailed assessment and disclosure of the Plan's risks.

This valuation was prepared based on the Plan provisions as summarized in Appendix C. There have been no changes in plan provisions since the prior valuation. The results of this valuation do not include members participating in the defined contribution plans.

B. Key Results of this Valuation

The key results of the July 1, 2022 actuarial valuation are as follows:

- The actuarial contribution shown in this report is the total contribution required from both the employer and the employees. The total contribution increased from $17,901,804 to $18,946,198, an increase of about $1 million from the July 1, 2021 valuation. This increase is due to the recognition of the current year's asset loss as well as unfavorable liability experience. See Table I-2 for a reconciliation of the contribution cost from last year to this year that includes all components of the change.

- During the plan year ending June 30, 2022, the return on Plan assets was -11.3% based on the Market Value of Assets (MVA) compared to the 6.0% assumed rate of return. A return over 6.0% would result in an actuarial gain, and a return lower than 6.0% would result in an actuarial loss. The unfavorable investment experience resulted in an actuarial loss on the market value of assets of $ (34,885,265).

- The Actuarial Value of Assets (AVA) recognizes 20% of the difference between the expected and actual return, referred to as "Unexpected Earnings", on the Market Value of Assets (MVA) for each of the prior five years. The return on the AVA was return of 3.4% for June 30, 2022. See Table III-3 and III-4 for the detailed calculations.

- The Actuarial Liability was more than expected by $4,856,802. The liability experience loss was primarily driven by retiree Cost of Living Adjustments (COLA) increases and active member salary increases that were higher than expected.

- The Plan's funded ratio, the ratio of actuarial (smoothed) assets over the Actuarial Liability, decreased from 58.7% last year to 58.1% as of July 1, 2022. Additionally, the funded ratio based on the Market Value of Assets decreased significantly from 61.7% to 52.5%, since the asset losses are recognized immediately with the MVA.

- The Unfunded Actuarial Liability (UAL) is the excess of the Plan's Actuarial Liability over the Actuarial Value of Assets. The Plan's UAL increased from $136,971,026 to $141,224,003 as of July 1, 2022.

Below we present Table I-1, which summarizes all the key results of the valuation with respect to membership, assets and liabilities, and contributions. The results are presented and compared for both the current and prior plan year.

Table I-1
Summary of Principal Plan Results

	July 1, 2021	July 1, 2022	% Change
Participant Counts			
Active Participants	355	331	-6.8%
Participants Receiving a Benefit	1,048	1,058	1.0%
Inactive Participants	192	184	-4.2%
Total	1,595	1,573	-1.4%
Projected Plan Member Payroll [1] for Fiscal Year 2022 and 2023	$ 23,223,335	$ 23,023,954	-0.9%
Assets and Liabilities			
Actuarial Liability (AL)	$ 331,267,043	$ 337,148,571	1.8%
Actuarial Value of Assets (AVA)	194,296,017	195,924,568	0.8%
Unfunded Actuarial Liability (UAL)	$ 136,971,026	$ 141,224,003	3.1%
Market Value of Assets (MVA)	$ 204,471,831	$ 176,877,426	-13.5%
Funded Ratio (AVA)	58.7%	58.1%	-0.5%
Funded Ratio (MVA)	61.7%	52.5%	-9.3%
Contributions	**FY 2022-2023**	**FY 2023-2024**	
Total Normal Cost [2]	$ 4,002,415	$ 4,012,243	0.2%
Total UAL Contribution	13,899,389	14,933,955	7.4%
Total Contribution (middle of year)	$ 17,901,804	$ 18,946,198	5.8%

[1] *Based on valuation data projected using half-year of salary increases but excludes payroll for members expected to leave employment or retire during the year.*

[2] *Includes assumed administrative expenses as of the beginning of the valuation year of $275,122 and $282,000 for both July 1, 2021 and July 1, 2022, respectively.*

C. Changes in Plan Cost

Table I-2 below summarizes the impact of actuarial experience on Plan cost.

Table I-2
Total Contribution Reconciliation

Fiscal Year 2022-2023, middle of year		**$**	**17,901,804**
Total Change due to actuarial investment experience			505,208
Investment experience from FYE 2022	697,707		
Expected change based on deferred investment gains 2018-2021	(192,499)		
Change due to liability experience			635,601
Change due to effect of closed plan on benefits earned			(149,916)
Change due to other miscellaneous factors			52,214
Fiscal Year 2023-2024, middle of year		**$**	**18,946,198**

An analysis of the cost **changes from the prior valuation** reveals the following:

- The Actuarial Value of Assets recognizes the annual unexpected gains or losses in the Market Value of Assets over a 5-year period. Actuarial gains and losses are based on the assumed rate of return. The actual return on Actuarial Value of Assets (AVA) was 3.4%, compared to the expected return of 6.00%, resulting in an actuarial loss of $5,051,760 which is paid over a 15-year period. The actuarial asset experience the total contribution by $505,208.

  The asset loss on the Market Value of Assets for the plan year ending June 30, 2022 resulted in a $35.9 million loss and accounted for a $697,707 increase to the total contribution. While the partial recognition of previous year's net deferred assets gains decreased the contribution by $192,499.

- Actual demographic experience will always differ from the actuarial assumptions. Salary experience, Cost-of-Living Adjustment (COLA) experience, and demographic experience of the Plan – rates of retirement, death, disability, and termination – were different than expected based on the actuarial assumptions, causing in the contribution of $635,601. The liability experience loss was primarily driven by retiree COLA increases higher than expected.

- Closing the Plan to most new entrants decreases the total amount of benefits that are being earned each year as members continue to leave employment through retirements, terminations, disabilities, and death, and thus cease to earn additional benefits. This decreased the Plan contribution by $149,916.

- The net effect of other miscellaneous factors, including administrative expenses experience and the timing of contributions, the Plan contributions by $52,214.

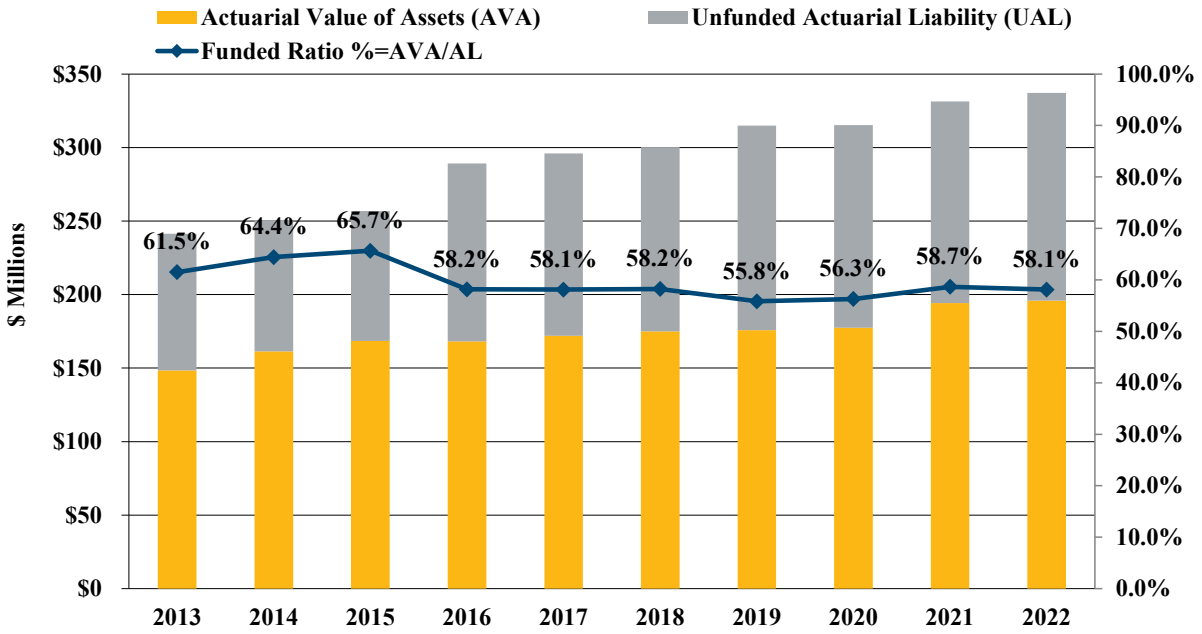
D. Historical Trends

Despite the fact that for most retirement plans the greatest attention is given to the current valuation results – in particular the size of the current Unfunded Actuarial Liability (UAL) and the total contribution – it is important to remember that each valuation is merely a snapshot in the long-term progress of a pension fund. It is important to judge a current year's valuation results relative to historical trends, as well as trends expected into the future.

Assets and Liabilities

The chart below presents the Actuarial Value of Assets (gold bars), Unfunded Actuarial Liability (gray bars), and Funded Ratio (navy line). The top of the bars (sum of gold and gray bars) depicts the total Actuarial Liability. Over the ten-year period shown, both the Actuarial Liability and Actuarial Value of Assets have been increasing, however, the Actuarial Liability has increased just under 40% while the Actuarial Value of Assets has increased by just over 30%. It is important to note that the assumed rate of return at the beginning of the period was 7.50% and has been gradually reduced over the ten-year period to 6.00% as of July 1, 2021, which has been a major source of the decrease in the funded ratio.

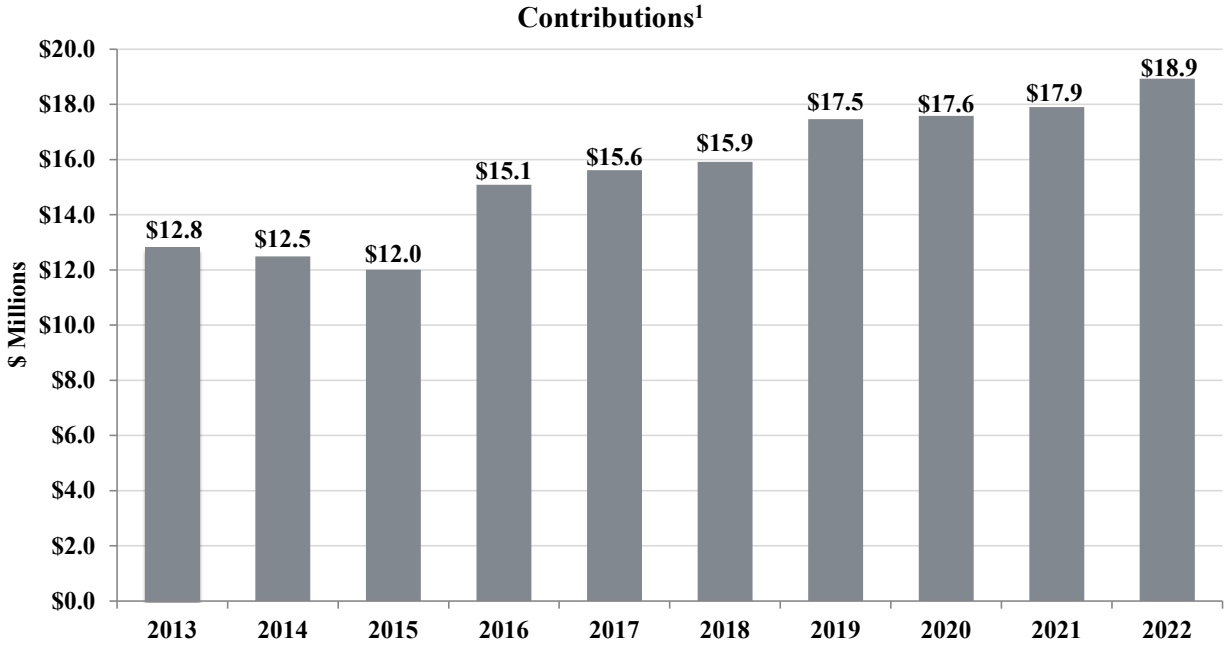
The funded ratio increased from 61.5% in 2013 to 65.7% in 2015, primarily due to favorable asset returns from 2010 to 2014 after the Great Recession. The decreases in the funded ratio in 2016 and 2019 were a result of reductions in the assumed rate of return, as well as increased life expectancy assumption in 2016. The funded ratio increased by 2.4% to 58.7% in 2021 even though the assumed rate of return was reduced from 6.75% to 6.00%. The significant return on assets as of June 30, 2021, and an additional $7.8 million contribution from the CARES Act more than offset the impact of the assumption changes. In 2022, the funding ratio decreased 0.6% due to both unfavorable asset and liability experience.



Contributions

The chart below shows a history of the Plan's actuarially determined total contribution. The contributions were relatively stable from 2013 to 2015. In 2016, the investment rate of return was reduced from 7.50% to 7.00% and mortality assumptions were updated for improved life expectancy. Investment experience on the AVA has been the primary source of the contribution increases during for the next four years. However, in 2019, there was a further reduction in the assumed rate of return to 6.75% which also increased the contribution level to $17.5 million. In 2021, the assumption changes, including a reduction in the assumed rate of return to 6.00%, were the primary source for the increase in the total contribution but were partially offset by the additional CARES Act contribution and favorable investment experience. In 2022, the contribution level increased to $18.9 million due to a combined actuarial asset and liability loss.

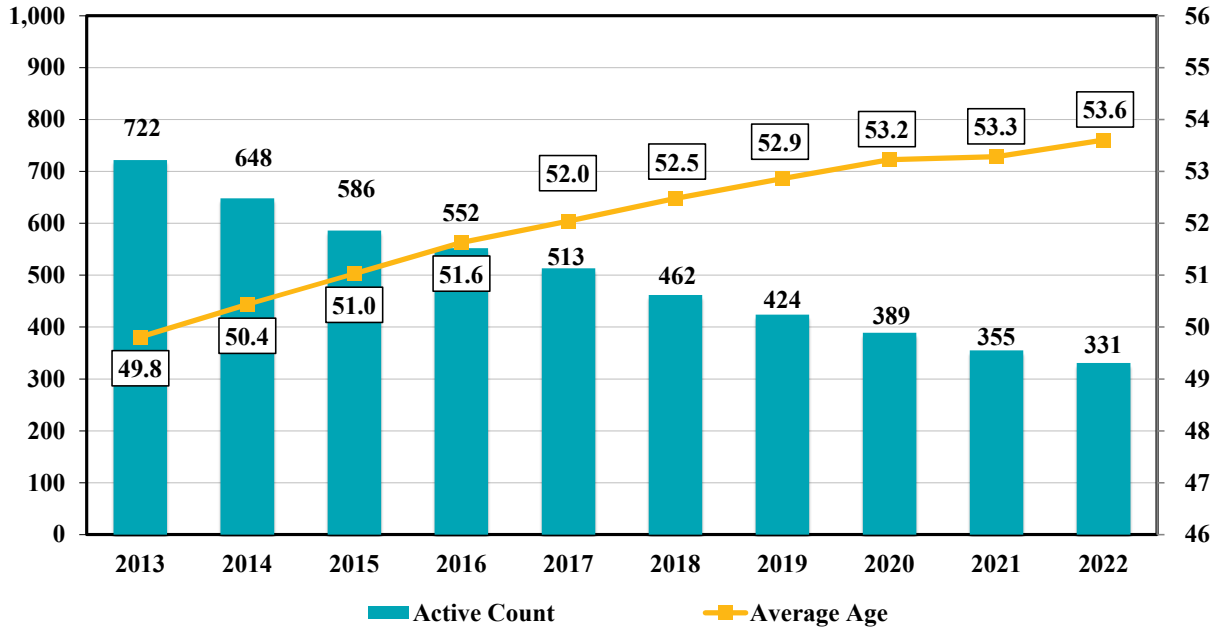
A reconciliation of the contributions from the 2021 to 2022 valuations can be found in Table I-2 of this report.



[1] *Beginning with 2015, contribution amounts are mid-year values for the upcoming fiscal year.*

Active Participant Trends

The number and average age of active Plan members for the last 10 years is shown in the chart below. Since the plan has been mostly closed to new entrants since 2012, the membership has declined by 54% from 722 to 331 actives over the last ten years. In addition, the average age of an active member has increased by almost four years during the period shown. These trends are expected to continue, as most new employees participate instead in the defined contribution plan.

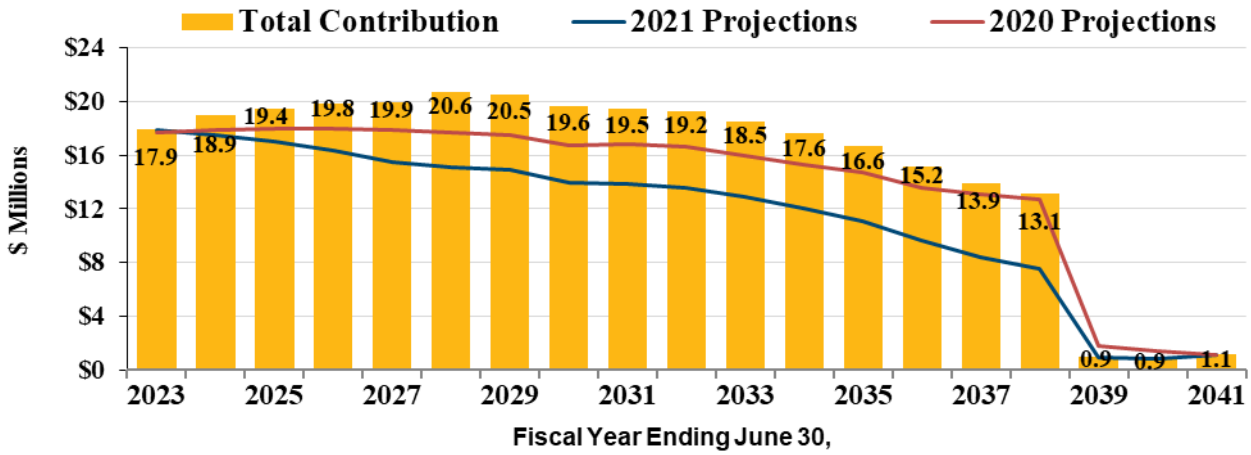


E. Future Expected Financial Trends

The analysis of projected financial trends is an important component of this valuation. In this section, we present our assessment of the implications of the July 1, 2022 valuation results in terms of benefit security (assets over liabilities) and contributions over the next 19 years.

The projections in this section assume that the Plan will achieve the 6.00% investment return assumption and all other actuarial assumptions will be met each year, which is highly unlikely. We assume the current funding method and amortization policy will remain in place throughout the projection period.

Contributions are shown for the Fiscal Year End that they are expected to be made. For example, the actuarial determined contribution from the July 1, 2022 valuation of $18.9 million is expected to be made during the period July 1, 2023 through June 30, 2024.



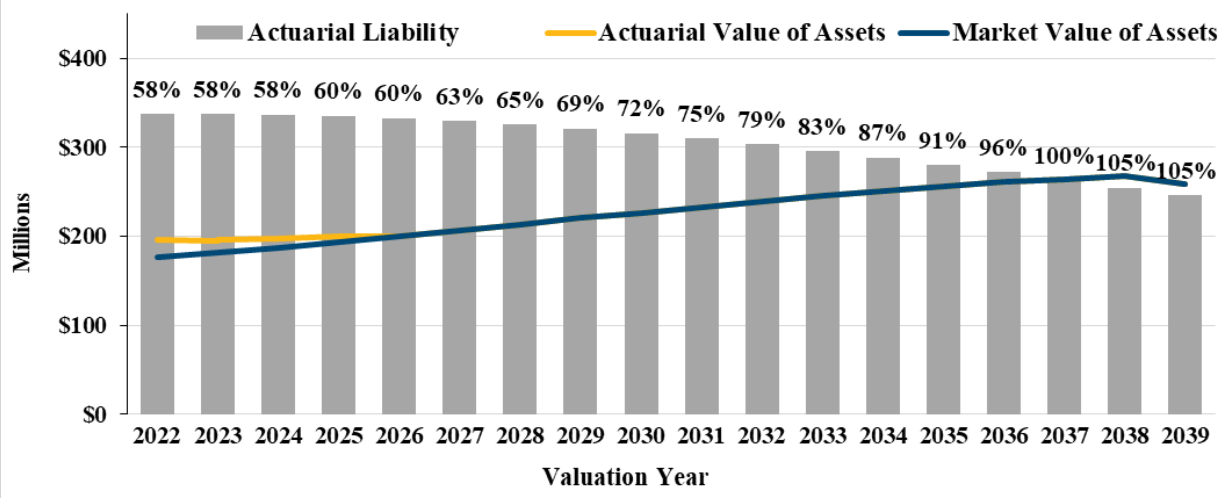
The Plan's contributions are higher than those projected in the 2021 valuation due to the unfavorable returns on the market value of assets, salary increases for actives and post retirement COLAs for retirees higher than expected. The graph shows that the Plan's contribution are expected to steadily increased over the next four years from $18.9 million to $20.6 million in FYE 2028 as the $19.0 million in net deferred asset losses are recognized. The gradual decline in the contribution thereafter is due to the decrease in the annual benefits that are earned as the number of active members decline since the Plan is closed to most new entrants.

The blue and red lines represent the contribution projections from the July 1, 2021 and July 1, 2020 actuarial valuation, respectively, for comparison. The favorable investment experience in 2021 and the additional CARES Act contribution are the reasons the 2021 projections are lower than the 2020 projections.

During Fiscal Year 2037-38 (which will be based on results from the July 1, 2036 valuation), the last payment for the Plan's expected UAL will be made. After that point, employer contributions are expected to stabilize and are based on the normal cost and expected administrative expenses since the UAL is paid off. PEPRA mandates that employers must continue to contribute at least the normal cost portion unless the plan is 120% funded and has met certain legal requirements as well.

Asset and Liability Projections:

The following graph shows the projection of assets and liabilities assuming that assets will earn the 6.00% assumption each year during the projection period. The percentages at the top of the graph represent the funded ratio based on the Actuarial Value of Assets.



The funded status is expected to gradually increase over the projection period. The Plan is projected to be fully funded with the July 1, 2037 valuation, assuming the actuarial assumptions are achieved. The projected funded status increases over 100% funded to 105% because of the aforementioned minimum contribution requirement of the normal cost. However, it is the actual return on Plan assets that will determine the future funding status and contributions to the Plan.

Actuarial valuations are based on a set of assumptions about future economic and demographic experience. These assumptions represent a reasonable estimate of future experience, but actual future experience will undoubtedly be different and may be significantly different. This section of the report is intended to identify the primary risks to the plan, provide some background information about those risks, and provide an assessment of those risks.

Identification of Risks

The fundamental risk to a pension plan is that the contributions needed to pay the benefits become unaffordable. While we believe it is unlikely that the Plan by itself would become unaffordable, the contributions needed to support the Plan may differ significantly from expectations. While there are a number of factors that could lead to contribution amounts deviating from expectations, we believe the primary sources are:

- Investment risk,
- Inflation risk, and
- Contribution risk.

Other risks that we have not identified may also turn out to be important.

Investment Risk is the potential for investment returns to be different than expected. Lower investment returns than anticipated will increase the Unfunded Actuarial Liability (UAL) necessitating higher contributions in the future unless there are other gains that offset these investment losses. In contrast, higher investment returns than anticipated may create a potentially significant surplus that could be difficult to use until all benefits have been paid. Expected future investment returns and their potential volatility are determined by the Plan's asset allocation.

Inflation risk is the potential for actual inflation to be different than expected. Retirement benefits under the plan for the Non-Contract retirees who retired on or after June 30, 1999, are potentially increased annually for inflation with certain caps. Higher inflation than expected could result in the payment of greater benefits, and lower inflation than expected could result in the payment of lower benefits.

Contribution risk is the potential for actual future actuarially determined contributions to deviate from expected future contributions to an extent that they become unaffordable. The Plan's funding policy is to determine an Actuarially Determined Contribution (ADC) equal to the sum of the normal cost, amortization of the UAL, and the Plan's expected administrative expenses. The UAL is amortized in level dollar payments with several layers with differing amortization periods. The UAL is currently expected to be fully paid for as of the July 1, 2037 actuarial valuation. However, as 2037 gets closer and the Plan's remaining amortization period shortens, a significant loss or change in assumption may cause a large increase in the ADC. While the funding policy can be changed when such a situation occurs, any reduction in the ADC will result in a slower recovery in funded status.

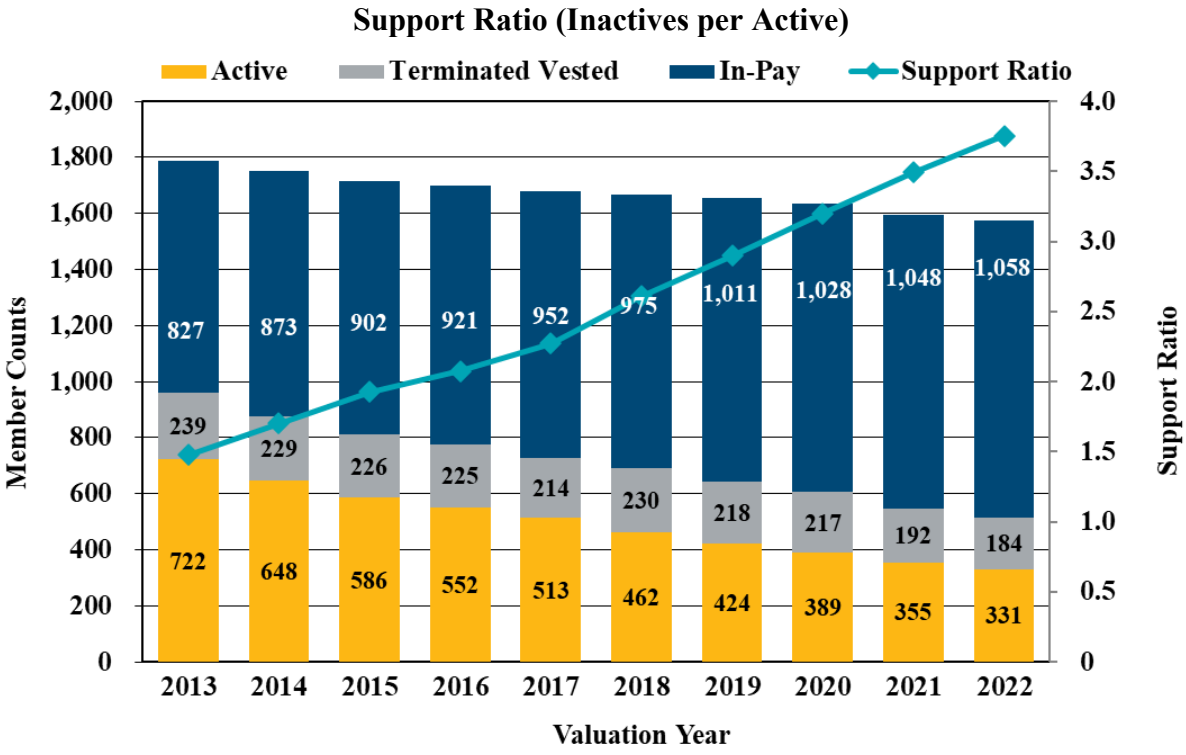
Plan Maturity Measures

The future financial condition of a mature pension plan is more sensitive to each of the risks identified above than a less mature plan. Before assessing each of these risks, it is important to understand the maturity of the plan.

Plan maturity can be measured in a variety of ways, but they all get at one basic dynamic – the larger the plan is compared to the contribution or revenue base that supports it, the more sensitive the plan will be to risk. Given that the Plan has been closed to most new entrants since 2012, measures specific to the Plan show significant increases in maturity while maturity measures in context of Metropolitan Transit System as a whole show declining maturity.

Support Ratio (Inactives per Active)

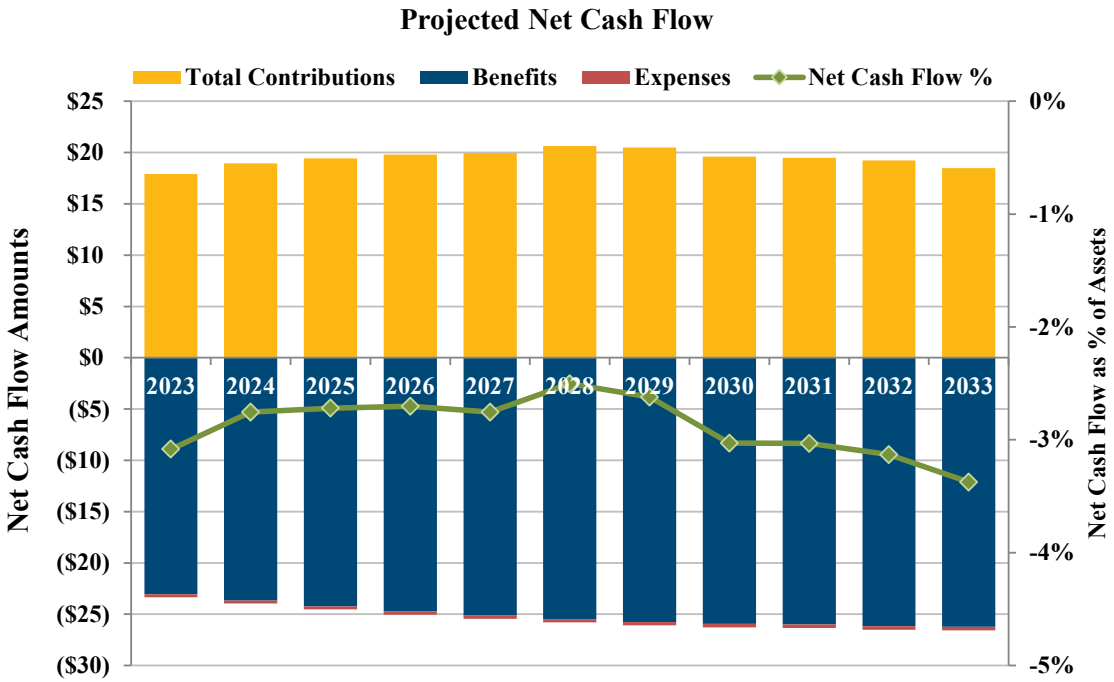
One simple measure of plan maturity is the ratio of the number of inactive members (those receiving benefits or entitled to a deferred benefit) to the number of active members. For a closed plan, the Support Ratio is expected to increase significantly as the active members retire or terminate and there are no new entrants replacing them. The chart below shows the growth in the Support Ratio for the Plan for the past 10 years.



Net Cash Flow

The net cash flow of the plan as a percentage of the beginning of year assets indicates the sensitivity of the plan to short-term investment returns. Net cash flow is equal to contributions less benefit payments and administrative expenses. Mature plans can have large amounts of benefit payments compared to contributions, particularly if they are well funded.

The chart below shows the projected net cash flow for the next 10 fiscal years. The bars represent the dollar amounts of the different components of the projected net cash flow, and the line represents the net cash flow as a percentage of the assets as of the beginning of the fiscal year.



The net cash flow has been negative since at least 2013. The net cash flow is expected to become less negative as contributions increase over the next five years. Then as the Plan becomes better funded, benefit payments increase and contributions slowly decline, the net cash flow starts to become increasingly negative.

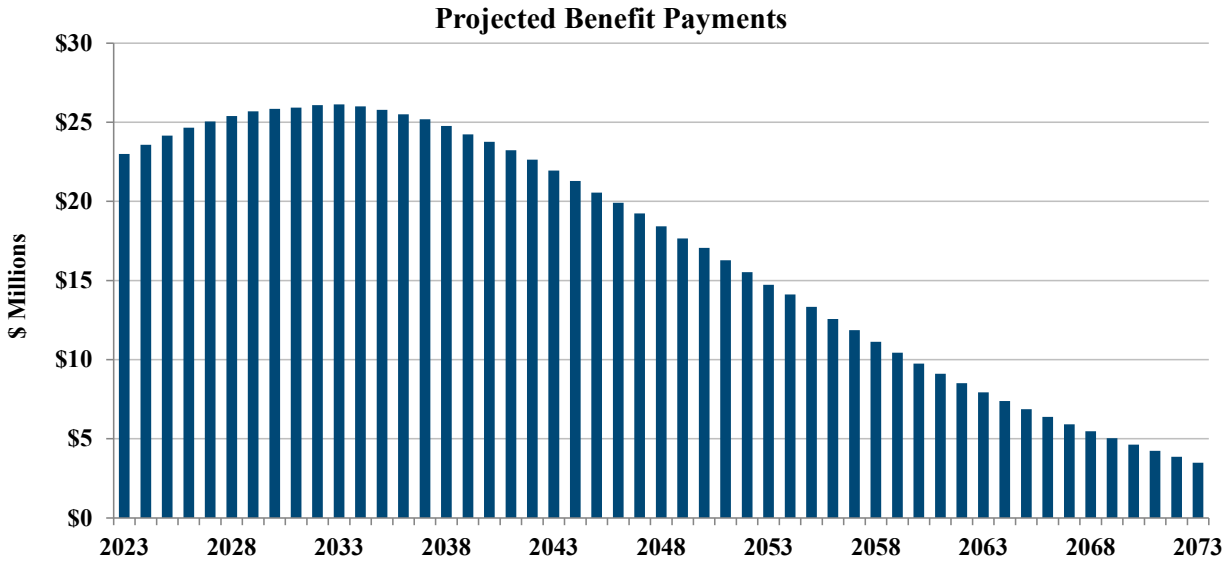
The first issue the negative cash flow presents to the Plan is a need for liquidity in the investments so that benefits can be paid. When the cash flow was positive or close to neutral, benefits could be paid out of contributions without liquidating investments. As net cash flow becomes increasingly negative, the benefit payments will require liquidation of some investments (at least to the extent the bond portfolio doesn't generate sufficient cash income).

The other change of note is the sensitivity to short-term investment returns. Investment losses in the short term are compounded by the net withdrawal from the plan leaving a smaller asset base to try to recover from the investment losses. On the other hand, large investment gains in the short term also tend to have a longer beneficial effect as any future losses are relative to a smaller liability base due to the negative cash flow.

Assessing Costs and Risks

A closed pension plan will ultimately either end up with excess assets after all benefits have been paid or run out of assets before all benefits have been paid. If the Plan develops surplus assets, it may be able to reduce the risk in its investment portfolio, immunize investments, or purchase annuities to settle the remaining obligation. However, such an approach may not be the objective for MTS, and if the surplus assets exceed the additional amounts needed to purchase annuities or immunize the portfolio, it is not clear how they could be used until all benefits have been paid.

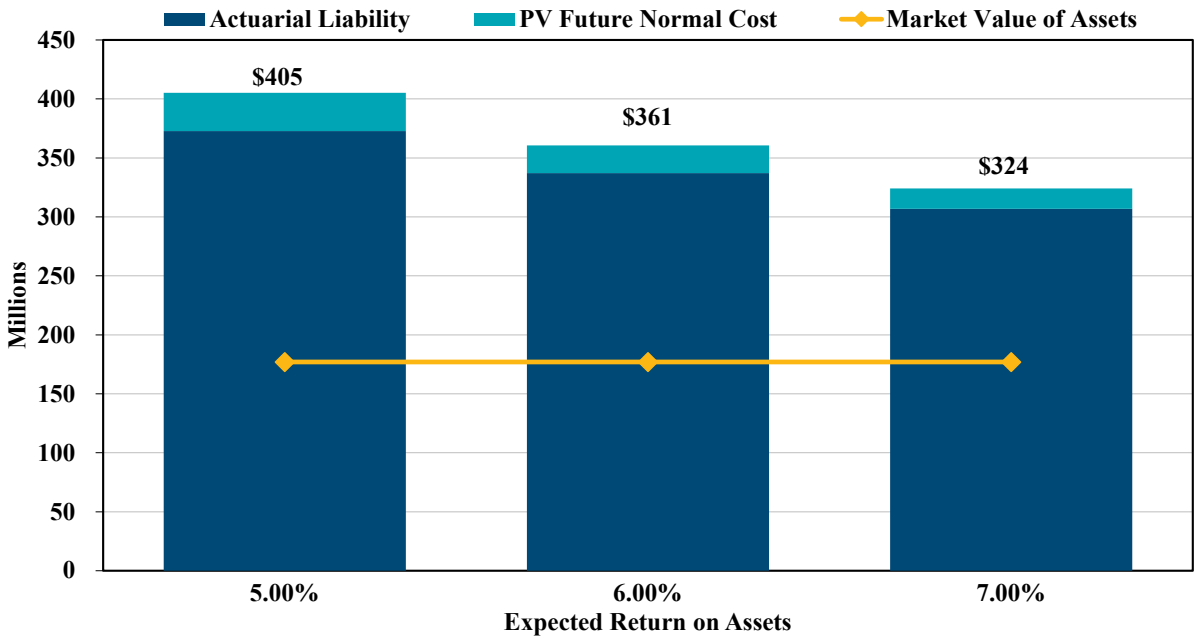
If the Plan, on the other hand, were to run out of assets, MTS would be forced to pay benefits directly on a pay-as-you-go basis. As long as MTS can afford the pay-as-you-go costs, benefits would remain secure. The chart below shows a projection of expected benefit payments for the closed plan.



Sensitivity to Investment Returns

The chart below compares assets to the present value of all projected future benefits discounted at the current expected rate of return and at investment return 100 basis points above and below the expected rate of return. The present value of future benefits is shown as a bar with the portion attributable to past service in dark blue (Actuarial Liability) and the portion attributable to future service in teal (Present Value of Future Normal Costs). The Market Value of Assets is shown by the gold line.

Present Value of Future Benefits versus Assets

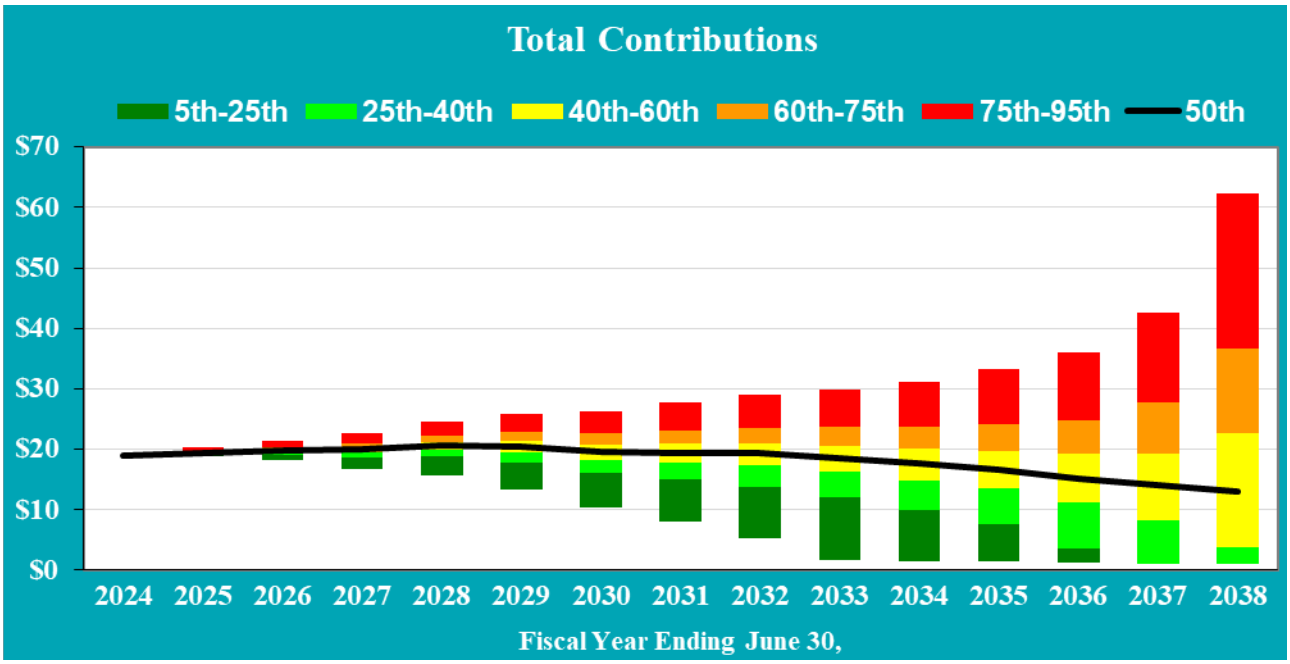


If investments return 6.00% annually, the Plan would need approximately $361 million in assets today to pay all projected benefits compared to current assets of $177 million. If investment returns are only 5.00%, the Plan would need approximately $405 million in assets today, and if investment returns are 7.00%, the Plan would need approximately $324 million in assets today.

Stochastic Projections

Stochastic projections serve to show the range of probable outcomes of various measurements. The charts on the following pages show the projected range of the total contributions and of the funded ratio on an actuarial value of assets basis. The range in both scenarios is driven by the volatility of investment returns (a 9.5% standard deviation of annual returns from RVK's Asset Allocation Study dated March 2022). The stochastic projections of investment returns are based on an assumption that each future year's investment return is independent from all other years and is identically distributed according to a lognormal distribution. This assumption may result in an unrealistically wide range of compound investment returns over longer periods of time.

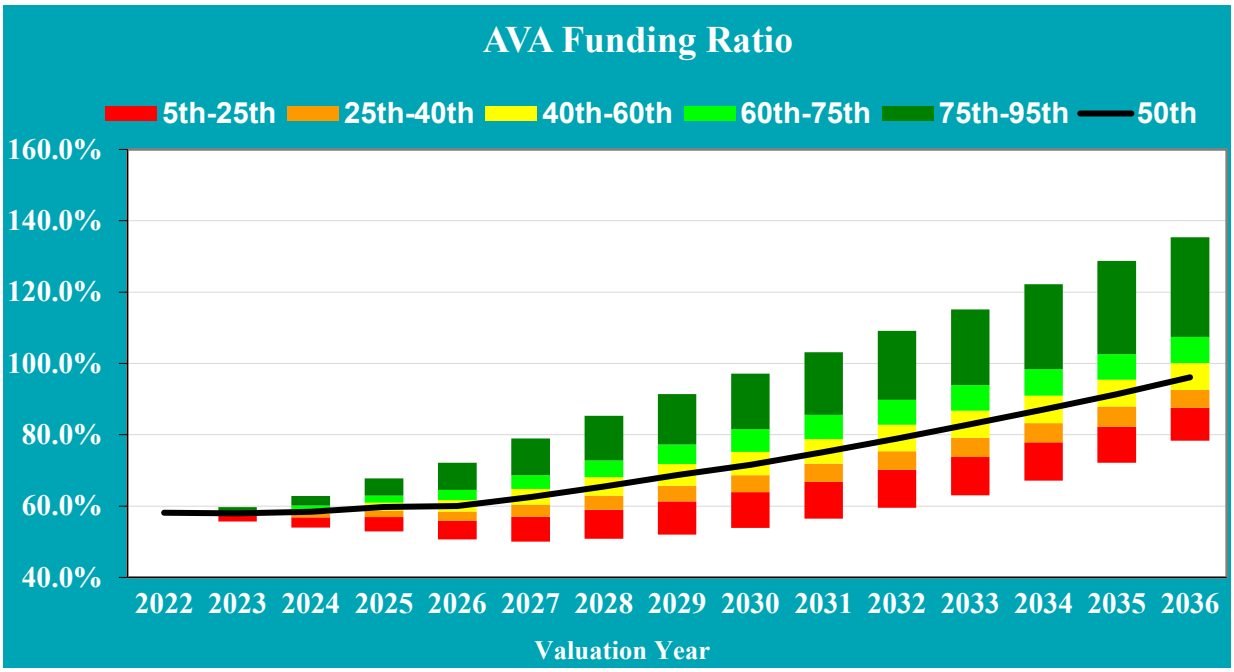
Stochastic Projection of Total Contributions (in millions)



The stochastic projection of contributions shows the probable range of future contributions. The baseline contributions (black line), which is based on the median simulations using an average return of 6.00%, aligns with the projections discussed in Subsection E of the Executive Summary of this report. In the most pessimistic scenario shown, the 95th percentile, the projected contributions are almost $62 million in FYE 2038. Conversely, in the most optimistic scenario shown, the 5th percentile, the projected contribution amount declines to about $1 million in FYE 2038.

The contribution range in the outer years becomes wider since the amortization periods for any actuarial gains or losses are short and fully paid for by 2038.

Stochastic Projection of Funded Ratio based on the Actuarial Value of Assets



While the baseline funded ratio (black line) is projected to be around 95% at the end of the 15-year period shown here, there is a wide range of potential outcomes. Good investment returns have the likelihood of bringing the funded ratio well over 100%. Due to the sound funding policy of the Plan, even in scenarios with unfavorable investment returns, the Plan is projected to remain above 50% funded, as long as actuarially determined contributions continue to be made.

Pension Plan assets play a key role in the financial operation of the Plan and in the decisions the Board may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact benefit levels, contributions, and the ultimate security of participants' benefits.

In this section, we present detailed information on Plan assets including:

- **Disclosure** of Plan assets as of June 30, 2021 and June 30, 2022,
- Statement of the **changes** in market values during the year,
- Development of the **Actuarial Value of Assets**.

Disclosure

There are two types of asset values disclosed in the valuation, the Market Value of Assets, and the Actuarial Value of Assets. The market value represents a snapshot value that provides the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. As a result, market values are usually not as suitable for long-range planning as are the Actuarial Value of Assets that reflect smoothing of annual investment returns.

Table III-1 discloses and compares each component of the Market Value of Assets as of June 30, 2021 and June 30, 2022.

Table III-1
Statement of Assets at Market Value

	June 30, 2021	June 30, 2022
Investments		
Common Stock	$ 89,616,904	$ 58,668,033
Mutual Funds	43,252,362	56,340,502
Corporate Debt / Bond Funds	68,165,562	52,671,200
Closely Held Instruments	33,419	7,694
US Treasury Obligations	3,434,282	9,006,975
Short-Term Investments	647,402	813,377
Total Investments	$ 205,149,931	$ 177,507,781
Receivables		
Dividends and Interest	$ 10	$ 909
Other Reveivables	0	0
Total Receivables	$ 10	$ 909
Payables		
Due to Plan Sponsor	$ 525,090	$ 541,246
Other Payables	153,020	90,018
Total Payables	$ 678,110	$ 631,264
Market Value of Assets	**$ 204,471,831**	**$ 176,877,426**

Changes in Market Value

The components of asset change are:

- Contributions (employer and employee)
- Investment income (realized and unrealized), net of investment expenses
- Benefit payments
- Administrative Expenses

Table III-2 shows the components of a change in the Market Value of Assets during FYE 2021 and FYE 2022.

Table III-2
Changes in Market Values

	June 30, 2021	June 30, 2022
Contributions		
Employer's Contribution	23,718,402	15,838,082
Members' Contributions	1,950,898	1,621,654
Total Contributions	25,669,300	17,459,736
Investment Income		
Interest	123	1,949
Dividends	4,648,015	6,977,161
Miscellaneous	0	0
Realized & Unrealized Gain/(Loss)	30,434,250	(29,442,846)
Investment Expenses	(417,438)	(296,142)
Net Investment Income	34,664,950	(22,759,878)
Disbursements		
Benefit Payments	(21,531,678)	(22,029,157)
Administrative Expenses	(252,541)	(265,106)
Total Disbursments	(21,784,219)	(22,294,263)
Net Increase (Decrease)	38,550,031	(27,594,405)
Net Assets Held in Trust for Benefits		
Beginning of Year	165,921,800	204,471,831
End of Year	204,471,831	176,877,426
Approximate Return	20.7%	-11.3%

Actuarial Value of Assets (AVA)

The Actuarial Value of Assets represents a "smoothed" value developed by the actuary to reduce the volatile results, which could develop due to short-term fluctuations in the Market Value of Assets. For this Plan, the Actuarial Value of Assets is calculated on a modified market-related value. The Market Value of Assets is adjusted to recognize, over a five-year period, investment earnings which are greater than (or less than) the assumed investment return. The actuarial value is constrained to fall within 20% of the market value.

Table III-3
Development of Actuarial Value of Assets
as of June 30, 2022

Plan Year	(a) Expected Earnings	(b) Actual Earnings	(c) = (b) – (a) Unexpected Earnings	(d) Phase-In Factor	(c) x (d) Phase-In Adjustment
2017 -18	11,170,341	8,792,300	(2,378,041)	0%	0
2018 -19	11,481,373	8,415,801	(3,065,572)	20%	(613,114)
2019 -20	11,343,578	24,666	(11,318,912)	40%	(4,527,565)
2020 -21	11,328,702	34,664,950	23,336,248	60%	14,001,749
2021 -22	12,125,387	(22,759,878)	(34,885,265)	80%	(27,908,212)
1. Total Unrecognized Asset Gains/(Losses)					(19,047,142)
2. Market Value of Assets as of June 30, 2022					176,877,426
3. Actuarial Value of Assets as of June 30, 2022: [(2) - (1)]					195,924,568
4. Ratio of Actuarial Value to Market Value [(3) ÷ (2)]					110.8%

Investment Performance

The following table calculates the investment related gain/loss for the plan year on both a market value and an actuarial value basis. The market value gain/loss is an appropriate measure for comparing the actual asset performance to the valuation's long-term assumption. The rate of return assumption was 6.00% for the July 1, 2021 actuarial valuation.

Table III-4
Asset Gain/(Loss)

	Market Value	Actuarial Value
As of June 30, 2021	**$ 204,471,831**	**$ 194,296,017**
Employer Contributions	15,838,082	15,838,082
Employee Contributions	1,621,654	1,621,654
Benefit Payments	(22,029,157)	(22,029,157)
Administrative Expenses	(265,106)	(265,106)
Expected Investment Earnings at 6.00%	12,125,387	11,514,838
Expected Value as of June 30, 2022	**$ 211,762,691**	**$ 200,976,328**
Actuarial Gain/(Loss) on Assets	(34,885,265)	(5,051,760)
Actual Value as of June 30, 2022	**$ 176,877,426**	**$ 195,924,568**
Return	-11.3%	3.4%
Variance from Expected Return of 6.00%	-17.3%	-2.6%

In this section, we present detailed information on Plan liabilities including:

- **Disclosure** of Plan liabilities at July 1, 2021 and July 1, 2022,
- Statement of **changes** in these liabilities during the year.

Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them. Note that these liabilities are not appropriate for settlement purposes, including the purchase of annuities and the payment of lump sums.

- **Present Value of Future Benefits:** Used for measuring all future Plan obligations; the obligations of the Plan earned as of the valuation date and those to be earned in the future by current Plan participants, under the current Plan provisions.

- **Actuarial Liability:** Used for funding calculations, this liability is calculated taking the total Present Value of Future Benefits and subtracting all future normal costs. The method used for this Plan is called the Entry Age Normal (EAN) funding method.

- **Unfunded Actuarial Liability:** The excess of the Actuarial Liability over the Actuarial Value of Assets.

Table IV-1 discloses each of these liabilities for the current and prior valuations.

Table IV-1
Liabilities and Unfunded Actuarial Liability

		July 1, 2021		July 1, 2022
1. Present Value of Future Benefits				
Active Participant Benefits				
ATU/Drivers	$	55,826,704	$	56,871,565
IBEW/Mechanics		29,056,184		28,757,046
ATU/Clerical		2,287,345		2,074,727
Non-Contract/Admin [1]		25,266,909		26,488,209
Total	**$**	**112,437,142**	**$**	**114,191,547**
2. Inactive Actuarial Liability				
ATU/Drivers	$	125,691,062	$	125,463,264
IBEW/Mechanics		32,562,591		33,332,983
ATU/Clerical		5,175,729		5,999,971
Non-Contract/Admin		79,294,340		81,693,824
Total	**$**	**242,723,722**	**$**	**246,490,042**
3. Active Actuarial Liability				
ATU/Drivers	$	43,715,761	$	45,266,486
IBEW/Mechanics		23,246,960		23,667,959
ATU/Clerical		1,980,025		1,746,716
Non-Contract/Admin [1]		19,600,575		19,977,368
Total	**$**	**88,543,321**	**$**	**90,658,529**
4. Total Actuarial Liability, [(2) + (3)]	$	331,267,043	$	337,148,571
5. Plan Assets (Actuarial Value)		194,296,017		195,924,568
6. Unfunded Actuarial Liability (UAL), [(4) - (5)]	**$**	**136,971,026**	**$**	**141,224,003**

[1] *Includes PEPRA members.*

Table IV-2 below analyzes the increases or decreases in the liabilities since the last valuation.

Changes in Liabilities

Each of the liabilities disclosed in the prior table are expected to change at each valuation. The components of that change (as shown in Table IV-2 below), depending upon which liability is analyzed, can include:

- Benefits accrued since the last valuation
- Plan amendments changing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Actuarial gains or losses from participants retiring, terminating, or dying at rates different than expected
- A change in actuarial assumptions
- A change in the actuarial funding method or software

Table IV-2
Changes in Actuarial Liability

Actuarial Liability at July 1, 2022	$	337,148,571
Actuarial Liability at July 1, 2021	$	331,267,043
Liability Increase (Decrease)	$	5,881,528
Change due to:		
Assumption Changes		0
Accrual of Benefits		3,612,367
Actual Benefit Payments		(22,029,157)
Interest		19,441,516
Actuarial (Gain)/Loss		4,856,802
Liability Increase (Decrease)	$	5,881,528

Unfunded liabilities will change (as shown in Table IV-3 below) because of the changes in liabilities on the previous page, and also due to changes in Plan assets resulting from:

- Contributions different than expected
- Investment earnings different than expected
- Expenses different than expected

Table IV-3
Development of Actuarial Gain / (Loss)

1. Unfunded Actuarial Liability (UAL) at Start of Year (not less than zero)	$	136,971,026
2. Expected UAL Payment		(13,500,280)
3. Interest on (1) and (2) to End of Year		7,408,244
4. Increase in UAL due to Assumption Change		0
5. Expected Unfunded Actuarial Liability at End of Year, [(1) + (2) + (3) + (4)]	$	130,878,990
6. Actual Unfunded Actuarial Liability at End of Year (not less than zero)	$	141,224,003
7. **Actuarial Gain/(Loss), [(5) – (6)]**	$	**(10,345,013)**
(a) Liability Gain/(Loss)		(4,856,802)
(b) Asset Gain/(Loss) on Actuarial Value		(5,051,760)
(c) Contribution Timing Delay Gain/(Loss)		(455,137)
(d) Administrative Expenses Less than Expected		18,686

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions are needed to properly maintain the funding status of the Plan. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both stable and predictable.

Based on the assumptions and cost method, Plan assets are currently below the target level of assets determined by the cost method; consequently, there is an Unfunded Actuarial Liability. As a result, the required Plan contribution consists of three components: The normal cost, the amortization of the Unfunded Actuarial Liability (UAL) and assumed administrative expenses.

The normal cost represents the cost of the additional benefits earned during the plan year by active Plan members. The amortization of the unfunded liability represents a payment designed to bring the Plan's assets up to the target level set by the actuarial cost method. Currently, the amortization of UAL represents about three-fourths of the total contribution.

As the UAL is paid overtime, the Plan contribution is expected to decrease to a level near the normal cost plus administrative expenses. The normal cost itself will be changing since the Plan is closed to new members other than non-contract employees.

The table below presents the total Plan contributions (both employer and employee) for the current and prior valuations.

Table V-1
Development of Annual Contribution

		July 1, 2021		July 1, 2022
1.	Total Actuarial Liability	$	331,267,043	$ 337,148,571
2.	Plan Assets (Actuarial Value)	$	194,296,017	$ 195,924,568
3.	Unfunded Actuarial Liability (UAL), [(1) - (2)]	$	136,971,026	$ 141,224,003
4.	UAL Amortization Payment	$	13,500,280	$ 14,505,139
5.	Total Plan Normal Cost	$	3,612,367	$ 3,615,035
6.	Expected Administrative Expenses	$	275,122	$ 282,000
7.	Total Cost (beginning of year), [(4) + (5) + (6)]	$	17,387,769	$ 18,402,174
8.	Total Cost (interest adjusted to middle of year)	$	17,901,804	$ 18,946,198

Table V-2 presents the calculation of the UAL payments for the Plan under the amortization policy adopted in 2012.

Table V-2
Development of the Amortization Payment (BOY) as of July 1, 2022

	Type of Base	Date Established	Initial Balance	Initial Amortization	Outstanding Balance	Remaining Amortization	Amortization Amount
1.	Initial Unfunded Actuarial Liability	7/1/2012	$ 87,613,245	25	$ 68,475,264	15	$ 6,651,323
2.	Actuarial Loss	7/1/2013	6,555,553	15	3,426,905	6	657,457
3.	Actuarial Gain	7/1/2014	(2,132,368)	15	(1,258,412)	7	(212,666)
4.	Actuarial Loss	7/1/2015	740,624	15	483,567	8	73,464
5.	Assumption Changes	7/1/2016	29,699,872	21	24,847,260	15	2,413,531
6.	Actuarial Loss	7/1/2016	4,978,340	15	3,541,489	9	491,205
7.	Actuarial Loss	7/1/2017	5,880,935	15	4,510,646	10	578,163
8.	Method Changes	7/1/2018	(640,322)	19	(561,612)	15	(54,552)
9.	Actuarial Loss	7/1/2018	5,453,907	15	4,466,709	11	534,290
10.	Assumption Changes	7/1/2019	7,536,766	18	6,792,043	15	659,743
11.	Actuarial Loss	7/1/2019	9,988,472	15	8,666,087	12	975,156
12.	Actuarial Loss	7/1/2020	3,425,437	15	3,130,089	13	333,561
13.	Assumption Changes	7/1/2021	10,215,184	16	9,817,281	15	953,598
14.	Actuarial Gain	7/1/2021	(5,703,358)	15	(5,458,326)	14	(553,994)
15.	Actuarial Loss	7/1/2022	10,345,013	15	10,345,013	15	1,004,860
	TOTAL				**$ 141,224,003**		**$ 14,505,139**
					Total UAL Payment, Middle of Year		**$ 14,933,955**

Table V-3 presents the development of the PEPRA Member Contribution Rate. PEPRA Members must contribute half of the total normal cost rate of the Plan, rounded to the nearest 0.25%, as shown in the table below.

Table V-3
Development of the PEPRA Member Contribution Rate

Valuation Date	**July 1, 2021**	**July 1, 2022**
Effective Date	FY 2022-2023	FY 2023-2024
Assumed Rate of Return	6.00%	6.00%
Total Normal Cost Rate	15.32%	18.81%
50/50 Cost Sharing Rate for Members	7.66%	9.40%
Member Contribution Rate	**7.75%**	**9.50%**
(rounded to nearest quarter %)		
Active PEPRA Membership Statistics		
Number	24	23
Average Age	47.3	46.8
Average Service	7.4	7.1
Average Age at Hire Date	39.9	39.7

Data pertaining to active and inactive Members and their beneficiaries as of the valuation date was supplied by the Plan Administrator on electronic media. As is usual in studies of this type, Member data was neither verified nor audited; however, it was reviewed to ensure that it complies with generally accepted actuarial standards.

Summary of Participant Data

Active Participants

Non-Contract/Admin	July 1, 2021	July 1, 2022
Number	45	47
Average Age	52.3	51.2
Average Service	18.5	18.0
Average Pay	$ 80,643	$ 82,441
Non-Contract/PEPRA	**July 1, 2021**	**July 1, 2022**
Number	24	23
Average Age	47.3	46.8
Average Service	7.4	7.1
Average Pay	$ 68,718	$ 71,110
ATU/Clerical	**July 1, 2021**	**July 1, 2022**
Number	10	9
Average Age	54.0	53.0
Average Service	17.6	15.4
Average Pay	$ 52,166	$ 56,094
ATU/Drivers	**July 1, 2021**	**July 1, 2022**
Number	185	171
Average Age	54.8	55.3
Average Service	17.7	18.4
Average Pay	$ 65,620	$ 70,855
IBEW/Mechanics	**July 1, 2021**	**July 1, 2022**
Number	91	81
Average Age	52.3	53.5
Average Service	21.1	22.7
Average Pay	$ 69,484	$ 73,474
Total	**July 1, 2021**	**July 1, 2022**
Number	355	331
Average Age	53.3	53.6
Average Service	17.9	18.5
Average Pay	$ 68,345	$ 72,758

Summary of Participant Data

Deferred Participants

Terminated Vested	July 1, 2021	July 1, 2022
Number	192	184
Average Age	54.9	55.2
Average Annual Benefit	$ 8,925	$ 9,249

In-Pay Participants

Service Retired	July 1, 2021	July 1, 2022
Number	798	807
Average Age	71.0	71.4
Average Annual Benefit	$ 23,807	$ 24,269
Beneficiaries	**July 1, 2021**	**July 1, 2022**
Number	174	178
Average Age	72.4	72.9
Average Annual Benefit	$ 11,416	$ 11,698
Disabled	**July 1, 2021**	**July 1, 2022**
Number	76	73
Average Age	70.9	70.9
Average Annual Benefit	$ 9,915	$ 10,121
Total	**July 1, 2021**	**July 1, 2022**
Number	1,048	1,058
Average Age	71.2	71.6
Average Annual Benefit	$ 20,742	$ 21,178

Data Summary as of July 1, 2022

Active Participants	Non-Contract/Administrative			ATU/	ATU/	IBEW/	
	Non-PEPRA	PEPRA	Sub-Total	Clerical	Drivers	Mechanics	Total
Number	47	23	70	9	171	81	331
Average Age	51.2	46.8	49.8	53.0	55.3	53.5	53.6
Average Service	18.0	7.1	14.4	15.4	18.4	22.7	18.5
Average Pay	$82,441	$71,110	$78,718	$56,094	$70,855	$73,474	$72,758

Inactive Participants	Non-Contract/Administrative			ATU/	ATU/	IBEW/	
	Non-PEPRA	PEPRA	Sub-Total	Clerical	Drivers	Mechanics	Total
Service Retired							
Number	136	n/a	136	34	513	124	807
Average Age	70.5	n/a	70.5	72.1	71.6	71.2	71.4
Average Annual Benefit	$40,866	n/a	$40,866	$15,319	$20,815	$22,810	$24,269
Beneficiaries							
Number	35	n/a	35	6	103	34	178
Average Age	71.1	n/a	71.1	75.6	73.7	71.9	72.9
Average Annual Benefit	$21,066	n/a	$21,066	$7,036	$9,901	$8,323	$11,698
Disabled							
Number	1	n/a	1	1	60	11	73
Average Age	63.3	n/a	63.3	80.3	71.1	69.8	70.9
Average Annual Benefit	$15,164	n/a	$15,164	$4,709	$9,740	$12,232	$10,121
Terminated Vested							
Number	21	2	23	9	114	38	184
Average Age	52.7	49	52.4	52.9	56.2	54.5	55.2
Average Annual Benefit	$21,018	$14,755	$20,473	$4,076	$8,135	$7,022	$9,249

Status Reconciliation - All Divisions
Changes in Plan Membership as of July 1, 2022

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Total
Participant count as of July 1, 2021	**355**	**192**	**76**	**798**	**174**	**1,595**
New Entrants	5					5
Rehires						0
Disabilities		(2)	2			0
Retirements/ Domestic Relations Order (DRO)	(22)	(11)		33	3	3
Vested Terminations	(6)	6				0
Died, with Beneficiaries' Benefit Payable			(1)	(8)	9	0
Transfers						0
Died, without Beneficiary, and Other Terminations			(4)	(16)	(2)	(22)
Beneficiary Deaths					(5)	(5)
Data Corrections	(1)	(1)			(1)	(3)
Total Change	(24)	(8)	(3)	9	4	(22)
Participant count as of July 1, 2022	**331**	**184**	**73**	**807**	**178**	**1,573**

Status Reconciliation - Non-Contract/Administrative[1]
Changes in Plan Membership as of July 1, 2022

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Total
Participant count as of July 1, 2021	**69**	**19**	**2**	**134**	**35**	**259**
New Entrants	5					5
Rehires						0
Disabilities						0
Retirements/ Domestic Relations Order (DRO)	(3)			3		0
Vested Terminations	(4)	4				0
Died, with Beneficiaries' Benefit Payable						0
Transfers	4					4
Died, without Beneficiary, and Other Terminations			(1)	(1)		(2)
Beneficiary Deaths						0
Data Corrections	(1)					(1)
Total Change	1	4	(1)	2	0	6
Participant count as of July 1, 2022	**70**	**23**	**1**	**136**	**35**	**265**

[1] *Includes 23 active individuals participating in PEPRA.*

Status Reconciliation - Clerical
Changes in Plan Membership as of July 1, 2022

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Total
Participant count as of July 1, 2021	**10**	**11**	**2**	**30**	**5**	**58**
New Entrants						0
Rehires						0
Disabilities						0
Retirements/ Domestic Relations Order (DRO)	(2)	(2)		4		0
Vested Terminations						0
Died, with Beneficiaries' Benefit Payable			(1)		1	0
Transfers	1					1
Died, without Beneficiary, and Other Terminations						0
Beneficiary Deaths						0
Data Corrections						0
Total Change	(1)	(2)	(1)	4	1	1
Participant count as of July 1, 2022	**9**	**9**	**1**	**34**	**6**	**59**

Status Reconciliation - ATU/Drivers
Changes in Plan Membership as of July 1, 2022

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Total
Participant count as of July 1, 2021	**185**	**122**	**62**	**512**	**104**	**985**
New Entrants						0
Rehires						0
Disabilities		(1)	1			0
Retirements/ Domestic Relations Order (DRO)	(12)	(7)		19		0
Vested Terminations	(1)	1				0
Died, with Beneficiaries' Benefit Payable				(6)	6	0
Transfers	(1)					(1)
Died, without Beneficiary, and Other Terminations			(3)	(12)	(2)	(17)
Beneficiary Deaths					(5)	(5)
Data Corrections		(1)				(1)
Total Change	(14)	(8)	(2)	1	(1)	(24)
Participant count as of July 1, 2022	**171**	**114**	**60**	**513**	**103**	**961**

Status Reconciliation - IBEW/Mechanics
Changes in Plan Membership as of July 1, 2022

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Total
Participant count as of July 1, 2021	**91**	**40**	**10**	**122**	**30**	**293**
New Entrants						0
Rehires						0
Disabilities		(1)	1			0
Retirements/ Domestic Relations Order (DRO)	(5)	(2)		7	3	3
Vested Terminations	(1)	1				0
Died, with Beneficiaries' Benefit Payable				(2)	2	0
Transfers	(4)					(4)
Died, without Beneficiary, and Other Terminations				(3)		(3)
Beneficiary Deaths						0
Data Corrections					(1)	(1)
Total Change	(10)	(2)	1	2	4	(5)
Participant count as of July 1, 2022	**81**	**38**	**11**	**124**	**34**	**288**

Age / Service Distribution Of Active Participants - Non-Contract/Administrative[1] (Counts)
As of July 1, 2022

	Service												
Age	Under 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up	**Total**
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	**0**
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	**0**
25 to 29	0	0	0	1	0	0	0	0	0	0	0	0	**1**
30 to 34	0	0	0	0	1	2	0	0	0	0	0	0	**3**
35 to 39	0	0	0	0	1	4	2	3	0	0	0	0	**10**
40 to 44	0	0	0	1	0	1	4	2	0	0	0	0	**8**
45 to 49	0	1	1	0	0	3	3	2	4	1	0	0	**15**
50 to 54	0	0	0	0	0	3	2	2	1	1	0	0	**9**
55 to 59	0	0	1	1	0	1	3	2	0	0	2	1	**11**
60 to 64	0	0	0	0	0	3	3	1	0	3	1	0	**11**
65 to 69	0	0	0	0	0	0	1	1	0	0	0	0	**2**
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Total	**0**	**1**	**2**	**3**	**2**	**17**	**18**	**13**	**5**	**5**	**3**	**1**	**70**

[1] *Includes 23 active individuals participating in PEPRA.*

Age / Service Distribution Of Active Participants - Non-Contract/Administrative[1] (Average Salary)
As of July 1, 2022

	Service												
Age	Under 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up	**Total**
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
25 to 29	0	0	0	68,744	0	0	0	0	0	0	0	0	**$68,744**
30 to 34	0	0	0	0	71,348	78,062	0	0	0	0	0	0	**$75,824**
35 to 39	0	0	0	0	76,141	79,677	74,121	82,580	0	0	0	0	**$79,083**
40 to 44	0	0	0	67,059	0	71,426	84,228	88,234	0	0	0	0	**$81,483**
45 to 49	0	46,093	68,744	0	0	77,656	83,665	90,591	91,003	89,188	0	0	**$82,212**
50 to 54	0	0	0	0	0	71,772	72,149	73,609	69,161	57,807	0	0	**$70,422**
55 to 59	0	0	48,418	88,234	0	75,734	76,653	70,206	0	0	84,347	88,234	**$76,335**
60 to 64	0	0	0	0	0	63,011	81,831	75,734	0	106,973	90,372	0	**$83,777**
65 to 69	0	0	0	0	0	0	73,944	69,157	0	0	0	0	**$71,550**
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
Total	**$0**	**$46,093**	**$58,581**	**$74,679**	**$73,745**	**$74,077**	**$79,436**	**$79,839**	**$86,635**	**$93,583**	**$86,355**	**$88,234**	**$78,718**

[1] *Includes 23 active individuals participating in PEPRA.*

Age / Service Distribution Of Active Participants - ATU/Clerical (Counts)
As of July 1, 2022

	Service												
Age	Under 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up	**Total**
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	**0**
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	**0**
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	**0**
30 to 34	0	0	0	0	0	0	0	0	0	0	0	0	**0**
35 to 39	0	0	0	0	0	0	1	0	0	0	0	0	**1**
40 to 44	0	0	0	0	0	0	0	1	0	0	0	0	**1**
45 to 49	0	0	0	0	0	1	0	0	0	0	0	0	**1**
50 to 54	0	0	0	0	0	0	2	0	1	0	0	0	**3**
55 to 59	0	0	0	0	0	0	1	0	0	0	0	0	**1**
60 to 64	0	0	0	0	0	0	0	0	0	1	0	0	**1**
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	**0**
70 & up	0	0	0	0	0	0	1	0	0	0	0	0	**1**
Total	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**1**	**1**	**1**	**0**	**0**	**9**

Age / Service Distribution Of Active Participants - ATU/Clerical (Average Salary)
As of July 1, 2022

	Service												
Age	Under 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up	**Total**
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
30 to 34	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
35 to 39	0	0	0	0	0	0	52,731	0	0	0	0	0	**$52,731**
40 to 44	0	0	0	0	0	0	0	48,959	0	0	0	0	**$48,959**
45 to 49	0	0	0	0	0	74,599	0	0	0	0	0	0	**$74,599**
50 to 54	0	0	0	0	0	0	57,677	0	48,661	0	0	0	**$54,671**
55 to 59	0	0	0	0	0	0	48,195	0	0	0	0	0	**$48,195**
60 to 64	0	0	0	0	0	0	0	0	0	67,331	0	0	**$67,331**
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
70 & up	0	0	0	0	0	0	49,017	0	0	0	0	0	**$49,017**
Total	**$0**	**$0**	**$0**	**$0**	**$0**	**$74,599**	**$53,059**	**$48,959**	**$48,661**	**$67,331**	**$0**	**$0**	**$56,094**

Age / Service Distribution Of Active Participants - ATU/Drivers (Counts)
As of July 1, 2022

	Service												
Age	Under 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up	**Total**
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	**0**
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	**0**
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	**0**
30 to 34	0	0	0	0	0	0	0	0	0	0	0	0	**0**
35 to 39	0	0	0	0	0	1	11	1	0	0	0	0	**13**
40 to 44	0	0	0	0	0	1	4	5	1	0	0	0	**11**
45 to 49	0	0	0	0	0	0	6	10	3	0	0	0	**19**
50 to 54	0	0	0	0	0	2	8	11	8	1	0	0	**30**
55 to 59	0	0	0	0	0	1	14	8	14	3	2	0	**42**
60 to 64	0	0	0	0	0	0	14	4	6	7	4	2	**37**
65 to 69	0	0	0	0	0	0	5	2	5	2	1	2	**17**
70 & up	0	0	0	0	0	0	0	0	1	0	0	1	**2**
Total	**0**	**0**	**0**	**0**	**0**	**5**	**62**	**41**	**38**	**13**	**7**	**5**	**171**

Age / Service Distribution Of Active Participants - ATU/Drivers (Average Salary)
As of July 1, 2022

	Service												
Age	Under 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up	**Total**
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
30 to 34	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
35 to 39	0	0	0	0	0	73,834	67,762	67,628	0	0	0	0	**$68,219**
40 to 44	0	0	0	0	0	63,916	61,023	73,056	80,799	0	0	0	**$68,553**
45 to 49	0	0	0	0	0	0	67,156	68,527	68,558	0	0	0	**$68,099**
50 to 54	0	0	0	0	0	67,907	71,747	70,522	74,221	80,120	0	0	**$71,981**
55 to 59	0	0	0	0	0	78,224	72,188	76,837	73,937	80,076	65,369	0	**$74,039**
60 to 64	0	0	0	0	0	0	73,087	70,816	64,716	67,734	72,752	70,673	**$70,305**
65 to 69	0	0	0	0	0	0	64,571	64,722	75,823	68,876	64,551	64,064	**$68,344**
70 & up	0	0	0	0	0	0	0	0	72,494	0	0	76,796	**$74,645**
Total	**$0**	**$0**	**$0**	**$0**	**$0**	**$70,358**	**$69,727**	**$71,252**	**$72,507**	**$71,711**	**$69,471**	**$69,254**	**$70,855**

Age / Service Distribution Of Active Participants - IBEW/Mechanics (Counts)
As of July 1, 2022

	Service												
Age	Under 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up	**Total**
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	**0**
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	**0**
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	**0**
30 to 34	0	0	0	0	0	0	5	3	0	0	0	0	**8**
35 to 39	0	0	0	0	0	1	3	1	0	0	0	0	**5**
40 to 44	0	0	0	0	0	0	2	1	2	0	0	0	**5**
45 to 49	0	0	0	0	0	0	0	0	5	3	0	0	**8**
50 to 54	0	0	0	0	0	0	1	1	1	2	5	0	**10**
55 to 59	0	0	0	0	0	0	3	1	6	3	4	2	**19**
60 to 64	0	0	0	0	0	0	1	4	7	2	3	3	**20**
65 to 69	0	0	0	0	0	0	2	2	0	0	1	0	**5**
70 & up	0	0	0	0	0	0	0	0	1	0	0	0	**1**
Total	**0**	**0**	**0**	**0**	**0**	**1**	**17**	**13**	**22**	**10**	**13**	**5**	**81**

Age / Service Distribution Of Active Participants - IBEW/Mechanics (Average Salary)
As of July 1, 2022

	Service												
Age	Under 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & up	**Total**
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	**$0**
30 to 34	0	0	0	0	0	0	75,912	82,109	0	0	0	0	**$78,236**
35 to 39	0	0	0	0	0	82,109	69,646	82,109	0	0	0	0	**$74,631**
40 to 44	0	0	0	0	0	0	68,585	82,109	82,109	0	0	0	**$76,699**
45 to 49	0	0	0	0	0	0	0	0	71,617	79,213	0	0	**$74,465**
50 to 54	0	0	0	0	0	0	82,109	73,423	47,021	77,766	76,897	0	**$74,257**
55 to 59	0	0	0	0	0	0	58,559	44,720	77,629	76,318	73,218	82,109	**$72,222**
60 to 64	0	0	0	0	0	0	73,423	68,671	71,948	77,766	76,318	79,213	**$73,693**
65 to 69	0	0	0	0	0	0	63,361	64,565	0	0	73,423	0	**$65,855**
70 & up	0	0	0	0	0	0	0	0	55,234	0	0	0	**$55,234**
Total	**$0**	**$0**	**$0**	**$0**	**$0**	**$82,109**	**$69,623**	**$71,731**	**$72,453**	**$77,766**	**$75,364**	**$80,371**	**$73,474**

Actuarial Method

For the Retirement Plans of San Diego Transit Corporation (the Plan), the actuarial funding method used to determine the normal cost and the Unfunded Actuarial Liability is the individual entry age to final decrement cost method. This method is consistent with the method required under the GASB accounting statements.

Under this cost method, the normal cost is calculated as the amount necessary to fund Members' benefits as a level percentage of total payroll over their projected working lives. At each valuation date, the Actuarial Liability is equal to the difference between the liability for the Members' total projected benefit and the present value of future normal cost contributions. The total normal cost is calculated as the sum of the individual normal costs for each active member (individual entry age method).

The excess of the Actuarial Liability over the smoothed value of Plan assets is the Unfunded Actuarial Liability (UAL); the initial Unfunded Actuarial Liability as of July 1, 2012 is amortized in level dollar payments over a 25-year period ending June 30, 2037. Changes in the Unfunded Actuarial Liability due to Plan amendments, changes in actuarial assumptions or methods will be amortized in level dollar payments over a separate period that ends on June 30, 2037, consistent with the amortization of the remaining June 30, 2012 UAL.

Changes in the Unfunded Actuarial Liability due to actuarial gains and losses are amortized over closed separate 15-year periods in level dollar payments. In order for SDTC to achieve its goal of full funding by 2037, once the amortization of future gains and losses extends beyond June 30, 2037, the period will be reduced to end on June 30, 2037. However, as the targeted full funding date of June 30, 2037 approaches, changes to the amortization policy may be made at the MTS Board's discretion to mitigate volatility or unsustainable increases in the UAL payment.

Though, the Retirement Board may make exceptions, in general, the intent is to follow the guidelines published by the California Actuarial Advisory Panel and the Government Finance Officers' Association.

The total Plan cost is the sum of the normal cost, assumed administrative expenses, and the amortization of the Unfunded Actuarial Liability. The employer is responsible for contributing the difference between the total cost and member contributions.

Actuarial Value of Plan Assets

The Actuarial Value of Assets (AVA) is determined using an adjusted market value. Under this method, a preliminary AVA is determined as the Market Value of Assets on the valuation date less a decreasing fraction (4/5, 3/5, 2/5, 1/5) of the gain or loss in each of the preceding four years. The gain or loss for a given year is the difference between the actual investment return (on a market-to-market basis) and the assumed investment return based on the Market Value of Assets at the beginning of the year and actual cash flow. The AVA is adjusted, if necessary, to remain between 80% and 120% of the market value.

Actuarial Assumptions

The economic and demographic assumptions are based on the experience study covering the period from July 1, 2015 through June 30, 2020 that was adopted at the MTS Board of Directors Meeting in November 2021. The rationale for all the assumptions can also be found in the experience study report dated September 2021. All assets and liabilities are computed as of the valuation date, July 1, 2022.

1. **Rate of Return**

   The annual rate of return on all Plan assets is assumed to be 6.00% net of investment expenses.

2. **Cost of Living**

   The cost of living as measured by the Consumer Price Index (CPI) will increase at the rate of 2.50% per year.

3. **Post Retirement COLA**

   Benefits for Non-Contract retirees assumed to increase after retirement at the rate of 2.0% per year.

4. **Pay for Benefits**

   In most cases, pay for benefits is based on a two-year average of each Participant's pay during the two years preceding the valuation date. Special procedures are used in some cases, as noted for full-time Participants.

Unit	Pay for Continuing Participants	Pay for New Participants
Drivers	The larger of gross pay or 1,800 hours times the member's hourly rate	
Mechanics	2,150 hours times the Participant's hourly rate	
Clerical	Gross pay	The larger of gross pay or 2,100 hours times the Participant's hourly rate
Non-Contract	Gross pay	The larger of gross pay or 2,080 hours times the Participant's hourly rate

Part-time Participants are assumed to work 1,040 hours in the calculations shown above.

5. Merit Pay (Longevity and Promotion) Increases

Assumed pay increases for active Participants consist of increases due to inflation (cost-of-living adjustments) and those due to longevity and promotion. Based on an analysis of pay levels and service, we developed the following assumptions:

Longevity and Promotion Increases				
Service	ATU Drivers	IBEW Mechanics	Clerical	Non-Contract
0	6.00%	7.50%	10.00%	3.50%
1	6.00%	7.50%	10.00%	3.50%
2	6.00%	7.50%	0.25%	3.50%
3	6.00%	7.50%	0.25%	3.50%
4	6.00%	7.50%	0.25%	3.50%
5	6.00%	7.50%	0.25%	3.50%
6	6.00%	7.50%	0.25%	3.50%
7	6.00%	7.50%	0.25%	3.50%
8	0.50%	7.50%	0.25%	3.50%
9	0.50%	7.50%	0.25%	3.50%
10+	0.50%	0.50%	0.25%	0.25%

In addition, annual adjustments in pay due to inflation will equal the CPI, for an additional annual increase of 2.50%. The combination of rates is compounded rather than using an additive method.

6. Active Participant Mortality

Rates of mortality for all active ATU and IBEW Participants are given by Cheiron's ATU Non-Annuitant mortality with generational improvements from the base year 2016 using Scale MP-2020. Sample rates are shown in the table below:

Age	Male	Female
25	0.040%	0.033%
30	0.049%	0.038%
35	0.056%	0.051%
40	0.064%	0.072%
45	0.079%	0.101%
50	0.113%	0.151%
55	0.174%	0.239%
60	0.272%	0.365%
65	0.408%	0.524%

Rates of mortality for all active Clerical and Non-Contract Participants are given by 2010 Public General Employee mortality with generational improvements from the base year 2010 using Scale MP-2020.

7. Healthy Inactive Participant and Beneficiary Mortality

Rates of mortality for healthy inactive ATU and IBEW Participants, spouses, and surviving spouses are given by Cheiron's ATU Healthy-Annuitant mortality with generational improvements from the base year 2016 using Scale MP-2020. Sample rates are shown in the table below:

Age	Male	Female
55	0.898%	0.520%
60	1.123%	0.762%
65	1.309%	1.103%
70	1.983%	1.633%
75	3.272%	2.631%
80	5.595%	4.433%
85	9.647%	7.691%
90	15.707%	13.411%
95	22.864%	20.609%

Rates of mortality for healthy inactive Clerical and Non-Contract Participants, spouses, and surviving spouses are given by 2010 Public General Healthy Annuitant Amount Weighted mortality with generational improvements from the base year 2010 using Scale MP-2020.

8. Disabled Participant Mortality

Rates of mortality for disabled members are given by Cheiron's ATU Disabled Annuitant mortality with generational improvements from the base year 2016 using Scale MP-2020.

9. Mortality Improvement

Mortality is assumed to improve in future years in accordance with the MP-2020 generational improvement tables.

10. Disability

Among ATU Drivers and IBEW Mechanics uses an 80% male/20% female blend of the standard CalPERS Public Agency Table, with sample rates below. Disabled Participants are assumed not to return to active service. No disability is assumed for Clerical and Non-Contract Participants.

Disability	
Age	Rate
25	0.016%
30	0.020%
35	0.045%
40	0.109%
45	0.158%
50	0.166%
55	0.156%
60	0.143%
65	0.120%
70	0.098%
75+	0.099%

11. Plan Expenses

Expected Plan administrative expenses as of the valuation date of $282,000 are included in the total annual cost, increasing each year with the assumed rate of inflation.

12. Family Composition

100% of active Participants are assumed married. Male spouses are assumed four years older than their wives are.

13. Service Retirement

Rates of service retirement among Participants eligible to retire are given by the following table:

Age	ATU Drivers	IBEW Mechanics	Clerical/Non Contract
52 [1]	0%	0%	0%
53-54	0%	0%	7.5%
55	10%	5%	7.5%
56-59	7.5%	5%	10%
60-61	10%	10%	10%
62	15%	10%	30%
63	15%	10%	25%
64	20%	15%	25%
65-66	40%	45%	25%
67-69	25%	20%	25%
70 and older	100%	100%	100%

[1] *Non-Contract retirement assumption at age 52 is for PEPRA participants only, 0% otherwise.*

14. Termination

Service-based or age-based termination rates are shown below by group. For all Participants, termination rates are assumed zero once a participant is eligible for retirement.

Termination for ATU Driver, IBEW Mechanic, and Non-Contract Participants are assumed to occur in accordance with the service-based rates shown in the following table:

Service	ATU Driver	IBEW Mechanic	Non-Contract
0	10.0%	10.0%	5.0%
1-6	4.0%	4.0%	5.0%
7 +	3.0%	3.0%	5.0%

Termination for Clerical Participants is assumed to occur in accordance with the age-based rates shown in the following table:

Clerical	
Age	**Rate**
20-24	25.0%
25-29	15.0%
30-34	13.0%
35-39	11.0%
40-44	10.0%
45-49	9.0%
50 and older	9.0%

15. Employment Status

No future transfers among Participant groups are assumed.

16. Changes in Actuarial Methods and Assumptions since the Prior Valuation

None.

A. Definitions

Average Monthly Final Earnings: Average Monthly Final Earnings means the average monthly compensation during the consecutive months that produces a Participant's highest average compensation, computed by dividing the Compensation Earnable for such period by the number of months in such period.

- For ATU, IBEW, and Clerical Participants, the averaging period is 36 consecutive months.
- For Non-Contract Participants, the number of consecutive months is 12.
- Public Employees' Pension Reform Act (PEPRA): For Non-Contract Participants hired on and after January 1, 2013, the number of consecutive months is 36.
- Those months during which the Participant did not receive compensation from the Employer equivalent to one-half the regular working days will be excluded. The average is then based on that portion of the averaging period remaining after the excluded months.
- PEPRA: It is possible that exclusions for months in which the Participant did not work full-time may be subject to change.
- Use the total of the Periodic Pensionable Earnings from the highest three calendar (payroll) years. These years need not be consecutive years. There shall be no skips and drops within the three calendar (payroll) years. Add the total Periodic Pensionable Earnings to Terminal Earnings and then divide by 36.

Compensation: Compensation means the remuneration for services paid by the Employer. The monetary value of board, lodgings, fuel, car allowance, laundry, or other advantages furnished to a Participant is not included.

PEPRA: For Participants joining the Plan on or after January 1, 2013, only base compensation up to the Social Security-integrated PEPRA compensation limit ($134,974 for 2022 and $128,059 for 2021) will count for computing Plan benefits and employee and employer contributions; in particular, all or most overtime will be excluded.

Compensation Earnable:

Compensation Earnable is the compensation actually received by a Participant during a period of employment. For ATU and Non-Contract Participants, any bonus or retroactive wage increases are treated as compensation when received rather than when the services are performed. For IBEW Participants, Compensation Earnable is limited to 2,140 hours of straight time equivalent hours in any 12-month period.

In addition, the value of any vacation or sick leave accumulated but unused when benefits begin is excluded from Compensation Earnable and from Average Monthly Final Earnings.

PEPRA: For Participants joining the Plan on and after January 1, 2013, it is likely that some sources of compensation, such as those underlined above, may be excluded from benefit and contribution computations for these new Participants.

Credited Years Of Service:

In general, Credited Years of Service is continuous service with the San Diego Transit Corporation and its predecessor company from the last date of employment through the date of retirement, death, disability, or other termination of service.

As of November 10, 1997, part-time ATU employees receive one Credited Year of Service for every 2,080 hours of service worked as a part-time employee after December 1, 1990.

For Non-Contract Participants, Credited Years of Service includes any year commencing on or after July 1, 1982 in which the Participant completes at least 1,000 Hours of Service. In addition, Credited Years of Service for Non-Contract Participants will exclude any period of service after the Participant's Normal Retirement Date.

A Participant who is disabled and recovers from disability and reenters the Plan as an active Participant will not receive Credited Years of Service for the period of disability.

B. Membership

All full-time and certain part-time IBEW employees hired prior to May 1, 2011, will become Participants on their date of hire. IBEW employees hired on and after May 1, 2011, will become Participants of a separate defined contribution plan and will not be Participants of this Plan.

All full-time and certain part-time ATU employees hired prior to November 1, 2012, will become Participants on their date of hire. ATU employees hired on and after November 1, 2012, will become Participants of a separate defined contribution plan and will not be Participants of this Plan.

All Non-Contract employees become Participants after earning one Credited Year of Service.

PEPRA: Any Participant joining the Plan for the first time on or after January 1, 2013, is a New Participant.

C. Retirement Benefit

Eligibility: Clerical and Non-Contract Participants are eligible for normal service retirement upon attaining age 63 and completing five or more Credited Years of Service and eligible for early service retirement upon attaining age 53 and completing five or more Credited Years of Service.

ATU and IBEW Participants are eligible for normal service retirement upon attaining age 63 (65 for IBEW) and completing five or more Credited Years of Service and eligible for early service retirement upon attaining age 55 and completing five or more Credited Years of Service.

PEPRA: New Participants are eligible to retire upon attaining age 52 and completing five or more Credited Years of Service.

Benefit Amount: The monthly service retirement benefit is the Participant's Average Monthly Final Earnings multiplied by the percentage figures shown in the tables below.

- For ATU and Clerical Participants terminating prior to October 1, 2005, ATU/Clerical Table A-1 is used; for ATU and Clerical Participants terminating on and after October 1, 2005, ATU/Clerical Table A-2 is used. Prior to July 1, 2006, the benefit from the table is limited to 60%.

- For IBEW Participants terminating prior to January 1, 2007, IBEW Table A-1 is used; for IBEW Participants terminating on and after January 1, 2007, IBEW Table A-2 is used.

- For Non-Contract participants terminating prior to July 1, 2000, Non-Contract Table A-1 is used; for Non-Contract participants terminating on and after July 1, 2000, Non-Contract Table A-2 is used.

For Participants with fractions of a year of age or service, the Participant’s age or service will be rounded to the completed quarter year, and the percentage multiplier will be computed from the table using interpolation.

ATU participants who are active from November 10, 1997, to December 31, 1998, and from November 10, 1997, to December 31, 1999, receive an additional 2.5% and 2.5%, respectively. However, the multiplier from Table A-1 or A-2, as augmented by the additional 2.5% increments, is still limited to 60% prior to July 1, 2006 and 70% thereafter.

Non-Contract Participants who are active as of July 1, 1994, and July 1, 1995, receive an additional 6% and 2%, respectively. However, the benefit multiplier, as augmented by the additional 6% and 2% increments, is still limited to 60% under Table A-1 and 70% under Table A-2.

A Participant who is disabled and recovers from disability and reenters the Plan as an active Participant will have this benefit amount reduced by the actuarial equivalent of the benefits paid during the period of disability.

PEPRA: For New Participants, the benefit multiplier will be 1% at age 52, increasing by 0.1% for each year of age to 2.5% at 67. In between exact ages, the multiplier will increase by 0.025% for each quarter year increase in age.

Form of Benefit: The normal form of benefit is an annuity payable for the life of the Participant, with no continuation of benefits to a beneficiary after death. The retirement benefit will be paid as a 50% Joint and Survivor benefit actuarially equivalent to the normal form for participants who have been married for at least one year. Otherwise, the normal form will be paid.

Because Participants will be making employee contributions, the Participant's beneficiaries may be eligible to receive a refund of accumulated contributions that exceed the benefits paid out to the Participant (if any) upon death.

The ATU and IBEW benefits have been amended from time to time to remove the actuarial reduction in benefits for previously retired Participants whose spouses have died before them. However, these adjustments are retroactive only, and they do not apply to benefits paid to currently active Participants.

ATU and IBEW Participants may elect an Alternative Retirement Formula if they terminate employment before early retirement but after 10 Credited Years of Service or were hired between April 1, 1968, and March 31, 1971, and desire to retire at their Normal Retirement Date. These Participants are eligible for a deferred benefit commencing at age 65 based on Table B.

Tables A-1 and A-2 for each employee group, as well as Table B, can be found at the end of Appendix C herein.

D. Disability Retirement Benefit

Eligibility: A Participant is eligible for a Disability Retirement Benefit if:

- The Participant has earned five Credited Years of Service (ATU, IBEW, Clerical and Non-Contract), and

- The Participant is unable to perform the duties of his or her job with the Corporation, cannot be transferred to another job with the Corporation, and has submitted satisfactory medical evidence of permanent disqualification from his or her job.

Benefit Amount: The Disability Retirement Benefit is a monthly benefit equal to the lesser of:

1. 1.5% times Credited Years of Service at Disability Retirement Date times the Participant's Average Monthly Final Earnings; and,
2. The Normal Retirement Benefit calculated using the Average Monthly Final Earnings at Disability Retirement Date and the projected Credited Years of Service to Normal Retirement Date.

The benefit is reduced by 50% of the amount of any earned income from other sources in excess of 50% of the Participant's Average Monthly Earnings during the 12 months prior to disability; this reduction applies to all IBEW and Non-Contract Participants, but only to ATU Participants hired after June 30, 1983.

PEPRA: Note that the Disability Retirement Benefit for New Participants is based on the new definition of Compensation, which is subject to a maximum and excludes overtime.

Form of Benefit: The normal form of benefit is an annuity commencing at disability and payable for the life of the Participant, with no continuation of benefits to a beneficiary after death. The Disability Retirement Benefit will be paid as a 50% Joint and Survivor benefit actuarially equivalent to the normal form for participants who have been married for at least one year. Otherwise, the normal form will be paid.

Because Participants will be making employee contributions, the Participant's beneficiaries may be eligible to receive a refund of accumulated contributions that exceed the benefits paid out to the Participant (if any) upon death.

The ATU and IBEW benefits have been amended from time to time to remove the actuarial reduction in benefits for previously retired Participants whose spouses have died before them. However, these adjustments are retroactive only, and they do not apply to benefits paid to currently active Participants.

E. Pre-Retirement Death Benefit

Eligibility: A vested Participant is entitled to elect coverage of a pre-retirement spouse's benefit.

For years, a Participant is age 55 or under, the cost of the coverage is paid by the Company. For the years, a Participant is over age 55 and has elected this coverage, the cost of this coverage is paid by the Participant in the form of a reduced benefit upon retirement. The reduction is 3.5¢ per $10 of monthly benefit for each year of coverage.

There is no cost for this benefit for any ATU, Clerical, or Non-Contract Participant whose monthly benefit commences after November 27, 1990. There is no cost for this benefit for any IBEW Participant whose monthly benefit commences after December 3, 1996.

In order for the spouse to be eligible for this benefit, the participant must be married to the spouse for one year prior to death, unless death occurs from accidental causes.

Benefit Amount: For a Participant who is eligible to retire at death, the pre-retirement death benefit is 50% of the benefit that would have been payable had the Participant retired immediately prior to his or her death and elected to receive a 50% Joint and Survivor annuity.

For a Participant who dies before being eligible to retire, the pre-retirement death benefit is 50% of the benefit that would have been payable had the Participant survived to his or her earliest retirement date, retired, elected to receive a 50% Joint and Survivor annuity, and died immediately.

PEPRA: Note that the Pre-Retirement Death Benefit for New Participants is based on the new definition of compensation, which is subject to a maximum and excludes overtime.

Form of Benefit: For a Participant who is eligible to retire at death, the death benefit begins when the Participant dies and continues for the life of the surviving spouse.

For a Participant who dies before being eligible to retire, the death benefit begins when the Participant would have reached his or her earliest retirement date and continues for the life of the surviving spouse.

Because Participants will be making employee contributions, the Participant's beneficiaries may be eligible to receive a refund of accumulated contributions that exceed the benefits paid out to the Participant or spouse (if any) upon death.

F. Termination Benefit

Eligibility: A Participant is eligible for a termination benefit after earning five Credited Years of Service.

Benefit Amount: The termination benefit is computed in the same manner as the Normal Retirement Benefit, but it is based on Credited Years of Service and Average Monthly Final Earnings on the date of termination.

Effective July 1, 2000, Non-Contract participants who terminate prior to eligibility for early service retirement will have their benefits actuarially reduced if they begin receiving benefits before Normal Retirement Age.

PEPRA: For New Participants, the benefit multiplier will be 1% at age 52, increasing by 0.1% for each year of age to 2.5% at 67. In between exact ages, the multiplier will increase by 0.025% for each quarter year increase in age. Note also that the Termination Benefit for New Participants is based on the new definition of compensation, which is subject to a maximum and excludes overtime.

We assume a refund of employee contributions, with no interest, if termination occurs before five years of service.

Form of Benefit: The Participant will be eligible to commence benefits at the later of termination and earliest retirement eligibility age.

The normal form of benefit is an annuity payable for the life of the Participant, with no continuation of benefits to a beneficiary after death. The retirement benefit will be paid as a 50% Joint and Survivor benefit actuarially equivalent to the normal form for participants who have been married for at least one year. Otherwise, the normal form will be paid.

Because Participants will be making employee contributions, the Participant's beneficiaries may be eligible to receive a refund of accumulated contributions that exceed the benefits paid out to the Participant (if any) upon death.

The ATU and IBEW benefits have been amended from time to time to remove the actuarial reduction in benefits for previously retired Participants whose spouses have died before them. However, these adjustments are retroactive only, and they do not apply to benefits paid to currently active Participants.

G. Cost-of-Living Adjustments

Eligibility: An annual Cost-of-Living Adjustment (COLA) has been added for Non-Contract Participants who were actively employed on or after June 30, 1999. One time only (ad hoc) COLAs were granted to ATU and IBEW Participants in 1991 and 1992.

Benefit Amount: For Non-Contract Participants, the cumulative COLA is the increase in the Consumer Price Index (CPI) since the Participant began receiving benefits.

The COLA is subject to the following limits for Non-Contract Participants:

- The cumulative COLA cannot exceed 2% compounded annually for all years since the Participant's benefits began;
- The annual COLA is zero if the CPI increase in that year is less than 1%;
- The annual COLA is limited to 6% of the initial benefit amount in any year; and,
- A Participant's benefit cannot be reduced below the benefit level when payments commenced.

H. Voluntary Early Retirement Program

The Plan provided enhanced benefits to ATU participants who voluntarily elected early retirement during the window period from July 1, 1998 through February 20, 1998.

The Plan provided enhanced benefits to certain IBEW participants who voluntarily elected early retirement during the window period from July 1, 2004, through December 31, 2004.

I. DROP Program

The Plan provided DROP benefits to a number of ATU participants who elected retirement from July 1, 2002, through December 31, 2002.

J. Funding

- IBEW members contributed 3% of compensation to the Plan in April 2013 and 4% of compensation in April 2014. The contribution rate increased to 6% of compensation in April 2015 and increased to 8% of compensation in April 2016.

- ATU drivers and clerical members contributed 3% of compensation in July 2013. The contribution rate increased to 5% of compensation in July 2014, to 6% in July 2015, and to 7% of compensation in July 2016. The contribution rate increased to 8% of compensation in December 2017.

- Non-contract members hired before July 1, 2013, contributed 2% of compensation to the Plan prior to January 2014. The Non-contract member contributions increased to 4% of compensation in January 2014, to 6% of in January 2015, and increased to 7% of compensation on January 1, 2016. As of January 1, 2017, the member contribution rate increased to 8% of compensation.

- New members under PEPRA must contribute half of the normal cost of the Plan, rounded to the nearest 0.25%. PEPRA members have been paying 6.25% of pay and the employer has been paying the remaining cost of the Plan. The PEPRA employee contribution rate increases to 7.75% of pay based on the results of July 1, 2021 valuation and 9.50% of pay based on the results of this July 1, 2022 valuation.

  The Corporation pays the actuarial cost of the Plan as reduced by Member contributions. Member contribution rates in the future may change in response to collective bargaining.

K. Changes in Plan Provisions since the Prior Valuation

PEPRA employee contributions increased from 7.75% of pay to 9.50% of pay.

ATU/Clerical Table A-1: Retirement Benefit Multipliers

Credited Years Of Service	Age at Retirement								
	55	56	57	58	59	60	61	62	63+
5	5.9%	6.3%	6.7%	7.2%	7.8%	8.3%	8.9%	9.5%	10.1%
6	7.1%	7.5%	8.1%	8.7%	9.3%	10.0%	10.7%	11.4%	12.1%
7	8.2%	8.8%	9.4%	10.1%	10.9%	11.7%	12.4%	13.3%	14.1%
8	9.4%	10.1%	10.8%	11.6%	12.4%	13.3%	14.2%	15.1%	16.1%
9	10.6%	11.3%	12.1%	13.0%	14.0%	15.0%	16.0%	17.0%	18.1%
10	11.8%	12.6%	13.5%	14.4%	15.5%	16.7%	17.8%	18.9%	20.1%
11	12.9%	13.8%	14.8%	15.9%	17.1%	18.3%	19.5%	20.8%	22.2%
12	14.1%	15.1%	16.2%	17.3%	18.6%	20.0%	21.3%	22.7%	24.2%
13	15.3%	16.3%	17.5%	18.8%	20.2%	21.7%	23.1%	24.6%	26.2%
14	16.5%	17.6%	18.9%	20.2%	21.7%	23.3%	24.9%	26.5%	28.2%
15	17.6%	18.9%	20.2%	21.7%	23.3%	25.0%	26.7%	28.4%	30.2%
16	18.8%	20.1%	21.5%	23.1%	24.8%	26.7%	28.4%	30.3%	32.2%
17	20.0%	21.4%	22.9%	24.5%	26.4%	28.3%	30.2%	32.2%	34.3%
18	21.2%	22.6%	24.2%	26.0%	27.9%	30.0%	32.0%	34.1%	36.3%
19	22.3%	23.9%	25.6%	27.4%	29.5%	31.7%	33.8%	36.0%	38.3%
20	23.5%	25.2%	26.9%	28.9%	31.0%	33.3%	35.5%	37.9%	40.3%
21	24.7%	26.4%	28.3%	30.3%	32.6%	35.0%	37.3%	39.7%	42.3%
22	25.9%	27.7%	29.6%	31.8%	34.1%	36.7%	39.1%	41.6%	44.3%
23	27.0%	28.9%	31.0%	33.2%	35.7%	38.3%	40.9%	43.5%	46.3%
24	28.2%	30.2%	32.3%	34.6%	37.2%	40.0%	42.6%	45.4%	48.4%
25	29.4%	31.4%	33.7%	36.1%	38.8%	41.7%	44.4%	47.3%	50.4%
26	30.6%	32.7%	35.0%	37.5%	40.3%	43.3%	46.2%	49.2%	52.4%
27	31.7%	34.0%	36.4%	39.0%	41.9%	45.0%	48.0%	51.1%	54.4%
28	32.9%	35.2%	37.7%	40.4%	43.4%	46.7%	49.8%	52.0%	56.4%
29	34.1%	36.5%	39.1%	41.9%	45.0%	48.3%	50.0%	55.0%	58.4%
30	35.3%	37.7%	40.4%	43.4%	46.5%	50.0%	51.0%	55.5%	60.0%
31	36.5%	39.0%	41.7%	44.8%	48.1%	51.0%	51.5%	56.0%	60.0%
32	37.6%	40.2%	43.1%	46.2%	49.6%	51.5%	52.0%	56.5%	60.0%
33	38.8%	41.5%	44.4%	47.6%	50.0%	52.0%	52.5%	57.0%	60.0%
34	40.0%	42.8%	45.8%	49.1%	51.0%	52.5%	53.0%	57.5%	60.0%
35 or more	41.2%	44.0%	47.1%	50.0%	51.5%	53.0%	53.5%	58.0%	60.0%

ATU/Clerical Table A-2: Retirement Benefit Multipliers

Credited Years Of Service	Age at Retirement										
	Clerical										
	53	*54*	55	56	57	58	59	60	61	62	63+
5	*8.71%*	*9.33%*	10.00%	10.26%	10.52%	10.78%	11.05%	11.31%	11.57%	11.83%	12.09%
6	*10.45%*	*11.20%*	12.00%	12.31%	12.62%	12.94%	13.26%	13.57%	13.88%	14.20%	14.51%
7	*12.19%*	*13.06%*	14.00%	14.36%	14.73%	15.09%	15.47%	15.83%	16.20%	16.56%	16.93%
8	*13.94%*	*14.93%*	16.00%	16.42%	16.83%	17.25%	17.68%	18.10%	18.51%	18.93%	19.34%
9	*15.68%*	*16.79%*	18.00%	18.47%	18.94%	19.40%	19.89%	20.36%	20.83%	21.29%	21.76%
10	*17.42%*	*18.66%*	20.00%	20.52%	21.04%	21.56%	22.10%	22.62%	23.14%	23.66%	24.18%
11	*19.16%*	*20.53%*	22.00%	22.57%	23.14%	23.72%	24.31%	24.88%	25.45%	26.03%	26.60%
12	*20.90%*	*22.39%*	24.00%	24.62%	25.25%	25.87%	26.52%	27.14%	27.77%	28.39%	29.02%
13	*22.65%*	*24.26%*	26.00%	26.68%	27.35%	28.03%	28.73%	29.41%	30.08%	30.76%	31.43%
14	*24.39%*	*26.12%*	28.00%	28.73%	29.46%	30.18%	30.94%	31.67%	32.40%	33.12%	33.85%
15	*26.13%*	*27.99%*	30.00%	30.78%	31.56%	32.34%	33.15%	33.93%	34.71%	35.49%	36.27%
16	*27.87%*	*29.86%*	32.00%	32.83%	33.66%	34.50%	35.36%	36.19%	37.02%	37.86%	38.69%
17	*29.61%*	*31.72%*	34.00%	34.88%	35.77%	36.65%	37.57%	38.45%	39.34%	40.22%	41.11%
18	*31.36%*	*33.59%*	36.00%	36.94%	37.87%	38.81%	39.78%	40.72%	41.65%	42.59%	43.52%
19	*33.10%*	*35.45%*	38.00%	38.99%	39.98%	40.96%	41.99%	42.98%	43.97%	44.95%	45.94%
20	*34.84%*	*37.32%*	40.00%	41.04%	42.08%	43.12%	44.20%	45.24%	46.28%	47.32%	48.36%
21	*36.58%*	*39.19%*	42.00%	43.09%	44.18%	45.28%	46.41%	47.50%	48.59%	49.69%	50.78%
22	*38.32%*	*41.05%*	44.00%	45.14%	46.29%	47.43%	48.62%	49.76%	50.91%	52.05%	53.20%
23	*40.07%*	*42.92%*	46.00%	47.20%	48.39%	49.59%	50.83%	52.03%	53.22%	54.42%	55.61%
24	*41.81%*	*44.78%*	48.00%	49.25%	50.50%	51.74%	53.04%	54.29%	55.54%	56.78%	58.03%
25	*43.55%*	*46.65%*	50.00%	51.30%	52.60%	53.90%	55.25%	56.55%	57.85%	59.15%	60.45%
26	*45.29%*	*48.52%*	52.00%	53.35%	54.70%	56.06%	57.46%	58.81%	60.16%	61.52%	62.87%
27	*47.03%*	*50.38%*	54.00%	55.40%	56.81%	58.21%	59.67%	61.07%	62.48%	63.88%	65.29%
28	*48.78%*	*52.25%*	56.00%	57.46%	58.91%	60.37%	61.88%	63.34%	64.79%	66.25%	67.70%
29	*50.52%*	*54.11%*	58.00%	59.51%	61.02%	62.52%	64.09%	65.60%	67.11%	68.61%	70.00%
30	*52.26%*	*55.98%*	60.00%	61.56%	63.12%	64.68%	66.30%	67.86%	69.42%	70.00%	70.00%
31	*54.00%*	*57.85%*	62.00%	63.61%	65.22%	66.84%	68.51%	70.00%	70.00%	70.00%	70.00%
32	*55.74%*	*59.71%*	64.00%	65.66%	67.33%	68.99%	70.00%	70.00%	70.00%	70.00%	70.00%
33	*57.49%*	*61.58%*	66.00%	67.72%	69.43%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
34	*59.23%*	*63.44%*	68.00%	69.77%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
35 or more	*60.97%*	*65.31%*	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%

IBEW Table A-1: Retirement Benefit Multipliers

Credited Years Of Service	Age at Retirement										
	55	56	57	58	59	60	61	62	63	64	65+
5	5.2%	5.5%	5.9%	6.3%	6.7%	7.2%	7.8%	8.3%	8.9%	9.5%	10.1%
6	6.2%	6.6%	7.1%	7.5%	8.1%	8.7%	9.3%	10.0%	10.7%	11.4%	12.1%
7	7.2%	7.7%	8.2%	8.8%	9.4%	10.1%	10.9%	11.7%	12.4%	13.3%	14.1%
8	8.2%	8.8%	9.4%	10.1%	10.8%	11.6%	12.4%	13.3%	14.2%	15.1%	16.1%
9	9.3%	9.9%	10.6%	11.3%	12.1%	13.0%	14.0%	15.0%	16.0%	17.0%	18.1%
10	10.2%	11.0%	11.8%	12.6%	13.5%	14.4%	15.5%	16.7%	17.8%	18.9%	20.1%
11	11.2%	12.1%	12.9%	13.8%	14.8%	15.9%	17.1%	18.3%	19.5%	20.8%	22.2%
12	12.3%	13.2%	14.1%	15.1%	16.2%	17.3%	18.6%	20.0%	21.3%	22.7%	24.2%
13	13.3%	14.3%	15.3%	16.3%	17.5%	18.8%	20.2%	21.7%	23.1%	24.6%	26.2%
14	14.4%	15.4%	16.5%	17.6%	18.9%	20.2%	21.7%	23.3%	24.9%	26.5%	28.2%
15	15.4%	16.5%	17.6%	18.9%	20.2%	21.7%	23.3%	25.0%	26.7%	28.4%	30.2%
16	16.4%	17.6%	18.8%	20.1%	21.5%	23.1%	24.8%	26.7%	28.4%	30.3%	32.2%
17	17.5%	18.7%	20.0%	21.4%	22.9%	24.5%	26.4%	28.3%	30.2%	32.2%	34.3%
18	18.5%	19.8%	21.2%	22.6%	24.2%	26.0%	27.9%	30.0%	32.0%	34.1%	36.3%
19	19.6%	20.9%	22.3%	23.9%	25.6%	27.4%	29.5%	31.7%	33.8%	36.0%	38.3%
20	20.6%	22.0%	23.5%	25.2%	26.9%	28.9%	31.0%	33.3%	35.5%	37.9%	40.3%
21	21.6%	23.1%	24.7%	26.4%	28.3%	30.3%	32.6%	35.0%	37.3%	39.7%	42.3%
22	22.7%	24.2%	25.9%	27.7%	29.6%	31.8%	34.1%	36.7%	39.1%	41.6%	44.3%
23	23.7%	25.3%	27.0%	28.9%	31.0%	33.2%	35.7%	38.3%	40.9%	43.5%	46.3%
24	24.8%	26.4%	28.2%	30.2%	32.3%	34.6%	37.2%	40.0%	42.6%	45.4%	48.4%
25	25.8%	27.5%	29.4%	31.4%	33.7%	36.1%	38.8%	41.7%	44.4%	47.3%	50.4%
26	26.9%	28.6%	30.6%	32.7%	35.0%	37.5%	40.3%	43.3%	46.2%	49.2%	52.4%
27	27.9%	29.7%	31.7%	34.0%	36.4%	39.0%	41.9%	45.0%	48.0%	51.1%	54.4%
28	29.0%	30.9%	32.9%	35.2%	37.7%	40.4%	43.4%	46.7%	49.8%	52.0%	56.4%
29	30.0%	32.0%	34.1%	36.5%	39.1%	41.9%	45.0%	48.3%	50.0%	55.0%	58.4%
30	31.1%	33.1%	35.3%	37.7%	40.4%	43.4%	46.5%	50.0%	51.0%	55.5%	60.0%
31	32.1%	34.2%	36.5%	39.0%	41.7%	44.8%	48.1%	51.0%	51.5%	56.0%	60.0%
32	33.2%	35.3%	37.6%	40.2%	43.1%	46.2%	49.6%	51.5%	52.0%	56.5%	60.0%
33	34.3%	36.5%	38.8%	41.5%	44.4%	47.6%	50.0%	52.0%	52.5%	57.0%	60.0%
34	35.4%	37.6%	40.0%	42.8%	45.8%	49.1%	51.0%	52.5%	53.0%	57.5%	60.0%
35 or more	36.5%	38.7%	41.2%	44.0%	47.1%	50.0%	51.5%	53.0%	53.5%	58.0%	60.0%

IBEW Table A-2: Retirement Benefit Multipliers

Credited Years Of Service	Age at Retirement								
	55	56	57	58	59	60	61	62	63+
5	10.00%	10.26%	10.52%	10.78%	11.05%	11.31%	11.57%	11.83%	12.09%
6	12.00%	12.31%	12.62%	12.94%	13.26%	13.57%	13.88%	14.20%	14.51%
7	14.00%	14.36%	14.73%	15.09%	15.47%	15.83%	16.20%	16.56%	16.93%
8	16.00%	16.42%	16.83%	17.25%	17.68%	18.10%	18.51%	18.93%	19.34%
9	18.00%	18.47%	18.94%	19.40%	19.89%	20.36%	20.83%	21.29%	21.76%
10	20.00%	20.52%	21.04%	21.56%	22.10%	22.62%	23.14%	23.66%	24.18%
11	22.00%	22.57%	23.14%	23.72%	24.31%	24.88%	25.45%	26.03%	26.60%
12	24.00%	24.62%	25.25%	25.87%	26.52%	27.14%	27.77%	28.39%	29.02%
13	26.00%	26.68%	27.35%	28.03%	28.73%	29.41%	30.08%	30.76%	31.43%
14	28.00%	28.73%	29.46%	30.18%	30.94%	31.67%	32.40%	33.12%	33.85%
15	30.00%	30.78%	31.56%	32.34%	33.15%	33.93%	34.71%	35.49%	36.27%
16	32.00%	32.83%	33.66%	34.50%	35.36%	36.19%	37.02%	37.86%	38.69%
17	34.00%	34.88%	35.77%	36.65%	37.57%	38.45%	39.34%	40.22%	41.11%
18	36.00%	36.94%	37.87%	38.81%	39.78%	40.72%	41.65%	42.59%	43.52%
19	38.00%	38.99%	39.98%	40.96%	41.99%	42.98%	43.97%	44.95%	45.94%
20	40.00%	41.04%	42.08%	43.12%	44.20%	45.24%	46.28%	47.32%	48.36%
21	42.00%	43.09%	44.18%	45.28%	46.41%	47.50%	48.59%	49.69%	50.78%
22	44.00%	45.14%	46.29%	47.43%	48.62%	49.76%	50.91%	52.05%	53.20%
23	46.00%	47.20%	48.39%	49.59%	50.83%	52.03%	53.22%	54.42%	55.61%
24	48.00%	49.25%	50.50%	51.74%	53.04%	54.29%	55.54%	56.78%	58.03%
25	50.00%	51.30%	52.60%	53.90%	55.25%	56.55%	57.85%	59.15%	60.45%
26	52.00%	53.35%	54.70%	56.06%	57.46%	58.81%	60.16%	61.52%	62.87%
27	54.00%	55.40%	56.81%	58.21%	59.67%	61.07%	62.48%	63.88%	65.29%
28	56.00%	57.46%	58.91%	60.37%	61.88%	63.34%	64.79%	66.25%	67.70%
29	58.00%	59.51%	61.02%	62.52%	64.09%	65.60%	67.11%	68.61%	70.00%
30	60.00%	61.56%	63.12%	64.68%	66.30%	67.86%	69.42%	70.00%	70.00%
31	62.00%	63.61%	65.22%	66.84%	68.51%	70.00%	70.00%	70.00%	70.00%
32	64.00%	65.66%	67.33%	68.99%	70.00%	70.00%	70.00%	70.00%	70.00%
33	66.00%	67.72%	69.43%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
34	68.00%	69.77%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
35 or more	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%

Non-Contract Table A-1: Retirement Benefit Multipliers

Credited Years Of Service	Age at Retirement										
	53	54	55	56	57	58	59	60	61	62	63+
5	5.2%	5.5%	5.9%	6.3%	6.7%	7.2%	7.8%	8.3%	8.9%	9.5%	10.1%
6	6.2%	6.6%	7.1%	7.5%	8.1%	8.7%	9.3%	10.0%	10.7%	11.4%	12.1%
7	7.2%	7.7%	8.2%	8.8%	9.4%	10.1%	10.9%	11.7%	12.4%	13.3%	14.1%
8	8.2%	8.8%	9.4%	10.1%	10.8%	11.6%	12.4%	13.3%	14.2%	15.1%	16.1%
9	9.3%	9.9%	10.6%	11.3%	12.1%	13.0%	14.0%	15.0%	16.0%	17.0%	18.1%
10	10.2%	11.0%	11.8%	12.6%	13.5%	14.4%	15.5%	16.7%	17.8%	18.9%	20.1%
11	11.2%	12.1%	12.9%	13.8%	14.8%	15.9%	17.1%	18.3%	19.5%	20.8%	22.2%
12	12.3%	13.2%	14.1%	15.1%	16.2%	17.3%	18.6%	20.0%	21.3%	22.7%	24.2%
13	13.3%	14.3%	15.3%	16.3%	17.5%	18.8%	20.2%	21.7%	23.1%	24.6%	26.2%
14	14.4%	15.4%	16.5%	17.6%	18.9%	20.2%	21.7%	23.3%	24.9%	26.5%	28.2%
15	15.4%	16.5%	17.6%	18.9%	20.2%	21.7%	23.3%	25.0%	26.7%	28.4%	30.2%
16	16.4%	17.6%	18.8%	20.1%	21.5%	23.1%	24.8%	26.7%	28.4%	30.3%	32.2%
17	17.5%	18.7%	20.0%	21.4%	22.9%	24.5%	26.4%	28.3%	30.2%	32.2%	34.3%
18	18.5%	19.8%	21.2%	22.6%	24.2%	26.0%	27.9%	30.0%	32.0%	34.1%	36.3%
19	19.6%	20.9%	22.3%	23.9%	25.6%	27.4%	29.5%	31.7%	33.8%	36.0%	38.3%
20	20.6%	22.0%	23.5%	25.2%	26.9%	28.9%	31.0%	33.3%	35.5%	37.9%	40.3%
21	21.6%	23.1%	24.7%	26.4%	28.3%	30.3%	32.6%	35.0%	37.3%	39.7%	42.3%
22	22.7%	24.2%	25.9%	27.7%	29.6%	31.8%	34.1%	36.7%	39.1%	41.6%	44.3%
23	23.7%	25.3%	27.0%	28.9%	31.0%	33.2%	35.7%	38.3%	40.9%	43.5%	46.3%
24	24.8%	26.4%	28.2%	30.2%	32.3%	34.6%	37.2%	40.0%	42.6%	45.4%	48.4%
25	25.8%	27.5%	29.4%	31.4%	33.7%	36.1%	38.8%	41.7%	44.4%	47.3%	50.4%
26	26.9%	28.6%	30.6%	32.7%	35.0%	37.5%	40.3%	43.3%	46.2%	49.2%	52.4%
27	27.9%	29.7%	31.7%	34.0%	36.4%	39.0%	41.9%	45.0%	48.0%	51.1%	54.4%
28	29.0%	30.9%	32.9%	35.2%	37.7%	40.4%	43.4%	46.7%	49.8%	52.0%	56.4%
29	30.0%	32.0%	34.1%	36.5%	39.1%	41.9%	45.0%	48.3%	50.0%	55.0%	58.4%
30	31.1%	33.1%	35.3%	37.7%	40.4%	43.4%	46.5%	50.0%	51.0%	55.5%	60.0%
31	32.1%	34.2%	36.5%	39.0%	41.7%	44.8%	48.1%	51.0%	51.5%	56.0%	60.0%
32	33.2%	35.3%	37.6%	40.2%	43.1%	46.2%	49.6%	51.5%	52.0%	56.5%	60.0%
33	34.3%	36.5%	38.8%	41.5%	44.4%	47.6%	50.0%	52.0%	52.5%	57.0%	60.0%
34	35.4%	37.6%	40.0%	42.8%	45.8%	49.1%	51.0%	52.5%	53.0%	57.5%	60.0%
35 or more	36.5%	38.7%	41.2%	44.0%	47.1%	50.0%	51.5%	53.0%	53.5%	58.0%	60.0%

Non-Contract Table A-2: Retirement Benefit Multipliers

Credited Years Of Service	Age at Retirement										
	53	54	55	56	57	58	59	60	61	62	63+
5	8.71%	9.33%	10.00%	10.26%	10.52%	10.78%	11.05%	11.31%	11.57%	11.83%	12.09%
6	10.45%	11.20%	12.00%	12.31%	12.62%	12.94%	13.26%	13.57%	13.88%	14.20%	14.51%
7	12.19%	13.06%	14.00%	14.36%	14.73%	15.09%	15.47%	15.83%	16.20%	16.56%	16.93%
8	13.94%	14.93%	16.00%	16.42%	16.83%	17.25%	17.68%	18.10%	18.51%	18.93%	19.34%
9	15.68%	16.79%	18.00%	18.47%	18.94%	19.40%	19.89%	20.36%	20.83%	21.29%	21.76%
10	17.42%	18.66%	20.00%	20.52%	21.04%	21.56%	22.10%	22.62%	23.14%	23.66%	24.18%
11	19.16%	20.53%	22.00%	22.57%	23.14%	23.72%	24.31%	24.88%	25.45%	26.03%	26.60%
12	20.90%	22.39%	24.00%	24.62%	25.25%	25.87%	26.52%	27.14%	27.77%	28.39%	29.02%
13	22.65%	24.26%	26.00%	26.68%	27.35%	28.03%	28.73%	29.41%	30.08%	30.76%	31.43%
14	24.39%	26.12%	28.00%	28.73%	29.46%	30.18%	30.94%	31.67%	32.40%	33.12%	33.85%
15	26.13%	27.99%	30.00%	30.78%	31.56%	32.34%	33.15%	33.93%	34.71%	35.49%	36.27%
16	27.87%	29.86%	32.00%	32.83%	33.66%	34.50%	35.36%	36.19%	37.02%	37.86%	38.69%
17	29.61%	31.72%	34.00%	34.88%	35.77%	36.65%	37.57%	38.45%	39.34%	40.22%	41.11%
18	31.36%	33.59%	36.00%	36.94%	37.87%	38.81%	39.78%	40.72%	41.65%	42.59%	43.52%
19	33.10%	35.45%	38.00%	38.99%	39.98%	40.96%	41.99%	42.98%	43.97%	44.95%	45.94%
20	34.84%	37.32%	40.00%	41.04%	42.08%	43.12%	44.20%	45.24%	46.28%	47.32%	48.36%
21	36.58%	39.19%	42.00%	43.09%	44.18%	45.28%	46.41%	47.50%	48.59%	49.69%	50.78%
22	38.32%	41.05%	44.00%	45.14%	46.29%	47.43%	48.62%	49.76%	50.91%	52.05%	53.20%
23	40.07%	42.92%	46.00%	47.20%	48.39%	49.59%	50.83%	52.03%	53.22%	54.42%	55.61%
24	41.81%	44.78%	48.00%	49.25%	50.50%	51.74%	53.04%	54.29%	55.54%	56.78%	58.03%
25	43.55%	46.65%	50.00%	51.30%	52.60%	53.90%	55.25%	56.55%	57.85%	59.15%	60.45%
26	45.29%	48.52%	52.00%	53.35%	54.70%	56.06%	57.46%	58.81%	60.16%	61.52%	62.87%
27	47.03%	50.38%	54.00%	55.40%	56.81%	58.21%	59.67%	61.07%	62.48%	63.88%	65.29%
28	48.78%	52.25%	56.00%	57.46%	58.91%	60.37%	61.88%	63.34%	64.79%	66.25%	67.70%
29	50.52%	54.11%	58.00%	59.51%	61.02%	62.52%	64.09%	65.60%	67.11%	68.61%	70.00%
30	52.26%	55.98%	60.00%	61.56%	63.12%	64.68%	66.30%	67.86%	69.42%	70.00%	70.00%
31	54.00%	57.85%	62.00%	63.61%	65.22%	66.84%	68.51%	70.00%	70.00%	70.00%	70.00%
32	55.74%	59.71%	64.00%	65.66%	67.33%	68.99%	70.00%	70.00%	70.00%	70.00%	70.00%
33	57.49%	61.58%	66.00%	67.72%	69.43%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
34	59.23%	63.44%	68.00%	69.77%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
35 or more	60.97%	65.31%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%

Table B: Alternate Retirement Formula Multipliers

Credited Years Of Service	Percentage
10	20.1%
11	22.2%
12	24.2%
13	26.2%
14	28.2%
15	30.2%
16	32.2%
17	34.3%
18	36.3%
19	38.3%
20	40.3%
21	42.3%
22	44.3%
23	46.3%
24	48.4%
25	50.4%
26	52.4%
27	54.4%
28	56.4%
29	58.4%
30	60.4%
31	62.5%
32	64.5%
33	66.5%
34	68.5%
35 or more	70.5%

1. **Actuarial Assumptions**

   Assumptions as to the occurrence of future events affecting pension costs such as mortality, withdrawal, disability, retirement, changes in compensation, and rates of investment return.

2. **Actuarial Cost Method**

   A procedure for determining the actuarial present value of pension plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a normal cost and an Actuarial Liability.

3. **Actuarial Gain (Loss)**

   The difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

4. **Actuarial Liability**

   The portion of the actuarial present value of projected benefits, which will not be paid by future normal costs. It represents the value of the past normal costs with interest to the valuation date.

5. **Actuarial Present Value (Present Value)**

   The value as of a given date of a future amount or series of payments. The actuarial present value discounts the payments to the given date at the assumed investment return and includes the probability of the payment being made.

6. **Actuarial Valuation**

   The determination, as of a specified date, of the normal cost, Actuarial Liability, Actuarial Value of Assets, and related actuarial present values for a pension plan.

7. **Actuarial Value of Assets**

   The value of cash, investments, and other property belonging to a pension plan as used by the actuary for the purpose of an actuarial valuation. The purpose of an Actuarial Value of Assets is to smooth out fluctuations in market values.

8. **Actuarially Equivalent**

   Of equal actuarial present value, determined as of a given date, with each value based on the same set of actuarial assumptions.

9. Amortization Payment

The portion of the pension plan contribution that is designed to pay interest and principal on the Unfunded Actuarial Liability in order to pay for that liability in a given number of years.

10. Entry Age Normal Actuarial Cost Method

A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages.

11. Funded Ratio

The ratio of the Actuarial Value of Assets to the Actuarial Liabilities.

12. Normal Cost

That portion of the actuarial present value of pension plan benefits and expenses, which is allocated to a valuation year by the actuarial cost method.

13. Projected Benefits

Those pension plan benefit amounts which are expected to be paid in the future under a particular set of actuarial assumptions, taking into account such items as increases in future compensation and service credits.

14. Unfunded Actuarial Liability

The excess of the Actuarial Liability over the Actuarial Value of Assets.

Retirement Plans of
San Diego Transit Corporation

AI No. 14, 2/13/2023

CHEIRON

Classic Values, Innovative Advice

Actuarial Valuation Results as of July 1, 2022

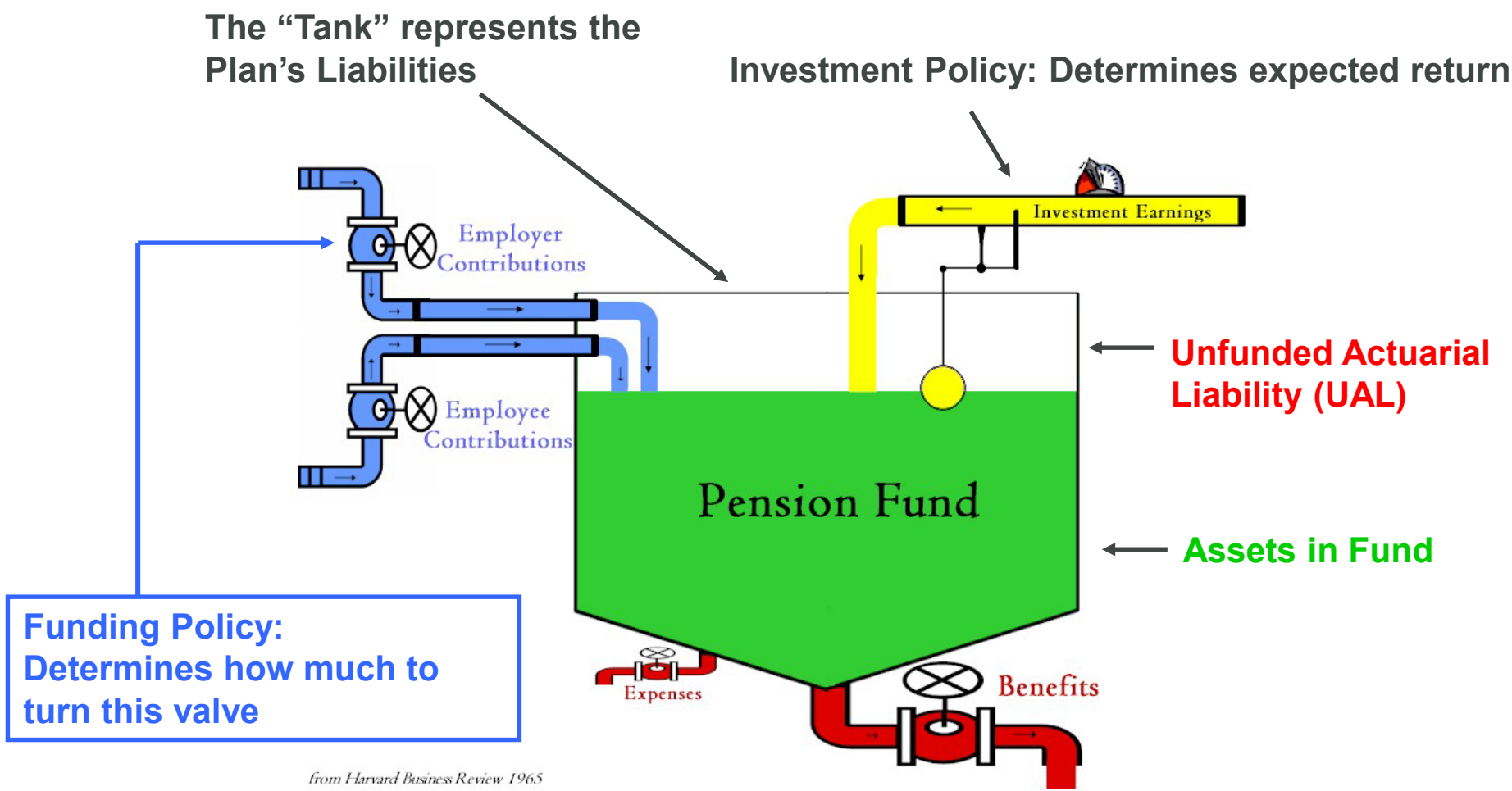
February 13, 2023

Anne D. Harper, FSA, EA, MAAA

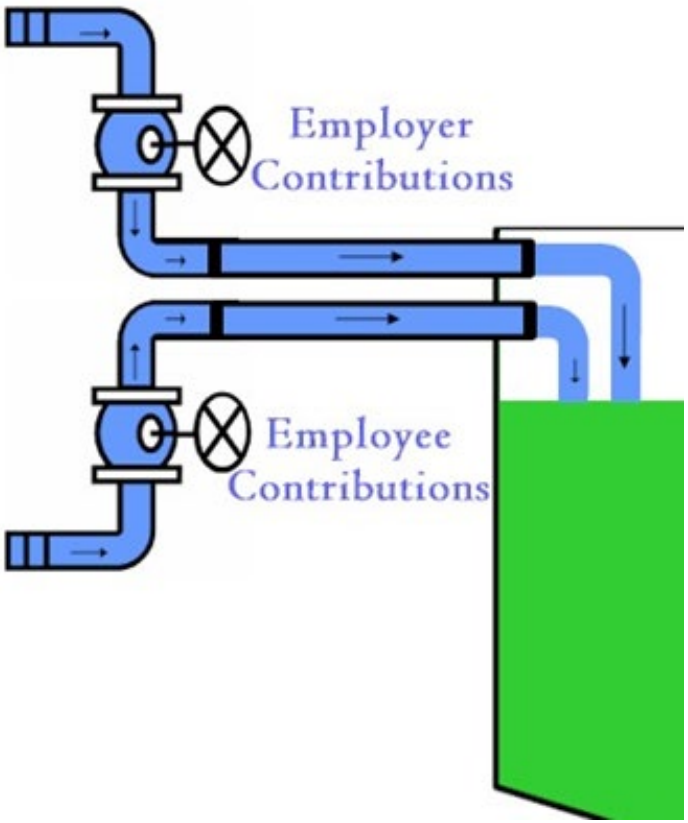
Today's Discussion

- Background
- Plan Cost for Fiscal Year 2023-2024 based on 2022 Actuarial Valuation
- Plan History
- Plan Projections

Pension Plan Management



Pension Plan Contributions



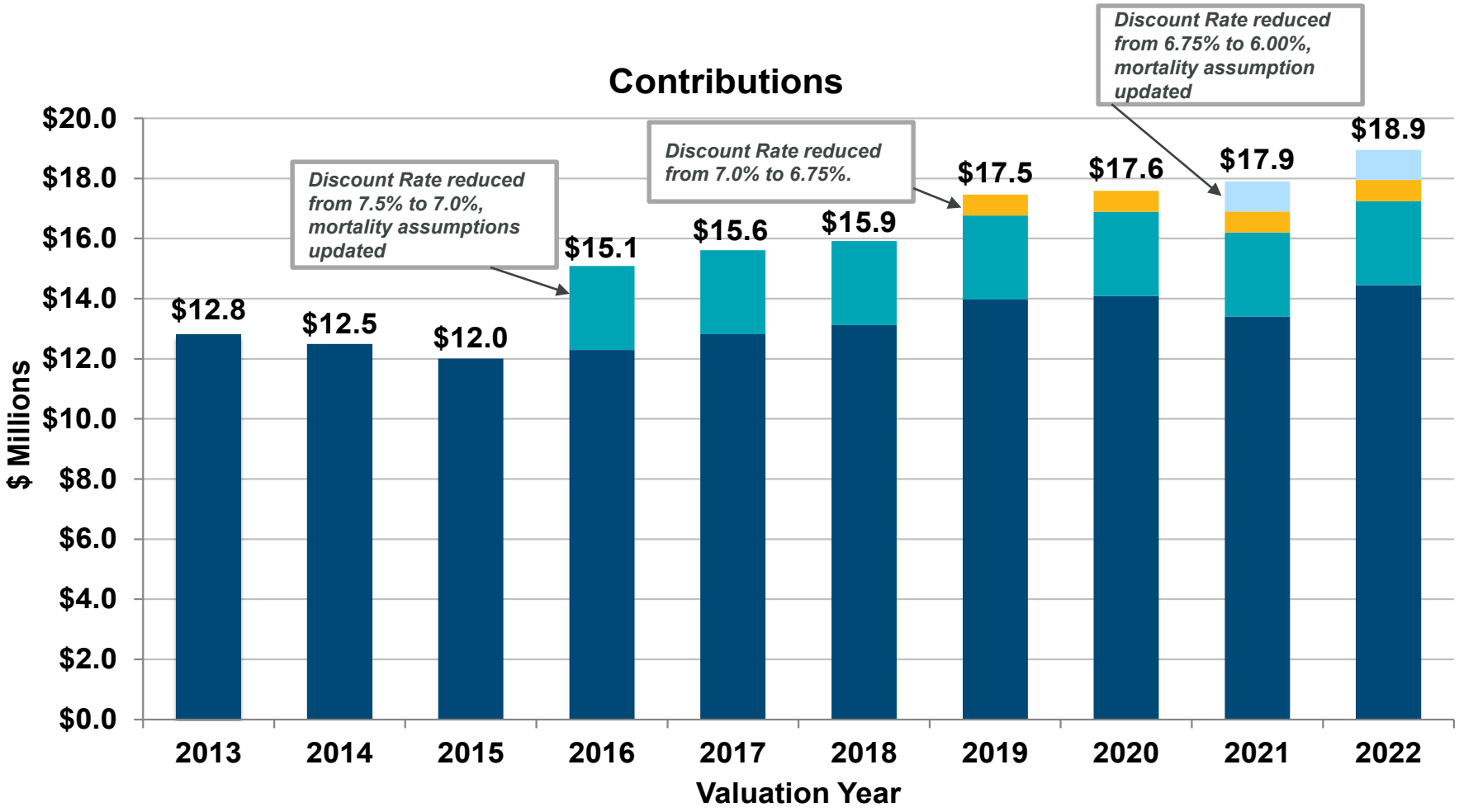
Components of the Contribution

1. ***Normal Cost***
   - **Active members' benefits earned during the year**
   - ***Gradual decreases over time for SDTC since Plan is closed to most new employees***
2. ***Unfunded Actuarial Liability (UAL) Payment***
   - ***New layer each year (payment or credit)***
   - ***Level $***
   - ***Last payment for all layers will be on or before FYE 2038***
3. ***Expected Administrative Expenses***
4. ***Employer Contributions = 1) + 2) + 3) less Employee Contributions***

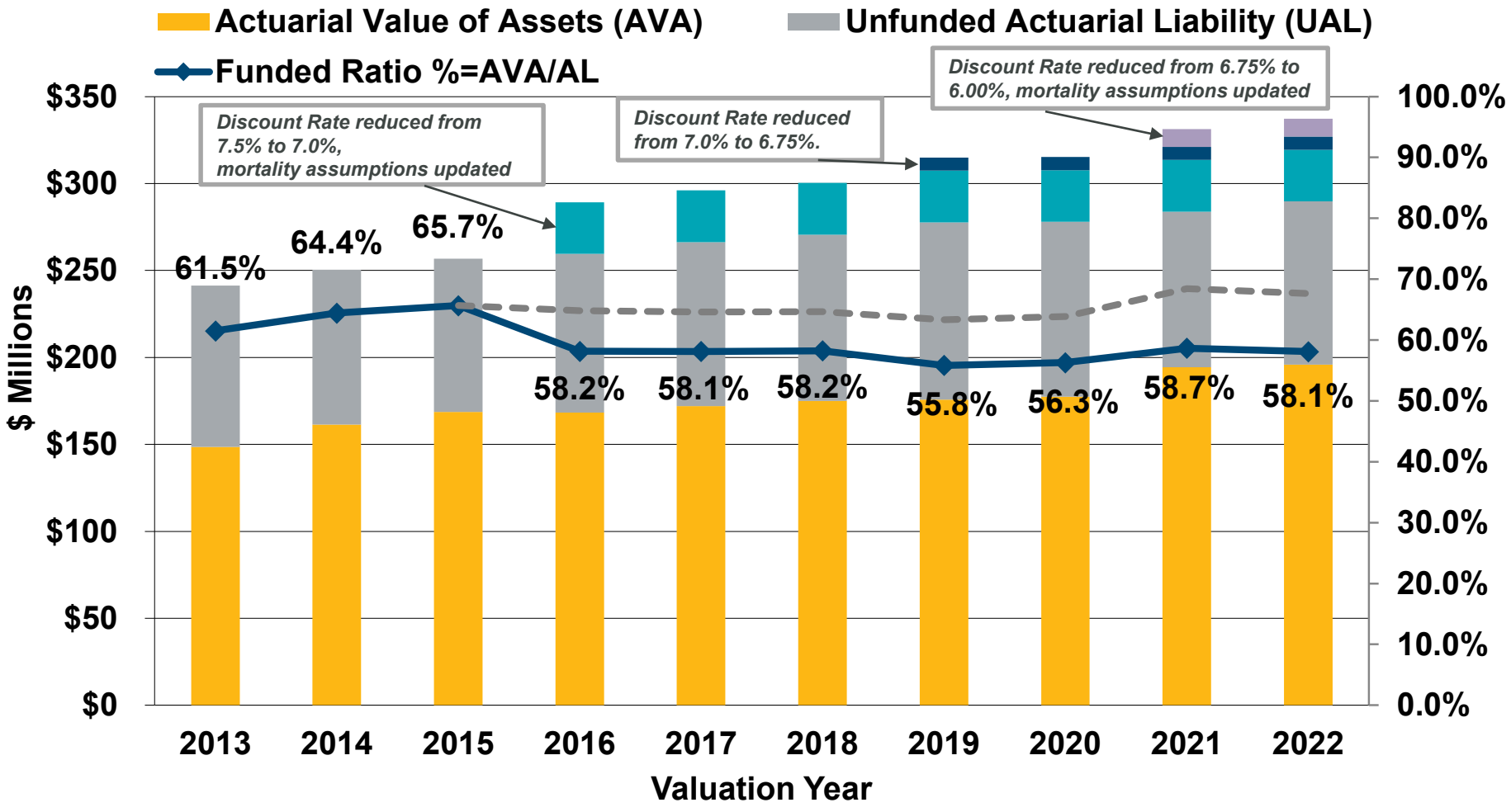
Plan Cost – Changes

Total Contribution Reconciliation		
Fiscal Year 2022-2023		**$ 17,902,000**
Actuarial liability experience		636,000
Actuarial investment experience		
FYE 2022 loss	698,000	
FYE 2018-2021 net deferred gains	(193,000)	
		505,000
Fewer benefits earned by active membership due to closed plan		(150,000)
Demographic, salary and COLA experience, and other miscellaneous factors		53,000
Fiscal Year 2023-2024		**$ 18,946,000**

Plan History – Contributions

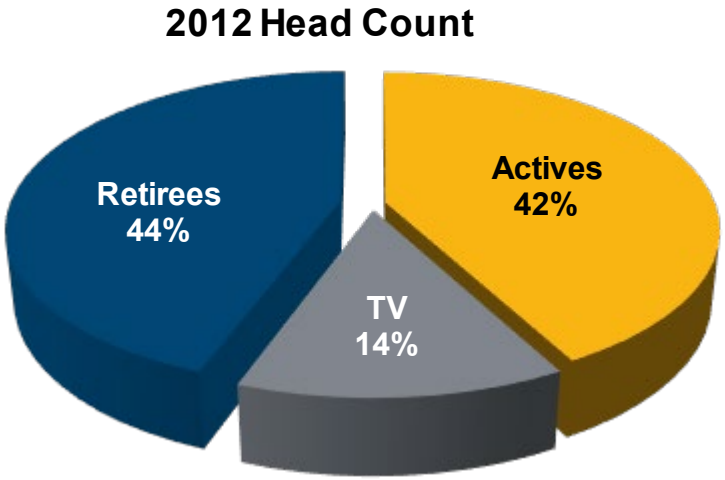


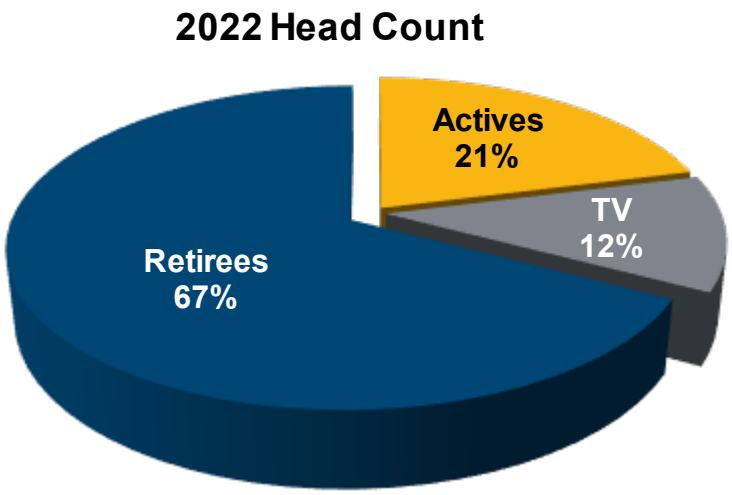
Plan History – Funding

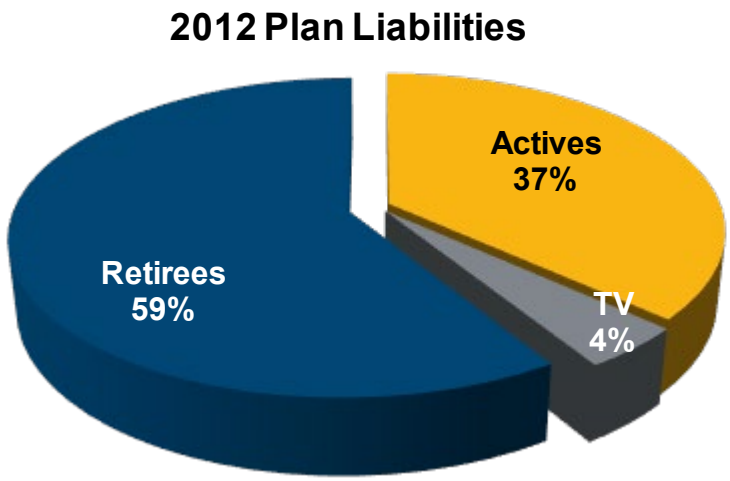


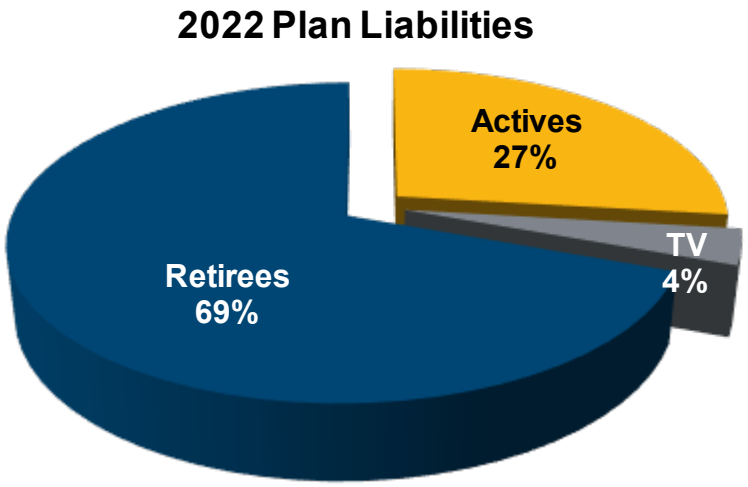
Note: As of July 1, 2022, the Funded Ratio based on the Market Value of Assets is 52.5%.

Membership Composition

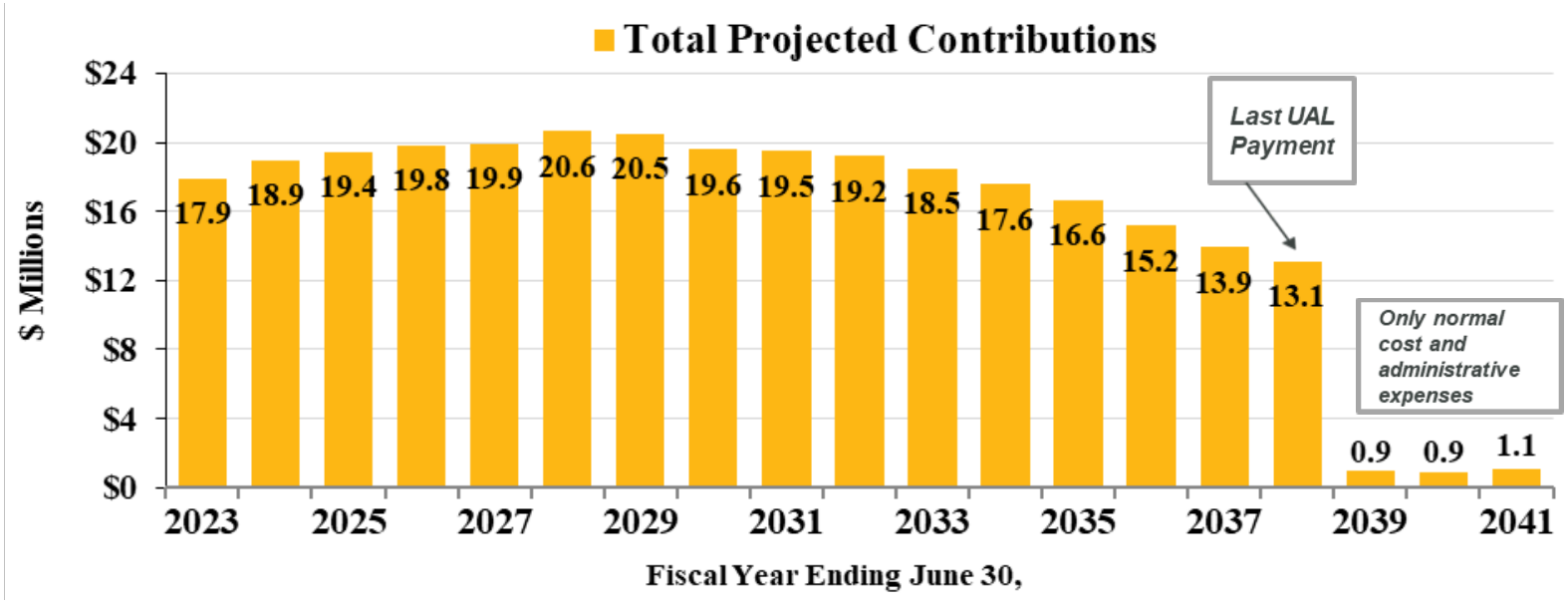






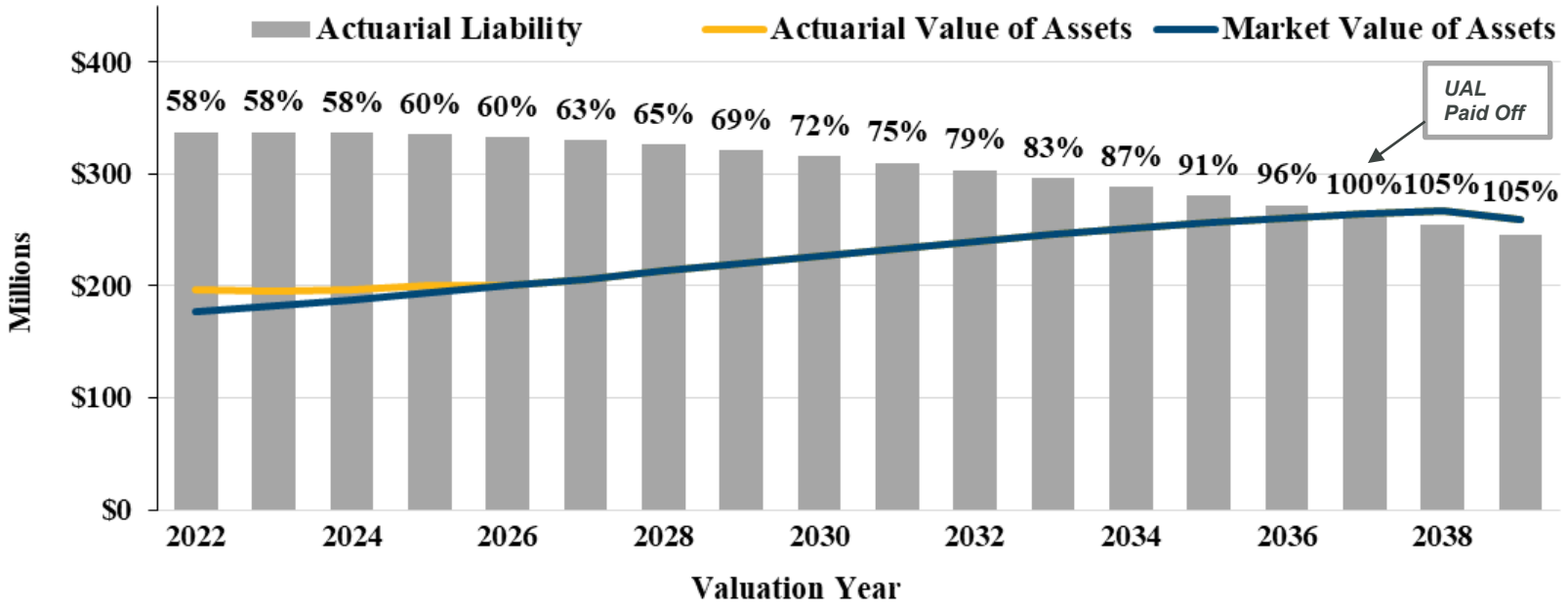


Projected Total Contributions



- Projected contributions have increased due to:
  - Approximately an 11% asset loss for FYE 2022
  - Larger retiree COLAs due to higher inflation
- Total contributions are expected to gradually increase to $20.6 million in FYE 2028 as net deferred asset losses are recognized
- Thereafter, contributions gradually decrease as the number of active members declines

Projected Funded Ratio



- Slow progress is expected in the funded ratio over the next four years as the 2022 investment losses are phased-in to the Actuarial Value of Assets
- The liabilities are expected to decrease over the period while the assets are expected to grow
- The Plan is still projected to be fully funded by 2037

Board Recommendation

- That the MTS Board of Directors to receive the SDTC Employee Retirement Plan's (Plan) Actuarial Valuation as of July 1, 2022, and adopt the pension contribution amount of $18,946,198 for fiscal year 2024.

Reliance

The purpose of this presentation is to discuss the July 1, 2022 Actuarial Valuation Results for the Retirement Plans of San Diego Transit Corporation.

In preparing this presentation, we relied on information (some oral and some written) supplied by the plan administrator. This information includes, but is not limited to, the Plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Cheiron utilizes ProVal, an actuarial valuation application leased from Winklevoss Technologies (WinTech) to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have a basic understanding of ProVal and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this valuation.

Deterministic projections in this presentation were developed using P-Scan, a proprietary tool used to illustrate the impact of changes in assumptions, methods, plan provisions, or actual experience (particularly investment experience) on the future financial status of the System. P-Scan uses standard roll-forward techniques that implicitly assume a stable active population.

Future results may differ significantly from the current results presented herein due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in Plan provisions or applicable law. The future outcomes become increasingly uncertain over time, and therefore the general trends and not the absolute values should be considered in the review of these projections.

This presentation has been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable law and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this presentation. This presentation does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This presentation was prepared exclusively for the Retirement Board and MTS Board for the purposes described herein. Other users of this presentation are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Anne D. Harper, FSA, EA, MAAA
Principal Consulting Actuary

Alice I. Alsberghe, ASA, EA, MAAA
Consulting Actuary

Metropolitan Transit System

REVISED

Agenda Item No. 15

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

City of San Diego Planned Closure of Fifth Avenue (Denis Desmond)

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors approve an advisory statement to the City of San Diego as follows: "In order to operate the highest quality and most reliable service to our passengers, the MTS Board of Directors supports a solution that will maintain transit bus access along Fifth Avenue, north of Market Street. The Board asks the City staff to continue collaboration with MTS to identify transit friendly solutions prior to full implementation of the Promenade Project." ~~take an advisory vote to support maintaining access to Fifth Avenue for MTS buses north of Market Street at all times.~~

Budget Impact

None at this time.

DISCUSSION:

The City of San Diego advised MTS in January 2023 that it intends to implement a permanent closure of Fifth Avenue in Downtown San Diego, from K Street to Broadway, starting at 11:00am or earlier each day. The purpose of this project, the Gaslamp Promenade, is to allow restaurants along Fifth Avenue to add tables and dining in the current street space.

As currently planned, the Gaslamp Promenade would significantly impact two of MTS's busiest, core-network bus lines, Routes 3 and 120. These routes, which carry an average of more than 7,500 passengers per weekday (FY 2019), would need to be re-routed, adding delay and turning movements, and eliminating multiple bus stops. Additionally, MTS Access buses would not be able to serve addresses along Fifth Avenue for federally-mandated ADA paratransit service.

Since 2020, MTS has been accommodating a partial implementation of the Gaslamp Promenade, which is being permitted as a special event and closes Fifth Avenue south of F Street during various hours on some days of the week. This event requires detours and on-

going operational management, and is difficult to communicate to our customers. However, it is the planned extension of this event north to Broadway that introduces the most significant impacts and challenges.

MTS and the City have been engaged in discussions about the Gaslamp Promenade for over two years, with MTS clearly detailing our issues and the resulting degradation in transit service quality. In spite of this, the City is moving ahead to implement the project without accommodations to maintain our existing transit service.

Recommendation

As owner of the right-of-way, the City of San Diego has the authority to operate its streets in the manner it deems best. Therefore, this recommendation would approve an advisory statement to the City of San Diego as follows: "In order to operate the highest quality and most reliable service to our passengers, the MTS Board of Directors supports a solution that will maintain transit bus access along Fifth Avenue, north of Market Street. The Board asks the City staff to continue collaboration with MTS to identify transit friendly solutions prior to full implementation of the Promenade Project." ~~is for an ***advisory vote***, to be forwarded to the City, as follows: "In order to operate the highest quality and most reliable service to our passengers, the MTS Board of Directors supports maintaining transit bus access along Fifth Avenue, north of Market Street, at all times."~~

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Fifth Avenue / Gaslamp Promenade

February 16, 2023

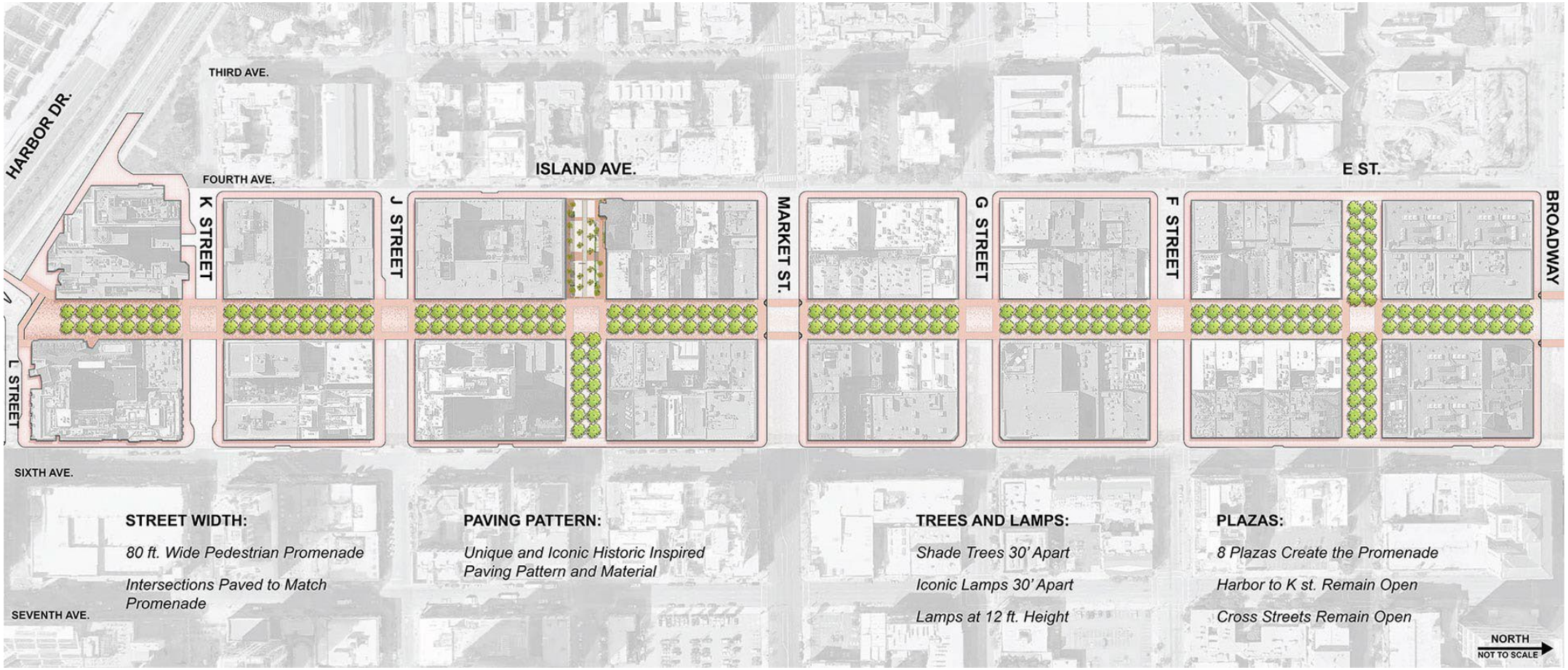
Gaslamp Promenade Project

- Collaboration between the City of San Diego, the Gaslamp Quarter Association and the Downtown Partnership
- Purpose is to create more pedestrian space and allow restaurants to expand footprint into street right-of-way.
- Currently operating under a special event permit at different times and days each week
- Operation of Project as proposed at buildout:
  - Fifth Ave closed to vehicles (and open only to pedestrians) from approximately 11:00 a.m. – 3:00 a.m. Monday through Sunday, from Broadway to K Street.
  - Fifth Avenue will be open for vehicular traffic from approximately 3:00 a.m. – 11:00 a.m. Monday through Sunday, from Broadway to K Street.
  - Fifth Avenue from L Street and Harbor Avenue to K Street to always remain open for vehicular traffic (except for special events).
  - Cross Streets to remain open at all times.

"Introducing the Gaslamp Promenade, developed to give public space back to the people of San Diego and all who visit America's Finest City. The Gaslamp Promenade will reinvent Fifth Avenue into eight distinctive plazas (from L Street to Broadway), fostering community by building a place for social connections, conversation, dining and entertainment. This promenade will be a vital part of what makes San Diego's future great."

— Michael Trimble, Executive Director, Gaslamp Quarter Association

Project at Buildout



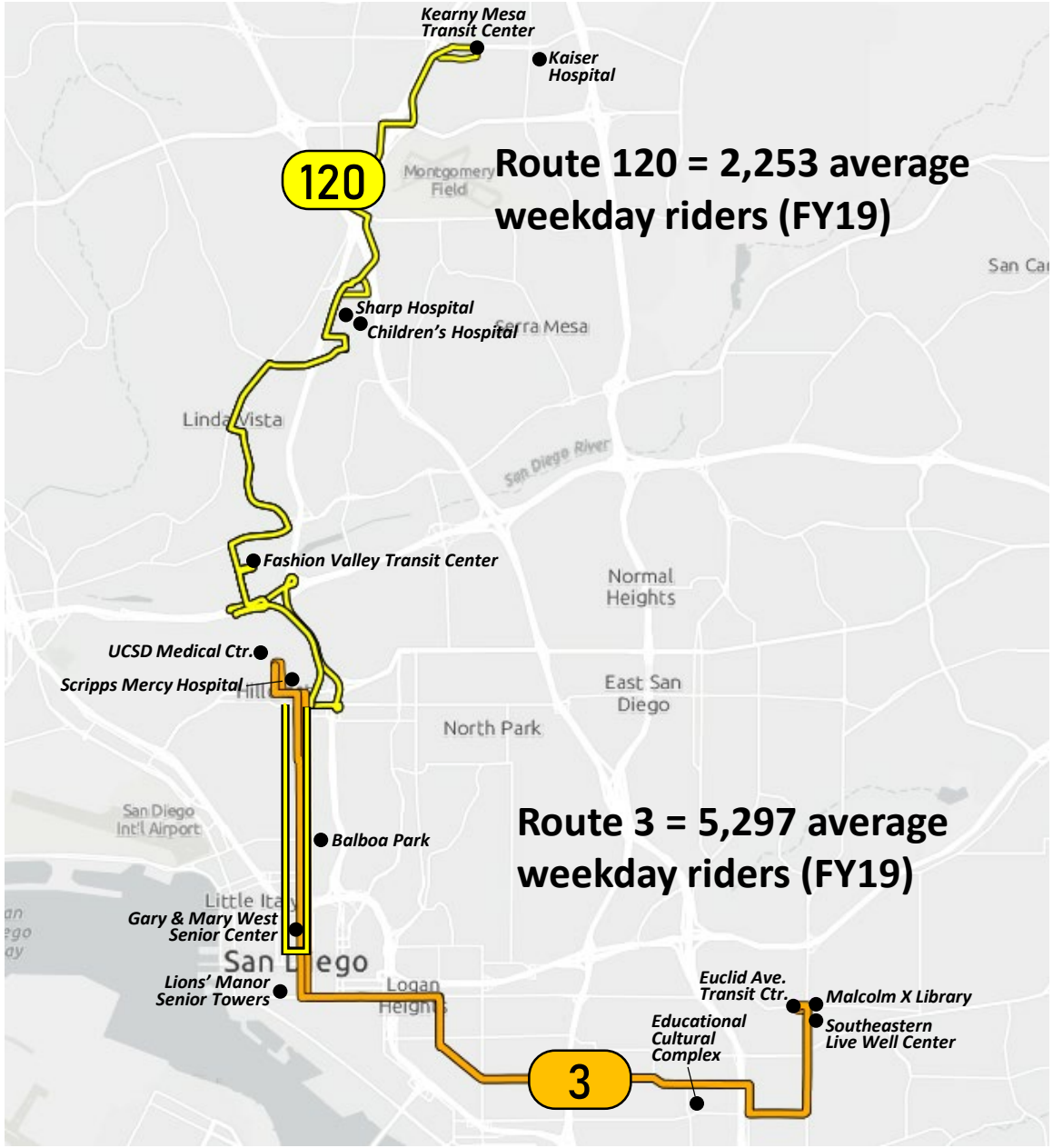
Street Access

- Street will be open before 11 a.m. so delivery trucks can access businesses.
- Fixed bollards will be manually installed each day to block 5th Ave. traffic.
- A fire lane will be kept clear to allow emergency vehicles through.
- Gates or retractable bollards may allow buses to use fire lane, but project doesn't have funding for installation or maintenance.

Challenge for Transit Operations with the Project

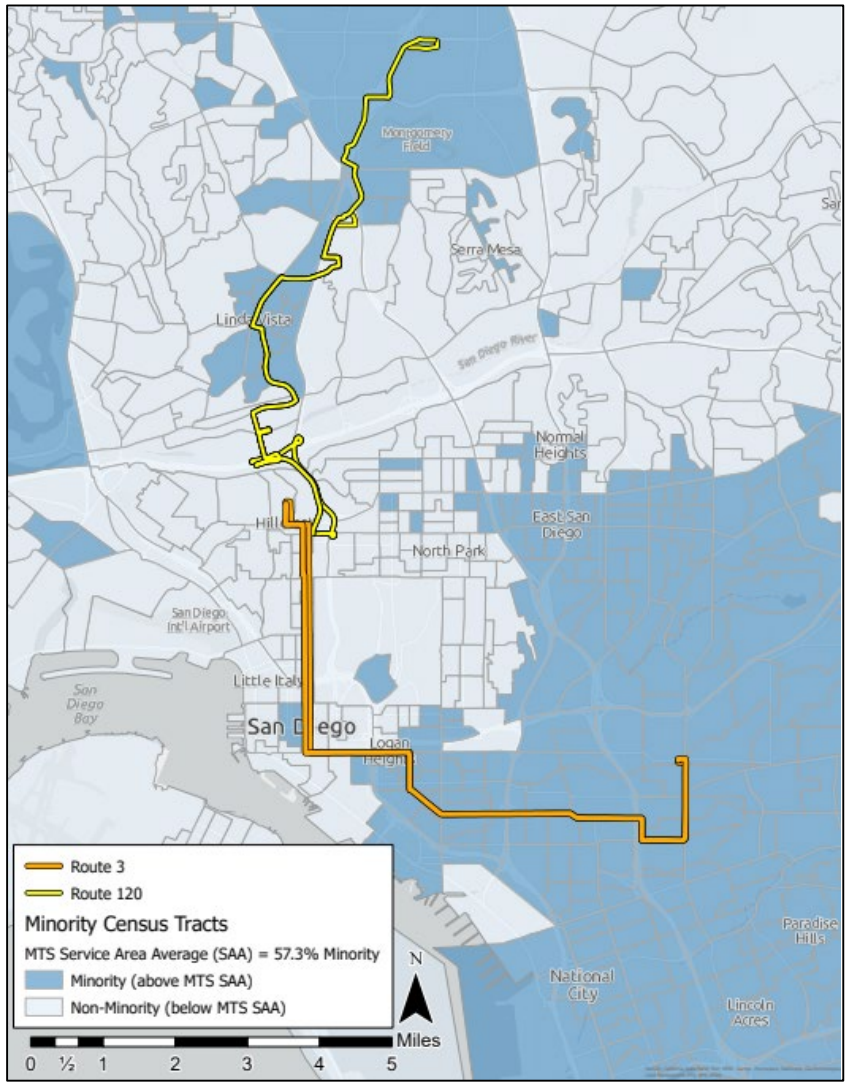
- Bus Routes 3 and 120 and MTS Access impacted by closure.
- MTS expressed opposition to the proposed project since 2020, due to negative service impacts – hope was to maintain transit access to Fifth Avenue north of Market
- City informed MTS that it would move ahead with the closures

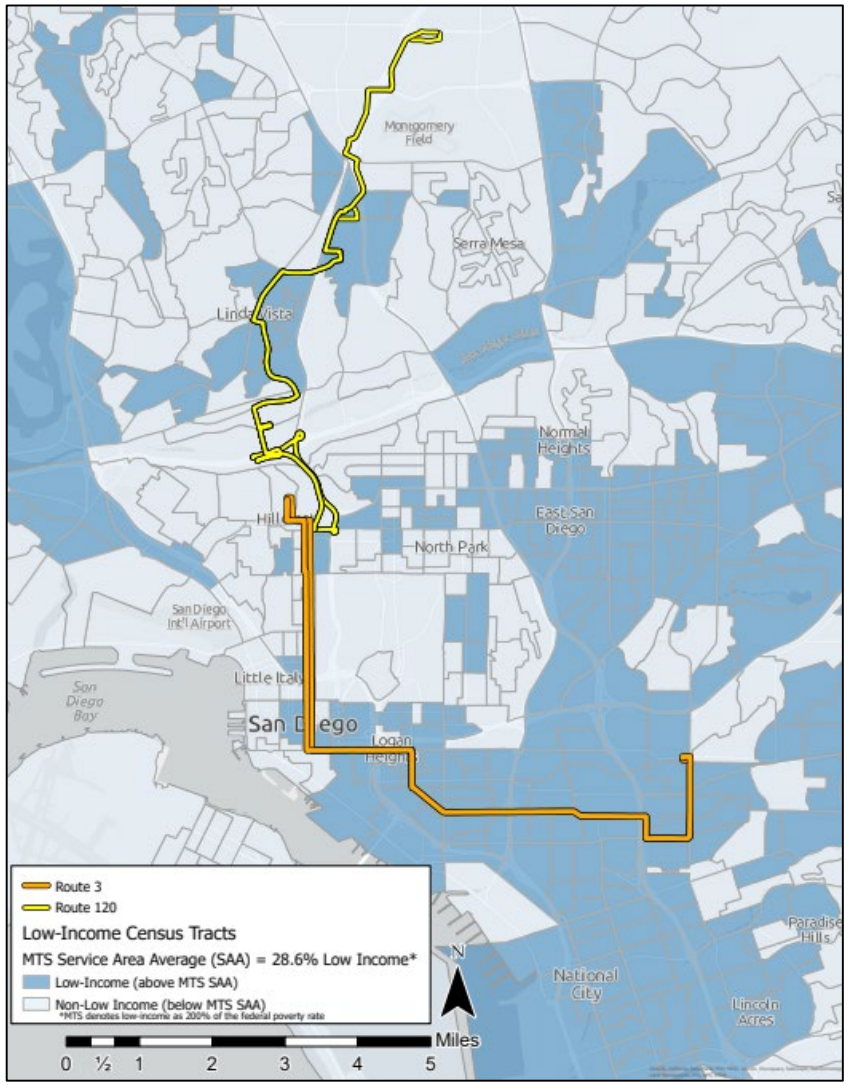
- Route 3 operates between Euclid Ave. Transit Center and UCSD Medical Ctr.
  - Serves: Lincoln Park, Mountain View, Memorial (Ocean View Blvd.), Logan Heights, Sherman Heights, Downtown, Bankers Hill (4th/5th Aves.), Hillcrest.
  - Access for southeastern communities to jobs, schools, medical care, and shopping.
  - Serves regional senior center in Downtown and new Live Well Center on Euclid.
  - Transfers with Blue & Orange Trolley Lines
- Route 120 operates between Downtown and Kearny Mesa Transit Center as a Limited Stop route.
  - Serves: Downtown, Bankers Hill (4th/5th Aves.), Hillcrest, Fashion valley, Linda Vista, Kearny Mesa.
  - Access for central communities to jobs, shopping, and medical care.
  - Transfers with all Trolley lines.

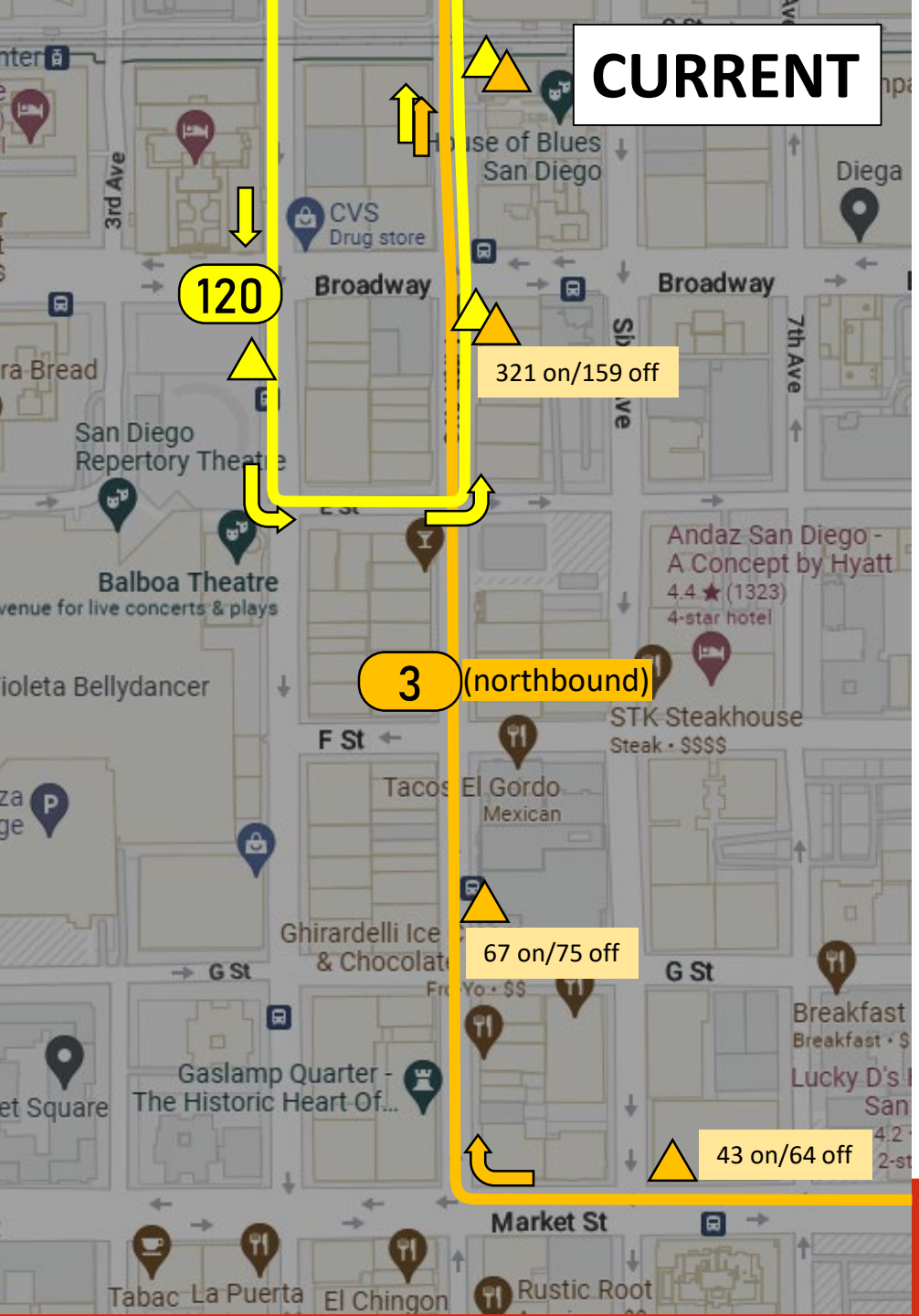


Disadvantaged populations rely on Routes 3 & 120, which:

- Serve an area that is **63% minority** and **38% low-income**, much higher than the MTS area overall
- Serve <u>five</u> regional hospitals, connecting vulnerable communities to healthcare and providing access to jobs for essential workers
- Connect seniors to services, shopping, and healthcare
- Transport students to school, recreation, and job opportunities.

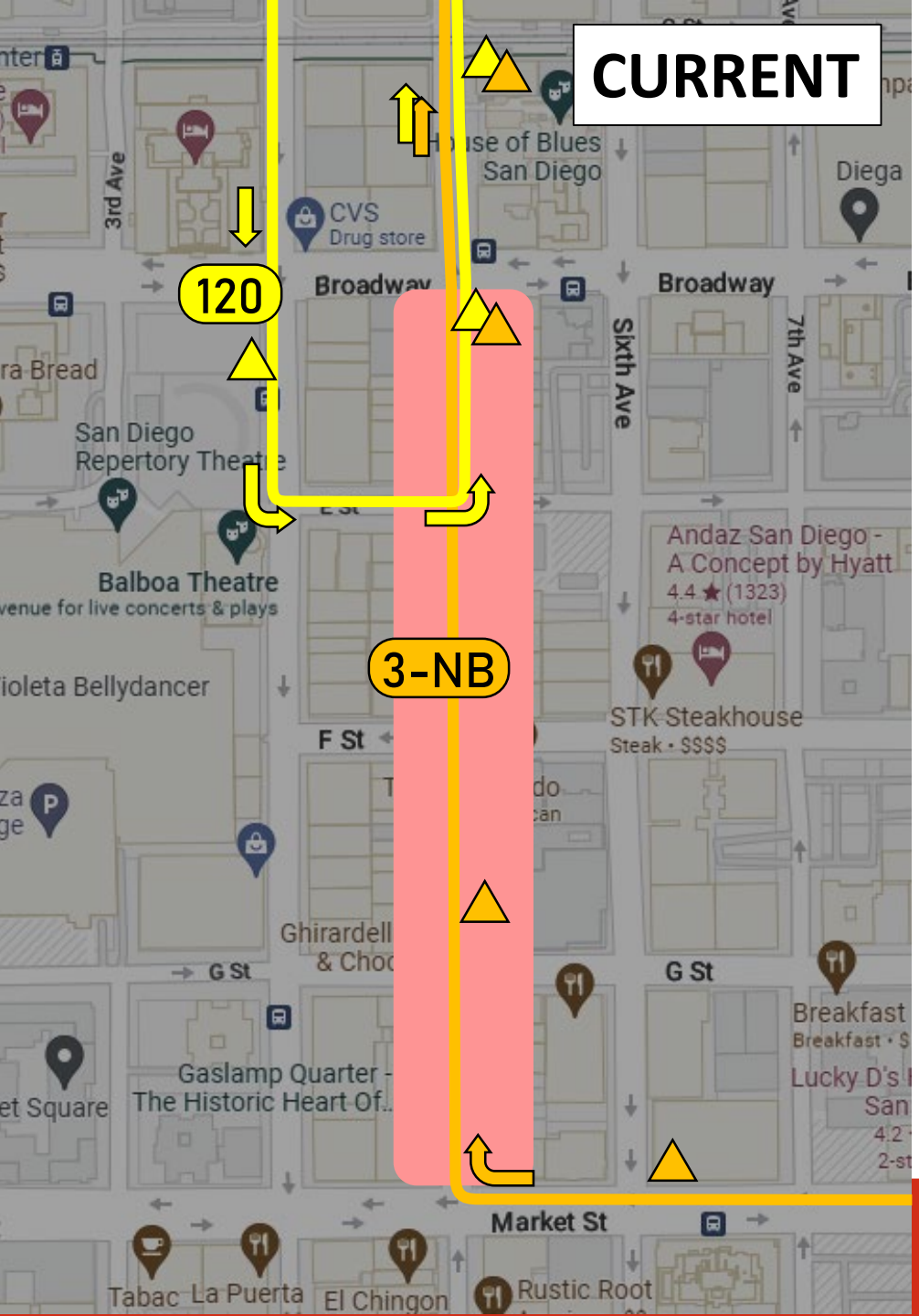






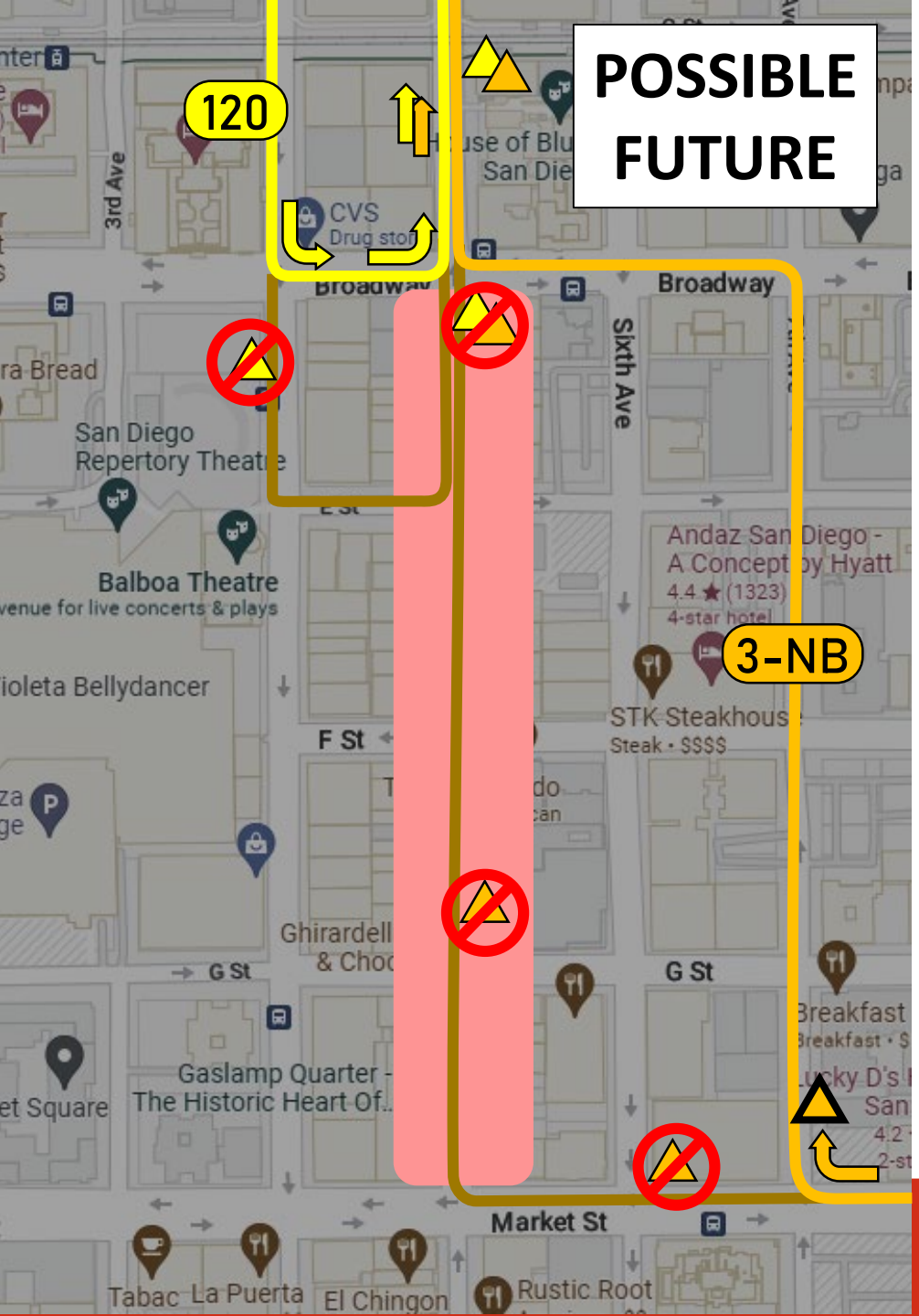
Gaslamp Routings

- Route 3: northbound Route 3 travels east on Market St. from Sherman Heights, then right on 5th Ave. up to Hillcrest.
- Southbound Route 3 uses 4th Ave. and is unaffected.
- Route 120: southbound Route 120 travels south on 4th Ave. from Hillcrest and ends at a terminal at Horton Plaza (just south of Broadway). Northbound Route 120 uses E Street to access 5th Ave., then continues north on 5th Ave. towards Hillcrest.



Gaslamp Project

- Closes 4 blocks of 5th Ave. used by northbound Route 3.
- Eliminates Route 120 turnaround via E Street.



Potential re-routes

- Route 3: utilize 7th Ave. instead of 5th Ave. between Market St. and Broadway.
  - Removes three bus stops from service.
  - Add two turns at busy Broadway intersections.
  - Left turn at 7th/Broadway requires physical modifications.
  - WB Broadway already busy with Routes 2, 7, 215, 225, 235, 901, 923, and 992. **Route 3 would add up to five more buses/hour.**
  - Right turn at Fifth Ave. would conflict with existing bus stop, and **right turn would cause delays to all routes.**
- Route 120: shorten route to use Broadway instead of E Street.
  - Removes terminal and Broadway transfers.
  - Requires physical modifications at both Broadway intersections.

How could Fifth Avenue closure impact rider experience?

Added travel time and lower reliability

- Added turns:
  - through-movements allow buses to continue forward at regular speed during the green phase of a traffic signal.
  - Turns require buses to queue behind other turning vehicles and wait for pedestrians, which reduces the amount of green time they can use.

Reduced access

- No more service to Gaslamp Quarter along 5th Ave.
- Gaslamp workers and resident seniors have 2+ added blocks to access transit


5th Ave. and heart of the Gaslamp
Alternate Gaslamp Quarter Stop location – 7th Avenue
MARKET ST.
EXIT
Google

Alternatives

Current special event is undesirable because it forces detour for Route 3 and is inconsistent in days and times, confusing riders.

- Close Fifth Ave. south of Market Street only.
- Use signage, striping, and enforcement to restrict access, except for buses and emergency vehicles.
- Use gates or retractable bollards to allow buses and emergency vehicles through.
- Continue dialogue with City staff and identify a transit solution prior to implementation.

Staff Recommendation

Approve an advisory statement to the City of San Diego as follows:

“In order to operate the highest quality and most reliable service to our passengers, the MTS Board of Directors supports a solution that will maintain transit bus access along Fifth Avenue, north of Market Street. The Board asks the City staff to continue collaboration with MTS to identify transit friendly solutions prior to full implementation of the Promenade Project.”

Questions?

February 16, 2023

Circulate San Diego
233 A Street, Suite 206
San Diego, CA 92101
(619) 544-9255
@CirculateSD
www.circulatesd.org

February 15, 2023

Chairperson Nathan Fletcher and the MTS Board
1255 Imperial Ave, Suite 1000
San Diego, CA 92101

RE: Support for Gaslamp Promenade on Fifth Avenue

Dear MTS Board:

On behalf of Circulate San Diego, whose mission is to create excellent mobility choices and vibrant, healthy neighborhoods, I urge the MTS Board not to oppose the Gaslamp Promenade on Fifth Avenue. The Gaslamp Promenade would promote pedestrian safety, economic activity, and cultural vibrance in one of San Diego's most iconic neighborhoods.

Concerns from MTS staff about the efficiency of the bus system are understandable. As articulated in our *Fast Bus!* report, Circulate also believes in a fast reliable bus network. However, that network need not come at the expense of vibrant pedestrian spaces.

In fact, pedestrianized spaces work in tandem with better transit service. A 2009 study of showed that MTS ridership was higher where walkability was better.[1] Patrons of restaurants and entertainment venues in the Gaslamp will be more likely to ride the bus if the Gaslamp Promenade is completed.

The MTS board should reject the staff proposal to oppose the Fifth Avenue Promenade. They should also direct staff to identify appropriate mitigation and alternative routing for Bus Routes 3 and 120, which currently run along Fifth Avenue. While these solutions may still impact transit service, they are worthwhile when considering the benefits that a pedestrianized Gaslamp will bring to the region.

Sincerely,

Jesse O'Sullivan
Policy Counsel, Circulate San Diego

[1] Sherry Ryan and Lawrence Frank, "Pedestrian Environments and Transit Ridership," Journal of Public Transportation, Vol. 12, Issue 1, p. 39 (2009), available at https://www.sciencedirect.com/science/article/pii/S1077291X22002429.

WRITTEN PUBLIC COMMENT

DOWNTOWN SAN DIEGO PARTNERSHIP

Gaslamp Quarter

February 15, 2023

Supervisor Nathan Fletcher
Metropolitan Transportation System
Board of Directors, Chair

RE: Item # 15: City of San Diego Planned Closure of Fifth Avenue

Dear Supervisor Fletcher,

The mission of the Downtown San Diego Partnership is to promote an economically prosperous and culturally vibrant urban center. Furthermore, The Gaslamp Quarter Association, representing more than 400 businesses, is the second oldest Business Improvement District in the City of San Diego and is contracted by the City to manage and promote the Gaslamp Quarter National Historic District. We are proud of our regional impact on the economy.

For over three years, the Downtown San Diego Partnership and the Gaslamp Quarter Association have been working collaboratively with the City of San Diego, community stakeholders and businesses on prioritizing the transformative project in the heart of San Diego known as the "Gaslamp Promenade." The project as it stands seeks to close 5th Avenue from K Street to Broadway twelve hours a day, seven days a week, 365 days a year beginning in the new fiscal year.

An opportunity exists to transform one of Downtown's greatest destinations, the Gaslamp Quarter, into an even more popular pedestrian corridor. The removal of cars will help create a walkable pedestrian-friendly environment that can be enjoyed by residents and visitors alike. Numerous studies have indicated that placing a greater emphasis on walkability can greatly enhance economic development and safety. Removing cars creates more space for seating, a greater capacity for pedestrian traffic, and reduces the potential for accidents.

While we appreciate MTS staff and their desire to balance the region's transportation's needs – each of our organizations are calling for greater collaboration as the goals of safety, accessibility, and addressing our regions Climate Action Plan goals are all aligned. We feel that this public enhancement will be just that and we are asking for MTS to be a collaborative partner and seek alternative solutions as we look to the future of mobility in the Downtown urban core.

Sincerely,

Michael Trimble
Executive Director
Gaslamp Quarter Association

Betsy Brennan
President & CEO
Downtown San Diego Partnership

THE CITY OF SAN DIEGO

TODD GLORIA

MAYOR

February 15, 2023

Sharon Cooney
Chief Executive Officer
San Diego Metropolitan Transit System
1255 Imperial Avenue
San Diego, CA 92101

RE: Item 15: City of San Diego Planned Closure of Fifth Avenue

Ms. Cooney,

As Mayor of the City of San Diego, I am writing to express my concerns regarding Item 15 – an advisory vote to support maintaining access to Fifth Avenue for MTS buses north of Market Street at all times– on the February 16, 2023 agenda. I was disappointed to learn that this discussion was being brought to the MTS Board of Directors rather than working productively with the City of San Diego on ways to address the agency's concerns with the City, and regret that I am unable to attend this meeting in person.

As you know, the goal of reimagining the Gaslamp Quarter through a permanent pedestrian promenade has been envisioned by Downtown community stakeholders, including the Gaslamp Quarter Association, and prominent community leaders since at least 2019. This project aims to revitalize Fifth Avenue through closing seven blocks along Fifth Avenue to car traffic and creating a safe community space for pedestrians to enjoy one of our most vibrant and walkable commercial districts. The project employs placemaking designs, such as brick paving, signature lighting, shading through trees, patio enclosure, and visual art pieces and installations.

Throughout the COVID-19 pandemic our region has faced a number of unforeseen challenges and obstacles. The pandemic also brought unexpected new opportunities, such as new policies to expand businesses, dining, entertainment, and safe pedestrian-centric spaces into the public right-of-way like never before. Over the past two years, we've seen that the vison of the Gaslamp Promenade can and will be an incredible success for Downtown and our region as a whole.

The City of San Diego intends to make permanent the temporary improvements we have realized in the Gaslamp Quarter by installing permanent bollards this summer and prioritizing pedestrian activation of the area, all while we continue to make progress on bringing to fruition the long-term goal of a fully redeveloped, revitalized, and amazing Gaslamp Quarter Pedestrian Promenade from Broadway to K Street. We share the goal of reducing any impacts to transit on Fifth Avenue in the Gaslamp Quarter, but recognize that building more walkable communities can actually have tremendous benefits to transit and its users and urge the staff at MTS to make clear what improvements can be made within the scope of our City project to address your concerns.

While I am committed to delivering the long-awaited Gaslamp Quarter Pedestrian Promenade project on Fifth Avenue despite potential opposition form MTS, I am truly hopeful that we can leverage this moment to begin meaningful collaboration between our organizations. I understand that making such significant, pedestrian-focused changes to Fifth Avenue presents new challenges to MTS' operations, but I am confident that by working together we can ensure that both this project and MTS's vital transit operations in the Gaslamp Quarter are successful.

Sincerely,

TODD GLORIA
Mayor
City of San Diego

Metropolitan Transit System

Agenda Item No. 16

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

MTS Safety Performance Annual Review (Fabeann Soberg and Jared Garcia)

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors approve updates to the Public Transportation Agency Safety Plan (PTASP).

Budget Impact

None.

DISCUSSION:

On July 19, 2018, the Federal Transit Administration (FTA) published Final Rule (49 CFR Part 673), which requires public transportation agencies who receive Federal funding to certify that it has established and implemented a comprehensive Public Transportation Agency Safety Plan (PTASP). Public transportation agencies were required to complete the PTASP by July 20, 2021. On July 30, 2020, the MTS Board of Directors approved the MTS Agency Safety Plan.

On November 15, 2021, President Biden signed into law the Bipartisan Infrastructure Law. The Bipartisan Infrastructure Law amends FTA's safety program at 49 U.S.C. § 5329(d) (Section 5329(d)) by adding to the PTASP requirements. These changes include the following requirements:

1) Establish a joint labor-management Safety Committee(s) under the PTASP regulation (49 CFR Part 673). Once established, the Safety Committee(s) must approve the PTASP, followed by the Board of Directors (or equivalent entity).
2) Use a 3-year rolling average of the data submitted to the National Transit Database (NTD) under 49 U.S.C. § 5335 in order to set performance targets.
3) Implement strategies to minimize the exposure of the public, personnel, and property to hazards and unsafe conditions, as well as ensure consistency with guidelines from the Centers for Disease Control and Prevention or a State health authority in order to minimize exposure to infectious diseases.

4) Establish measures to mitigate assaults on transit workers, which includes the deployment of assault mitigation infrastructure and technology on buses, as well as barriers to restrict the unwanted entry of individuals and objects into the workstations of bus operators.
5) Ensure operations and maintenance personnel and personnel directly responsible for safety complete a safety training program, receive continuing safety education and training, and receive de-escalation training.

49 CFR Part 673 requires transit agencies to report annually to its Board of Directors on the status of the agency's PTASP, established performance targets, and any modifications made to the PTASP in the preceding year. The Rail Safety Plan, which is a part of the MTS Agency Safety Plan, was previously revised in January 2022 to reflect the opening of the Mid-Coast Extension.

Staff will provide a report at the Board meeting.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. MTS Agency Safety Plan
B. MTS Infectious Disease Preparedness and Response Plan

Metropolitan Transit System

Agency Safety Plan

(Public Transportation Agency Plan pursuant to 49 CFR 673)

SAN DIEGO METROPLITAN TRANSIT SYSTEM
SAN DIEGO TROLLEY, INC.
SAN DIEGO TRANSIT CORP.

Table of Contents

MTS Agency Safety Plan
Approvals

The approvals for the updated MTS Agency Safety Plan are as follows:

I. Approval by the Accountable Executive for the MTS Agency:

_____ 2/16/23

Sharon Cooney — Date
Chief Executive Officer
San Diego Metropolitan Transit System

II. Approval by the MTS Board of Directors:

_____ 2/16/23

Nathan Fletcher — Date
Chair of the Board of Directors
San Diego Metropolitan Transit System

MTS Agency Safety Plan
Overview

On July 19, 2018, Federal Transit Administration (FTA) published the Public Transportation Agency Safety Plan (PTASP) Final Rule (49 C.F.R. Part 673), which requires certain operators of public transportation systems that receive Federal financial assistance (49 U.S.C. § 5307) to develop a PTASP.

The PTASP Final Rule intends to improve public transportation safety by implementing an approach that provides an effective and proactive way to manage safety risks. Transit agencies must develop and implement safety plans that establish processes and procedures to the support the implementation of Safety Management System (SMS). SMS is a comprehensive, collaborative approach to managing safety and addressing safety risks.

Specifically, the PTASP Final Rule requires the following minimum standards to be included in safety plans: the identification, assessment, and mitigation of risks and strategies to minimize exposure to hazards, a safety training program, safety performance targets, and a process and timeline for conducting an annual review and update of the safety plan.

The following MTS Agency Safety Plan has been developed to comply with the PTASP Final Rule.

MTS Agency Safety Plan
SMS Policy Statement

The San Diego Metropolitan Transit System (MTS) has established this SMS Policy Statement to emphasize its overall commitment to the safety of our passengers, our operators, our staff and the general public. This SMS Policy Statement provides direction for MTS's safety program, which applies to every facet of MTS operations.

The management of safety is MTS's highest priority. MTS is committed to safety throughout the entire organization, from the Board of Directors to the front line employees.

MTS will ensure that all transit service delivery activities take place under a balanced allocation of organizational resources to achieve the highest level of safety performance and meeting established standards. MTS is committed to developing, implementing, maintaining, and constantly improving our processes. As evidence of our commitment to safety, every MTS policy shall be guided by and every employee shall perform their duties in furtherance of the following safety goals:

- Supporting safety through the provision of appropriate resources that fosters a safety culture;
- Integrating the management of safety among the primary responsibilities of all managers and employees;
- Clearly defining managers and employees' responsibilities in relation to the performance of our SMS;
- Conducting hazard identification and evaluating safety risks, which includes an employee safety reporting program, in order to eliminate or mitigate safety risks;
- Ensuring that no action will be taken against any employee who discloses a safety concern through the employee safety reporting program, unless disclosure indicates, beyond any reasonable doubt, an illegal act, gross negligence, or a deliberate or willful disregard of regulations or procedures;
- Complying with, and wherever possible exceeding, legislative and regulatory requirements and standards;
- Ensuring that sufficiently skilled and trained employees are available to implement safety management processes;
- Ensuring that all staff are provided with adequate and appropriate safety-related information and training, are competent in safety management matters, and are assigned only tasks for which they are adequately trained;
- Establishing and measuring our safety performance against realistic and data-driven safety performance indicators and safety performance targets;

- Continually improving our safety performance by ensuring appropriate safety management action is taken and is effective; and
- Ensuring externally supplied systems and services that support our operations are delivered to meet our safety performance standards.

Sharon Cooney
Chief Executive Officer
San Diego Metropolitan Transit System

7/30/2020
Date

Nathan Fletcher
Chair of Board of Directors
San Diego Metropolitan Transit System

7/30/2020
Date

MTS Agency Safety Plan
Safety Responsibilities – Description

Each MTS employee is required to carry out specific safety responsibilities consistent with their position. Safety does not begin and end with MTS' front-line employees. All levels of management are accountable for the delivery of safe transit service and safe work environments. Employees must have a clear definition of their individual responsibilities relative to the Safety Management System (SMS). The information provided below describes the safety responsibilities of employees and the applicable reporting structure.

Position:	MTS Agency Safety Plan Designations:	Reports to:	SMS Responsibilities:
Board of Directors		General Public	Approves the SMS Policy Statement and Agency Safety Plan; Promotes the Safety Management Policy Objectives to External Stakeholders and the General Public; and Provides Overall Accountabilitiy of and Support to Chief Executive Officer for Addressing the Objectives of the SMS Policy.

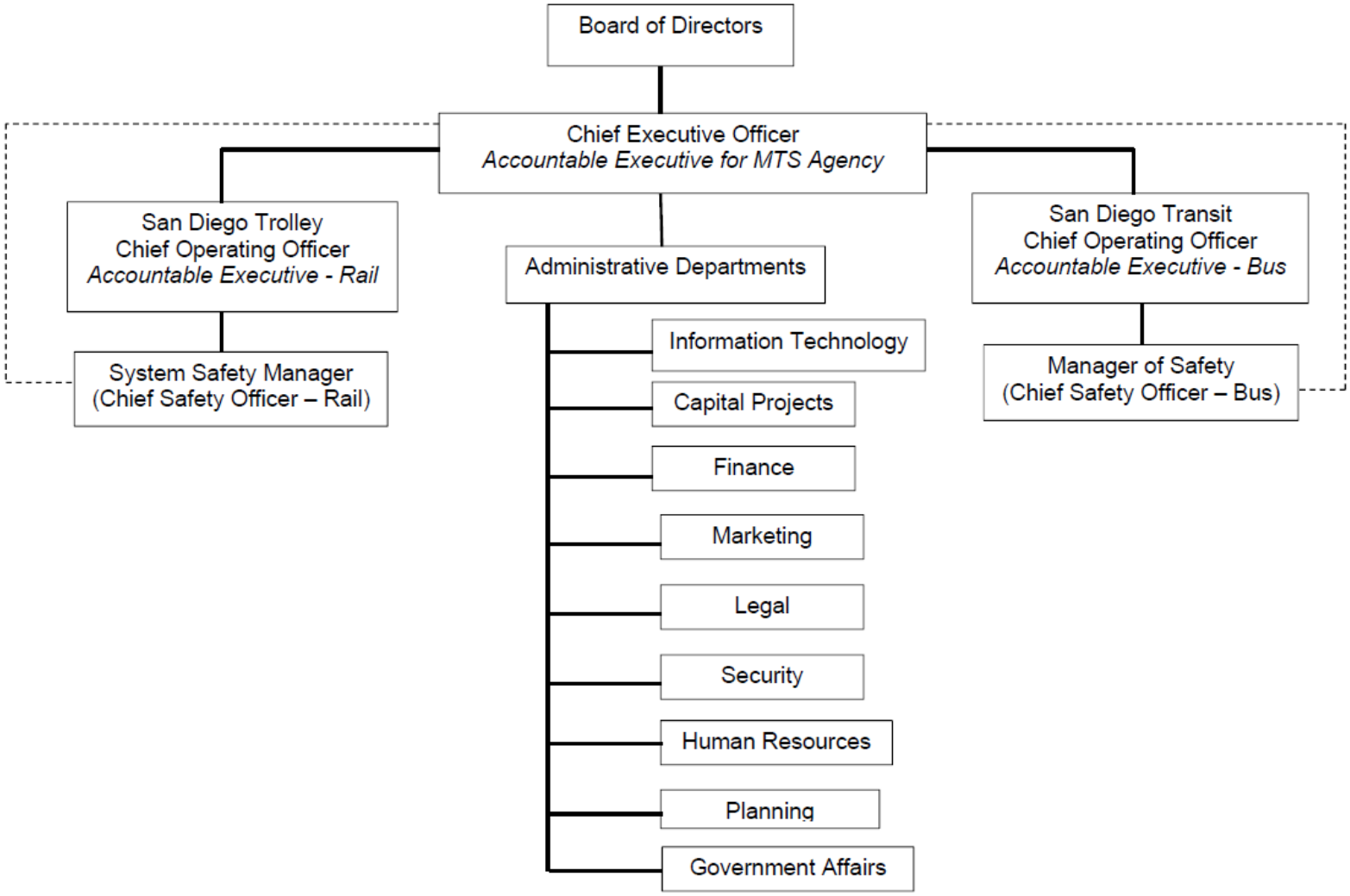
Position:	MTS Agency Safety Plan Designations:	Reports to:	SMS Responsibilities:
Chief Executive Officer	Board of Directors Designates the Chief Executive Officer as the **Accountable Executive for the MTS Agency**	Board of Directors	Develops and Upholds Safety Objectives; Ensures Safety Objectives are Prioritized in Budget Planning Process and Allocation of Resources; Directs the Capital and Financial Resources Needed to Maintain the Agency Safety Plan; Informs and Educates the Board of Directors on Implementation of Safety Objectives and Identification of Significant Safety Risks; Promotes the SMS Policy and a Positive Safety Culture throughout the Agency; and Retains the Ultimate Responsibility for the Performance of SMS and Approves the MTS Agency Safety Plan.
General Counsel		Chief Executive Officer; and Board of Directors	Advises and Recommends Actions to Reduce Legal Risks and Liabilities; and Oversees Risk, Workers' Compensation and Insurance.
Chief Operating Officer of Transit	Chief Executivie Officer designates the Chief Operating Officer of Transit as the **Accountable Executive for Transit**	Chief Executive Officer	Manages Day to Day Operations and Maintenance for Transit; Directs the Implementation of SMS for Transit; Establishes SMS as a Core Value for Transit; and Evaluates the Performance of SMS for Transit.

Position:	MTS Agency Safety Plan Designations:	Reports to:	SMS Responsibilities:
Chief Operating Officer of Trolley	Chief Executive Officer designates the Chief Operating Officer of Trolley as the **Accountable Executive for Trolley**	Chief Executive Officer	Manages Day to Day Operations and Maintenance for Trolley; Directs the Implementation of SMS for Trolley; Establishes SMS as a Core Value for Trolley; and Evaluates the Performance of SMS for Trolley.
Safety Manager of Bus	Chief Executive Officer designates the System Safety Manager of Bus as the **Chief Safety Officer for Bus**	Chief Operating Officer – Transit; and Chief Executive Officer as necessary	Coordinates Implementation and Operation of SMS for Bus.
Safety Manager of Trolley	Chief Executive Officer designates the Safety Manager of Trolley as the **Chief Safety Officer for Trolley**	Chief Operating Officer – Trolley; and Chief Executive Officer as necessary	Coordinates Implementation and Operation of SMS for Trolley.
Chief Financial Officer		Chief Executive Officer	Oversees Budgeting and Procurement of All Goods and Services Necessary for Implementation of Safety Objectives.
Director of Transit Enforcement/Security		Chief Executive Officer	Oversees Security and Law Enforcement Efforts In Preparation for and in Response to Safety and Security Incidents.
Director of Human Resources and Labor Relations		Chief Executive Officer	Oversees the Hiring and Employment of Qualified Employees that Demonstrate Safety Effectiveness.
Director of Capital Projects		Chief Executive Officer	Oversees Implementation of Design and Construction Projects to Address Identified Safety Action Items.

Position:	MTS Agency Safety Plan Designations:	Reports to:	SMS Responsibilities:
Director of Marketing and Communications		Chief Executive Officer	Oversees the Communication and Distribution of Information Regarding Safety and Security Practices to the Agency and the Public.
Director of Planning		Chief Executive Officer	Oversees Internal Planning Efforts and Coordinates with External Stakeholders to Ensure Safety Concerns are Addressed in Design and Location of Facilities and Transit Amenities.
Manager of Government Affairs		Chief Exeuctive Officer	Oversees the Legislative and Lobbying Efforts to Facilitate Identified Safety Goals.
Director of Information Technology		Chief Executive Officer	Oversees the Management of Technology and Computer Systems that Support SMS.
Environmental Health and Safety Specialist		Chief Operating Officer – Transit and Chief Operating Officer – Trolley, as applicable	Oversees Compliance with Environmental and Occupational Health and Safety Regulations.
Operations and Maintenance		Chief Operating Officer – Transit or Chief Operating Officer – Trolley, as applicable	Adheres to Policies and Procedures on Established Safety Goals, Responsibilities, and Objectives; and Reports Safety Hazards and Concerns to Management.
Administration		Applicable Management	Supports the Agency's Mission in Achieving a Safe Operating Environment; and Reports Safety Hazards and Concerns to Management.

Safety Responsibilities – Organization Chart

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
MTS AGENCY SAFETY PLAN (PTASP)
ORGANIZATIONAL CHART



MTS Agency Safety Plan
SMS Documentation and Records

MTS's SMS is supported by further policies and procedures developed by the Departments responsible for the management of safety. MTS's Agency Safety Plan is organized by mode, which include bus and light rail service. Bus service is operated directly through the San Diego Transit Corporation (SDTC), as well as through contracts with private operators. Light rail service is operated directly through San Diego Trolley, Inc. (SDTI). The Bus Agency Safety Plan and Rail Agency Safety Plan comply with the objectives and goals of the SMS Policy Statement and are readily available and communicated throughout MTS. The following framework is documented within the Bus Safety Plan and the Rail Safety Plan:

I. Safety Management System (SMS) Policy

- Safety Performance Goals and Objectives
- Organizational Structure and the Specific Employee Responsibilities for Safety
- Employee Safety Reporting Program
- Coordination with both External Organizations and other Internal Departments to Manage Emergencies and other Public Safety Incidents

II. Safety Risk Management

- Safety Hazard Identification
- Safety Risk Assessment
- Safety Risk Mitigation

III. Safety Assurance

- Developing Safety Performance Targets
- Monitoring and Measuring Safety Performance
- Managing Changes In Operations
- Continuously Improving Processes

IV. Safety Promotion

- Communicating Safety Performance on Hazards and Safety Risks Relevant to an Employees' Roles and Responsibilities
- Establishing a Comprehensive Safety Training Program for MTS Employees and Contractors Directly Responsible for the Management of Safety

The Chief Executive Officer will annually review the MTS Agency Safety Plan and the corresponding Policies and Procedures implementing the SMS and update as necessary. The Board of Directors will approve the MTS Agency Safety Plan on an annual basis, if updates. The MTS Agency Safety Plan will be maintained for a minimum of three (3) years after approval.

Attachments

I. Rail Agency Safety Plan

II. Bus Agency Safety Plan

- San Diego Transit Corp. (SDTC) Safety Plan
- Private Contractor Transdev Safety Plan
- Private Contractor First Transit Safety Plan

Metropolitan Transit System

San Diego Trolley, Inc.
1255 Imperial Avenue, Suite 900
San Diego, CA 92101-7492
(619) 595-4949 • FAX (619) 238-4182

January 31, 2023

VIA EMAIL

Daren Gilbert, Program Manager
California Public Utilities Commission
Rail Transit Safety Branch
180 Promenade Circle, Suite 115
Sacramento. CA 95834-2939

SUBJECT: Submittal of Public Transportation Agency Safety Plan (Rail)

Dear Mr. Gilbert,

Pursuant to 49 CFR Part 673.13, the San Diego Metropolitan Transit System (SDMTS) has completed the development of its Public Transportation Agency Safety Plan (PTASP); specific to the rail requirements as stated in 49 CFR Part 673 and Bipartisan Infrastructure Law (2021), submitting the plan for your review and final approval.

On January 17, 2023 , SDMTS management staff met with California Public Utilities Commission (CPUC), Rail Transit Safety Division representatives to conduct a review of the PTASP; utilizing the checklists that were provided by the CPUC and the Federal Transit Administration (FTA). The purpose of the review was to evaluate the specific sections of the plan to verify each requirement is described and in compliance with the regulatory rule. SDMTS management staff incorporated the Commission staff comments into the plan received during the review.

Based on our efforts, SDMTS is poised to present the plan to our SDMTS Board of Directors for approval as required by 49 CFR Part 673 regulations and are requesting preliminary approval. Once we receive preliminary approval, we will present the plan to our Board of Directors for formal approval, which will complete the final agency requirement in the certification process. Subsequent to approval by the Board of Directors on February 16, 2023, we will submit evidence of such to your office and will anticipate receiving a final approval letter from the CPUC.

Sincerely,

Sharon Cooney

Sharon Cooney
Chief Executive Officer

cc: Stephen Artus, CPUC
Ainsley Kung, CPUC
Brian Riley, Chief Operating Officer, SD-MTS/Rail

Metropolitan Transit System

Rail Safety Plan

San Diego Trolley, Inc.

(Public Transportation Agency Plan pursuant to 49 CFR 673)

APPENDICES

LIST OF TABLES

TABLE OF FIGURES

1.0 SAFETY MANAGEMENT POLICY

POLICY STATEMENT

The San Diego Metropolitan Transit System (MTS) has established this Safety Management System Policy Statement to emphasize its overall commitment to the safety of its passengers, operators, staff, and the general public. This Safety Management System Policy Statement provides direction for MTS's safety program, which applies to every facet of MTS operation.

The management of safety is MTS's highest priority. MTS is committed to safety throughout the entire organization, from the Board of Directors to the frontline employees. MTS will ensure that all transit service delivery activities take place under a balanced allocation of organizational resources to achieve the highest level of safety performance and meeting established standards. MTS is committed to developing, implementing, maintaining, and constantly improving its processes.

As evidence of MTS's commitment to safety, every MTS policy shall be guided by and every employee shall perform their duties in furtherance of the following safety goals and objectives:

1. Supporting safety through the provision of appropriate resources that fosters a safety culture;

2. Integrating the management of safety among the primary responsibilities of all managers and employees;

3. Clearly defining managers' and employees' responsibilities in relation to the performance of MTS's safety management system;

4. Conducting hazard identification and evaluating safety risks, which includes an employee safety reporting program, in order to eliminate or mitigate safety risks;

5. Ensuring that no action will be taken against any employee who discloses a safety concern through the employee safety reporting program, unless disclosure indicates, beyond any reasonable doubt, an illegal act, gross negligence, or a deliberate or willful disregard of regulations or procedures;

6. Complying with, and wherever possible exceeding, legislative and regulatory requirements and standards;

7. Ensuring that sufficiently skilled and trained employees are available to implement safety management processes;

8. Ensuring that all staff are provided with adequate and appropriate safety-related information and training, are competent in safety management matters, and are assigned only tasks for which they are adequately trained;

9. Establishing and measuring MTS's safety performance against realistic and data-driven safety performance indicators and safety performance targets;

10. Continually improving MTS's safety performance by ensuring appropriate safety management action is taken and is effective; and

11. Ensuring externally supplied systems and services that support MTS's operations are delivered to meet its safety performance standards.

Chief Executive Officer - MTS Date: 2/16/2023

Chairperson of MTS Board of Directors Date: 2/16/2023

Chief Operations Officer - MTS Rail Date: 2/16/2023

1.1 AUTHORITY, PURPOSE, GOALS AND OBJECTIVES

MTS is a California transit district that operates multiple modes of transit: light rail transit (Rail) and fixed route/ADA complementary paratransit bus operations (Transit). The agency has three major divisions: Administration, Rail[1] and Transit. The MTS Chief Executive Officer (CEO) is responsible for managing all aspects of the agency, with direction from the Board of Directors. Because of the distinct differences in operations, MTS has prepared a Safety Plan for each individual division: Rail and Transit. This is MTS's Rail Agency Safety Plan.

San Diego Trolley, Inc. (SDTI) is a wholly owned subsidiary of San Diego Metropolitan Transit System (MTS), with administrative offices located at 1255 Imperial Avenue, Suite 1000, San Diego California 92101. The SDTI System Safety Manager, reporting directly to the Chief Operating Officer-Rail (COO-Rail) and the CEO as necessary, is empowered to develop and administer a comprehensive Public Transportation Agency Safety Plan (ASP) for rail transportation within San Diego Trolley, Inc. (SDTI). It is the duty of all employees to cooperate with, and provide information to, the System Safety Manager with respect to safety-related matters. All employees and any outside contractor agencies or organizations working on SDTI property must fully comply with the orders set forth in the ASP. The program applies to:

- Design, construction, inspection, testing, start-up, operation, and maintenance activities that affect the SDTI system
- Fixed facilities, vehicles, and system equipment

The MTS Board of Directors has designated the CEO as the Accountable Executive for the MTS Agency. The CEO designated the COO-Rail as the Accountable Executive for Rail. The Accountable Executive for Rail is responsible for the following:

- Approving the ASP and any updates
- Implementing and maintaining the Safety Management System (SMS)
- Making decisions over the human and capital resources needed to develop and maintain the SDTI's Transit Asset Management Plan
- Having the ability to make budgetary, operational and capital program decisions to address safety and asset management concerns
- Relying on outputs of SMS processes and activities to ensure that SDTI's strategic planning is informed and transparent with regard to the role of safety in decision-making
- Ensuring that action is taken to address substandard performance in the agency's SMS

The Accountable Executive the MTS Agency (CEO) has designated the System Safety Manager as the Chief Safety Officer (CSO). The System Safety Manager is an adequately trained individual with responsibility for safety who reports directly to the Accountable Executive (COO-Rail). The System Safety Manager is responsible for day-to-day implementation and operation of the agency's SMS and does not serve in other operational or maintenance capacities.

[1] Historically, the Rail division was run by a separate entity, San Diego Trolley, Inc. (SDTI). SDTI is a wholly-owned subsidiary of MTS. While some operations continue under the SDTI entity (e.g. legacy property ownership or agreements), in practical terms it is operated as the Rail division of MTS.

SDTI supports the development and growth of its internal SMS processes. To this end, SDTI conducted a gap analysis of the agency's SMS activities (April 2017). This analysis has been instrumental in implementing SMS throughout SDTI.
This ASP has been developed in accordance with Safety Management System principles, as defined by the FTA. It has been prepared in accordance with guidelines established by the American Public Transportation Association Rail Transit Safety Management System Guide (2016), the Federal Transit Administration (FTA) Moving Ahead for Progress in the 21st Century Act (2012), the FTA requirements for Agency Safety Plans under 49 Code of Federal Regulations (CFR) Part 673, Bipartisan Infrastructure Law (2021) and the California Public Utilities Commission (CPUC) General Order 164-E (2018). The CPUC is designated as the State Safety Oversight Agency (SSOA) and must review and approve the MTS Agency Safety Plan. The CPUC's SSOA Program was approved and certified by the FTA in accordance with the requirements of Federal Public Transportation Safety Law 49 U.S.C 5329 (e) and FTA's SSO regulation 49 CFR Part 674 on October 23, 2018.

This plan has also been prepared in a manner prescribed by the State of California Occupational Safety and Health Administration (Cal/OSHA) and mandated by California Labor Code (Section 6401.7).

The System Safety Manager administers the ASP on a day-to-day basis with specific tasks monitored by appropriate management personnel. All SDTI, MTS, and SANDAG project-implementation staffs are, as applicable, responsible for undertaking the relevant safety efforts described in this plan.

1.1.1 Purpose and Scope

The ASP provides a formal and documented plan wherein safety goals, objectives, responsibilities, and procedures are established and monitored to ensure compliance with state and federal regulatory requirements, as well as to ensure the agency observes industry best practices in all areas of the operation.

The ASP encompasses all rail system elements of SDTI, including employees, contractors, and relationships with external agencies. All departments involved in safety tasks should have a clear definition of their individual responsibilities relative to the SMS. The relationship of the safety unit to operations should be clearly defined.

SDTI has established safety as a core value, where top management are tasked with overseeing the establishment of organizational factors necessary to achieve improved safety and to lead others in the effective implementation of SMS principles within SDTI.

The FTA's definition of SMS is the formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of a transit agency's safety risk mitigation. SMS includes systematic procedures, practices and policies for managing risks and hazards.

The purpose of the SDTI SMS is to provide a comprehensive, collaborative approach that brings management and labor together to build a safety program.

SMS builds upon SDTI's existing safety programs to provide the means to accomplish the following:

- Control safety risk better
- Detect and correct safety problems earlier
- Share and analyze safety data more effectively
- Measure safety performance more carefully

There are four components to SDTI's Safety Management System:

1. Safety Management Policy
2. Safety Risk Management
3. Safety Assurance
4. Safety Promotion

1.1.2 Goals

The overall goal of the SDTI Safety Management System is to experience continuous improvement in safety performance. To accomplish this, SDTI will identify, eliminate, minimize and/or control safety hazards and their attendant operational risks by establishing control requirements, lines of authority, and levels of responsibility and methods of documentation for the organization. Safety is SDTI's top priority in alignment with SDTI's mission. Top management's role is to ensure that these safety goals and safety policies are implemented within SDTI.

It is the goal of SDTI's ASP to ensure that all employees, patrons, and the public are provided the safest environment possible while on the SDTI system and within its facilities. Additionally, SDTI through the ASP:

- promotes the philosophy of safety to all employees, patrons, and contract personnel
- provides a method of implementing goals and objectives relating to safety
- provides a method for recommending appropriate corrective action to mitigate potential hazards and maintain oversight to ensure safety remains at the optimum level
- promotes and maintains safety and training programs mandated by federal and state regulatory agencies and required to implement the SMS
- maximizes the safety of future operations by affecting the design and procurement processes

1.1.3 Objectives

The ASP objectives provide a mechanism to ensure the ASP goals are attainable, provide a method of measuring the safety program effectiveness and support the goal of continuous improvement in safety performance. The ASP objectives are:

1. Safety shall be the first consideration during SDTI involvement in system design, construction, and operation

2. Safety hazards are identified and either eliminated, mitigated or controlled throughout the life cycle of the system
3. Verify that all aspects of the operation adhere to SDTI safety policies and procedures, and state and federal regulatory requirements
4. Meet or exceed industry safety requirements in rail operations and maintenance
5. Meet or exceed SDTI performance targets for safety and state of good repair
6. Investigate all major accidents / incidents by identifying and documenting primary causes, contributing factors, and implementing corrective action to prevent a recurrence, and verifying implementation through configuration management procedures
7. Evaluate the implications of all proposed modifications prior to implementation as they relate to safety
8. Maintain association with federal, state, and local agencies to obtain safety-related agreement permits, and approvals where applicable

1.1.4 Policies

The following policies are set forth to attain the ASP objectives:

- All phases of construction activity under SDTI's influence require the highest safety standards and practices for major public works projects. The public shall not be exposed to extraordinary safety hazards.
- Operational systems shall meet all safety-related codes and regulations issued by appropriate federal, state, and local authorities.
- Health and safety provisions for SDTI passengers and personnel shall be equal to, or exceed those required by federal, state, and local regulatory authorities.
- Goals and objectives shall be considered throughout all phases of the operation and maintenance of the SDTI system.
- Annual internal safety audits shall be conducted to ensure compliance with the ASP. Recommendations shall be implemented following configuration management procedures.
- Department Superintendents and Managers shall ensure distribution of the ASP to all personnel directly responsible for meeting its goals, carrying out its objectives, and enforcing its policies.

1.2 SAFETY ACCOUNTABILITIES AND RESPONSIBILITIES

1.2.1 System Description

1.2.1.1 History

The Metropolitan Transit Development Board (MTDB), created by state law (Mills, SB 101) in 1975, was empowered to design, engineer, and build fixed-guideway facilities within San Diego County. MTDB created the SDTI in August 1980 as a wholly owned subsidiary responsible for operation and maintenance of the LRT system.

Effective January 1, 2003, SB 1703, the San Diego Regional Transportation Consolidation Act, directed consolidation of two main functions among SANDAG, MTDB (San Diego Metropolitan Transit System) and the North County Transit District (NCTD): (1) planning and programming, and (2) engineering and construction. Planning, design, and construction of the LRT system is coordinated with SDTI management and in compliance with the MTS LRT design criteria. SANDAG engineering staff administers regional construction contracts for, and under the direction of, the MTS Board and executive staff. MTS contractors and MTS staff administers local and minor improvement projects.

1.2.1.2 Scope of Services

The SDTI system spans 65 track miles in length and is serviced by the Blue Line, the Orange Line, the Green Line, and the Silver Line.

BLUE LINE
Revenue service began on the Blue Line on July 26, 1981. The Blue Line extends 30 miles from the San Ysidro station at the International Border to University Town Center. Of the total 30 miles, 1.4 miles (C Street & India to 12th & Imperial) are operated on city streets; and 14 miles (12th & Imperial to San Ysidro) are operated on semi-exclusive right-of-way. The Blue Line comprises 32 stations, sharing six stations with the Orange and Silver Lines downtown and five with the Green Line. The Blue Line operates through four jurisdictions: the cities of San Diego, National City, Chula Vista and an unincorporated area of San Diego County.

ORANGE LINE
Revenue service on the first phase of the Orange Line from Imperial Transfer to the Euclid Station began on March 23, 1986. The line was extended to El Cajon in 1989 and to Santee in 1995. In April 2018, the both Orange Line terminals were changed. The Orange Line currently extends 17.7 miles from the Courthouse Station in downtown San Diego (via the C St. corridor and downtown San Diego) to Arnele Avenue Station in El Cajon. Of the total 17.7 miles, 3.1 miles (C Street & India to Commercial & 32nd) are operated on the city streets; and 14.6 miles are operated on semi-exclusive right-of-way from 32nd and Commercial to Arnele Avenue. The Orange Line is comprised of 19 stations, sharing five with the Blue and Silver Lines downtown and five with the Green Line (one in downtown and four in East County). The Orange Line operates through four jurisdictions: the cities of San Diego, Lemon Grove, La Mesa and El Cajon.

GREEN LINE
Revenue service began on the Green Line on July 10, 2005. The Green Line extends 23.8 miles from the 12th & Imperial along the bayside to Old Town Transit Center through Mission Valley to Santee Town Center, including a 0.7-mile subway tunnel under San Diego State University (SDSU). The Green Line is comprised of twenty-seven stations, sharing five with the Orange Line (two in downtown and three in East County), one with the Blue Line downtown, and four with the Silver Line downtown. The Green line operates through four jurisdictions: the cities of San Diego, La Mesa, El Cajon and Santee.

Figure 1: SDTI System Map

SILVER LINE
Revenue service on the Silver Line began in August 2011. The Silver Line is a 2.7-mile loop in downtown San Diego along Harbor Drive, C Street, and Park Blvd, completing its loop at 12th & Imperial, and is host to restored 1940's era Presidential Conference Committee (PCC) streetcars. The Silver Line is comprised of nine stations, sharing six with both the Blue and Orange Lines, and three with the Green Line.

Figure 2: Silver Line Map

1.2.1.3 Rail Fixed Guideway

Trains operate on-site in segments of the system that do not have automatic block signals and are primarily in non-exclusive right-of-way. Maximum speeds vary between 25mph (in the downtown area) to 55mph. Trains are governed by automatic block signaling (ABS) on semi exclusive right-of-way. The ABS system consists of a series of consecutive blocks of defined track limits equipped with interlocked wayside signal circuits that monitor the status and control movements of key elements of the signaling system and ensure the safe movement of light rail and freight trains.

1.2.1.4 Traction Power Substations

SDTI trains are electrically propelled using high-voltage DC power, which is fed via an overhead catenary system (OCS) from traction power substations located along the right-of-way. Isolated OCS sections can be de-energized by opening appropriate circuit breakers in the substations or via pole-mounted sectionalizing switches. SDTI utilizes seventy (70) substation locations throughout the system. These substations are equipped with a rotating blue trouble light that indicates a malfunction associated with the substation. When observed, a Train Operator reports the trouble light to the Operations Control Center, Line Supervisor, or

maintenance crew. Only trained and qualified employees (including Line Supervisors) may remove power in emergencies.

1.2.1.5 Overhead Contact System

A power distribution system known as an Overhead Contact System (OCS) provides electrical power to the LRVs. The minimum contact wire height above the top of the rail in areas of light rail vehicle usage is nineteen feet, except in exclusive and semi exclusive right-of-way. The CPUC granted an exemption to General Order 95 (Overhead Electric Line Construction) and allowed the minimum contact wire height above the top of the joint-usage track rail reduced to 22 feet. The contact wire profile is as low as 14 feet Gillespie Field and Lindbergh Field Airport glide paths; Grape, Hawthorn, and 70th Streets; Morena Boulevard; and San Diego State University tunnels). Segments of track throughout the downtown area (C Street, Park Boulevard, Commercial Street, Harbor Drive and in the Yard) have fixed-termination OCS where operating speeds are lower. In all other areas of the right-of-way, a constant-tension catenary system allows for higher operating speeds.

1.2.1.6 Stations

SDTI has sixty-two barrier-free passenger stations that provide circulation between street, bus/auto connections, and platform/track areas. There are fifty-one stations outside the "Centre City" zone shown on MTS System map. Many stations outside the Centre City zone have adjacent parking, pick-up/drop-off zones, and bus pull-in areas to accommodate patrons. All stations are equipped with a public address system to notify patrons of service changes. Key stations are equipped with changeable message signs that display the same information, which broadcasts over the public address system.

1.2.1.7 Light Rail Vehicles

The SDTI fleet currently consists of Light Rail Vehicles (LRVs) manufactured by the Siemens Corporation and Presidential Conference Committee cars (PCC) manufactured by the St. Louis Car Company (reference Figure 3: SDTI Fleet). LRVs have an articulated center and operating cabs on each end. There is no access between LRVs when coupled. Safety features include a fire extinguisher, a mobile radio equipped with a silent alarm button mounted in each operating cab, a fail-safe system to prevent movement of the train in the event doors are not fully closed, and an onboard CCTV system. A Train Operator (T/O), who performs all operational functions, controls trains manually.

Model:	U2	SD-100	SD-7	SD-8	SD-9	SD-10	PCC
Fleet Size:	1	39	11	65	45	15	2
Length:	80 feet	80 feet	90 feet	80 feet	80 feet	80 feet	45 feet
Weight:	40 tons	40 tons	48 tons	40 tons	40 tons	40 tons	25 tons
Max Speed:	50 mph	55 mph	55 mph	55 mph	55 mph	55 mph	25 mph

Figure 3: SDTI Fleet

1.3 ORGANIZATIONAL STRUCTURE

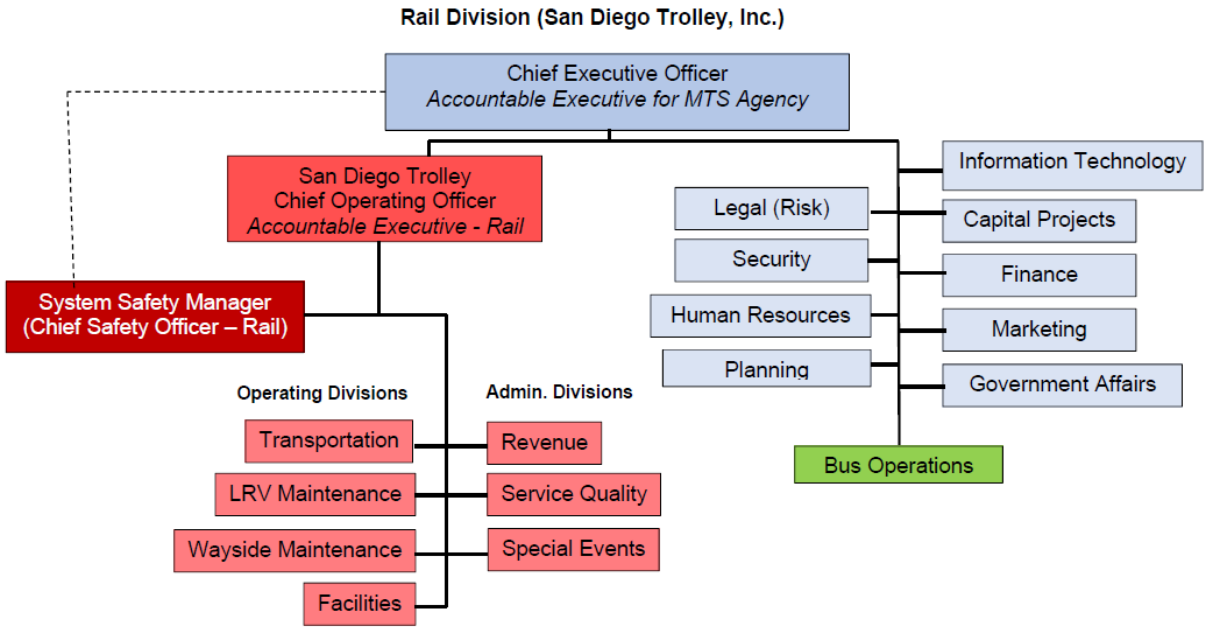


Figure 4: Organization Chart for MTS Rail Transit Operations

MTS has three (3) major divisions: Administration, Rail and Transit. The MTS CEO is responsible for managing all aspects of the agency, with direction from the Board of Directors. The CEO has designated the COO-Rail to manage Rail operations.

The COO-Rail reports to the MTS CEO. For the Rail division, administrative and operational functions consist of departments directed by the COO-Rail. The administrative functions are responsible for the daily management of system-support requirements provided by the Facilities, Revenue (fare vending machine maintenance and collection/processing), Engineering, Purchasing, Stores, Claims Administration, and Accounting Departments. The operational functions consist of the Transportation, Light Rail Vehicle (LRV) Maintenance, and Wayside Departments. The Superintendents of these sub departments are responsible for establishing and implementing the ASP safety requirements.

1.3.1 Board of Directors

The Board of Directors is responsible for setting policy for SDTI. They are required to approve the ASP initial document and all updates. The Board of Directors receives periodic safety briefings from SDTI.

1.3.2 Accountable Executive

The Accountable Executive of the MTS Agency is the CEO who has ultimate responsibility for safety within the MTS organization. The MTS CEO designated the COO of Rail (SDTI) as the Accountable Executive for Rail.

The Accountable Executive- Rail is responsible for establishing and implementing the Safety Management System for Rail operations. The COO-Rail

directs and provides support for all rail operations functions and is responsible for decisions regarding safety risks. The COO-Rail will elevate relevant safety discussions to the CEO's attention. The COO-Rail will support and encourage an open dialogue between the System Safety Manager (CSO) and the CEO.

1.3.3 System Safety Manager/Chief Safety Officer (CSO)

The System Safety Manager (CSO) is responsible for managing the SMS on a day-to-day basis. The System Safety Manager oversees safety within SDTI and provides technical support to the CEO and COO-Rail, and to the Board of Directors regarding safety. The System Safety Manager is responsible for the chairing safety committees; providing safety input to operations, procedures, rules and training; internal audits; accidents/incidents/near-miss investigations and reporting; safety input for major extensions and rehabilitations of the transit system; and hazard analyses.

The CSO must be adequately trained and is responsible for ensuring compliance with requirements as set forth in 49 CFR 672, which provides minimum training requirements to enhance the proficiency of transit safety oversight professionals. This training shall meet the requirement as outlined in Appendix A to 49 CFR 672, and include the required annual refresher training. The CSO must be enrolled in the 49 CFR Part 672 – Public Transportation Safety Certification Training Program (PTSCTP) and must complete the training within the three (3) year prescribed timeframe.

The CSO reports to the COO- Rail. The CSO works with the COO-Rail to implement the Agency Safety Plan.

The CSO has a dual reporting role with the COO-Rail and the CEO. As necessary to implement the Safety Plan and discuss relevant issues, the CSO has a duty and right to report directly to and consult with the CEO. The CSO will have direct access to the CEO at all times regarding all safety related issues.

1.3.4 Facilities Department

The Superintendent of Facilities reports directly to the COO-Rail. The Facilities Manager is responsible for the maintenance and operation of all fixed facilities and equipment, including all trolley stations, shelters, canopies, signage, equipment, parking lots, landscaping, related right-of-way maintenance and all irrigation systems. Scheduled weekly maintenance includes maintenance of stations, facilities/buildings and grounds, as well as vehicle inspections. Bimonthly maintenance is performed on the LRV car wash and sludge/drain system and stations and facilities maintenance is conducted annually and as needed. In accordance with SMS principles, a supervisor ensures that corrective actions are implemented and closed out in a timely manner and reviews inspection and trouble reports. The Superintendent of Facilities writes specifications, initiates, monitors contract maintenance services, and ensures that all designated facilities are maintained in a safe, operational, and presentable state.

1.3.5 Revenue Department

The Revenue Lead Supervisors report directly to the COO-Rail/Fare Systems Administrator. The Fare Systems Administrator oversees revenue administration, reporting and management functions. The Revenue Lead Supervisors oversee Ticket Vending Machine (TVM) revenue collection and recovery process, security, maintenance and accuracy of fare collection equipment, revenue accounting and analysis, auditing, reporting functions and armored transport and banking functions performed in accordance with MTS policies. The Fare Systems Administrator implements policies and procedures to ensure that revenues are handled in a safe and secure manner; researches, analyzes, and monitors all phases of fare-collection process, and develop findings and appropriate recommendations.

1.3.6 Stores Department

The Manager of Inventory Operations reports to the Director of Supply Chain & Operations and is responsible for all MTS warehouses, including departments within SDTI, SDTC (bus operations) and MTS administration.

All warehouse personnel are responsible for the management of functions associated in ensuring the availability, upkeep and distribution of all items stored in each warehouse that include but not limited to maintenance spares, tooling, consumable and commercial items. In addition, the warehouse is also responsible for the management of disposals across inventory and company assets.

Included in the Manager Inventory Operations role is the establishment of strategic direction and tactical delivery for the department. The Manager will work alongside safety and environmental departments to facilitate and ensure a safe and risk-free environment for each employee. In delivering exceptional performance, each warehouse employee will be adequately trained to attain a high level of understanding across the role of a storekeeper and to provide exceptional customer service through the efficient discharge of their duties.

1.3.7 Engineering Department

The Director of Capital Projects reports directly to the CEO and is responsible for the coordination of all engineering and construction activities of the organization. The Director of Capital Projects provides regular updates to the COO-Rail.

1.3.8 Transportation Department

The Superintendent of Transportation reports directly to the COO-Rail. The Superintendent of Transportation is responsible for the operational planning and overall supervision of all employees involved in the transportation discipline of SDTI, including mainline and yard service and the operation of all trains in accordance with the approved timetables. The Superintendent of Transportation is also in close and continuing association with the initial and subsequent installation, testing and preoperational system check-out of various systems

comprising the light rail system and must be sufficiently knowledgeable and experienced to render timely and effective assistance in establishing and coordinating applicable operating and safety procedures. The Superintendent of Transportation is responsible for promulgating operating rules, regulations and related procedures, as well as the enforcement of safety policies and the review of problem areas to determine the need for changes to improve operating and safety procedures. The Superintendent of Transportation ensures that contingency plans are up-to-date and readily available in the event of an emergency, including accidents and system delays in general. The Superintendent of Transportation ensures that properly trained personnel and appropriate equipment are available to respond on a timely basis to rectify the problem(s) and restore normal operations.

Both SDTI and San Diego & Imperial Valley Railroad (SD&IV) trains operate under the authority of the Operations Control Center (OCC). The OCC is staffed twenty-four hours a day, seven days a week and provides twenty-four hour emergency response for SDTI employees and local emergency-response agencies. An integrated fire management panel monitors/controls the emergency ventilation system and traction power emergency trip switches in the event of a fire or other emergency within the tunnel or platform areas integrated within the SDSU Station. Ventilation of the tunnels and station platform are also controlled through a computer program in the OCC interfaced with high-powered reversible fans and air dampers throughout the underground structure. A trespasser intrusion system will also activate an alarm at the OCC if a person or other detectible object smaller than an LRV enters a tunnel segment at either the station platform or the portal entrance from either end. The MTS Transit Security emergency contact number is posted on public information signs and passenger timetables for public knowledge.

The primary functions established for the OCC Facility and personnel are:

- Provide for the safety and security of SDTI personnel and passengers
- Maintain system-wide supervisory control by monitoring train operations and facilities that support the system
- Document incidents that result in system delays, injuries, or damages
- Maintain detailed reports on operational status items and reported defects
- Create unusual occurrence reports and various daily statistical summaries for dissemination
- Supervise personnel, direct operations, and maintain established service levels
- Execute corrective actions to optimize service levels and minimize adverse system-wide impact
- Monitor fire management panel and remain conversant with the emergency ventilation operation panel and trespasser intrusion system

The Controller on duty is responsible for all operational activities and must ensure that train movements (mainline and within yard limits) and any work performed on or about SDTI property is conducted in accordance with all safety requirements mandated by the CPUC, the FRA, and SDTI policies and procedures. Controllers also monitor SDSU tunnels via CCTV.

Train movements are controlled through:

- Speed restrictions, slow orders, and advisories printed daily on an Operating Clearance Form
- Verbal train orders communicated over a two-way radio system

All SDTI personnel and contractors working on the property perform their duties in a safe manner in accordance with written instructions and are verified through:

- Verbal two-way radio communications
- Field oversight (Line Supervisors and Employee-in-Charge/Flagperson who inform the Controller of personnel adherence and progress)
- Operating clearances

In addition, train movements on signalized track are governed by automatic block signals (ABS). Special operations are conducted on an as-required basis for construction or maintenance needs. Authorization for special operations must receive approval from the Superintendent of Transportation.

1.3.9 Wayside Maintenance Department

The Superintendent of Wayside Maintenance reports directly to the COO-Rail. The Superintendent of Wayside Maintenance coordinates with subordinate staff and other department superintendents and managers to handle elements associated with the administration and maintenance responsibilities of the Wayside Division of the Maintenance Department. The Superintendent of Wayside Maintenance is responsible for directing, planning and scheduling inspections, maintenance and repairs of traction power, signals and switches, crossing gates, guideway structures, pumping stations, lighting and station electrical service and component devices (PA system, message signs, etc.).

The Maintenance-of-Way Department is responsible for the maintenance and repair of wayside equipment, including signals, grade-crossing protection, traction power, switches, track and substructures, as well as SDTI back-up generators. Wayside Department staff includes Shift Supervisors, Track Supervisors, Electro Mechanics, Linemen, Assistant Linemen, and Track Maintenance Personnel.

Shift Supervisor Responsibilities

Shift Supervisors' responsibilities include the following activities:

- Ensure that work site areas have safety and hazardous material inspections performed within required time frame
- Conduct and document scheduled safety meetings held with employees
- Ensure safety inspections and safety maintenance cycles performed on equipment and specialized facilities are appropriately scheduled and documented
- Verify that personal protective equipment (PPE) is available and in good working order

- Ensure that employees under their control follow the established safe-work practices and use the required personal protective equipment
- Confirm that the Hazard Communication Program Plan and MSDS binders are available to all maintenance employees
- Monitor personnel and verify that safety training was conducted and tasks are performed safely
- Ensure that all affected personnel receive training to ensure the component is used in a safe manner when a new process, procedure, chemical, or piece of equipment is introduced into the workplace
- Assure proper forms are completed prior to the personnel's tour of work begins

1.3.10 Light Rail Vehicle (LRV) Maintenance Department

The Superintendent of LRV Maintenance reports directly to the COO-Rail. The Superintendent of LRV Maintenance establishes, implements, and monitors new or revised policies and guidelines for the LRV Maintenance Department. The Superintendent of LRV Maintenance administers policies and programs, and plans, coordinates, schedules, and implements these into day-to-day activities as they relate to the efficient operation and maintenance of light rail vehicles. The Superintendent of LRV Maintenance ensures that all light rail vehicle maintenance meets regulatory agencies' and internal standards, with special consideration given to the safety of patrons and employees. The Superintendent of LRV Maintenance supervises the enforcement of safety policies for all LRV Maintenance work areas.

- Ensure monthly work area safety inspections and weekly hazard material (hazmat) inspections are performed and documented on checklists
- Conduct and document scheduled monthly safety meetings with employees
- Ensure the performance and documentation of safety inspections and safety maintenance cycles of vehicles and equipment meet schedule requirements
- Verify that personal protective equipment (PPE) is available, in good working order, and used in compliance with established safety practices
- Ensure that the Hazard Communication Program Plan and Material Safety Data Sheets (MSDS) are available to all LRV Maintenance employees for review upon request
- Monitor that employees perform assigned task(s) in a safe manner
- Ensure that training on proper use and operation of any new processes, procedures, chemicals, or equipment, including necessary safety precautions, is conducted

The LRV Maintenance Department is responsible for the maintenance, repair, and cleaning of all Light Rail Vehicles. Personnel include LRV Supervisors, Electro Mechanics, Linemen, and Assistant Linemen.

<u>LRV Supervisor Responsibilities</u>

- Ensure monthly work area safety inspections and weekly hazard material (hazmat) inspections are performed and documented on checklists

- Conduct and document scheduled monthly safety meetings with employees
- Ensure the performance and documentation of safety inspections and safety maintenance cycles of vehicles and equipment meet schedule requirements
- Verify that personal protective equipment (PPE) is available, in good working order, and used in compliance with established safety practices
- Ensure that the Hazard Communication Program Plan and Material Safety Data Sheets (SDS) are available to all LRV maintenance employees for review upon request
- Monitor that employees perform assigned task(s) in a safe manner
- Ensure that training on proper use and operation of any new processes, procedures, chemicals, or equipment, including necessary safety precautions, is conducted

1.3.11 Risk Department

The Manager of Risk and Claims reports directly to the General Counsel. The General Counsel reports directly to the CEO and the MTS Board of Directors as necessary. The Manager of Risk and Claims directs and manages the liability claims and workers' compensation functions of MTS and ensures that all claims and workers' compensation activities are properly processed and reported in accordance with state and federal regulations. The Manager of Risk and Claims manages and tracks claims and incidents, evaluates mitigation and insurance strategies, and facilitates the annual placement of MTS's excess liability, excess workers' compensation property, crime, and fiduciary liability insurance. The Manager of Risk and Claims coordinates activities, policies, and procedures with third-party administrators and insurance brokers on contract and insurance issues.

1.3.12 Transit Enforcement Department

The MTS Chief of Police/Director of Transit Enforcement reports directly to the CEO. This department is staffed through contracted services and in-house Code Compliance Inspectors (CCIs). The Transit Enforcement Department conducts ongoing Security Risk Analyses for the system to maintain a secure environment for passengers, employees and facilities through identification of emerging significant security risks and to formulate solutions and mitigations.

1.3.13 Transit Asset Manager

The MTS Transit Asset Manager reports directly to the Chief Financial Officer. The Chief Financial Officer reports directly to the CEO. The Transit Asset Manager is responsible for developing and coordinating new Transit Asset Management policies, data collection and FTA reporting for bus and rail. The Transit Asset Manager is also responsible for the agency's Capital Improvement Program and Capital budget.

1.4 INTEGRATION WITH PUBLIC SAFETY AND EMERGENCY MANAGEMENT

The System Safety Manager, in conjunction with representatives from Transit Enforcement and other departments are responsible for coordinating all rail system-wide emergency response planning. Prior to opening new segments of the rail system, training sessions and familiarization exercises are conducted for all emergency-response agencies in the new segment.

SDTI's progressive exercise program has the commitment of internal staff and emergency-response agencies to utilize a building block approach in which training and activities focus on specific capabilities in a cycle of escalating complexity. This program allows the collective community to achieve and maintain competency in executing the transportation and local-emergency response plans. MTS has a Continuity of Operations Plan to ensure that critical functions continue following an emergency.

SDTI's emergency-response policies and procedures are reviewed annually and updated as needed. The System Safety Manager is responsible for coordinating this review and producing updated policies and procedures with input from SDTI staff.

1.4.1 Exercises and Drills

The Safety and Transit Enforcement Departments organize major emergency response drills and exercises that simulate terrorist activities and catastrophic incidents requiring multijurisdictional response. These aid the agency in assessing and validating policies, plans, procedures, training, equipment, assumptions, and interagency agreements. MTS uses the Homeland Security Exercise and Evaluation Program (HSEEP) as it provides a standardized policy, methodology, and terminology for exercise design, development, execution, evaluation, and improvement planning.

Emergency drills are held periodically and are scenario based when identifying locations on the system. Prior to any drill, meetings with external agencies regarding the emergency-management program are held. The FTA provides funding to SDTI to develop and conduct major drills. Typical drills may include mass casualties, fires, derailments, active shooters, or suspicious devices. Drills are designed to exercise competency in emergency situations.

Following a drill, a post-drill debriefing is convened with representatives from all participating agencies to review the performance of the drill and to identify lessons learned. These findings are documented in drill reports or after-action reports and matrices. The post-drill briefing comments are included in a final summary report to management that includes areas needing fire and life-safety improvements and corrective actions. The SDTI Safety and Security Departments track corrective actions to resolution.

1.4.2 Internal Emergency Training

MTS's emergency preparedness program focuses on staff development and training using drills and exercises to assess current practices and procedures. MTS hosts US Department of Transportation (USDOT) Transportation Safety Institute (TSI) and National Transit Institute (NTI) courses and encourages staff participation to the extent possible and appropriate. As necessary, MTS also partners with contractors to facilitate advanced training, exercises, and drills. All emergency-response procedures are found in the Operating Rules and Standard Operating Procedures Manual and in the MTS Emergency Management Plan. These procedures are included in the Transportation Department's Standard Operating Procedures Manual. These documents are distributed to employees as they are updated. The following situations are addressed in the above-referenced documents:

- Emergency occurrences
- Emergency shuttle bus service
- Operation of LRV silent alarm
- Earthquake emergency procedures
- Hazardous materials
- Emergency radio calls
- Emergency call list
- Fire on a train
- Derailment
- Hijacking
- Passenger emergency alarm
- Civil unrest
- Sick person on or near SDTI property
- Collisions and accidents
- Emergency removal of power
- Fire on or near track
- Bomb threat
- Criminal incidents
- SDSU fire management panel, emergency ventilation operation panel, and trespasser intrusion system

1.4.3 Emergency Responder Familiarization

SDTI performs safety training with personnel from emergency-response agencies within jurisdictions through which the trolley operates. First responder personnel, such as fire and law enforcement, from the County of San Diego and the cities of San Diego, La Mesa, El Cajon, Santee, National City, and Chula Vista are provided with basic information of the SDTI system, equipment, and operations during the training provided by the System Safety Manager and the Transportation Training Department. Function-specific training and exercises are also provided, including:

- Active shooter/tubular assault/sniper (SWAT)
- Heavy lift/extraction (fire departments, urban search and rescue)
- San Diego State University familiarization (fire departments in proximity to the university)

- Field canine enforcement (US Customs and Border Patrol)

This training is available year-round to these agencies, and annual participation is encouraged. Additionally, Maintenance-of-Way Department personnel provide San Diego Fire Department with on-site orientation for unique stations, such as San Diego State University.

1.4.4 Fire Protection

All fire protection systems are verified for conformance with fire protection requirements through the use of emergency drills, inspections, incident investigations, and routine testing of fire protection and fire-suppression systems.

1.5 SMS DOCUMENTATION AND RECORDS

1.5.1 Annual Plan Review

The ASP is assessed annually and updated to include corrections and modifications. The System Safety Manager is responsible for coordinating review and revisions.

1.5.2 Revisions and Change Control

Updates to the ASP include changes to operating procedures or environment, or procedures, instructions, or rules affecting safety. These changes are made by the System Safety Manager. The methods and procedures contained in the ASP are applicable to all phases of the rail transit system: planning, design, construction, inspection, preoperational testing, start-up, and revenue service.

1.5.3 Responsible Parties

The System Safety Manager is responsible for initiating and developing the ASP in cooperation with SDTI departments, and MTS and SANDAG project implementation staff, as applicable, with oversight by the CPUC. All changes are approved by the COO-Rail, CEO, and the Board of Directors. Existing SMS processes and procedures are evaluated and modified as necessary in the ASP update.

The current version of the ASP is available to all employees and contractors via the MTS Intranet. The System Safety Officer issues a bulletin to all employees when updates are available.

1.5.4 Regulatory Oversight and Acknowledgement

SDTI will submitted its initial Public Transportation Agency Safety Plan (ASP) to the CPUC for review and approval (in accordance with the requirements of CPUC General Order 164-E) before the FTA's July 20, 2020, deadline for submittal of the agency's ASP. SDTI incorporated CPUC comments and issue the revised ASP for CPUC approval. After receiving CPUC approval of the ASP,

CPUC/SDTI will submitted the ASP to the FTA in compliance with 49 CFR Part 673, so that The FTA's Certification and Assurance process could be completed on or before the FTA established deadline.

The revised ASP is submitted annually on or before February 15th to meet requirements set forth by the CPUC in GO 164-E. The System Safety Manager is responsible for notifying the CPUC representative of any changes or modifications to the ASP or any significant safety issues. The CPUC representative is responsible for reviewing the ASP to ensure the plan meets the requirements of GO 164-E. All CPUC recommendations to enhance or modify changes in the ASP will be considered and the ASP will be revised accordingly.

1.5.5 Plan Implementation

The ASP focuses on the activities that are required to provide a high level of safety. The ASP elements include the long-term approach to implement Safety Management Systems within SDTI. The ASP also delineates activities to be performed by the Safety Committee to ensure its involvement on a continuing basis.

This ASP outlines the methods to assure that safety is an integral and continuous part of planning, specification, design, test operation, construction, procurement, and disposal activities of rail transit systems. The ASP complies with all state and federal laws and mandates by systematically monitoring all phases of the operation.

MTS has an intranet that includes information on various functions within the agency including safety. A sample page from the Rail Safety Intranet is shown in Figure 5. The MTS Rail Safety Intranet contains a description of policies and procedures that apply to the Safety Management System, including the Safety Management Policy. The intranet is the prime method of communication of how updates or revisions to the Safety Management Policy are communicated to employees.

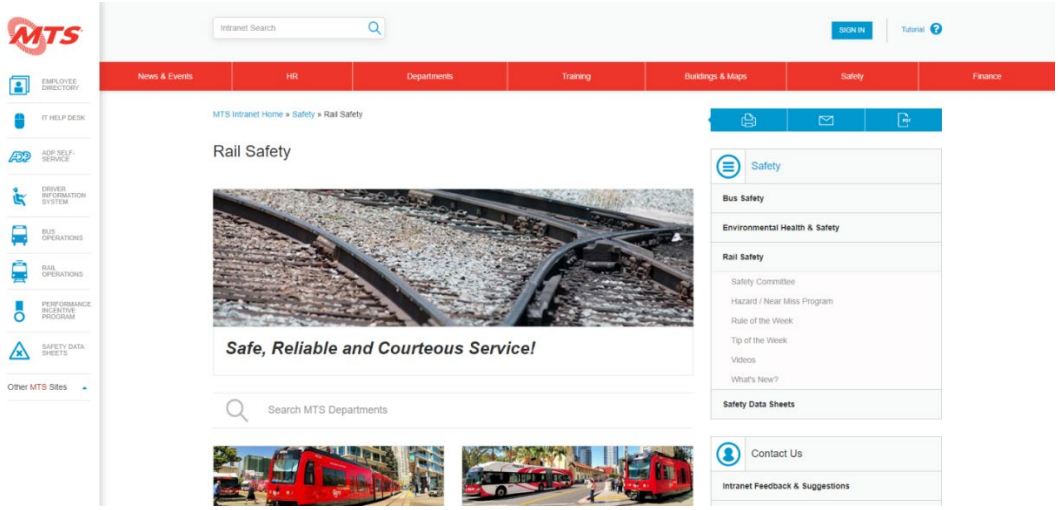


Figure 5: MTS Safety Intranet Page 1

1.5.6 Program Administration

The System Safety Manager has the functional authority, under direction of the COO-Rail, to ensure all employees comply with the ASP and that all operations and maintenance related functions are performed with the intent to conform to safety requirements, including:

- Analysis of rules, procedures, and practices to ensure adequate hazard control including employee safety reporting systems
- Participation in design reviews and planning sessions to ensure that safety concerns and issues are addressed and resolved
- Collection and dissemination of applicable information/practices from other transit properties
- Investigation of serious incidents or accidents and assigning responsibility, when applicable, for the purpose of retraining and/or disciplinary action
- Periodic safety inspections
- Determination of cause and recommendation of corrective action to prevent recurrence
- Verification of implementation and effectiveness of corrective action
- Emergency-response agency interface on safety-related matters, including familiarization sessions with SDTI equipment/facilities
- Participation on internal committees (Major Incident Review Committee, Derailment Committee, etc.)
- Interface with NTSB, CPUC, Cal/OSHA, FTA, FRA, and other regulatory agencies

When unsafe conditions or practices exist, the System Safety Manager has the authority, granted by the COO-Rail, to immediately order such conditions corrected or unsafe practices halted. This includes the interruption of revenue service if conditions warrant. The System Safety Manager reviews and evaluates the ASP for program effectiveness. This includes ensuring all departments comply with elements contained herein, adding or deleting work tasks commensurate with the project(s) schedule and budget, and delegating responsibilities, accordingly.

1.5.7 Current Operational Systems

Verification of compliance with SDTI, manufacturer, federal, state, and local requirements is accomplished through:

- Review of accident/incident reports
- Performance to established safety goals and safety performance targets
- Investigations of cause and corrective action when appropriate
- Inspection of facilities and equipment
- Management procedures
- Review of operating procedures
- Review of safety rules
- Review of emergency drills
- Occupational safety and health inspections
- Inspection and testing of fire protection equipment

1.5.8 Safety Committee

The Safety Committee is made up of both hourly and supervisory personnel from each of the departments within SDTI. The committees' primary function is to act as a communication channel on safety-related matters between employees and upper management and to provide a forum to discuss issues which impact safety.

Safety Committee members solicit recommendations from employees of their respective departments regarding proposed improvements to enhance safety in the work environment. The Safety Committee discusses, evaluates, and determines if such recommendations are practical and require follow-up. Any suggestions that require fund expenditure is referred to the appropriate department head who, in turn, advises the COO-Rail whether the recommendation should be acted upon. Recommendations are reviewed for possible implementation and the Safety Committee is advised of the decision reached by the COO-Rail. Safety Committee meeting minutes are distributed and posted on all SDTI Bulletin Boards.

Based on the Bipartisan Infrastructure Law requirements, the Safety Committee will also include Joint Safety Committee members who are union labor-selected frontline voting members of an equal number of management representatives responsible for approving the ASP and any updates to ASP. The Director of Human Resources will identify the union labor-selected frontline representatives participating in the voting process. Voting members will also be responsible for identifying and recommending risk-based mitigations or strategies to reduce the likelihood and severity of consequences identified through the agency's risk assessment, identifying mitigations or methods that may be ineffective or inappropriate, and identifying safety deficiencies for continuous improvement.

1.5.9 Monthly CEO Safety Briefing

Every month the System Safety Manager provides a rail safety briefing to the SDTI CEO. Topics include, but are not limited to accidents, outside inspections, recent CPUC activity, training, Safety Committee meetings, Rail Operation and Regulatory (ROAR) Committee, major projects, regular duties, right-of-way, security, and any high-level safety risks and/or safety meetings that have been conducted or are ongoing. In addition, on a case-by-case basis, the CEO will meet with the CSO to discuss individual incidents, policies, or other concerns and programs related to safety.

1.5.10 Weekly Executive Safety Briefing

Every week the System Safety Manager provides a rail safety briefing to the MTS COO-Rail. Topics include, but are not limited to:

- CPUC activity
- Safety Committee update
- Accident/incident investigative follow-up

1.5.11 General Awareness Program

SDTI, in cooperation with SANDAG, may develop and conduct safety-awareness programs for local schools, community groups, and the media. These programs increase public awareness of issues related to safety on the system.

1.5.12 Incentive and Correctional Programs

A safety award program and an employee excellence award program has been established to reward employees annually based on safe behavior, accident-free operation, personal injuries, and attendance. Award recipients are invited to a public ceremony.

1.5.13 Documentation and Retention of SMS Documentation

The documents required to implement the SMS program are maintained within MTS for a period of no less than four years. The SMS documents contain record of revision as applicable and are maintained within individual department record systems.

During the course of developing the SMS there may be additional processes and procedures required that are not included or referenced in the ASP. The processes and procedures will be further developed by the responsible parties designated within the agency with the involvement and participation of representatives assigned to the safety department. As applicable new SMS policies and procedures will be included or referenced in the revised ASP during the annual review.

Upon request the CPUC, FTA, and other Federal entities will have access to review any SMS documentation that is maintained MTS.

2.0 SAFETY RISK MANAGEMENT

Safety is integrated into design, specification preparation, equipment selection, construction, procedures, and operations. The Safety Risk Management process is intended to verify that identified hazards have been satisfactorily documented, tracked, and resolved through a risk mitigation and resolution process. Hazards are continually identified during the development of a project and during ongoing rail operations. As specified in a project's safety and security certification plan (see Section 3.2.2), SDTI, MTS, and SANDAG project implementation staff (under the direction of SDTI and CPUC), as applicable, apply methods of hazard identification, assessment, and resolution to minimize or eliminate accidents and injuries. The Safety Risk Management process also applies to SDTI's existing operations and maintenance procedures, changes to the existing SDTI rail public transportation system, new operations of service to the public, new operations or maintenance procedures, and any organizational changes.

Figure 6: Safety Risk Management Process

SDTI, MTS, and SANDAG project staffs, as applicable, work to identify areas and situations prone to a high frequency of incidents and accidents through existing system inspections and evaluation, reviewing trends, comparative analysis, and evaluating available data. Safety analyses are part of a formalized process to identify, eliminate, and/or control hazards. Safety analyses provide for:

- Identification of hazards
- Assessment of the severity and probability of occurrence of the hazard
- Timely awareness of hazards for those who must resolve them
- Traceability and control of hazards through all phases of a system's life cycle

Analysis results assist team members in understanding the causes of occurrences and ensure appropriate corrective action. Variables determined as significant contributing factors to the frequency of accidents or incidents become a focal point for review and evaluation to determine appropriate corrective action.

Safety Risk Management is performed using a decentralized process. Hazards are assessed and evaluated by the operating departments (transportation and maintenance) with assistance from the System Safety Manager.

The Safety Risk Management process feeds into the Safety Assurance process so that safety risk mitigations are evaluated for effectiveness over time. Feedback between the two processes is essential to ensure that risk mitigation does not introduce additional hazards. MTS uses safety data acquisition to monitor what occurs within the system. If the hazard reoccurs, then the mitigation will be adjusted.

2.1 SAFETY HAZARD IDENTIFICATION

2.1.1 Hazard Identification

Defining the physical and functional characteristics of a project creates the foundation of the hazard identification process. These characteristics are presented in terms of the major elements that comprise the project, such as personnel, facilities, systems, equipment, procedures, the public, and the environment. The perceived hazards are identified using several techniques, including the following:

- Historical hazard or accident data
- Operational experience and lessons learned
- Identification of credible hazard scenarios
- Checklists of potential hazards
- Hazard analyses
- Employee Safety Reporting System
- Data provided by the FTA
- Data provided by the CPUC
- Input from vendors, suppliers, and subcontractors
- Input from project staff and engineering/construction consultants
- Other methods as appropriate.

Identified hazards are tracked in the Hazard Management Master File (an Excel database). Information collected includes the following:

- Date reported
- Reported by
- Form completed
- Reported to
- Hazard description
- Severity
- Probability
- Responsible party

- Potential mitigation(s)
- Final mitigation(s)
- Risk score after mitigation
- Completed by
- Completion date

2.1.2 Safety Risk Assessment

A hazard analysis should be performed on all facility modifications and new construction projects. Hazard analysis is a risk assessment of the safety and security of a project with regard to known hazards. The purpose of hazard analysis is to assess the severity and probability of the risk associated with each identified hazard. Severity and probability generally are determined based on qualitative rather than quantitative analyses. The results and conclusions of the analyses of identified hazards, assessed in terms of severity or consequence and the probability of occurrence, are presented by the responsible party in accordance with standard methods (such as MIL-STD-882D, MTS ASP, FTA Hazard Analysis Guidelines, and 49 Code of Federal Regulations Part) and as specified in contract documents.

To classify the assessment, hazards identified in formal hazard analyses receive a classification based on the definitions that follow. Unacceptable and undesirable hazards are mitigated to an acceptable level by one or more of the above-described methods.

Hazards identified in the Hazard Management Master File also receive a classification based on the definitions that follow.

2.2 SAFETY RISK MITIGATION

Hazard assessments determine whether assuming some or all of the risk associated with a particular hazard is acceptable and whether corrective action is called for. Hazard assessment involves hazard severity, hazard probability, and risk assessment. The following definitions are used to establish Hazard Severity and the Probability of Occurrence. The Risk Assessment Matrix is used to categorize hazards as acceptable, acceptable with certain conditions applied, undesirable, or unacceptable.

2.2.1 Hazard Evaluation

Hazard severity is a subjective measure of the worst credible mishap expected to result from human error, environmental conditions, design inadequacies, subsystem or component failure or malfunction, and/or procedural deficiencies. The categories of hazards are as follows:

Table 1: Hazard Severity

CATEGORY	DESCRIPTION
1. Catastrophic	Death or system loss
2. Critical	Severe injury, severe occupational illness, or major system damage
3. Marginal	Minor injury, minor occupational illness, or minor system damage
4. Negligible	So small or of so little consequence that it requires little to no attention

Hazard probability is the likelihood that a specific hazard will occur during the planned life expectancy of the system element, subsystem, or component described subjectively in potential occurrences per unit of time, events, population, items, or activity. The Hazard Probability in Table 2 is derived from research, analysis, or evaluation of historical data.

Table 2: Hazard Probability

DESCRIPTION	LEVEL	LIKELIHOOD	EXAMPLE OF FREQUENCY
Frequent	A	Continuously experienced	One or more times per week during a four week period
Probable	B	Occurs or may occur often	One or more times per month during a four month period
Occasional	C	Will likely occur several times during the system's lifecycle	One or more times per year on an annual basis
Remote	D	Potential to occur during the system's lifecycle	Once per decade
Improbable	E	Is unlikely to occur, but possible	Less frequently than once per decade

After hazard severity and probability are determined, associated risks are assessed by project implementation staff and the Safety & Security Review Committee (see Section 3.2.2.7). A risk assessment determines the level of risk associated with a hazard. It enables understanding the risk in relation to the costs (in dollars or operational impact) that may be incurred. The Risk Assessment Matrix in Table 3 identifies the risk assessment based on hazard severity and probability.

Table 3: Risk Assessment Matrix

FREQUENCY OF OCCURRENCE	CATASTROPHIC (1)	CRITICAL (2)	MARGINAL (3)	NEGLIGIBLE (4)
Frequent (A)	**1A**	**2A**	**3A**	**4A**
Probable (B)	**1B**	**2B**	**3B**	**4B**
Occasional (C)	**1C**	**2C**	**3C**	**4C**
Remote (D)	**1D**	**2D**	**3D**	**4D**
Improbable (E)	**1E**	**2E**	**3E**	**4E**

Table 4 relays the criticality of implementing corrective measures to reduce the hazard to an acceptable level. Projects use this index to prioritize hazardous conditions and to focus resources on the most serious hazards requiring resolution.

Table 4: Criticality Index

RISK INDEX	CRITERIA	CORRECTIVE ACTION
1A, 1B, 1C 2A, 2B, 3A	Unacceptable	Hazard cannot remain as is; must be mitigated.
1D, 2C, 2D, 3B, 3C	Undesirable – decision required	The hazard should be mitigated, if at all possible, within fiscal constraints. This level of risk must involve a documented decision by executive management, and it may be mitigated at a later time.
1E, 2E, 3D, 3E, 4A, 4B	Acceptable - with review	The Safety & Security Review Committee must determine if the hazard may remain.
4C, 4D, 4E	Acceptable - without review	The hazard may remain.

2.2.2 Hazard Mitigation

The Hazard Resolution and Control process involves the analysis and corrective action(s) taken to reduce the risk of an identified hazard to the lowest practical level. The order of precedence, which follows, are used for satisfying system safety requirements and resolving identified hazards.

Design for Minimum Risk	Design new facilities and equipment to eliminate hazards. If an identified hazard cannot be eliminated, reduce its associated risks to an acceptable level through the design selection.
Incorporate Safety Devices	If an identified hazard cannot be eliminated or its associated risk cannot be reduced through design selection, reduce that risk to an acceptable level by using protective safety features or devices. Provide, and issue procedures for, periodic inspection and functional checks of safety devices.
Provide Warning Devices	When neither design nor safety devices can effectively eliminate identified hazards or reduce risk to an acceptable level, use warning devices to detect the condition and produce an adequate warning signal to alert individuals to the hazard. Standardized warning devices minimize the probability of persons reacting incorrectly to these warnings.
Develop Special Procedures	When it is impossible or impractical to eliminate hazards through design selection or adequately reduce associated risks through safety or warning devices, then use approved procedures and special training programs. Procedures may include the use of personal protective equipment. Precautionary notations and warning signs must be standardized. Employees who perform safety-critical tasks require certification of proficiency and periodic recertification.

Typically, hazards are controlled by more than one corrective method. The use of warning, caution, and other forms of written advisories alone to control Category I (Catastrophic) and Category II (Critical) hazards will be carefully reviewed to ensure that no other additional measures are possible.

If a new light rail extension or capital improvement project is determined not to contain significant hazards, the SANDAG Project Director may request a determination of “no significant potential for hazard” for the segment(s) from the COO-Rail. The COO-Rail may approve or deny the request.

Hazards identified by employees are tracked in the Hazard Management spreadsheet. Proposed mitigations are discussed in monthly Safety Committee meetings and documented in meeting minutes. The minutes posted on company bulletin boards and the agency intranet provide feedback on hazard mitigation and strategy.

2.3 HAZARD NOTIFICATION TO CPUC

If the System Safety Manager determines that an unacceptable hazardous condition exists (according to the Criticality Index), the System Safety Manager will notify the CPUC staff within two hours as required by GO164-E. The System Safety Manager or designee maintains a hazard tracking spreadsheet that identifies the hazard, status of hazard (open or closed), recommendations for corrective action, person or department responsible for corrective actions, and scheduled date of completion. The System Safety Manager is responsible for tracking open status items to resolution as required by GO164-E.

MTS will also submit any CAPs developed to minimize, mitigate, control, correct, or eliminate the identified risks and hazards. The CAPs will include description, immediate mitigation (if needed), origin of hazard, the proposed actions, permanent hazard resolution, or temporary mitigation if necessary, the responsible individual or department, and the schedule for implementing those actions for the identified hazard, including date the hazard was identified and closed, and hazard resolution verification/follow-up activities, all in accordance with Commission GO 164-E, Section 9.

3.0 SAFETY ASSURANCE

Safety assurance ensures that MTS implements appropriate and effective mitigations and monitors the safety performance of SDTI. Safety assurance also helps assess changes to see if the changes affect the safety of operations.

Safety assurance includes three subcomponents:

1. Safety Performance Monitoring and Measurement
2. Management of Change
3. Continuous Improvement

3.1 SAFETY PERFORMANCE MONITORING AND MEASUREMENT

There are many ways that SDTI monitors safety performance including:

- Monitor service delivery activities
- Monitor employee safety reporting programs
- Monitor operations and maintenance data
- Conduct safety audits, studies, reviews and inspections
- Conduct safety investigations
- Conduct safety surveys
- Evaluate data and information from external agencies

The FTA, in the National Transportation Safety Plan, has established safety performance, criteria and state of good repair standards that all transit agencies must meet. This Agency Safety Plan includes safety performance objectives that meet or exceed the required safety performance criteria and state of good repair standards. The Trolley is the best.

SDTI currently produces many forms of indicators that get reported to levels within MTS and SDTI and also to the CPUC and the FTA. In accordance with the requirements of the FTA's National Public Transportation Safety Plan. The Bipartisan Infrastructure Law of 2021 requires transit agencies to develop a risk reduction program to improve safety by reducing the number and rates of accidents, injuries and assaults on transit workers based on data submitted to the National Transit Database (NTD). SDTI risk reduction program addresses safety performance in the following Five categories:

- Fatalities: the total number of reportable fatalities and rate per total unlinked passenger trips by mode
- Injuries: the total number of reportable injuries and rate per total unlinked passenger trips by mode
- Safety Events: the total number of reportable events and rate per total vehicle miles by mode
- System Reliability: mean distance between failures by mode
- Transit Worker Assaults

SDTI's monitoring and assessment programs enable the agency to identify any safety risk mitigations that are ineffective, inappropriate or have not been implemented as originally intended. The System Safety Manager works with the appropriate departments

to reassess and document inadequate safety risk mitigations. New proposed mitigations are discussed with the Accountable Executive, and implemented. The System Safety Manger informs the CPUC of these actions.

3.1.1 Safety Performance Measurement

3.1.1.1 Safety Performance Measure: Fatalities

SDTI is committed to reducing the number of fatalities to zero and partners with community outreach efforts to attain this goal. The calendar year (CY) performance target for total fatalities and total fatalities rate per 100,000 revenue miles is to achieve a reduction compared to the previous three CY average. A National Transit Database (NTD) reportable fatality is a death due to: collision (including suicides), derailment, fire, hazardous material spill, acts of God, system or personal security event (including suicides), or other safety event. An NTD reportable fatality does not include: fatalities that occur because of illnesses or other natural causes (including individuals who are found deceased).

3.1.1.2 Safety Performance Measure: Injuries

Any harm to persons that requires immediate medical attention away from the scene because of a reportable event is considered to be a reportable injury. SDTI reports to the National Transit Database (NTD) anytime a person is transported away from the scene for medical attention as an injury, whether or not the person appears to be injured.

In addition to injuries requiring transport from the scene, injuries defined as serious are automatically reportable. Individuals with serious injuries may or may not have been transported away from the scene for medical attention. A serious injury is one that:

- Requires hospitalization for more than 48 hours within 7 days of the event
- Results in a fracture of any bone (except simple fractures of fingers, toes, or nose)
- Causes severe hemorrhages, or nerve, muscle, or tendon damage;
- Involves an internal organ
- Involves second- or third-degree burns, or any burns affecting more than five percent of the body surface

The CY performance target for total number of injuries and injury rate per 100,000 revenue miles is to achieve a reduction compared to the previous three CY average.

3.1.1.3 Safety Performance Measure: Transit Worker Assaults

Assault on a transit worker is defined as an individual knowingly, without lawful authority or permission, and with intent to endanger the safety of any individual, or with a reckless disregard for the safety of human life, interferes with, disables, or incapacitates a transit worker while the transit worker is performing the duties of the transit worker.

3.1.1.4 Safety Performance Measure: Safety Events

The safety events measure captures events meeting NTD reporting thresholds occurring on SDTI right-of-way or infrastructure, at a revenue or maintenance facility, rail yard, during the performance of maintenance activities or involving a transit revenue vehicle. The NTD reporting thresholds include fatalities, injuries requiring immediate medical attention away from the scene, derailment, substantial damage, and evacuation for life safety reasons.

The CY performance target for total number of safety events and safety events rate per 100,000 revenue miles is to achieve a reduction compared to the previous three CY average.

3.1.1.5 Safety Performance Measure: System Reliability

The system reliability measure expresses the relationship between safety and asset condition. The rate of vehicle failures in service, defined as mean distance between major mechanical failures, is measured as vehicle revenue miles operated divided by the number of major mechanical failures. SDTI continues to invest and plan for a highly reliable, safe operation of its public transportation system. As SDTI introduces new vehicles, there is a burn-in period for the vehicles that may result in a decrease of reliability. As such, SDTI will strive to maintain current system reliability targets during this time period.

The CY performance target for system reliability rate is to achieve a reduction compared to the previous three calendar years' average. SDTI system reliability targets are calculated using a three-year average of the mean distance between failures per 100,000 revenue miles.

3.1.1.6 Safety Performance Measure: Other

SDTI also develops specific performance targets for individual functional areas, including various departments within the agency (administration, facilities, LRV maintenance, maintenance of wayside, track, rail operations, transportation, safety, environmental health).

These include, but are not limited to:

- Safety related rule infractions
- Roadway worker protection violations
- Workplace inspection findings
- Near miss report frequency

- Employees attending safety meetings

SDTI also produces an emergency brake log.

These indicators and targets are developed jointly with safety working with each involved department and with the approval of the Accountable Executive of Rail. These performance targets and indicators are included in weekly COO Rail briefings by the Safety Department and in monthly CEO safety briefings, as well as to relevant members of the Board of Directors.

3.1.1.7 Safety and State of Good Repair

The State of Good Repair (SoGR) standards are defined by the National Safety Program and National Transit Asset Management (TAM) System, found in 49 CFR Part 625. These set forth conditions when safety risk analysis must be performed on capital assets such as equipment, rolling stock, infrastructure, and facilities. SDTI documents safety performance objectives in the TAM plan based on this definition and makes informed investments in order to strive for a SoGR for all assets.

3.1.2 Annual Safety Performance Report and Coordination with Stakeholders

SDTI disseminates and makes available safety performance targets to the FTA, CPUC, SANDAG (MPO) and other stakeholders to aid in the planning process. SDTI coordinates safety performance targets with stakeholders to the maximum extent practicable to assist with the selection of safety performance targets.

3.1.3 Safety Data Acquisition and Analysis

3.1.3.1 Safety Data Analysis

The System Safety Manager analyzes data to assist in maintaining a safe work environment for all employees. Analysis of data may result in a recommendation for corrective action. The principal approach used in achieving ASP goals and objectives are accomplished by charging all SDTI personnel with safety and the implications of their decisions. SDTI uses a proactive approach that stresses review of systems and the proposal of modifications to these systems from a safety perspective before losses occur. The ASP also requires employees to examine the affect that their actions may have on safety of other interrelated systems. All personnel are responsible for ensuring that safety-related tasks meet and are in compliance with the guidelines set forth in the ASP.

All SDTI personnel are responsible for working safely and following established rules, procedures, policies, and safe-work practices. The intent of this section is to provide a description of ASP responsibilities that, when fulfilled, will assist SDTI's efforts in achieving optimal safety. Specific procedures and responsibilities are listed in procedure manuals, rule books, plans, program manuals, policies, and other controlling documents. Each SDTI department is

responsible for implementing and maintaining the procedures of the ASP pertaining to that department.

Personal Injuries

Personal injury reports are completed by Line Supervisors or Controllers and submitted to the System Safety Manager for inclusion in the Personal Injury Master Database.

The following elements of every injury are tracked:

- Date
- Line segment
- Location and location type
- Individual type (passenger, employee, trespasser, other)
- Area(s) injured
- Action (means of injury)
- If the injured party was transported
- If there was a fatality
- Train operator involved, if applicable, for evaluating potential trends with operating style

Personal injury reports are collected for on-train accidents, such as fall on start/stop, boarding/alighting, etc.; in transit facility accidents including slips, trips, and falls; along with collision reports; and in nonrevenue facility accidents, such as on the right-of-way or on SDTI property (maintenance facilities or yard).

Accidents/Incidents

If an LRV collides with vehicles, people, or objects, accident reports are completed by a Line Supervisor. Accident investigation information is discussed in detail in Section 3.1.2. As with personal injuries, collision reports are submitted to the System Safety Manager to be entered into the Master Accident Database.

The following elements of every incident are tracked to the extent possible based on available information:

- Date and time
- Train operator
- Location
- Incident type
- Highway user (auto, motorcycle, bicycle, pedestrian, other)
- Position (red light, stop sign, left turn, stopped and then proceeded, did not stop, around/through gate, fouling tracks, intentional, into path, coupler related, other)
- Circumstance (highway user struck train, train struck highway user)
- Risk assessment
- Number of injured parties or fatalities
- Video locator
- Line segment

- Direction (eastbound, westbound)
- Consist (LRV #s)
- Primary involved (generally lead) LRV and cost of repairs
- Secondary involved LRV, if applicable, and cost of repairs
- CPUC crossing number
- Geolocations (latitude, longitude)
- Fiscal year
- Investigating supervisor
- Weather conditions (clear, rainy, fog, windy, dry, wet, slick)
- Visibility (dawn, daylight, dusk, dark, street lights)
- Traffic control/protection (traffic signal, control zone, crossing gates, stop sign)
- Horn(s) used (LRV horn, federal horn, or no time for horn)
- Brake (dynamic, emergency, no time for brake)
- LRV lights (auxiliary, bright, dim)
- Designated and estimated speeds
- System check
- Operator 10-58
- Fire suppression
- Passenger evacuation
- 2+ injured on train
- Transported for treatment
- Regulatory reporting (CPUC, FRA, FTA/NTD)
- Days since last accident

Emergency Brake Applications

When an emergency brake application occurs, it is logged by Central Control. As with accidents/incidents, emergency brake application logs are submitted to the System Safety Manager to be entered into the Emergency Brake Log Master Database. The following elements of every application are tracked to the extent possible based on available information:

- Date and time
- Train operator involved, if applicable, for evaluating potential trends with operating style
- Train #
- Line segment
- Direction (eastbound, westbound)
- Consist (LRV #s)
- Geolocations (latitude, longitude)
- Highway user (auto, bicycle, pedestrian, child, animal, object, other)
- Reason (red light, stop sign, left turn, stopped and then proceeded, did not stop, around/through gate, fouling tracks, intentional, into path, coupler rider or similar, penalty)

This information is evaluated to determine trends in location, cause, and train operator. This information may also be used in accident reviews.

Comparisons of Monthly, Annual, and Historic Accident Rates

A monthly accident summary is distributed to management personnel and posted on company bulletin boards. Annual and historic statistics including cause, location, and highway user, are posted on company bulletin boards and used internally. This information is also available in map form (thermal, by type, maps).

Near-Miss and Hazardous Conditions

SDTI Rules and Instructions for Employees require all employees to report hazards to their supervisor or employee-in-charge (whether they were involved in, or observed, the event or condition) on the same day or as soon as practicable. Employees should report these on the Hazard/Near-Miss Form. The supervisor or employee-in-charge will attempt to immediately correct any hazard that is within their ability to affect. The System Safety Manager, in conjunction with the appropriate department head(s), conducts a subsequent investigation. All incidents are tracked for analysis and identification of trends.

Near-miss reporting allows employees an opportunity to report near-miss incidents involving employees or contractors working along the right-of-way. This program is for all employees, particularly operations personnel. Reports of near-miss incidents and other safety concerns allow management to identify, evaluate, correct, or avoid hazardous conditions, procedures, or equipment that may adversely affect the safety of all employees.

3.1.3.2 Accident/Incident Notification, Investigation, and Reporting

When notifications are necessary, the following information should be included:

a. The time and date of the accident/incident
b. The location of the accident/incident, including the Commission highway-rail grade-crossing number, if applicable
c. The number of fatalities and/or injuries
d. The rail transit vehicles involved in the accident/incident, if any
e. The factor that makes the accident/incident immediately reportable
f. Narrative description of the accident/incident, as known at the time of reporting; and
g. The emergency-response organizations at the scene of the accident/incident
h. Description of the service impact

3.1.3.2.1 SDTI Notifications

Transportation Department Standard Operating Procedure (SOP) 108.10, Emergency Call List identifies all personnel that are notified. The System Safety Manager shall be notified immediately by the Operations Control Center Supervisor or designee of all rail accidents/incidents. The System Safety Manager responds and investigates accidents/incidents whenever practicable in accordance with SDTI accident investigation procedures.

3.1.3.2.2 Accident, Derailment, Power Failure, Serious Injury, Fatality

In the event of a train accident, derailment, or long-term power failures resulting in major service loss, serious personal injury or fatality, SDTI or SD&IV related, the following notifications must be made immediately:

1. MTS CEO (only be made for those incidents involving significant property damage or fatal injuries, or as directed by the COO-Rail or Superintendent of Transportation)
2. COO-Rail
3. Superintendent of Transportation
4. Superintendent of LRV Maintenance
5. Superintendent of Wayside Maintenance
6. Assistant Superintendent of Transportation
7. Assistant Superintendent of LRV Maintenance
8. Assistant Superintendent of Wayside Maintenance
9. System Safety Manager
10. Central Control Supervisor
11. Director of Transit System Security
12. Assistant Central Control Supervisor
13. MTS Risk Management

3.1.3.2.3 Minor Accident/Injury

When accident or injury is of a minor nature and occurs after normal business hours or on weekends, the same notifications must be made, but discretion must be used as to the time such calls are made.

3.1.3.2.4 Regulatory Notifications

The following identifies the thresholds that incidents must meet to be reported to regulatory agencies.

<u>California Public Utilities Commission</u>

CPUC staff is notified within two hours of rail accidents that meet the immediately reportable thresholds, as defined in GO 164-E Section 7.2 as follows:

a. A fatality (occurring at the scene or within 30 calendar days following the accident)
b. One or more persons suffering serious injury
c. A collision involving a rail transit vehicle and any other vehicle, object, or individual
d. A derailment of any rail transit vehicle at any location, at any time, whatever the cause
e. An evacuation for life safety reasons
f. A runaway train

<u>Federal Transit Administration/Federal Railroad Administration</u>

The Federal Transit Administration (FTA) requires concurrent notification for all immediately reportable accidents as outlined in GO 164-E Section 7.4.

The Federal Railroad Administration (FRA) is notified within two hours of rail accidents that occur on joint or shared use segments and meet the established criteria as follows:

a. An incident that results in a fatality or fatalities
b. Causes serious injury to a number of people
c. Results in a major disruption to SDTI service
d. A threat that may cause injury to patrons or destruction of facilities

The FTA Region IX office and FRA Region VII headquarters must also be notified using the above criteria as well as any other incident that could impact transit and/or generate public or media attention.

National Transportation Safety Board

Train accidents and incidents meeting the following established criteria must be reported within two hours:

- Fatalities or injuries of a critical nature (requiring hospitalization) or two (2) or more employees or passengers
- Fatalities at grade crossing (trespassers not included)
- Evacuation of passengers resulting from an onboard fire or other hazardous condition that would require the dispatching of a fire-suppression unit to mitigate

3.1.3.2.5 Incident Investigations

The incident investigation and review process will involve the following, as appropriate:

- Interviews and questioning of persons directly or indirectly involved in the accident
- Visual examinations, measurements, and test of light rail vehicle, track, switches, signals, and other similar items
- Operational reenactments simulating conditions that applied when the accident happened
- Review of results of drug and alcohol tests
- Examination of employee training, certification, and re-certification records
- Assessment of employee hours of service records
- Review of light rail vehicle maintenance records
- Examination of wayside equipment maintenance records
- Evaluation of Train Operator and Controller communication recordings
- Review of light rail vehicle and wayside data/event recorder logs
- Examination of operating rules, general notices, procedures, and bulletins
- Review of law enforcement and coroner reports, including reports of similar accidents

3.1.3.2.6 Securing Evidence for Investigation

Standard Operating Procedure (SOP) 106.11: Accident Investigations Involving LRV/Auto or LRV/Pedestrian identifies the duties and responsibilities when an accident occurs as follows:

- Train Operator distributes witness cards and makes an initial effort to identify other individuals, either onboard or in immediate proximity, who may have witnessed the incident.

- After arrival at the scene, the Line Supervisor should arrange to mark the point of impact (POI), uncontrolled point of rest (POR) of the train and other party, photograph property damage of all vehicles or fixed structures involved; the license plate of any non-trolley vehicle involved, and any other relevant items. The Supervisor should arrange to obtain the Train Operator's name and employee number, and other information as may be helpful in completing an appropriate accident report, i.e., direction of travel, train and car numbers, speed at time of accident, etc. In all cases, the Line Supervisor will complete an internal accident report using the above information.

In order to maintain the preservation and integrity of evidence, the Line Supervisor should include the following methods of collection:

Photography
Interview of personnel and witnesses employees
Measurements and drawings
Debris collection
Drug test for involved

3.1.3.2.7 Causative Factors

The following causative factors are evaluated at the scene:

Equipment and infrastructure
Human factors
Weather conditions
Geography
Position and status of signals
Switches
Annunciators
Track wheels
Emergency brakes
Sand
Point of rest of involved vehicle

3.1.3.2.8 Minor Property Damage (No Injuries)

Law enforcement, as normal procedure, will not generally respond to a noninjury accident. They are, however, notified. This notification is reflected on the Unusual Occurrence Report. Law enforcement should be requested if the collision involves a government vehicle, a hit-and-run incident, if the driver appears to be intoxicated, or if injuries are reported.

3.1.3.2.9 Minor Injuries

In collisions involving minor injuries to the occupants or pedestrians and/or property damage only, the Line Supervisor arriving at the scene represents SDTI in the exchange of information between the involved parties and ensures that any statements regarding the collision are recorded in written form from all involved parties or witnesses.

If law enforcement has not arrived by the time all pertinent information is obtained, the Line Supervisor has authority to release the train. If law enforcement personnel arrive after this time, the Line Supervisor represents SDTI by providing or exchanging any additional information.

3.1.3.2.10 Moderate or Severe Injuries

In collisions involving moderate or severe injuries, responding law enforcement may conduct full accident investigations or file incident reports. The responding Line Supervisor prepares a detailed accident report regardless of the actions of law enforcement, but takes all steps necessary to work in unison with responding agencies in the exchange of information, and respects potential crime scenes as under authority of law enforcement.

3.1.3.2.11 California Public Utilities Commission Participation in Investigations

The CPUC has primary responsibility within the State of California for oversight of SDTI accident investigations and the System Safety Manager is the primary contact for the CPUC-designated representative assigned SDTI. The System Safety Manager is responsible for providing CPUC staff an opportunity to participate to the fullest extent possible in all aspects of the accident investigation, including providing advanced notification of interviews, inspections, examinations, tests, and meetings with consultants, review boards, etc. to review and analyze accident-related information.
In the event that the CPUC produces an investigation report, SDTI will review the report and identify any areas of dissent and agrees to provide a response to the CPUC within prescribed timelines as defined in GO 164-E.

3.1.3.2.12 Reviews

The System Safety Manager is responsible for ensuring that the following activities are performed. When reviewing an accident that resulted in a fatality or serious injury, notice shall be given to the CPUC whenever an accident investigation team or panel is convened to perform interviews, inspections, examinations, or tests to determine the cause of the accident. The investigation shall be documented in a written report that identifies the most probable cause and any contributing causes of the accident or unacceptable hazardous condition. The report shall also contain or reference a corrective action plan and schedule to prevent a recurrence of the accident or to mitigate the unacceptable hazardous condition.

3.1.3.2.13 Accident Review Committee

In an attempt to minimize accidents, SDTI conducts post-accident debriefings with each Train Operator involved in an LRV/auto accident or LRV/pedestrian accident. Safety concerns and defensive driving techniques are reinforced through discussion of individual train-handling techniques, physical characteristics/increase of accidents at the location, and previous accidents involving the Train Operator. The Accident Review Committee typically consists of two Train Operators, one Supervisor, a Transportation Training Supervisor or designee, and the System Safety Manager. This review provides an avenue by which the Accident Review Committee and involved Train Operator learn how similar types of incidents may be avoided. Employees found to have violated specific safety rules may be subject to disciplinary measures assessed by the Superintendent of Transportation.

3.1.3.2.14 Major Incident Review Committee

In the event of any unusual occurrence resulting in significant property damage, such as a derailment, significant injuries, or impact to system operations, the Major Incident Review Committee (MIRC) examines the evidence, determines the cause, and evaluates the response by SDTI. Chaired by the System Safety Manager, MIRC members may include personnel from any relevant departments. The Committee examines the effectiveness of current methods to prevent or minimize the potential of a recurrence and, if necessary, recommendations are made on the modification of policies, procedures, or equipment maintenance and operation. If the extent of the accident requires the expertise of outside consultants, a review board, such as American Public Transit Association (APTA), may be called upon to perform the accident review on behalf of SDTI.

3.1.3.2.15 Reports and Documentation

The System Safety Manager is responsible for conducting investigations and preparing investigation reports.

<u>California Public Utilities Commission Reporting</u>

SDTI investigates, on behalf of the CPUC, all reportable accidents involving a rail transit vehicle or taking place on rail transit-controlled property. SDTI submits written accident reports on forms prescribed by the CPUC within 30 calendar days after the last day of the month in which the accident occurred. The Safety Department produces one of two different types of reports for CPUC reportable accidents, an investigative report or a 60-Day Minor Incident Report. These reports contain findings of the investigation, the most probable cause of the accident, contributing factors, and recommendations for corrective action to prevent a recurrence of the accident. As part of an agreement made by the CPUC and the ROAR Committee in Fall 2007, which was documented in the ROAR Committee Meeting minutes, the Table 5: CPUC Incident Reporting Thresholds was established to identify which of the above two reports will be submitted based on the incident thresholds.

The CPUC has primary responsibility for oversight of the design, engineering, construction, and operation of fixed guideway systems within the state of California. State-mandated rules and regulations which are applicable to safety-related matters are contained in GOs 22-B, 26-D, 33-B, 72-B, 75-D, 88-B, 95, 108, 110, 118, 127, 128, 135, 143-B, 161, 164-E, 172 and 175. SDTI rail segments with shared- or joint-use heavy rail operation and rail segments with light rail-exclusive usage each have a set of general orders applicable to their unique operational characteristics. The System Safety Manager is responsible for confirming that staffs who work on the SDTI system are familiar with all applicable GOs.

Table 5: CPUC Incident Reporting Thresholds

Investigative Report	Minor Event Report
• Fatality (including suicides) • Serious injury to one or more people (does not include persons onboard the train). Serious injury is any injury or illness that requires inpatient hospitalization for a period in excess of 24 hours for other than medical observation, loss of any member of the body, or serious degree of permanent disfigurement. • Mainline derailment • Mainline collision between rail vehicles • Evacuation due to life safety	• Two (2) or more injuries onboard the train that are transported for medical attention away from the scene • Collision minor/no injury • Yard collisions

SDTI also submits a Form V (Monthly Service Record, Accident, Hazard, and Corrective Action Summary Report) regardless of the number of reportable accidents or unacceptable hazardous conditions. These reports are provided to the CPUC representative. The System Safety Manager reports to the CPUC representative.

If an accident is ruled as "suicide" or "attempted suicide," the investigation report shall identify this based upon the review of the Train Operator's report, witness statements, law enforcement reports, and/or coroner’s reports.

If an MIRC is convened to investigate the accident, all team members including CPUC staff shall receive a copy of the final report in draft form. In cases where disagreement exists between team members regarding any aspect of the report, the System Safety Manager exercises ultimate authority. The final report is a Safety Department document.

A corrective action plan is also submitted to the CPUC office for accidents that require a recommendation other than internal defensive-driving reinstruction. Corrective actions from accidents, MIRC committee meetings, and investigations are confidential and kept with the Safety Department files.

If an accident investigation takes longer than 60 days, status reports will be submitted to the CPUC each month. The first status report is due 60 days after the rail accident.

If the final investigative report is acceptable to the CPUC a formal letter is issued approving the report as consistent with best industry investigation procedures and in furtherance of the public's interest in system safety and security. If it not acceptable, the CPUC shall identify within six months from the date of the submittal, the areas in the report requiring correction. If SDTI does not agree with the rejection, the CPUC shall either conduct its own investigation, or communicate its disagreement with the findings of the accident investigation to SDTI. The CPUC will then meet with SDTI in an effort to reach a mutually-agreed upon solution. If a mutually agreed upon solution is not reached, SDTI's report and the CPUC's statement of disagreement shall be filed with the CPUC.

No investigation report or recommendation of the CPUC or other investigation report of SDTI's that is filed with the CPUC shall be admissible as evidence in any action for damages based on or arising out of matters covered therein pursuant to Public Utilities Code Section 315.

Federal Railroad Administration Reporting

The Statement of Agency Policy, 49 CFR 42526 and 42529, dated July 10, 2000, requires that rail transit agencies report accidents that meet reporting thresholds that occur on shared- or joint-use heavy-rail segments be reported. These reports are submitted by the System Safety Manager.

Table 6: FRA Reporting Thresholds

Form 6180.56	Annual Report of Employee Hours Worked and Casualties By State • Submitted every year with the December submission
Form 6180.55	Railroad Injury and Illness Summary • Submitted each month even if there were no reportable accidents/incidents during the month
Form 6180.57	Highway-Rail Grade Crossing Accident/Incident Report • Train accidents on crossings and corridors shared with heavy rail operations under the jurisdiction of the Federal Railroad Administration
Form 6180.55a	Railroad Injury and Illness Summary (continuation sheet) • Completed for each injury reported on Form 6180.57
Form 6180.54	Rail Equipment Accident/Incident Report • Should damage to MTS equipment, track, or other property exceed the FRA damage threshold, Form 6180.54 must also be submitted. The calculation of damage includes labor costs and all other costs to repair or replace in-kind, damaged on-track equipment, signals, track, track structures, or roadbed. Reportable damage does not include the cost of clearing a wreck; however, additional damage to the above-listed items caused while clearing the wreck is to be included in the damage estimate.
NOTE:	All signed forms shall be emailed to RSISAIREPORTS@dot.gov

National Transit Database Reporting

The National Transit Database (NTD) records transit-related Safety and Security data and incidents that meet certain thresholds. These reports are submitted within 30 days by the System Safety Manager through the NTD reporting website based on the following criteria:

1. A personal injury that is not a serious injury;
2. One or more injuries requiring medical transportation away from the event; and
3. Damage to facilities, equipment, rolling stock or infrastructure that disrupts the operations of a rail transit agency.

Table 7: NTD Quick Reporting Reference Guide (CY 2019)

2020 NTD Safety & Security Quick Reference Guide – Non-Rail Mode Reporting

***Reportable Event**: A safety or security event occurring: on transit right-of-way or infrastructure, at a transit revenue facility, at a maintenance facility, during a transit related maintenance activity, or involving a transit revenue vehicle. Excluded from this event reporting requirement are: events that occur off transit property where affected persons, vehicles, or objects come to rest on transit property after the event, OSHA events in administrative buildings, deaths that are a result of illness or other natural causes, other events (assault, robbery, non-transit vehicle collisions, etc.) occurring at bus stops or shelters that are not on transit-owned property (unless boarding/alighting at the time), collisions that occur while travelling to or from a transit-related maintenance activity, collisions involving a supervisor car, or other transit service vehicle operating on public roads.)*

S&S-40 Major Event Report	S&S-50 Non-Major Monthly Summary
MAJOR THRESHOLDS An event meeting the reportable event definition AND meeting *one or more* of the following reporting thresholds: • A fatality confirmed within 30 days (including suicide) • An injury requiring transport away from the scene for medical attention for one or more persons (partial exception in the case of Other Safety Events) • Estimated property damage equal to or exceeding $25,000 • An evacuation for life safety reasons • Collisions involving transit roadway revenue vehicles that require towing away of a transit roadway vehicle or other non-transit roadway vehicle **Reports are due within 30 days of the date of the event.**	**NON-MAJOR THRESHOLDS** Less severe Other Safety Occurrence Not Otherwise Classified (OSONOC) injuries meeting the reportable event definition that are **NOT** a result of a collision, evacuation, security event, hazmat spill, or Act of God; and non-major fires. Other Safety Occurrence Not Otherwise Classified (OSONOC): • Single injury event requiring transport away from the scene for medical attention (*do not report "minor" collisions on S&S-50*) Fires: • Requiring suppression that **do not** meet a major incident reporting threshold *injury, fatality, evacuation, or property damage of $25,000 or more).* **Reports due by the end of the following month (e.g., January data due by end of February).**

EVENT TYPES
• Collision (including suicide/attempted suicide)
• Fire
• Hazardous material spill (requires *specialized* clean-up)
• Acts of God (nature)
• System security:
  ○ Arson
  ○ Bomb threat/bombing
  ○ Burglary / Vandalism
  ○ Chemical/biological/radiological/nuclear release
  ○ Cyber security event
  ○ Hijacking
  ○ Sabotage
  ○ Suspicious package
  ○ Other security event (shots fired, projectiles, etc.)
• Personal Security:
  ○ Assault
  ○ Homicide
  ○ Suicide or Attempted Suicide (no transit vehicle involved)
  ○ Robbery
  ○ Larceny/theft
  ○ Motor vehicle theft
  ○ Rape
  ○ Other personal security events (perpetrator tazing)
• Other Safety Occurrences Not Otherwise Classified (OSONOC) (two injuries and/or another threshold)
  ○ Miscellaneous events that meet a threshold
	EVENT TYPES
	Other Safety Occurrence Not Otherwise Classified (OSONOC):
	Injury due to:
	• Slip/Trip
	• Fall
	  ○ Including person making contact with a non-moving transit vehicle
	• Injury to maintenance workers
	• Boarding/alighting
	• Abrupt or evasive transit vehicle maneuvers
	• Mobility device (e.g. wheelchair) securement issues
	• Injury sustained on a mobility device lift
	• Stairs/elevator/escalator injury
	
	Fire:
	• Requires suppression but no major threshold is met
	  ○ Small fire on in transit station
	  ○ Small engine fire on transit vehicle

Reportable incidents include events that occur in transit centers or parking lots of transit centers. Incidents occurring in the maintenance department of a transit agency or related to maintenance activities are excluded from the reportable incident category, as are incidents involving an on-duty transit vehicle operator not engaged in directly performing his/her operator duties.

3.1.4 Infrastructure Maintenance and Inspection

3.1.4.1 Facilities and Equipment Inspections

The Facilities Department is responsible for the maintenance and cleaning of fixed facilities, including stations, parking areas, irrigation, weed control, and exterior cleaning of nonrevenue vehicles. Scheduled weekly maintenance includes maintenance of stations, facilities/buildings and grounds, as well as vehicle inspections. Bimonthly maintenance is performed on the LRV car wash and sludge/drain system, and stations and facilities maintenance are conducted annually and as needed. A Supervisor ensures that corrective actions are implemented and closed out in a timely manner and reviews inspection and trouble reports. On-site facilities are inspected monthly for unsafe and unhealthy conditions and are documented utilizing building inspection checklists. The results of these inspections are reported to the appropriate department so that the condition can be corrected and/or operational changes can be made.

3.1.4.2 Maintenance Inspection Program

Wayside Maintenance Department

Preventive maintenance is performed for both track and signals in accordance with FRA Regulations, Part 213 for Track, FRA Part 234 for Grade Crossing and FRA Part 236 for Signals. SDTI internal Standard Operating Procedures schedule maintenance for other equipment not covered by FRA rules, such as traction power substations, OCS, overpasses, bridges, and tunnels.

The inspection interval is time-based, and nonrevenue vehicles are scheduled by mileage. A list of Wayside scheduled maintenance programs designed to examine both the safety and efficiency of the operating equipment follows:

DAILY	WEEKLY
• Station lighting • Rights-of-way • Maintenance facilities • Non-revenue vehicles	• Track (twice weekly) • Track bonds • Street switches • SDSU emergency lighting/walkway for tunnel • SDSU tunnel structure integrity (completed during track inspections)

MONTHLY	QUARTERLY
• Substation batteries • Switch inspections per FRA rules • Gates and crossing protection equipment • FRA inspections: 103, 104, 107	• SDSU wet standpipes (under maintenance contract with Simplex/Grinnell) • Substations • SDSU under car deluge test

ANNUALLY	5-YEAR
• OCS, trees and shrubs for interference with overhead wires and pedestrian walkways, FRA inspections: 106, 108, 109 • Preventive maintenance for portable equipment and rail-bound maintenance equipment, with recertification provided bi-annually by a designated contractor. • Emergency vent fans • Sump pumps • SDSU underground phones • Annual bridge inspections by a designated contractor	• Overpasses, bridges and tunnels

3.1.5 Vehicle Maintenance, Inspection, and Repair

3.1.5.1 LRV Scheduled Maintenance

Scheduled maintenance is performed periodically on the basis of time intervals, mileage intervals, and manufacturer's specifications. Each inspection targets a specific area along with a visual check of all subsystems to ensure nothing is overlooked. A list of LRV scheduled maintenance programs that are designed to examine both the safety and efficiency of the operating equipment follows:

U2	SD-100
• Daily Inspection • Daily Cleaning Procedures for LRVs • 6 Month Inspection • Annual Inspection • 6 Month Oil Change	• Daily Inspection • 7.5K Inspection • 22K Inspection • 1 Year Inspection

SD-7/SD-8/SD-9/SD-10	PCC
• Daily Inspection • 7.5K Inspection • 15K Inspection • 30K Inspection • 60K Inspection	• Quarterly Inspection

3.2 MANAGEMENT OF CHANGE

3.2.1 Configuration Management

System modifications are carefully evaluated and considered from concept to design and implementation to determine how the change might affect the safety of the system. MTS, SDTI, and SANDAG staffs, as applicable, working under the direction of SDTI, evaluate the proposed modification for its potential to create additional hazards or to reduce the effectiveness of existing hazard controls. MTS, SDTI, and SANDAG staffs, as applicable, coordinate the integration of new equipment, system expansion, modification, and system rehabilitation from the design and procurement effort through construction, inspection, testing, and start-up. GO-164-E requires a Safety Certification Plan be developed and submitted to the CPUC for review and approval during the project preliminary design phase. The Safety Certification Plan purpose is to ensure extensions and the new capital and new capital projects are reviewed for compliance with safety requirements and to ensure the system satisfies operational readiness to enter revenue service.

3.2.1.1 Regional Project Implementation

Regional Projects are administered by SANDAG project implementation staff under the direction of SDTI, MTS, and SANDAG management. The SANDAG project implementation team develops contract documents (plans and specifications) and organizes review meetings with SDTI, SANDAG, consultants, and other agency staff, as needed. The project is constructed in accordance with the contract documents and contract change orders, and contract work built by the contractors is tested and inspected.

3.2.1.2 Change Control

The purpose of configuration management is to establish standard procedures and policy for the control of changes to transit systems and facilities. The configuration management process is applied to any changes or modifications to the system that may affect operational safety. The process is followed for creation of construction plans and specifications, specification and procurement of vehicles and components, and contract change orders. The SANDAG project engineer shall solicit input from SDTI staff during the scoping, design, and construction phases of a project. The SANDAG project engineer is responsible for carefully reviewing and coordinating SDTI input and shall evaluate all possible impacts to the system before recommending a project scope and design to the COO-Rail for approval.

Modifications to safety critical subsystems like tracks, structures, grade crossings, or vehicles must be designed by professional engineers and then managed by professional construction managers. Once construction is complete and safety certification is verified, revenue operation may start. Any changed conditions are recorded on as-built documents then addressed in operations and maintenance manuals, procedures, and by training.

The process establishes and documents the authority needed to make configuration changes, the process for incorporating these changes in all appropriate documentation, and the process for ensuring that all necessary business units are aware of such changes. A systematic and comprehensive review and approval process will occur before changes are made.

Configuration Management ensures that:

- The primary and secondary impacts of all system changes are adequately addressed during the scoping phase of a project or procurement
- A careful, systematic, and comprehensive review and approval occur during the design and construction phase of a project or procurement
- Revision records are maintained with the document
- Only the latest approved document is distributed
- The completed modifications are properly incorporated into the existing system

Thorough configuration records and controls are in effect to ensure that an audit trail exists, tracking the current facility or equipment configuration back to its inception, and that only the current approved set of documents is released for construction and operations. All completed documentation concerning changes or updates of as-built documents are maintained and/or filed at the SANDAG engineering offices, as applicable.

3.2.1.3 New Systems

SDTI staff will review project design documents (plans and specifications, failure and critical analysis reports), equipment submittals, test procedures and reports, operations and maintenance manuals, and other related documents as needed. An inspection of the finished system ensures compliance with all SDTI, manufacturer, federal, state, and local requirements.

3.2.2 Safety and Security Certification Process

The Safety Certification Program verifies that safety-related requirements are incorporated into rail transit projects. The goal is to verify that safety standards are met or exceeded in the design, construction, and start-up of these projects. SANDAG self-certifies regional SDTI rail transit projects, subject to the safety oversight of the CPUC. The CPUC requirements for safety certification are identified in General Order 164-E, which SDTI adheres to. The SANDAG Director of Engineering and Construction is responsible for overseeing the activities of the safety certification plan as applied to regional SDTI rail transit projects. A safety certification plan identifies all project elements considered safety-critical that must be verified prior to incorporation into the system.

3.2.2.1 Purpose of Safety and Security Certification

The purpose of the safety certification process is to:

- Identify the processes to verify and document that the design, construction, and installation of facilities, systems, and equipment are in compliance with design criteria, conformed contract specifications, and applicable safety and security requirements
- Hazards are identified, analyzed, and resolved
- Contractor training and operations and maintenance manuals are provided to SDTI staff
- Rules and procedures are written
- Operations personnel are trained in rules and procedures
- Emergency services personnel are trained on rail systems and facilities
- Emergency drills are conducted
- Safety and security documentation is properly maintained

3.2.2.2 Goals of Safety and Security Certification

The goals of the safety certification process are that:

- All SANDAG rail transit projects meet or exceed acceptable safety levels
- Verification of safety standards are documented
- A consistent manner to certify projects is established and followed

3.2.2.3 Objectives of Safety and Security Certification

Safety certification covers the design, construction, testing, training, and operational safety and security of the following:

- System Safety: Elimination, minimization, or control of potential hazards to patrons, the general public, employees, contractors, and property to the most practical level through effective use of available design, engineering, and/or procedural measures
- Fire/Life Safety: Elimination, minimization, or control of potential hazards to patrons, employees, emergency response personnel, property, and the general public caused by fire, smoke, explosion, or resulting panic to the most practical level through effective use of available design, engineering, and/or procedural measures
- Occupational Safety: Elimination, minimization, or control of potential hazards to employees, contractors, and emergency response personnel to the most practical level through effective use of available design, engineering, and/or procedural measures during revenue service
- System Security: Elimination, minimization, or control of potential security threats and vulnerabilities to patrons, the general public, contractors, and property to the most practical level through the effective use of available design, engineering, and/or procedural measures

3.2.2.4 Elements of Safety and Security Certification

Safety certification verifies that safety-critical subsystems, plans, procedures, and training programs are reviewed for compliance with safety requirements prior to the start of revenue service.

- The safety features required by the technical specifications are properly included in the finished product(s)
- Subsystems are tested and inspected to verify that the safety features perform as the design intended
- The hazard identification analysis and resolution process is performed
- Plans, procedures, and training programs are developed, reviewed, and implemented prior to the start of revenue service
- Responsible program participants verify that the above are completed to document a traceable history of the safety certification process
- Security certification coordination for maintenance elements and major capital projects is included in the safety certification process as it pertains to those facilities

3.2.2.5 Safety and Security Certification Process

As applicable, SANDAG is responsible for self-certifying and has overall responsibility for the safe and dependable design, construction, and pre-revenue operation of safety-critical projects. The following steps typically comprise the safety certification process:

Step 1: Identify certifiable elements
Step 2: Develop safety and security design criteria
Step 3: Develop and complete design criteria conformance checklist
Step 4: Perform construction specification conformance
Step 5: Identify additional safety and security test requirements
Step 6: Perform testing and validation in support of safety certification
Step 7: Manage integrated tests for safety certification
Step 8: Manage open items in the safety certification program
Step 9: Verify operational readiness
Step 10: Conduct final determination of project readiness and issue a Safety Certification Verification Report

If complications arise that render a safety-critical system element incomplete or temporarily unavailable, the deficiency can be mitigated by establishing operating restrictions, general notices or bulletins are issued to all affected departments. Compliance with the general notice or bulletin dealing with an exception is monitored constantly to ensure compliance.

3.2.2.6 Safety and Security Certification Verification Report

The final step of safety certification before a new project, modified system, equipment, or facility may enter revenue service is the preparation of the Safety Certification Verification Report (SCVR). The SCVR provides an executive summary of certifiable elements prior to revenue service. The SCVR includes safety certification letters documenting signature sign-off by department heads and the COO-Rail. The SCVR provides documentation as follows:

- Design and construction reviews
- Certificates of safety compliance
- Testing
- Plans, rules, and procedures
- Emergency drills (if necessary)
- Maintenance training
- Operations training
- Operations and maintenance manuals
- Hazard identification and resolution
- Audits
- Security certification
- Exceptions list

The SCVR is transmitted by the CEO to the CPUC Rail Safety Division Director at least 21 days prior to revenue service requesting final authority to approve the project for revenue service. An approval letter from the CPUC is required prior to commencement of revenue service.

3.2.2.7 Roles and Responsibilities

SDTI Participation

SDTI and SANDAG, as applicable, are responsible for ensuring the design review process for new equipment, system expansion, and system modifications comply with the requirements specified under the Configuration Management Plan, and any hazards associated with system expansions or modifications are included in the hazard identification analysis and resolution process.

SDTI staff's participation in the project implementation phases of planning, design, construction, and start-up and testing is required to ensure the system is designed and constructed in compliance with the operational and maintenance needs.

Chief Executive Officer

The MTS CEO will provide input and direction during project implementation.

Chief Operating Officer-Rail

The SDTI COO-Rail will be a member of the Rail Activation Committee and may chair a pre-revenue operations subcommittee.

Superintendent of Transportation

The SDTI Superintendent of Transportation, under direction of the COO-Rail, will provide input on operating plans, train timetables, train-consist configurations, fleet and equipment needs, operational characteristics, and other operational requirements.

Superintendent of Wayside Maintenance

The SDTI Superintendent of Wayside Maintenance, under direction of the COO-Rail, will provide input to the project team on wayside and system maintenance issues.

Superintendent of LRV Maintenance

The SDTI Superintendent of LRV Maintenance, under direction of the COO-Rail, will provide input to the project team on vehicle issues.

MTS Chief of Police

The MTS Chief of Police manages the MTS Transit Enforcement Department. The Chief of Police, with Transit Enforcement Department staff as needed, will coordinate closely and participate in the Safety and Security Review and Fire Life Safety and Security Committees with emphasis on operational and construction security issues.

System Safety Manager

The SDTI System Safety Manager coordinates closely with the COO-Rail and may chair the Safety and Security Review and Fire Life Safety and Security Committees, as appropriate.

Safety and Security Certification Committees

Multiple committees may be established in support of project certification programs, including the Safety & Security Review and the Fire Life Safety & Security Committees. Membership on these committees may change as the projects enter different phases.

Safety and Security Review Committee

The Safety and Security Review Committee (SSRC) is a multidisciplinary working group that serves as a high-level committee to address all safety and security issues for projects. This committee oversees the implementation of each project’s Safety and Security Certification Plan.

Fire/Life Safety and Security Committee

The Fire/Life Safety and Security Committee (FLSSC) membership consists of SANDAG and MTS staff, along with representatives from fire, police, emergency services, and local building code agencies. The FLSCC is to review requirements that relate to fire life safety and obtain concurrence from local authorities having jurisdiction that the proposed designs meet code requirements. The FLSSC also reviews security requirements.

CPUC Participation

CPUC GO 164-E requires that the Safety Certification Plan be developed and submitted to the CPUC for review and approval during the preliminary design phase of major projects. The CPUC formally approves the Safety Certification Plan prior to the project final engineering phase.

3.3 CONTINUOUS IMPROVEMENT

MTS is committed to evaluating the effectiveness of its procedures for operations and maintenance. Various methods are routinely used to perform this assessment including, but not limited to the following: internal safety reviews, employee performance observation reports, efficiency testing. Additionally, external safety reviews are periodically conducted by established federal, state and local oversight agencies.

3.3.1 Safety Assessment

3.3.1.1 Internal Safety Management Reviews

Annual internal safety audits are conducted by the System Safety Manager and agency staff (reviewers) to ensure that compliance is maintained and objectives are met. If the System Safety Manager is responsible for the audit checklist under review, agency staff independent of the safety function will complete the checklist. Additionally, reviewers must be independent from the first line of supervision responsible for the checklist under review. Internal safety audits required by the FTA Oversight Rule 49 CFR Part 674 for Fixed Guideway Systems are witnessed by a CPUC-designated representative. Should there be a disagreement on findings, the responsible party and reviewers will meet with the COO-Rail. If no resolution can be reached by the COO-Rail, then the internal auditor and CEO will review and issue a final determination. The System Safety Manager provides monthly progress reports to the CPUC-designated representative on the status of the open items/recommendations, as well as to the COO-Rail for review and comment on the status of recommendations and corrective actions.

Table 8: Process for Conducting Reviews

	Task	Deadlines (no later than)
1	Ensure checklist reference sheets are up-to-date	Prior to next step
2	Notify reviewers and CPUC of audit checklists and audit dates via memo and meeting invitation	30 days prior to beginning of audit
3	Complete audit of checklists	December 31 of audit year
4	Review findings of each checklist reviewed with COO-Rail and responsible departments. Draft corrective action plan, if necessary.	January 31 of following year
5	Submit final internal safety audit including findings and corrective action plan, to CPUC	February 15 of following year

The CPUC also conducts periodic safety audits. Audits may include review of equipment, procedures and programs, inspection of documents and records relative to operations and maintenance, and tracking and resolving open defects during inspections.

Results from the annual internal safety audit are documented in a report submitted to the CPUC annually by February 15 as required by 49 CFR Part 674 and GO 164-E. This annual audit includes elements scheduled on a rotation to ensure that all twenty-one elements are completed during the three-year cycle. This schedule is included with the Internal Safety Audit Report.
The report summarizes the results of the internal safety audit. Any deficiencies or instances of noncompliance are brought to the attention of the responsible department by the System Safety Manager. During this discussion, a corrective action plan (CAP) is created and it is determined that any disagreement or discrepancy found is resolved. The correction action plan contains the identification of the required action needed to minimize, control, correct or eliminate the identified risk and hazard; the schedule for taking these actions and identifies responsible party. Documentation of corrective action progress and resolution is given to the System Safety Manager by each department for review and final closure. The System Safety Manager is responsible for tracking all corrective actions to completion and submits progress reports monthly to the CPUC.

3.3.1.2 External Safety Management Resources

A compliance safety management review is available when it is determined that verification of compliance to policies, plans, procedures, milestones, or other predetermined requirements need to be made. These compliance safety management reviews indicate whether requirements are met (yes or no) or partial compliance.

Peer reviews are a valuable resource to SDTI for assessing all aspects of transit operations and functions. Highly experienced rail transit personnel who are selected on the basis of their subject matter expertise conduct the peer reviews on-site. Through the benefits of on-site interviews of SDTI staff and review of relevant documents, the peer review panel concludes its review with a summary of observations and recommendations as needed.

DEPARTMENTS SUBJECT TO REVIEW

	Task	2020	2021	2022	2023
1	Policy Statement		2021		
2	Purpose, Goals, and Objectives		2021		
3	RTA Management Structure		2021		
4	Interdepartmental/Interagency Coordination	2020			2023
5	Plan Implementation, Plan Review, and Modification	2020			2023
6	Hazard Management Program	2020			2023
7	Safety Certification Process (SANDAG)			2022	
8	Safety Data Acquisition			2022	
9	Incident Notification, Investigation, and Reporting	2020			2023
10	Emergency Management Program	2020			2023
11	Internal Safety and Security Audit Program		2021		
12	Rules Compliance			2022	
13	Facilities and Maintenance Inspections		2021		
14	Maintenance Audit and Inspection Program		2021		
15	Training and Certification Program			2022	
16	Configuration Management Process (SANDAG)				2023
17	Compliance with Local, State and Federal Safety Requirements		2021		
18	Hazardous Materials Program	2020			2023
19	Drug and Alcohol Program		2021		
20	Procurement (SANDAG)			2022	
21	PED Random Monitoring Program				2023
22	Roadway Worker Protection Program				2023
23	Security (five elements over three years)	2020	2021	2022	2023
	S-1: Identify Policies, Goals and Objectives	2020			2023
	S-2: Process for Management of Threat Vulnerabilities	2020			2023
	S-3: Identification Concepts for Passenger and Employee Security		2021		
	S-4: Process for Internal Security Audits			2022	
	S-5: Process for Generating Security Plans			2022	

	Task	Department
1	Policy Statement	Safety
2	Purpose, Goals, and Objectives	Safety
3	RTA Management Structure	Safety
4	Interdepartmental/Interagency Coordination	Safety
5	Plan Implementation, Plan Review, and Modification	Safety
6	Hazard Management Program	Safety
7	Safety Certification Process	SANDAG Project Management
8	Safety Data Acquisition	Safety
9	Incident Notification, Investigation, and Reporting	Safety
10	Emergency Management Program	Safety
11	Internal Safety and Security Audit Program	Safety
12	Rules Compliance	Transportation LRV Maintenance Wayside Maintenance Facilities
13	Facilities and Maintenance Inspections	Facilities LRV Maintenance Wayside Maintenance
14	Maintenance Audit and Inspection Program	Wayside Maintenance
15	Training and Certification Program	Transportation LRV Maintenance Wayside Maintenance Facilities
16	Configuration Management Process	SANDAG Project Management
17	Compliance with Local, State, and Federal Safety Requirements	Safety
18	Hazardous Materials Program	Safety
19	Drug and Alcohol Program	Human Resources
20	Procurement	SANDAG/MTS Procurement
21	CPUC G.O. 172: Personal Electronic Device Prohibitions/In Cab Cameras	Transportation LRV Maintenance Wayside Maintenance Facilities
22	CPUC G.O. 175-A: Rules and Regulations Governing Roadway Worker Protection Provided by Rail Transit Agencies and Fixed Guideway Systems	Transportation LRV Maintenance Wayside Maintenance Facilities
23	Security (five elements over three years)	Security
	S-1: Identify Policies, Goals and Objectives	
	S-2: Process for Management of Threat Vulnerabilities	
	S-3: Identification Concepts for Passenger and Employee Security	
	S-4: Process for Internal Security Audits	
	S-5: Process for Generating Security Plans	

ISA Master Schedule based on GO 164-E requirements effective May 3, 2007

3.3.1.3 External Safety Management

Compliance safety management review focuses on verification of compliance to policies, plans, procedures, milestones, or other predetermined requirements. These compliance safety management reviews indicate whether requirements are met (yes or no) or partial compliance.

Peer reviews are a valuable resource to SDTI for assessing all aspects of transit operations and functions. Highly experienced rail transit personnel who are selected on the basis of their subject matter expertise conduct the peer reviews on-site. Through the benefits of on-site interviews of SDTI staff and review of relevant documents, the peer review panel concludes its review with a summary of observations and recommendations.

3.3.1.4 Safety Culture Assessment

It is important for SDTI to continually assess its effectiveness on overall safety. Since safety culture is not “visible,” assessment is not simple. Types of assessment instruments may include the following:

- Surveys of employee attitudes, opinions, and perceptions
- Written questionnaires
- Face-to-face interviews
- Focus group interviews
- Ability of the organization to focus on long term performance
- How SDTI handles conflicts
- How SDTI views errors and mistakes
- Ability of the organization to focus on improving safety defenses instead of assigning blame
- SDTI’s proactive stance toward safety

4.0 SAFETY PROMOTION

Safety promotion has two subcomponents:

1. Safety Communication
2. Competencies and Training

Safety promotion provides increased safety awareness through safety training and communications. This process helps employees have the skills needed to perform their job safely and to have shared ownership of MTS's safety program. Management commitment is demonstrated through visibility of safety throughout MTS.

4.1 SAFETY COMMUNICATION

An effective SMS includes a positive safety culture where there is a two-way feedback loop between frontline employees and management about safety information. This communication fosters an environment where hazards and safety risks are routinely discussed and employees feel encouraged to report safety concerns. Management commitment is essential to ensure an effective SMS.

SDTI uses the intranet to communicate safety activities and events throughout the agency including updates to critical documents, such as the Public Transportation Agency Safety Plan. SDTI also uses bulletins communicating safety activities and events. These bulletins are placed on display boards throughout the SDTI workplace.

4.1.1 Workplace Safety Programs

4.1.1.1 Industrial /Occupational Safety Program

SDTI has developed and implemented an Injury and Illness Prevention Program (IIPP) to maintain a self and healthful workplace for employees. The IIPP Manual includes the following:

- Management Commitment/Assignment of Responsibilities
- Safety Communications
- Hazard Assessment and Control
- Accident Investigation
- Safety Planning, Rules, and Work Procedures
- Safety and Health Training

SDTI's IIP is designed to have input from employees and coordination with labor unions and their local representatives. Contractors are also required to conform to industrial and occupational safety program requirements.

4.1.1.2 Exposure Control Plan for Bloodborne Pathogens and Infectious Materials

MTS's policy is to provide safe working conditions and a safe work environment for all of its employees. The written Exposure Control Plan (Plan) is designed to minimize occupational exposure to blood and other potentially infectious materials. The Plan is located for employees to review on the MTS Intranet.

The written Plan was prepared to meet 8 CCR Section 5193 and 29 CFR 1910.1030.

4.1.1.3 Fitness for Duty Program

SDTI is committed to ensuring that employees and contractor personnel are fit for duty. Many factors can affect their overall fitness, including drugs and alcohol, fatigue, prescription drugs, and cognitive distractions.

4.1.1.4 Drug and Alcohol Program

MTS is committed to a drug- and alcohol-free workplace. All MTS employees are issued, and acknowledge receipt (signature to employee file in the Human Resources Department) of the MTS Drug and Alcohol Policy. All guidelines of this policy are prepared according to 49 CFR Parts 653, 654, and 655; Drug-Free Workplace Act, effective August 1, 2001. Policy application is monitored and recorded by the Human Resources Manager, including physical examinations and post-accident test results. Violation of the policy subjects the employee to immediate termination from SDTI.

4.1.1.5 Fatigue Program

Fatigue can contribute to hazardous operations. SDTI has implemented countermeasures to manage this risk potential. These measures include the following:

- Hours of service rules
- Medical evaluations for sleeping disorders
- Awareness training for employees and contractors

4.1.1.6 Medical Monitoring Program

MTS has medical standards that apply to safety sensitive positions which include pre-employment medical examinations and periodic examinations to identify any physical or mental deterioration of employees below thresholds established for safe performance of their duties.

4.1.1.7 Critical Incident Follow-up- Post Traumatic Stress

After significant incidents, such as major accidents, SDTI offers involves employees referral to the Employee Assistance Program (EAP).

After-action reports are prepared that include the following elements:

- Review interagency relationships to minimize interagency misunderstandings
- Ensure that a formal review of problems encountered is performed
- Learn from innovations developed during incidents
- Aid personnel in coping with the stresses of complex traumatic events

Transit personnel and emergency responders often face emotional trauma from serious incidents (post-traumatic stress disorder [PTSD]). SDTI provides access to health professionals to help counteract PTSD.

4.1.1.8 Cognitive Distraction and Attentional Error

Cognitive distraction refers to an employee or contractor taking his or her mind off the job. One major cause of cognitive distraction is the increased use of personal electronic devices, such as cell phones. SDTI has implemented a zero tolerance for cell phone use while on the job except in designated areas on SDTI property (see section 4.2.5).

4.1.2 Procurement

SANDAG/MTS procurement staff is responsible for planning, solicitation, award, administration, and documentation of contracts. SANDAG/MTS uses procurement procedures that reflect applicable state and local laws and regulations and, when applicable, federal law. All procurements and contracts must be approved in accordance with SANDAG/MTS Board Policies and delegation of authority. All completed documentation is kept on-file at SANDAG/MTS offices concerning procurements and policies.

SANDAG/MTS engineering staff is responsible for ensuring the material supplied conforms to procurement specifications. Per policy and procedures set forth in the Configuration Management Plan product submittals, design drawings, and change orders must be reviewed and approved. Through the efforts of SANDAG/MTS construction management contractors, inspection and quality-assurance measures are implemented to ensure unacceptable material is rejected and discarded.

All employees, agents, and contractors who are permitted to work on SDTI property must adhere to the provisions required by the MTS Agency Safety Plan.

The Safety Data Sheet (SDS) Program has established specific procedures for the acquisition and dissemination of information regarding hazardous materials. All operations and maintenance departments must meet applicable state, federal, and local regulations for the proper labeling, storage, handling, and disposal of hazardous materials, including documentation and recordkeeping requirements.

SDTI Stores Department procedures regarding procurement include:

- Procurement process complies with established procedures for evaluating materials and products for use by SDTI
- Safety Data Sheet requirements are met and copies maintained for all materials and that the materials undergo an evaluation by the Industrial Hygiene and Environmental Safety Section prior to use
- Develop, maintain, and utilize a list of hazardous materials and equipment; enforce procurement restrictions and other procurement procedures
- Follow safety procedures related to hazardous substance acquisition, handling, labeling, storage, disposal, and recordkeeping

4.1.3 Hazardous Materials Program

Procedures are in place to control hazards associated with procurement, storage, transfer, use, and disposal of hazardous substances. These procedures also address recordkeeping and reporting requirements. Hazardous Material Plans are developed for each facility and comply with 40 CFR 372 and SARA Title III Section 313.

The Hazard Communication standards orientation includes training and/or information on:

- OSHA Hazard Communication Standards
- Material Safety Data Sheets (MSDS)
- Physical health effects of hazardous materials used at SDTI
- Steps that SDTI has applied to minimize exposure to these materials
- Methods to determine presence or release of hazardous chemicals
- Emergency procedures for exposure to hazardous chemicals

4.1.4 Public Safety Programs

SDTI provides ongoing passenger and public safety programs to rail transit patrons and the general public. This outreach affects all aspects of the agency. During rail extensions, SANDAG provides outreach during all phases of the project starting with design and culminating in revenue service operations. MTS outreach programs include rail operations and major rail rehabilitation projects.

4.2 COMPETENCIES AND TRAINING

There are many different kinds of training involved in safety promotion. They include the following:

- Training of the Board of Directors on its role in transit safety during regular scheduled Board of Directors meeting
- Training of all employees on their role and responsibilities as they relate to safety performance

- Development of safety competencies at the frontline employee level: formal training on the contents of an effective employee safety reporting system
- At safety management level, training should develop safety data management competencies, how to analyze safety data, extract information from safety data, and turn safety information into safety intelligence

MTS has a very progressive agency-wide training program. All new employees are given safety training, which includes an overview of SMS. Many of the MTS employees have taken safety courses (including SMS) from the FTA's Transportation Safety Institute (TSI). MTS has hosted many TSI classes to enable more MTS employees to attend. Several MTS employees are also TSI instructors.

Accidents, incidents, and near misses are used in training to educate personnel on how to prevent future occurrences.

4.2.1 Rules and Procedures Review

MTS identifies operating and maintenance procedures that affect safety. These operating and maintenance rules and procedures that affect safety are reviewed for their effectiveness, and MTS determines when they would require updates or revisions.

4.2.1.1 Rules and Instructions for Employees

Rules and Instructions for Employees establishes the rules of personal conduct, instructions in the safe operation of trains, signals and interlocking, special operations, electric power systems, and general communications. The Human Resources Manager issues the rulebook to all employees who certify by signed receipt that they have received a copy that they agree to comply with the provisions therein and understand that their failure to comply with such provisions may subject the employee to disciplinary action, up to and including discharge.

4.2.1.2 Standard Operating Procedures

Standard Operating Procedures (SOPs) are issued to employees in each department on an as-needed basis. SOPs cover specific guidelines and instructions on how to perform related duties with the intent to ensure operational and maintenance safety. Departments that are affected by the same procedures are identified on the SOP distribution list. The department heads are responsible for issuing and updating their department's SOPs and distributing to employees within their department.

4.2.1.3 Compliance with Operating and Maintenance Rules and Procedures

The System Safety Manager has the functional authority, under direction of the COO-Rail, to ensure that all employees comply with the ASP and that all operations and maintenance-related functions are performed with the intent to provide safety duties.

Line Supervisors conduct efficiency testing to document inspections of train operator performance. An efficiency test is an inspection of employee performance that is unobserved, unannounced, and unexpected by the train operator. An efficiency test is completed on each train operator every quarter. The efficiency testing program is administered by the System Safety Manager. The supervision and tracking of the efficiency testing program is carried out by Transportation Department training staff.

Line Supervisors also conduct work-site inspections to verify that the work sites and employees are in compliance with the Roadway Worker Protection Program. A representative sample is monitored and logged by the Central Control Supervisor or designee as well as reviewed when there is a derailment, collision, complaint against an operator, report of noncompliance with personal electronic device policy, security events, or to augment efficiency testing or any other event deemed necessary.

4.2.2 Training and Certification Programs

MTS provides agency-wide safety training programs to all employees. All new employees are given safety training, which includes an overview of Safety Management Systems. In addition, MTS sponsors ongoing Transportation Safety Institute (TSI) safety and security training courses to be held either on site in San Diego or, alternatively, sponsors employees to take TSI training at other locations.

4.2.2.1 Transportation Department Training

The Training Supervisor is responsible for all aspects of training within the department and interdepartmental training for on-track and roadway worker operating qualifications. The Training Supervisor develops programs, conducts classroom/field training for many job classifications, and is responsible for instructional activities for Supervisors, Train Operators, Flagpersons, and LRV Maintenance and Maintenance-of-Way personnel.

The Training Supervisor is responsible for the development of training requirements, initial instruction of new employees, and follow-up training and recertification. The Training Supervisor maintains employee records relative to training sessions, safety-related and defensive operating programs, accident investigation, field exercises and public/customer relations as well as emergency procedures pertaining to a variety of scenarios.
The Transportation Standard Operating Procedures issued to employees include all departmental operating procedures (including safety and emergency procedures) as well as the Rules and Instructions for Employees Handbook. Train Operators and Supervisors (control, yard, and line) are required to demonstrate qualifications on these procedures during initial training. Additionally, training and recertification is required for each Train Operator and Supervisor biennially (after initial qualification) to ensure their current understanding of all safety-related matters and procedures. The System Safety Manager reviews the recertification programs to verify compliance with regulatory requirements.

Train Operators

The 440-hour initial training and biennial 24-hour recertification programs include classroom training, field exercises, and written and practical examinations pertaining to:

- Defensive driving/accident prevention
- Passenger sensitivity
- De-escalation
- LRV troubleshooting technique
- Emergency situation instruction
- Roadway worker safety

Supervisors

The 120-hour initial training and biennial 16-hour recertification programs include:

- Accident investigation
- De-escalation
- Equipment operation and troubleshooting
- Emergency situations instruction
- Administrative policy
- Roadway worker safety

Controllers

The 320-hour Controller training and recertification programs include orientation with the Wayside Maintenance, Track, and Security, as well as:

- System failure recovery techniques
- Manual block operations and instructions
- Interdepartmental and interagency communications
- Risk management
- De-escalation
- Accident investigation
- Equipment operation and troubleshooting
- Emergency situations instruction
- Administrative policy
- Roadway worker safety

4.2.2.2 Wayside Maintenance Department Training

New employees are instructed on company policies, safety rules, safety programs, and emergency procedures. Each maintainer is registered with the State of California to participate in a four-year Apprenticeship Program. Under this program, personnel must complete college-level training in electricity and electronics and participate in on-the-job and in-house training classes before becoming Journeyperson certified. New personnel with experience that demonstrate their knowledge of subject have the option of taking apprenticeship program (AP) examinations. If the new employee is successful in passing all required AP examinations, they qualify to be a Lineman.

Maintenance training is conducted continually. Track personnel participate in the "Track Training Program II" administered by the Railway Educational Bureau of Omaha, Nebraska and supported by SDTI. Qualification is required for main line operation of hi-rail track and rail-bound maintenance equipment. Qualification is required for main line operation of hi-rail track equipment with recertification provided biennially. Roadway Worker Protection Program qualification is required for Wayside Maintenance and Track Department employees with annual recertification.

Safety Meetings conducted by Supervisors cover a variety of subjects that relate to specific job duties such as:

- Hazardous material disposal
- State right-to-know laws
- Electrical safety
- Defensive driving
- De-escalation

As part of their daily routine, Shift Supervisors will observe workers' actions to:

- Identify potential hazards and initiate corrective action
- Look for unsafe work habits or improper use of equipment
- Ensure that safety equipment is properly and appropriately used

4.2.2.3 LRV Maintenance Training

Each LRV Supervisor is responsible for providing employee orientation and training, and verifying performance of required safety program activities during their shift. In addition, each maintainer is registered with the State of California to participate in a four-year Apprenticeship Program. Under this program, an employee must complete college-level training in electricity and electronics and go through on-the-job and in-house training classes before finally receiving certification as a Journeyperson by the State of California. All LRV Maintainers are certified on:

- Yard operation of LRVs (limited qualification)
- OSHA forklift operation
- Hazardous communication/blood-borne pathogens
- De-escalation

Monthly safety meetings conducted by Shift Supervisors cover topics including:

- Hazardous materials disposal
- Electrical safety
- Shop power red tag/blue flag procedures
- Preventive maintenance for re-rail equipment
- Yard and shop safety
- Safe working habits, ergonomics, and PPE

4.2.2.4 Revenue Department Training

Safety is a vital element in the Revenue Department training program. Revenue Collector/Processors must be alert to the threat of armed robbery, and they are potentially subject to injuries from carrying and lifting heavy coin vaults. Job duties may require driving on congested highways, city streets, and pedestrian-active parking areas. Each employee is issued a company handbook that includes all safety instructions. New employees in the Revenue department are registered with the State of California to participate in a four-year Apprenticeship Program. Maintainers in the program must receive college-level training in electricity and electronics, participate in on-the-job and in-house training classes, de-escalation and pass all requirements before obtaining Journeyperson certification. Individual and group safety meetings are held on a monthly basis within the Revenue Department.

4.2.2.5 Facilities Department Training

New employees are instructed on the Rules and Instructions for Employees Handbook, company policies, safety programs, Drug and Alcohol Policy, Hazard Communication Program, and emergency procedures. Roadway Worker Protection Program qualification is required for Wayside Maintenance and Track Department employees, with annual recertification.

Toolbox meetings conducted by Shift Supervisors cover topics including:

- State right-to-know laws
- Proper use and disposal of cleaning chemicals, pesticides, and other hazardous materials
- Forklift and man-lift operating safety
- Power tool safety
- Hazard communication
- De-escalation

4.2.2.6 Board of Directors Safety Training

In accordance with FTA requirements, MTS has developed a safety presentation for the Board of Directors. This presentation explains the principles of Safety Management Systems and the role of the Board of Directors in the review and approval of the Public Transportation Agency Safety Plan.

4.2.2.7 Emergency Services Training

The purpose of this program is to familiarize San Diego-area emergency-response personnel and other organizations with the operating characteristics of the San Diego Trolley system and equipment.

Key training elements covered include but are not limited to:

- Brief Introduction to SDTI
- Roadway/Main Line and Yard Safety
- Traction Power
- Electrical Safety
- Communication with OCC or SDTI
- Railroad Response Protocol
- Cell phone usage on SDTI property
- Front Line Supervisor Identification
- Vehicle Familiarization
- Vehicle Access

The expectation of this exposure to SDTI's environment and procedures is to generate knowledge and awareness among personnel in emergency response agencies and to mitigate the risk of potential dangers to responding personnel, SDTI employees, and its patrons.

4.2.3 Roadway Worker Protection

It is SDTI's mission to provide safe, reliable, and courteous service. The Safety Department is responsible for compliance with federal, state, and local regulatory requirements.

4.2.3.1 Roadway Worker Protection Plan

A roadway worker is any person who is fouling or has the potential to foul the track, including an employee of a railroad or a contractor to a railroad whose duties include inspection, construction, maintenance, or repair of railroad track, bridges, roadway, signal and communication systems, electric traction systems, roadway facilities, or roadway machinery on or near track or with the potential of fouling a track.

Employees, contractors and other non-railroad employees who perform work fouling any track or occupying the right-of-way must attend roadway worker safety training and maintain a copy of the Roadway Worker Protection Plan at the work site. It is the responsibility of SDTI to:

- Properly train every roadway worker.
- Guarantee each employee the right to challenge, in good faith, whether the on-track safety procedures to be applied at a work site comply with the Roadway Worker Protection Plan and SDTI Rules and Instructions for Employees.
- Follow proper procedures to resolve challenges promptly and equitably.

4.2.3.2 Roadway Worker Safety Program Management

Under the direction of the Superintendent of Transportation, the development, revision, and scheduling of initial roadway worker training and recertification will

be the responsibility of the Transportation Department Training Supervisor and are conducted in compliance with Section 1.3 of the SDTI Rules and Instructions for Employees and the Roadway Worker Protection Plan. All classroom training modules will be conducted by the Transportation Department Training Supervisor or their designee. Program outline and individual modules will include the date of last revision.

4.2.3.3 Roadway Worker Safety Training

Recertification is conducted annually for all roadway workers and biennially for employees who may interface with roadway workers, including train operators, controllers, and supervisors. This training covers, but is not limited to:

- Identification of the right-of-way and the limits in which roadway worker protection (RWP) is required
- Recognition of railroad tracks and understanding of the space surrounding them
- Hazards associated with working on or near railroad tracks, including review of on-track safety rules and procedures
- Hazard/near-miss program and reporting procedures
- Understanding of hazards through a representative field setting
- The functions and responsibilities of various persons involved with on-track safety procedures
- Proper compliance with on-track safety instructions given by person responsible for on-track safety
- Train approach warning signals given by watchperson/lookout and the proper procedures upon receiving a train approach warning

The safety card issued by SDTI upon completion of roadway worker safety training must be carried at all times while on SDTI property or railroad right-of-way. Additionally, numbered RWP stickers issued by SDTI to contractor employees upon completion of roadway worker safety training must be visible on each roadway worker's hard hat while on SDTI property or railroad right-of-way. Roadway worker training records are maintained for a minimum of three years within employee's department or with the contracted third-party training provider in the case of contractors.

Federal and state government agencies are involved with the safe design, construction, maintenance, and operation of the SDTI system. The System Safety Manager, under the direction of the COO-Rail, is the primary contact person for all matters concerning safety at SDTI.

4.2.4 Contractor Safety Program

SANDAG contracts work for regional rail construction and capital improvement projects. The contractor personnel are not directly under the jurisdiction of SDTI but follow the requirements specified in SANDAG bid documents as to the roles and responsibilities of contractors. A SANDAG project engineer is responsible for providing scope of work orientation to the contractor in pre-bid meetings. All contractor personnel are instructed on the Roadway Worker Protection Program, which identifies responsibilities and restrictions on or near the right-of-way. Contractor training records are maintained by the MTS Right-of-Way Engineer. Contractor personnel are not allowed to enter the right-of-way until a right-of-entry permit is submitted to the Superintendent of Transportation for notice of intent to enter the right-of-way, location of work, equipment used on right-of-way, and nature of work. The Superintendent of Transportation reviews and approves all requests. SANDAG must coordinate any contractor work performed on the right-of-way that may impact revenue operations with MTS.

4.2.5 Personal Electronic Device Use

SDTI maintains a zero-tolerance policy, which prohibits the use of personal electronic devices (PEDs). This policy is in accordance with the requirements of CPUC General Order 172, Section 5. The policy mitigates the use of PEDs by employees and contractor personnel responsible for operating or controlling revenue and nonrevenue vehicles or performing work on or near the SDTI right-of-way.

SDTI Rule 1.4.9 (Restrictions on Use of Personal Cell Phones) and Standard Operating Procedure 101.27 (Use of Personal Electronic Devices While On-Duty) provides instructions and outlines policy regarding the use of PEDs. One incident of noncompliance with the established rules and procedures will result in employee termination.

SDTI uses a video-based monitoring system in the operating cabs and other areas of each LRV. This system supplements the random monitoring and enforcement of its operating rules, policies, and procedures, including those that govern the use of electronic devices in compliance with General Order 172. A representative sample is monitored and logged by Central Control Supervisor or designee as well as reviewed when there is a derailment, collision, complaint against the operator, a report of noncompliance with personal electronic device policy, security events, to augment efficiency testing, or any other event deemed necessary. The video-based enforcement and monitoring log will be maintained for a period of three (3) years.

5.0 ABBREVIATIONS AND DEFINITIONS

ACCEPTABLE RISK	A determination made that the probability of an incident or scenario occurring is unlikely and the severity of its consequence is negligible.
ACCIDENT	Any event involving the operation or maintenance of the SDTI system which results in: (1) a loss of life; (2) a report of a serious injury to a person; (3) a collision of public transportation vehicles; (4) a runaway train; (5) an evacuation for life safety reasons; (6) any derailment of a rail transit vehicle at any location, at any time, whatever the cause.
ACCOUNTABLE EXECUTIVE	Single, identifiable person who has the ultimate responsibility for carrying out the Public Transportation Agency Safety Plan of a public transportation agency; responsibility for carrying out the agency's Transit Asset Management Plan; and control and direction over the human and capital resources needed to develop and maintain both the agency's Public Transportation Agency Safety Plan, in accordance with 49 U.S.C. 5329 (d) and the agency's Transit Asset Management Plan in accordance with 49 U.S.C. 5326.
CHIEF SAFETY OFFICER	An adequately trained individual who has responsibility for safety and reports directly to a transit agency's chief executive officer, general manager, president, or equivalent officer.
CONTRACTOR	An entity that performs tasks required by this part on behalf of the oversight or rail transit agency.
CORRECTIVE ACTION PLAN	A plan developed by the rail transit agency that describes the actions the rail transit agency will take to minimize, control, correct, and/or eliminate hazards. Further, it includes the schedule for implementing for those actions.
EVENT	Any accident, incident or occurrence.
FTA	Federal Transit Administration, an operating administration within the United States Department of Transportation.
HAZARD	Any real or potential condition that can cause injury, illness or death; damage to or loss of the facilities, equipment, rolling stock or infrastructure of a public transportation system; or damage to the environment.
HIGHWAY RAIL GRADE CROSSING	(1) a location where a public highway, road, or street, or a private roadway, including associated sidewalks, crosses one or more railroad tracks at grade; or (2) a

	location where a pathway is dedicated for the use of non-vehicular traffic, including pedestrians, bicyclists, and others, that is not associated with a public highway, road, or street, or a private roadway, crosses one or more railroad tracks at grade.
HIGHWAY USER	Automobiles, buses, trucks, motorcycles, bicycles, farm vehicles, pedestrians, or any other mode of surface transportation motorized and un-motorized.
INCIDENT	An event that involves any of the following: a personal injury that is not a serious injury; one or more injuries requiring medical transport; or damage to facilities, equipment, rolling stock, or infrastructure that disrupts the operations of a transit agency
INDIVIDUAL	A passenger, employee, contractor, other rail transit facility worker, pedestrian, trespasser, or any other person on RTA property.
INVESTIGATION	The process of determining the causal and contributing factors of an accident, incident or hazard, for the purpose of preventing recurrence and mitigating risk.
JOINT SAFETY COMMITTEE	Union labor-selected frontline voting members of an equal number of management representatives responsible for approving the ASP and any updates to the ASP.
LIGHT RAIL VEHICLE (LRV)	The rail transit agency's rolling stock, including, but not limited to passenger and maintenance vehicles.
NATIONAL PUBLIC TRANSPORTATION SAFETY PLAN	The plan to improve the safety of all public transportation systems that receive federal financial assistance under 49 U.S.C. Chapter 53.
OCCURRENCE	An event without any personal injury in which any damage to facilities, equipment, rolling stock or infrastructure does not disrupt the operations of a transit agency.
PASSENGER	A person who is onboard or in the process of boarding or alighting from a rail transit vehicle.
PERFORMANCE TARGET	Quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the FTA.
PROGRAM STANDARD	A written document developed and adopted by the oversight agency, that describes the policies, objectives, responsibilities, and procedures used to provide rail transit agency safety and security oversight.

PROPERTY	Property that is used by SDTI and may be owned, leased, or maintained by SDTI.
PUBLIC TRANSPORTATION AGENCY SAFETY PLAN (ASP)	Documented comprehensive agency safety plan for a transit agency that is required by 49 U.S.C. 5329 and 49 CFR 673.
RAIL FIXED GUIDEWAY SYSTEM	As determined by FTA, any light, heavy, or rapid rail system, monorail, inclined plane, funicular, trolley, or automated guideway that: (1) Is not regulated by the FRA (2) Is included in FTA's calculation of fixed guideway route miles or receives funding under FTA's formula program for urbanized areas (49 U.S.C. 5336); or (3) Has submitted documentation to FTA indicating its intent to be included in FTA's calculation of fixed guideway route miles to receive funding under FTA's formula program for urbanized areas (49 U.S.C. 5336).
RAIL TRANSIT AGENCY (RTA)	An entity that operates a rail fixed guideway system.
RISK	Composite of predicted severity and likelihood of the potential effect of a hazard.
RISK MITIGATION	A method or methods to eliminate or reduce the effects of hazards.
SAFETY ASSURANCE	Processes within a transit agency's Safety Management System that functions to ensure the implementation and effectiveness of safety risk mitigation, and to ensure that the transit agency meets or exceeds its safety objectives through the collection, analysis, and assessment of information.
SAFETY MANAGEMENT POLICY	A transit agency's documented commitment to safety, which defines the transit agency's safety objectives and the accountabilities and responsibilities of its employees in regard to safety.
SAFETY MANAGEMENT SYSTEM (SMS)	Formal, top-down organization-wide approach to managing safety risk and assuring the effectiveness of a transit agency's safety risk mitigation. SMS includes systematic procedures, practices and policies for managing risks and hazards.
SAFETY MANAGEMENT SYSTEM EXECUTIVE	Chief Safety Officer or equivalent.
SAFETY PERFORMANCE TARGET	A performance target related to safety management activities.

SAFETY PROMOTION	Combination of training and communication of safety information to support SMS as applied to the transit agency's public transportation system.
SAFETY RISK ASSESSMENT	Formal activity whereby a transit agency determines Safety Risk Management priorities by establishing the significance or value of its safety risks.
SAFETY RISK MANAGEMENT	Process within a transit agency's Public Transportation Agency Safety Plan for identifying hazards and analyzing, assessing and mitigating safety risk.
SANDAG	San Diego Association of Governments.
SERIOUS INJURY	Any injury which (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fractures of fingers, toes or noses); (3) causes a severe hemorrhage, nerve, muscle or tendon damage; involves an internal organ; or (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.
STATE	A state of the United States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, Guam, American Samoa, and the Virgin Islands.
STATE OF GOOD REPAIR	Condition in which a capital asset is able to operate at a full level of performance.
STATE SAFETY OVERSIGHT AGENCY	An agency established by a state that meets the requirements and performs the functions specified by 49 U.S.C. 5329 (e) and the regulations set forth in 49 CFR part 674.
TRANSIT AGENCY	Operator of a public transportation system.
TRANSIT ASSET MANAGEMENT PLAN	Strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks and costs over their life cycles, for the purpose of providing safe, cost-effective, and reliable public transportation as required by 49 U.S.C. 5326 and 49 CFR part 625.
UNACCEPTABLE RISK	A determination made that a condition or hazard that will inevitably promote accidents continuously or frequently with critical or catastrophic effects.

6.0 REVISION TABLE

Revision No.	Issue Date
0	July 2020 (First Issue)
1	January 2022 - Section 1.2.1 System Description: Mid-Coast Extension (Revenue Service November 2021)
2	January 2023 – Included all requirements of Bipartisan Infrastructure of Law (2021): Joint labor/management Committee, de-escalation training, Infectious Diseases Exposure Plan, trending based on 3-year rolling average of NTD data, risk reduction programs for reducing accidents, and transit worker assaults.

7.0 REGULATORY REFERENCE DOCUMENTS

Document Reference Number	Title
49 CFR 42526 and 42529	Statement of Agency Policy Requires That Rail Transit Agencies Report Accidents Which Meet Reporting Thresholds That Occur on Shared- Or Joint-Use Heavy Rail Segments Be Reported
49 USC 5329 (b)	Reports of Accidents on Railroads
49 CFR 670	National Public Transportation Safety Plan
49 CFR Part 672	Public Transportation Safety Certification Training Program
49 CFR Part 673	Public Transportation Agency Safety Plan
49 CFR Part 674	State Safety Oversight Program
General Order 22-B	Regulations Governing Reports of Accidents on Railroads
General Order 26-D	Clearances on Railroads and Street Railroads with Reference to Side and Overhead Structures, Parallel Tracks, Crossings of Public Roads, Highways, and Streets
General Order 33-B	Construction, Reconstruction, Maintenance and Operation of Interlocking Plants at Crossings, Junctions, Drawbridges, in Yards and at Sidings of Railroads and Street Railroads
General Order 72-B	Construction and Maintenance of Crossings at Grade of Railroads with Public Streets, Roads and Highways
General Order 75-D	Standards for Warning Devices for At-Grade Highway-Rail Crossings
General Order 88-B	Rules for Altering Public Highway-Rail Crossings
General Order 95	Overhead electric line construction
General Order 108	Filing of Railroad Operating Department Rules
General Order 110	Radio Communications in Railroad Operations
General Order 118-A	Construction, Reconstruction and Maintenance of Walkways and Control, of Vegetation Adjacent to Railroad Tracks
General Order 127	Maintenance and Operation of Automatic Train Control Systems-Rapid Transit Systems
General Order 128	Construction or Underground Electric Supply and Communication Systems
General Order 135	Occupancy of Public Grade Crossings by Railroads
General Order 143-B	Design, Construction and Operation of Light Rail Transit systems
General Order 161	Transportation of Hazardous Materials by Rail
General Order 164-E	State Safety Oversight of Rail Fixed Guideway Systems
General Order 172	Use of Personal Electronic Devices by Employees Of Rail Transit Agencies And Rail Fixed Guideway Systems
General Order 175-A	Roadway Worker Protection Provided by Rail Transit Agencies and Rail Fixed Guideway Systems
CPCU Program Standards Procedures Manual	Safety and Security Oversight of Rail Fixed Guideway System

APPENDIX A:

APPROVAL OF PTASP BY JOINT SAFETY COMMITTEE

Metropolitan Transit System

Via Email

San Diego Trolley, Inc.
1255 Imperial Avenue, Suite 900
San Diego, CA 92101-7492
(619) 595-4949 • FAX (619) 238-4182

SDTI Joint Safety Committee

On December 21, 2022, the Joint Safety Committee (JSC) members met to review the Public Transportation Agency Safety Plan (PTASP) Bipartisan Infrastructure Law and the requirements of 49 CFR Part 673. The Joint Safety Committee has approved the 2023 Version 2 PTASP which is attached and MTS will present the plan to our Board of Directors for formal approval of the 2023 Version 2 PTASP.

The 2023 Version 2 Public Transportation Agency Plan has been approved as recorded below.

Joint Safety Committee
Management Committee Members

Fabeann Soberg, JSC Chair – Management

Joint Safety Committee
Labor Committee Members

Josh Stolz, JSC Co-Chair – Labor

Enclosure: 2023 Version 2 PTASP
Joint Safety Committee Meeting Notes

cc: Sharon Cooney, Chief Executive Officer
Brian Riley, Chief Operating Officer, MTS Rail Division
Joey Bigornia, CPUC Representative

Joint Safety Committee Meeting Minutes

Date and Time: Wednesday, December 21, 2022, at 9:00AM (JLSC)
Location: MTS 9th Floor Boardroom - 1255 Imperial Avenue, San Diego, CA

ATTENDEES

Management Committee Members

Fabeann Soberg	System Safety Manager
Brent Boyd	Manager of Service Quality and Special Operations – Rail Division

Union Committee Members

Joshua Stolz, Co-Chair	LRV Electromechanic
Louis Damian	Construction Safety Flagperson

DISCUSSION SUMMARY

The following summarizes the highlights of the information presented and topics of discussion during the Joint Safety Committee meeting.

1. **Introductions and Sign-In**

   The meeting was called to order by Committee Chair Fabeann Soberg, a sign-in sheet was circulated, and attendees introduced themselves by name, title, and union they were representing.

2. **Review Public Transportation Agency Safety Plan (PTASP) 2021 Version 1**
3. **Bipartisan Infrastructure Law PTASP Requirements**
4. **Approval of the PTASP 2023 Version 2**

   Joint Labor Safety Committee approved the 2023 Version 2 Public Transportation Agency Safety Plan.

5. Attached PTASP includes the Bipartisan Infrastructure Law required updates
6. The attached signature page confirms approval of the 2023 PTASP Version 2 by Joint Labor Safety Committee.

This summary was:
Prepared by Fabeann Soberg, Committee Chair

Enc: PTASP- Approval Letter by the Committee
2023 PTASP Version 2

APPENDIX B:

MTS BOARD MEETING MINUTES & FINAL BOARD AGENDA (FEBRUARY 16, 2023)

APPENDIX C:

APPROVAL OF PTASP VERSION 2 BY MTS BOARD OF DIRECTORS

Metropolitan Transit System

Bus Safety Plan

San Diego Transit Corp

(Public Transportation Agency Plan pursuant to 49 CFR 673)

Table of Contents

MTS Directly Operated Bus Service (*SDTC* at KMD and IAD) and Contract Operations Oversight (*Transdev* at ECBMF/SBMF and *First Transit* at CPMF)

Appendices

Bus Safety Plans – Contract Operators

Acronyms

ADA	Americans with Disabilities Act
Caltrans	California Department of Transportation
CBA	Collective Bargaining Agreements
CEO	Chief Executive Officer
CHP	California Highway Patrol
COO	Chief Operating Officer
CSO	Chief Safety Officer
EH&S	Environmental Health and Safety
EPN	Employer Pull Notice
KPI	Key Performance Indicators
NTD	National Transit Database
OEM	Original Equipment Manufacturer
PIP	Performance Incentive Program
PPE	Personal Protective Equipment
PUC	Public Utilities Commission
SANDAG	San Diego Association of Governments
SOS	Service Operations Supervisor
SPT	Safety Performance Targets
SRC	Safety Review Committee

1 Bus Agency Safety Plan Overview

1.1 Agency Information

The purpose of this Bus Agency Safety Plan discusses how safety is managed for San Diego Metropolitan Transit System (MTS) directly operated fixed route bus transportation services. The Agency Safety Plan addresses all applicable requirements and standards as set forth in FTA's Public Transportation Safety Program and the National Public Transportation Safety Plan.

MTS is a California transit district that operates multiple modes of transit: light rail transit (Rail) and fixed route/ADA complementary paratransit bus operations (Transit). The agency has three major divisions: Administration, Rail and Transit[1]. The MTS Chief Executive Officer (CEO) is responsible for managing all aspects of the agency, with direction from the Board of Directors. Because of the distinct differences in operations, MTS has prepared a Safety Plan for each individual division: Rail and Transit. This is MTS's Bus Agency Safety Plan (Table 1).

Table 1: Agency Information

Agency Information	
Transit Agency Name	MTS
Transit Agency Address	1255 Imperial Ave Suite 1000, San Diego, CA 92101
Name and Title of Accountable Executive	Sharon Cooney, Chief Executive Officer (CEO)
Name of Chief Safety Officer (CSO) or Safety Management System (SMS) Executive	Jared Garcia, Manager of Safety
Modes of Service Covered By This Plan	Directly Operated Fixed Route Bus
List Of All Funding Types:	5307, 5337, 5339
Mode(s) of Service Provided by the Transit Agency (Directly Operated or Contracted Service)	Directly Operated Light Rail, Directly Operated Fixed Route Bus, Contracted Fixed Route Bus, Contracted Commuter

[1] Historically, the Bus division was run by a separate entity, San Diego Transit Corporation (SDTC). SDTC is a wholly-owned subsidiary of MTS. While some operations continue under the SDTC entity (e.g. legacy property ownership or agreements), in practical terms it is operated as the Bus division of MTS.

	Bus, Contracted Paratransit, Contracted Paratransit Taxi
Does the agency provide transit services on behalf of another transit agency or entity?	No
Description of Arrangement(s)	N/A

MTS operates in southern San Diego County with a fleet of approximately 800 buses. MTS operates Rapid Express, Rapid, Express, Urban Frequent, Urban Standard, Community Circulator, Rural and ADA complementary paratransit. Service is directly operated by SDTC and operated by private contractors, First Transit and Transdev (Table 2).

Table 2: Services Operated

Service Types Operated By Each Entity			
Service Type	**MTS/SDTC**	**First Transit**	**Transdev**
Fixed Route	X		X
Commuter			X
Rural			X
Fixed Route Mini		X	
Paratransit		X	

MTS Bus operates over a 716 square-mile service area, with a combined population of more than two million people within the cities of San Diego, Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, National City, Lemon Grove, Poway and Santee, as well as the County of San Diego. Service is provided seven days a week on most routes. Routes serve approximately 4,200 bus stops.

MTS Bus has five bus fleet operating divisions, all of which include operations, maintenance and fueling functions: Imperial Avenue Division (IAD); Kearny Mesa Division (KMD); South Bay Bus Maintenance Facility (SBMF); East County Bus Maintenance Facility (ECBMF); and Copley Park Maintenance Facility (CPMF). IAD and KMD are operated by SDTC. SBMF and ECBMF are operated by private contractor Transdev. CPMF is operated by private contractor First Transit.

Service began in 1886 as the San Diego Streetcar Company. Over the years, this and several other entities were merged into the San Diego Electric Railway (later, the San Diego Transit Corporation (SDTC)). The City of San Diego purchased SDTC from private ownership in 1967, and transferred it to the Metropolitan Transit Development Board (MTDB) in 1985. In 2002, Senate Bill 1703 merged MTDB's planning, financial programming, project development and construction functions into the region's metropolitan planning organization, the San Diego Association of Governments (SANDAG). In 2005, MTDB changed its name to the San Diego Metropolitan Transit System (MTS). The MTS Board of Directors is composed of

members representing the cities of San Diego, Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, National City, Lemon Grove, Poway and Santee, and the County of San Diego.

1.2 Bus Agency Safety Plan Approvals

The Bus Agency Safety Plan has been approved by the Safety Committee, the Accountable Executive and the MTS Board of Directors (Table 3).

Table 3: Bus Agency Safety Plan Approvals

Bus Agency Safety Plan Approvals		
Name of Entity That Drafted This Plan	San Diego Metropolitan Transit System	
Safety Committee Approval	Signature of Chief Safety Officer	Date of Approval
	Jared Garcia	11/17/2022
Accountable Executive Signature	Signature of Accountable Executive	Date of Signature
		2/16/2023
Approval by the MTS Board of Directors	Signature of Chairperson of the MTS Board of Directors	Date of Approval
		2/16/2023
Certification of Compliance	Name of Individual/Entity That Certified This Plan	Date of Certification
		2/16/2023

1.3 Annual Review, Update, and Safety Performance Assessment

1.3.1 Annual Review of the Bus Agency Safety Plan

At a minimum, this plan will be reviewed and updated annually during the month of January by the Chief Safety Officer. Proposed changes are reviewed with the Safety Committee, Accountable Executive, Executive Management and Key Staff. The Safety Committee will review and approve any changes to this plan before being sent to the Accountable Executive. The Accountable Executive will then review and approve any changes, sign the updated plan, and then forward the plan to the Board of Directors for final review and approval. Updates to this plan may be made when there are:

- Changes to: safety performance targets, safety management policy, safety risk management, safety assurance, and safety promotion;
- Changes to: the Accountable Executive, COO, or CSO;
- Significant changes to service delivery;
- Significant changes to the organizational structure;
- New process/procedures are introduced that impact safety;
- Changes to available resources or priorities that support SMS; and
- Changes required by the Federal Transit Administration (FTA), California Public Utilities Commission (CPUC), California Department of Transportation (Caltrans), San Diego Association of Governments (SANDAG), etc. or other similar oversight agency.

1.3.2 Annual Safety Performance Assessment

MTS conducts an annual safety performance assessment in conjunction with the annual review. This assessment includes a review of the prior year's performance involving the Safety Performance Targets, Key Performance Indicators and applicable Performance Incentive Program (PIP) goals. The assessment may also include reviewing identified safety deficiencies, or other areas involving safety performance.

Updates made to the Bus Agency Safety Plan will be documented (Table 4).

Table 4: Version Number and Update History of Transit Safety Plan

Version Number and Update History of Bus Agency Safety Plan			
Version Number	Section/Pages Affected	Reason for Change	Date Issued
1.0	All	N/A	July 2020
1.0	All	Annual Review	January 2021
1.0	All	Annual Review	January 2022
2.0	All	Bipartisan Infrastructure Law	TBA

1.4 Documentation and Recordkeeping

This Bus Agency Safety Plan and documents related to this plan will be maintained for three (3) years after date of creation and be made available upon request by the FTA or other applicable agency having jurisdiction.

2 Safety Performance Targets

2.1 Safety Performance Targets

As required by 49 CFR 673.11(a) (3), this Bus Agency Safety Plan must include performance targets associated with revenue service that are based on the safety performance measures established under the National Public Transportation Safety Plan.

MTS may adjust performance targets over time, as data is collected and as SMS implementation matures. MTS performance targets are calculated using a 3-year rolling average of the data submitted to the National Transit Database (NTD), (Table 5). All totals except Fatalities are rounded to the nearest whole number. The safety performance targets are evaluated for each calendar year (January 1 – December 31).

Table 5: Safety Performance Targets

Bus Safety Performance Targets (Rolling Average Calendar Years 2020-2022)								
Mode of Transit Service	**Fatalities (Total)**	**Fatalities (Rate) Per 100K**	**Injuries (Total)**	**Injuries (Rate) Per 100K**	**Safety Events (Total)**	**Safety Events (Rate) Per 100K**	**System Reliability (Rate) Failures/ Rev Miles**	**Assaults (Total)**
Fixed Route Directly Operated	0.67	0.007	45	0.49	50	0.54	6,719	0
Fixed Route Contracted	0.33	0.003	50	0.50	52	0.52	7,071	0
Fixed Route Mini Bus Contracted	0	0	2	0.20	3	0.26	8,359	0
Paratransit Contracted	0	0	2	0.08	3	0.12	40,736	0
Total	**1**	**0.004**	**99**	**0.44**	**108**	**0.48**	**7,563**	**0**

2.2 Safety Performance Target Definitions

Definitions are based on the 2020 NTD Safety and Security Policy Manual.

Assault - An unlawful attack by one person upon another.

Fatality – Death confirmed within 30 days of the event (including suicides). Fatalities that occur because of illnesses or other natural causes (including individuals who are found deceased) are not reportable.

Injury - Any damage or harm to persons that requires immediate medical attention away from the scene because of a reportable event must be reported as an injury. MTS reports each person transported away from the scene for medical attention as an injury, whether or not the person appears to be injured.

Safety Events – Collisions that meet NTD thresholds for injuries, fatalities, property damage, or evacuation; vehicle towed from the scene involving a transit revenue vehicle; fires; hazardous materials spills, acts of God; evacuations for life safety reasons; other safety events listed in NTD policy manual.

System Reliability - mean distance between major mechanical failures, is measured as revenue miles operated divided by the number of major mechanical failures.

2.3 Safety Performance Target Coordination

Safety Performance Targets are made available to state of California including the Public Utilities Commission (CPUC), Caltrans, and the San Diego Association of Governments (SANDAG), MTS's Metropolitan Planning Organization (MPO), to aid in the planning process. Coordination with these agencies, in the selection of safety performance targets is accomplished to the maximum extent practicable. MTS officially transmits its targets in writing to the State and MPO following the annual review and certification. This transmission will take place in February of each year.

	State Entity Name	Date Transmitted
Targets Transmitted to the State[2]	California Public Utilities Commission (CPUC)	See Footnote 2
	California Department of Transportation (Caltrans)	See Footnote 2
Targets Transmitted to the MPO	**MPO Name**	**Date Transmitted**
	San Diego Association of Governments (SANDAG)	7/7/2020

3 Safety Management Policy

3.1 Safety Management Policy Statement

The Safety Management Policy Statement, signed by the Accountable Executive and approved by the MTS Board of Directors, establishes the agency's safety objectives, and documents the organizational authorities, accountabilities and responsibilities (Figure 1).

[2] Although MTS has offered to share Bus Safety Performance Targets with CPUC and Caltrans, both have stated it is not necessary to send Bus Safety Performance Targets for their review. As required per 49 CFR 673.15, MTS will coordinate and share Bus Safety Performance Targets with state entities to the maximum extent practicable.

Figure 1: Safety Management Policy Statement

San Diego Metropolitan Transit System
Safety Management Policy Statement

The San Diego Metropolitan Transit System (MTS) has established this Safety Management System Policy Statement to emphasize its overall commitment to the safety of our passengers, our operators, our staff and the general public. This Safety Management System Policy Statement provides direction for MTS's safety program, which applies to every facet of MTS operations.

The management of safety is MTS's highest priority. MTS is committed to safety throughout the entire organization, from the Board of Directors to the front line employees.

MTS will ensure that all transit service delivery activities take place under a balanced allocation of organizational resources to achieve the highest level of safety performance and meeting established standards. MTS is committed to developing, implementing, maintaining, and constantly improving our processes. As evidence of our commitment to safety, every MTS policy shall be guided by and every employee shall perform their duties in furtherance of the following safety goals:

- Supporting safety through the provision of appropriate resources that fosters a safety culture;
- Integrating the management of safety among the primary responsibilities of all managers and employees;
- Clearly defining managers and employees' responsibilities in relation to the performance of our safety management system;
- Conducting hazard identification and evaluating safety risks, which includes an employee safety reporting program, in order to eliminate or mitigate safety risks;
- Ensuring that no action will be taken against any employee who discloses a safety concern through the employee safety reporting program, unless disclosure indicates, beyond any reasonable doubt, an illegal act, gross negligence, or a deliberate or willful disregard of regulations or procedures;
- Complying with, and wherever possible exceeding, legislative and regulatory requirements and standards;
- Ensuring that sufficiently skilled and trained employees are available to implement safety management processes;
- Ensuring that all staff are provided with adequate and appropriate safety-related information and training, are competent in safety management matters, and are assigned only tasks for which they are adequately trained;
- Establishing and measuring our safety performance against realistic and data-driven safety performance indicators and safety performance targets;
- Continually improving our safety performance by ensuring appropriate safety management action is taken and is effective; and
- Ensuring externally supplied systems and services that support our operations are delivered to meet our safety performance standards.

Sharon Cooney
Chief Executive Officer
San Diego Metropolitan Transit System

July 30, 2020
Date

Nathan Fletcher
Chair of Board of Directors
San Diego Metropolitan Transit System

July 30, 2020
Date

3.2 Goals

MTS Transit Services is committed to providing the safest transportation possible for our employees, customers, the citizens of San Diego, and the communities we serve. We will:

- Provide and maintain a safe and healthy working environment
- Provide a safe and courteous transit system
- Follow best practices that will safeguard employees, customers, and persons interacting with transit property and equipment

Accidents are the result of unsafe acts committed by people and the existence of hazards or unsafe conditions, both of which are controllable and must be prevented to the maximum extent practicable in order to achieve MTS' commitment.

Our Safety Policy and our commitment to safety are at all times guided by the following principles:

- Safety is the responsibility of each and every employee
- Management has the responsibility to train all employees to work safely and to assure all employees work in a safe manner
- Preventing accidents, injuries, and incidents is good business
- Operating risks, hazards, and exposures can be safeguarded with active and effective safety practices
- Injuries and occupational illnesses can be prevented

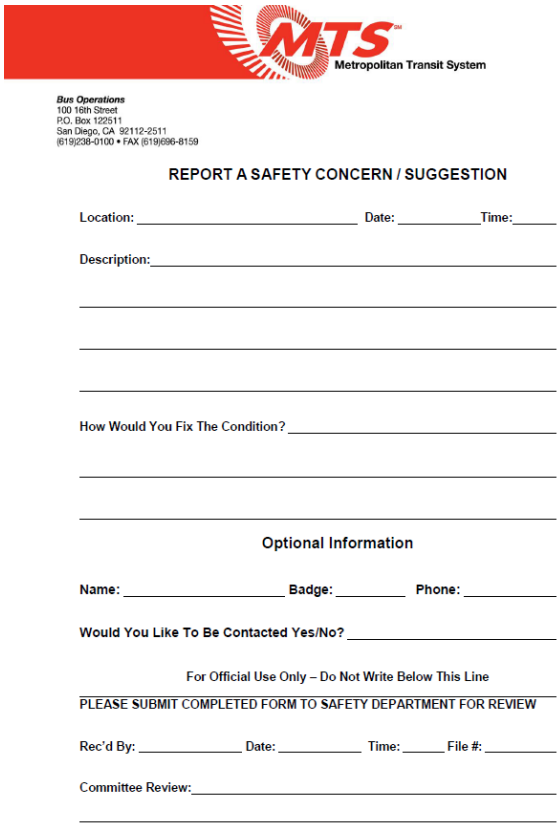
3.3 Employee Reporting Program

Employees and contractors are empowered to report safety hazards, unsafe conditions, and near misses to management. No action will be taken against an employee through the reporting program as long as the report or act was not illegal, negligent, willful, or a violation of company policy/procedure. Employees have multiple means of communicating their concerns which include:

- Verbally to their direct supervisor or other member of management;
- By use of phone/radio;
- Through their union representative;
- Completing an anonymous online form via the intranet (Figure 2); and
- Through the Employee Safety Committee.

Hazards that cannot be adequately mitigated at the time of reporting are reported to the CSO and entered into a software database (Industry Safe or equivalent) for further assessment and mitigation (see Safety Risk Management).

Figure 2: Sample Online Reporting Form



MTS Metropolitan Transit System

Bus Operations
100 16th Street
P.O. Box 122511
San Diego, CA 92112-2511
(619)238-0100 • FAX (619)696-8159

REPORT A SAFETY CONCERN / SUGGESTION

Location: _____ Date: _____Time:_____

Description:_____

_____

_____

_____

How Would You Fix The Condition? _____

_____

_____

Optional Information

Name: _____ Badge: _____ Phone: _____

Would You Like To Be Contacted Yes/No? _____

For Official Use Only – Do Not Write Below This Line

PLEASE SUBMIT COMPLETED FORM TO SAFETY DEPARTMENT FOR REVIEW

Rec'd By: _____ Date: _____ Time: _____ File #: _____

Committee Review:_____

_____

3.4 Safety Management Policy Communication

The Safety Management Policy Statement is communicated to all employees and contractors throughout the organization including: employees, managers, executives and the Board of Directors. This policy is communicated through:

- Employee Handbooks;
- Bulletin Boards;
- Newsletters; and
- Company Intranet.

3.5 Authorities, Accountabilities, and Responsibilities

3.5.1 Board of Directors

The Board of Directors (Board) is responsible for setting policy for MTS, including Transit Services. The Board is required to approve the ASP initial document and all updates. At its regular meetings, the Board receives periodic safety briefings from Bus Operations. The Board has delegated agency management to the CEO, subject to various adopted Board policies and legal requirements**.**

3.5.2 Accountable Executive

The Board of Directors has designated the CEO as the Accountable Executive for the Agency. The Accountable Executive has ultimate responsibility for ensuring that SMS is effectively implemented and that action is taken, as necessary, to address substandard performance throughout the Agency. These responsibilities include:

- Establishing, implementing, and promoting the Safety Policy Statement;
- Authority over financial and human resources;
- Authority over all activities and operations;
- Authority over final risk assessment ranking;
- Authority over final mitigation(s) of hazards/unsafe conditions;
- Briefing the Board of Directors; and
- Responsibility for carrying out the Transit Asset Management (TAM) Plan.

The CEO has delegated the authority and the day-to-day responsibilities of the agency safety plan for Transit Services to the Chief Operating Officer (COO) of Transit Services.

3.5.3 Chief Operating Officer (COO)

The COO reports directly to the CEO and is responsible for ensuring that SMS is effectively implemented and that action is taken, as necessary, to address substandard performance throughout Transit Services. These responsibilities include:

- Implementing, and promoting the Safety Policy Statement;
- Authority over financial and human resources within Transit Services;
- Authority over all activities and operations within Transit Services;
- Authority over the risk assessment ranking within Transit Services;
- Authority over final mitigation(s) of hazards/unsafe conditions within Transit Service; and

- Briefing the Board of Directors on SMS related activities within Transit Services, as requested by the CEO.

The COO will support and encourage an open dialogue between the Chief Safety Officer and the CEO.

3.5.4 Chief Safety Officer

The Chief Safety Officer (CSO) is the Manager of Safety for Transit Services. The CSO has a dual reporting role with the COO and the CEO. As necessary to implement the Bus Agency Safety Plan and discuss relevant issues, the CSO has a duty and a right to report directly to and consult with the CEO. The CSO has independent and direct access to the CEO as needed regarding all safety related issues. The CSO has regularly scheduled safety briefings with the CEO and COO. The CSO also reports to the COO on a day-to-day basis. The CSO is responsible for:

- Developing and maintaining SMS programs including the Bus Agency Safety Plan;
- Managing the Employee Reporting Program;
- Performing analysis of incidents, trends, and causes and making recommendations to reduce or eliminate the potential for recurrence;
- Assisting other departments with the development of training programs and procedures;
- Managing the review and analysis of all accidents, incidents and safety events to determine preventability and any other causal or contributing factors;
- Providing monitoring and follow-up with employees after preventable accidents;
- Serving as the Chair of the Employee Safety Committee;
- Coordinating with external emergency response agencies, including police, fire and emergency management agencies, regarding emergency response training, familiarization and review of emergency occurrences and Transit Services emergency preparedness plans; and
- Managing the Department of Motor Vehicles (DMV) Pull Notice Program and assuring all licenses, permits and certifications are in compliance.

3.5.5 Other Agency Leadership, Executive Management and Key Staff

3.5.5.1 Director of Fleet and Facility Maintenance

The Director of Fleet and Facility Maintenance directly reports to the COO and is responsible for:

- Directing, organizing, developing and planning all directly operated bus and facility maintenance functions;
- Providing oversight, contract compliance and support for all of MTS's contracted service fleet and facility maintenance operations;
- Directing, coordinating and supervising the development, implementation and administration of capital plans and contracts for fleet replacement, as well as service contracts providing maintenance for all MTS bus facilities and fleets;
- Overseeing the administration of applicable Collective Bargaining Agreement (CBA);
- Overseeing maintenance employee training, including the apprenticeship program; and
- Providing expertise and advice regarding staffing decisions in Fleet and Facilities, including recommendations for hiring, promotion and termination; evaluation and the implementation of discipline and other remedial measures.

3.5.5.2 Director of Transportation

The Director of Transportation directly reports to the COO and is responsible for:

- Organizing, developing, planning and directing all of San Diego Transit's transportation functions;
- Overseeing the development and management of all transportation employee training programs, including new employee and drivers training, refresher courses, safety-related training and all required safety/certifications/licensing; providing expertise for the development and coordination of new training programs.
- Overseeing the management of both Radio/Communications and Service Operations Supervisor teams, including developing standard operating procedures, setting expectations for professional interactions with customers and other employees. Guiding opportunities to improve supervisor skillsets through training, mentoring and professional development;

- Overseeing the administration of applicable CBA; and
- Providing expertise and advice regarding staffing decisions in Transportation Department, including recommendations for hiring, promotion and termination and the implementation of discipline and other remedial measures.

3.5.5.3 Director of Contract Operations and Passenger Facilities

The Director of Contract Operations and Passenger Facilities directly reports to the COO and is responsible for:

- Providing day-to-day oversight of contractor compliance with the agency safety plan;
- Providing contract oversight of the Agency's multi-year transit operations contracts;
- Monitoring ongoing facility maintenance activities dictated by Agency service contracts;
- Planning, directing, coordinating and reviewing Contract Services' staff;
- Assisting with transportation activities and coordinating schedules, projects and programs as needed to ensure Contract Service quality and continuity with Agency goals and objectives;
- Overseeing the coordination of bus stop maintenance and other transit amenities, including administration of various vendor contracts;
- Working with appropriate staff to develop fleet capital replacement program; and
- Supporting Finance Department staff on discretionary and programmed grants applications.

3.5.5.4 Manager of Paratransit and Mini Bus

The Manager of Paratransit and Mini Bus directly reports to the Legal department and is responsible for:

- Providing day-to-day oversight of contractor compliance with the agency safety plan;
- Organizing, developing, planning and directing all of MTS' Paratransit and Mini Bus functions and ensuring alignment of these functions with the goals and critical business outcomes of MTS;

- Ensuring the MTS ADA Paratransit Program is in full compliance with ADA regulations with respect to operations, client certification, call center operations and revenue service;
- Managing the fixed route “Mini Bus” program and overseeing the operations and management contract between MTS and the service provider(s); and
- Preparing operating and capital budgets, monitoring service performance, conducting community outreach, representing MTS on advocacy and transportation committees, and evaluating existing and proposed transit services.

3.5.5.5 Environmental Health & Safety Specialist

The Environmental Health & Safety Specialist reports directly to the Legal department and is responsible for:

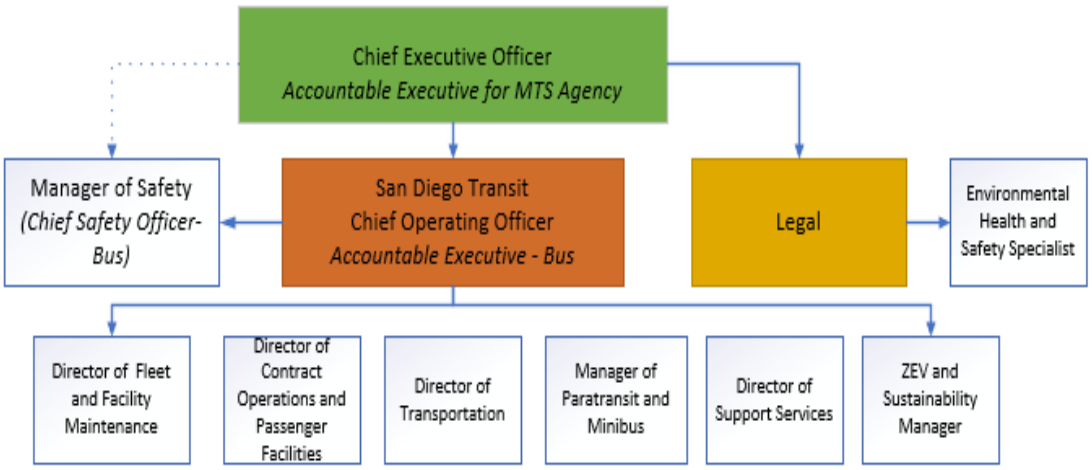
- Developing, implementing, and overseeing Environmental Health and Safety policies and procedures;
- Developing, coordinating and participating in industrial hygiene and environmental safety programs;
- Developing comprehensive environmental and occupational safety and health inspection checklists and protocols, conducting inspections of facilities, and escorting regulatory inspectors during inspections;
- Interfacing with government agencies to maintain regulatory compliance with Federal, State, regional, and local environmental laws and regulations by preparing permit applications and renewal documents and negotiating permit conditions and developing corrective action plans; and
- Reviewing and approving chemical products used in relation to environmental and industrial hygiene impacts.

3.6 Contract-Operations Oversight

Various MTS employees are charged with oversight of contractors as it relates to safety and other matters. Such responsibilities are noted where applicable. In addition, each of the contractor safety plans (See Appendices) also describe oversight functions.

4 Organization Chart

Figure 3: Organization Chart



5 Meetings

5.1 CEO Safety Briefings

The CEO, COO, and CSO meet on a regular basis to review and discuss monthly safety performance. These topics include but are not limited to:

- Accidents & Injuries
- Hazard mitigation strategies
- Training activities
- Policy & Procedures
- Committee meetings
- Contract management
- Project updates

5.2 Transit Services Executive Staff Meetings

The CSO and other agency leadership within Transit Services meet together on a weekly basis with the COO to review and discuss updates from each department. These topics include but are not limited to:

- Accidents & Injuries
- Hazard mitigation strategies
- Training activities
- Policy & Procedures
- Committee meetings

- Contract management
- Project updates

5.3 Transit Services Safety Committee

The Safety Committee meets monthly on the third Thursday of each month at 2:00 pm at the IAD Executive Conference Room. Members can attend the meeting in person, or via conference call (virtual). The Safety Committee is comprised of representatives from both bargaining units (ATU, IBEW) as well as management representatives from the Maintenance, Safety, Security, and Transportation Departments. The Safety Committee is a joint labor-management committee that is comprised of an equal number of employee representatives and management representatives, compliant with the Bipartisan Infrastructure Law, § 5329(d)(5).

Frontline employee representatives are selected by the labor organization(s) that represents the plurality of the agency's frontline workforce employed by the agency or a contractor, to the extent labor organizations represent the frontline workforce.

The purpose of the Safety Committee is to: create, improve, promote and maintain a heightened safety culture within the organization; inform, educate and influence employees through awareness campaigns and training activities designed to prevent and reduce accidents and injuries; and to provide a forum for employees to actively participate in safety programs that address and resolve safety issues in a timely manner.

The Safety Committee also is responsible for, at a minimum: (1) identifying and recommending risk-based mitigations or strategies necessary to reduce the likelihood and severity of consequences identified through the agency's safety risk assessment; (2) identifying mitigations or strategies that may be ineffective, inappropriate, or were not implemented as intended; and (3) identifying safety deficiencies for purposes of continuous improvement.

The Bipartisan Infrastructure Law requires the Safety Committee to approve an agency's Agency Safety Plan (ASP) and any updates to the ASP. This approval must occur before the agency's Board of Directors approves the ASP or update. All members of the Safety Committee may suggest changes to the ASP. Members must provide their suggested changes in writing to the Chief Safety Officer, so they can be distributed to all members of the Safety Committee prior to the next regularly scheduled meeting. All members in attendance of the monthly meeting will be given an equal opportunity to discuss proposed revisions prior to approval. In the event that any member(s) object to proposed changes of the plan, the objection will be included in this plan and reviewed with the Accountable Executive and Board of Directors prior to final approval.

5.4 Risk Department Meetings

Agency leadership within Transit Services meets with the Risk Department on a quarterly basis. These topics include but are not limited to:

- Open & recently closed claims
- Workers comp claims
- Litigation updates
- Hazard mitigation strategies
- Training activities
- Policy & Procedures

5.5 Emergency Preparedness and Response

5.5.1 Employee Training

Employees receive varying levels of emergency response training during the initial onboarding process depending on job position. Employees also receive applicable refresher training throughout the year through training programs and topics outlined in the Safety Promotion and Safety Communication sections of this document. Topics covered for emergency training include:

- Accident/Injury reporting
- Inspection protocols
- Passenger evacuations
- Road calls/Breakdowns
- Fire suppression
- Spill prevention, control and countermeasures (SPCC)
- Hazardous waste, operations, and emergency response (HAZWOPER)
- Conflict resolution and de-escalation techniques
- CPR/AED

5.5.2 Emergency Responder Training & Coordination

Transit Services participates in external agency emergency trainings and exercises whenever requested/invited by local municipal, county, state, or federal entities. These events include emergency events specific to the transit system as well as supporting other agencies with available resources (vehicles) to aid in external emergency response. Typical training events and exercises include:

- Vehicle familiarization
- Bus hijacking/SWAT

- Rescue/heavy lift extraction
- Homeland Security canine training
- Community based evacuations & temporary shelter
- Tabletop exercises

5.5.3 Vehicle Safety Equipment

Fixed route buses are equipped with the following safety features to reduce to the likelihood/severity of an emergency:

- Two way radio
- GPS tracking
- Security cameras
- Discreet panic button
- Fire extinguisher
- Engine fire detection & suppression system (excludes battery electric buses)
- Interlock device(s)
- Fuel leak detection alarm (CNG buses only)
- Emergency exit windows & roof hatches
- Low air pressure alarm

6 Safety Risk Management

Safety Risk Management is a decision making process that involves the identification, evaluation, and mitigation of hazards and unsafe conditions throughout the system. Hazards are to be eliminated or mitigated to lowest practical level with consideration given to financial and operational constraints. Transit Services utilizes a decentralized process where each department is responsible for managing the hazards that exist within their department.

6.1 Safety Hazard Identification

All employees are responsible for identifying and reporting hazards and unsafe conditions to their immediate supervisor/manager. The supervisor/manager is responsible for the initial evaluation and mitigation of a reported hazard. If the supervisor/manager is unable to eliminate the hazard or effectively mitigate the hazard to an acceptable level, the hazard must be reported to the CSO. The CSO is responsible for documenting the reported hazard.

Hazards are generally identified through:

- Employee Reporting Program;

- Employee Safety Committee;
- Routine inspections;
- Training activities;
- Direct observation by supervisors, managers and/or safety personnel;
- Accident and incident investigations;
- Customer Service reports;
- Daily operations activity reports;
- Safety data analysis;
- Audits;
- Data and info provided by FTA or other oversight authority;
- Design/Planning process for capital projects;
- Procurement of goods and services; and
- New service implementation.

6.2 Safety Risk Assessment

The CSO is responsible for assessing safety risks. Analyzing hazards is subjective. Two reasonable people could assess the same hazard and determine a different probability or severity of an unfavorable outcome. Hazards are analyzed using the probability/severity matrix within this section (Table 6, Table 7, Table 8, and Table 9). The criteria listed in the severity and probability charts are intended to be guidelines only. Each hazard is unique. Therefore, in addition to the severity and probability charts, the CSO should also consider common sense, similar prior/existing hazards, historical data, and their professional experience when conducting the assessment. Hazards that are “unacceptable”, “undesirable”, or “acceptable with review by management” are entered into the Risk Register by the CSO. Hazards that are “acceptable without review” are not required to be entered into the Risk Register. The CSO is responsible for informing the Accountable Executive of the MTS Agency of any hazard that is “unacceptable” or “undesirable”.

Table 6: Severity

Severity		
Description	**Category**	**Criteria (worst likely credible outcome)**
Catastrophic	**1**	Could likely result in death, permanent total disability, severe property damage or irreversible environmental damage.
Critical	**2**	Could likely result in permanent partial disability, injuries or occupational illness that may result in hospitalization, or reversible significant property/environmental damage.

Marginal	**3**	Could likely result in injury or occupational illness resulting in one or more lost work days(s), reversible moderate property/environmental damage.
Negligible	**4**	Could likely result in injury or illness not resulting in a lost work day, minimal property/environmental impact.

Table 7: Likelihood

Likelihood		
Description	**Level**	**Specific Individual Item (Example of Frequency)**
Frequent	**A**	Likely to occur frequently or continuously. (Weekly, 100K miles)
Probable	**B**	Likely to occur several times. (Monthly, 1 million miles)
Occasional	**C**	Likely to occur sometime. (Yearly, 10 million miles)
Remote	**D**	Unlikely but reasonable or possible to occur. (Decade, 100 million miles)
Improbable	**E**	So unlikely, it can be assumed occurrence may not be experienced.
Eliminated	**F**	This level is used when potential hazards are identified and later eliminated.

Table 8: Hazard Assessment Matrix

Hazard Assessment Matrix				
	1 - Catastrophic	**2 - Critical**	**3 - Marginal**	**4 - Negligible**
A - Frequent	**1A**	**2A**	**3A**	**4A**
B - Probable	**1B**	**2B**	**3B**	**4B**
C - Occasional	**1C**	**2C**	**3C**	**4C**
D - Remote	**1D**	**2D**	**3D**	**4D**

E - Improbable	**1E**	**2E**	**3E**	**4E**
F - Eliminated	**N/A**	**N/A**	**N/A**	**N/A**

Table 9: Acceptability Levels

Acceptability Levels	
High	**Unacceptable**
Serious	**Undesirable** with management decision
Medium	**Acceptable** with review by management
Low	**Acceptable** without review

6.3 Safety Risk Mitigation

After a risk assessment has been conducted, the CSO will identify parties responsible for mitigating the hazard. The responsible parties are generally department heads, those most knowledgeable about the hazard (subject matter experts), or those with the most adequate resources to mitigate the hazard.

The following are common methods and processes responsible parties typically use to mitigate hazards:

- Eliminate hazards by repair/replacement;
- Eliminate hazards through design/change of service;
- Incorporate engineered features or devices;
- Provide warning devices, signage and alarms;
- Establish written policy and procedures to address the hazard;
- Implement training activities;
- Use of personal protective equipment (PPE); and
- Communication of hazard with employees, passengers, and general public.

Responsible parties are required to update the CSO on mitigation progress in a timely manner. The CSO is then responsible for updating the Accountable Executive and the Risk Registry in Industry Safe. The Risk Registry is reviewed quarterly by the Accountable Executive, CSO, and responsible parties. The Accountable Executive has the ultimate authority when deciding mitigations and the final assessment of a hazard. Hazards that remain at an unacceptable/undesirable level

will continue to be monitored and revisited during the annual budget and capital improvement process.

7 Safety Assurance

7.1 Safety Performance Monitoring and Measurement

MTS has established several activities to monitor operations and maintenance for compliance with procedures. These processes are also used to identify any safety risk mitigations that may be ineffective, inappropriate, or were not implemented as intended. Non-compliance with procedures is generally addressed through counseling, training, and other management oversight activities. Insufficient procedures are addressed through safety risk management activities.

Supervisors are responsible for upholding established policies and procedures covered in documents such as CBAs, employee handbooks, training manuals, bulletins, memos, California Vehicle Code sections, etc. Supervisors typically utilize direct observations, job briefings, facility inspections, radio communications, and investigations to determine compliance. Employees who are not compliant with these procedures may receive in-person counseling, written observation letters, re-training, and/or progressive discipline depending on the severity of the event and the employee's work record.

7.1.1 Investigations

All employees are required to immediately report safety related events to their direct supervisor or the Bus Control Center/radio room and complete a written accident/incident report. The Supervisor on duty is responsible for ensuring the appropriate response to the scene (dependent on available resources) and determining if a drug and alcohol test is required.

A Service Operations Supervisor (SOS) should be sent to the scene to investigate whenever a person is injured/claiming injury or there is a collision involving a bus or other mass transit vehicle. The SOS will gather statements from persons involved/witnesses, collect insurance and other contact information, take photos of the scene, etc., and complete a written report.

Following the event, the Transportation Service Quality Specialist will collect video from the bus camera system and facility camera system if available. The video is generally stored in either the camera system server or a shared network drive and preserved for at least one year after the event and may be stored longer as dependent on available storage space. The CSO will collect and review all information and forward all written materials to the Risk Department and/or the Safety Review Committee (SRC).

The SRC is responsible for reviewing events involving: vehicle collisions, claims of injury, wheelchair ramp use, and certain braking events. The SRC is chaired by the CSO and also includes a member from the Training Department and a member from the Transportation Department. The SRC meets weekly and reviews all available information to determine preventability and any other causal or contributing factors. The CSO informs applicable management and other involved employees of the SRC's findings.

The CSO is responsible for entering safety related information in MTS's Enterprise Resource Program (SAP) for tracking purposes and data analysis. The CSO is responsible for entering hazards that require management review and/or a decision by management (High/Serious/Medium risk levels) in Industry Safe for tracking the mitigation of hazards. The CSO is also responsible for reporting this data to the Accountable Executive on a monthly basis. The CSO is also responsible for reporting applicable required information to the National Transit Database (NTD) on a monthly basis.

7.1.2 Drug & Alcohol Program

MTS is a drug and alcohol-free workplace and has an established drug and alcohol policy that is compliant with 49 CFR parts 40 and 655. Every employee receives training upon initial hiring. Supervisor/mangers receive two hours of additional training every two years that includes a minimum of 60 minutes on the effects of drug use and 60 minutes of training on the effects alcohol use and the agency policy. Drug and alcohol testing is conducted under the following circumstances:

- Pre-Employment;
- Reasonable Suspicion;
- Post-Accident;
- Random;
- Assuming Safety Sensitive Duties; and
- Return to Duty / Follow-Up

7.1.3 Driving Hours and On-Duty Time

Bus operators' schedules are assigned on a daily basis by an Operations Supervisor. The Operations Supervisor checks hours of service before scheduling upcoming work days. The following records for all bus operators are generated, tracked, and stored in the system:

- The scheduled assignment of all drivers including regular work days, day off work, overtime, vacations, holidays, absences, outside employment hours;

- The time the driver reports for duty each day;
- The time the driver is released from duty each day;
- The total number of hours the driver is on duty each day;
- The total scheduled driving time each day;
- The delay time at the end of each work piece; and
- The total time for the preceding seven days for drivers used for the first time or intermittently.

Title 13 of the California Code of Regulations subsection 1212 and 1212.5 establish the following limits on commercial bus operating hours:

- Drivers must have at least 8 hours off between work shifts;
- Maximum 10 hours driving time per day;
- Maximum 15 hours of on duty time; and
- Maximum 80 hours of on duty time for any consecutive 8 days.

In addition to state law, the applicable CBA establishes the following limits on scheduling and work hours:

- Drivers have at least 10 hours off between bid-in and scheduled work shifts; and
- Scheduled on-duty/spread work day limited to 12.5 hours.

7.1.4 DMV Pull Notice

MTS enrolls all employees in the California Employer Pull Notice (EPN) program. The program is required for all commercial drivers as a means for employers to electronically verify and monitor driving records. Employees are enrolled upon hire and removed upon termination. Records indicate license type, expiration date, special certificates, endorsements, restrictions. Notices are also sent annually and when there is a change to license status including a ticket, accident, or suspension. MTS uses a web based software solution company to manage the EPN program.

The CSO is responsible for monitoring the records of all commercial drivers and union employees. The CSO is responsible for notifying each department of status changes to the employee's eligibility to operate a bus or other vehicle. Each department is responsible for notifying the employee in their department of status changes, collecting documentation, and preventing them from operating a vehicle if they are not eligible to drive.

The Human Resources Department is responsible for checking a prospective employee's three (3) year driving record during the application and interview

process. The Human Resources Department is responsible for monitoring the records of all management employees who do not have a commercial license.

The California Highway Patrol (CHP) performs an audit of the EPN program during the annual terminal inspection.

7.1.5 Customer Complaint Investigation

Customer complaints are managed overall by Support Services Department. Customers can submit a complaint by mail, in-person at MTS's administrative through the call center, through the MTS website or through MTS's mobile application.
All customer's comments or complaints are entered into the Customer Review Module in SAP. The comments then investigated by the responsible department. Investigation measures may include interviewing staff and/or collecting video if appropriate. Final resolution is handled by department managers. The findings of the investigation are then entered into the Customer Review Module.

7.1.6 Ride Checker Program

MTS has two (2) anonymous part-time employees that conduct both directed and random rides that monitor a driver's performance while in revenue service. The ride checker completes a four-page "Ride Monitor Observation Listing" report for each ride. The report includes both yes/no questions and comment fields for various categories (Table 10).

Table 10: Ride Monitor Observation Listing

Ride Monitor Observation Listing		
Employee Information	Safety Observations	Bus Stop
Operator Appearance	Speed & Clearance	Turning Intersections
Departure / Arrival	ADA Compliance	Customer Service
Fare Collection	Railroad Crossing	Bus Appearance

The report is verified by the Support Services Analyst, and emailed to a management distribution group. The Division Managers are responsible for final resolution of the reports.

7.1.7 Vehicle Pre-Trip Inspections

Pre-trip inspections are conducted in accordance with State and Federal law. Pre-trip inspections are completed by bus operators in the bus yard before the

bus goes into revenue service. The pre-trip inspections also occur when bus operators make a relief on the road (excluding air brake test).

7.1.8 Vehicle Preventative Maintenance

Preventative maintenance and inspection is carried out at a minimum in accordance with the Original Equipment Manufacturer (OEM) recommendations. This process occurs based on miles and varies in the complexity based on the mileage interval. Inspections include:

- Brake inspection;
- Lube and oil filter;
- General inspection;
- Wheelchair ramp;
- Air conditioner;
- Electrical;
- Cooling;
- Compressed Natural Gas (CNG) and fire suppression;
- Farebox;
- Transmission; and
- Differential and diaphragms.

All inspections are documented and kept for the life of the vehicle. Specific details on the preventative maintenance program are explained further in the Maintenance Manual that is maintained by the Maintenance Department. The California Highway Patrol (CHP) conducts an independent audit of the preventative maintenance program annually.

7.1.9 Internal Safety Reporting Programs

The CSO routinely reviews safety data from various sources including: employee safety reports, safety meetings, the employee reporting program, customer service complaints, OSHA logs, and other safety communication channels that track safety performance information. The CSO will review and assess the data, conduct further investigations, and use established safety risk management process as needed to ensure safety risk mitigations are effective.

7.2 Management of Change

Changes that may introduce new hazards or impact the agency's safety performance are assessed through various processes. These changes include but are not limited to:

- Procurement of new goods/equipment;

- Changes to route design and special event detours;
- Operations/Maintenance procedure changes;
- Introduction of new technology;
- New regulatory requirements;
- Changes to operating environment including city/regional planning;
- Design and construction of capital projects; and
- Organizational changes.

If management determines that a change may impact safety performance, the proposed change should be evaluated using the Safety Risk Management Process, which includes hazard identification, risk assessment, and risk mitigation. Any change that may introduce new hazards to the system should include the safety department. Please refer to the Safety Risk Management section of this document or contact a member of the safety department for more information regarding this process. If the safety department is not consulted and engaged during the decision making process of the change, the project manager or individual who is approving/implementing the change is responsible for ensuring adequate safety risk management is conducted prior to making any changes.

7.3 Continuous Improvement

MTS establishes Safety Performance Targets, Key Performance Indicators and PIP goals annually. These goals are tracked and reported on a monthly and annual basis. The CSO meets with the CEO, COO, executive management and other key staff regularly to review and evaluate the agency's performance. Any identified deficiencies are addressed with a plan, under the direction of the Accountable Executive or their designee.

8 Safety Promotion

8.1 Safety Communication

Management promotes and communicates safety performance throughout the entire organization. This communication includes information on hazards and safety risk relevant to employees' roles and responsibilities. Employees are also informed of safety actions that are taken in response to reports submitted through the safety reporting program. The methods of communication include but are not limited to:

- Training Activities;
- Safety Committee;
- Meetings;
- Handbooks;
- Policies;
- Memos;

- Bulletins;
- Newsletters;
- Company Intranet;
- Job Briefings; and
- Department Information Monitors.

8.2 Competencies and Training

8.2.1 Chief Safety Officer Training Program

The CSO participates in the Voluntary Bus Safety Certification Program as outlined in 49 CFR Part 672. This training includes the following courses:

- SMS Awareness;
- SMS Safety Assurance;
- SMS Principles For Transit;
- Transit Bus System Safety;
- Fundamentals of Bus Collision Investigation; and
- Effectively Managing Transit Emergencies.

The CSO training also includes:

- Drug and Alcohol;
- Harassment Prevention; and
- Management Development

8.2.2 Servicer Training Program

All servicers complete a comprehensive training program. This program includes passing a written and behind the wheel test for a commercial driver license. Other major topics covered in the training program include: Code of Safe Practices, CNG fueling procedures, electric bus charging, bloodborne pathogen control program, Spill Prevention & Control Program (SPCC), and Maintenance Department policies and procedures.

Servicer refresher training includes but is not limited to:

- Toolbox training sessions;
- SPCC refresher training;
- Behind the wheel evaluations; and
- Preventable Accident remediation
- De-escalation training

8.2.3 Mechanic Apprenticeship Program

All mechanics complete a three (3) to four (4) year (depending on specialty) state certified apprenticeship program. The training starts with 40 days of in-house classroom instruction followed by on-the-job training with a mentor throughout the program. Apprentices must also complete nine (9) required college courses through Miramar Community College. In addition to the apprentice program, mechanics also receive the training program outlined in the servicer training program. Mechanics also receive Hazardous Waste Operations and Emergency Response (HAZWOPER) training as well as forklift certification.

Mechanic refresher training includes but is not limited to:

- Toolbox training sessions;
- SPCC annual refresher training;
- HAZWOPER annual refresher training;
- Forklift recertification every 3 years;
- Behind the wheel evaluations;
- Preventable accident remediation;
- De-escalation training;

8.2.4 Foreman and Maintenance Managers

Foreman and Maintenance Managers training includes, but is not limited to, the following:

- Drug and Alcohol;
- Harassment Prevention;
- Management Development;
- Toolbox training sessions;
- SPCC;
- HAZWOPER;
- Forklift recertification;
- Behind the wheel evaluations;
- De-escalation training;
- Preventable accident remediation; and
- Cardiopulmonary Resuscitation (CPR).

8.2.5 Bus Operator Training Program

All bus operators complete a nine (9) week training program prior to operating a bus in revenue service on their own. The training program is comprised of both classroom and behind the wheel driving. Operators are required to receive and maintain a class B commercial driving license, with a passenger and air brake endorsement. Operators are also required to have a valid medical certificate and Verification of Transit Training (VTT) certificate. Training topics includes, but are not limited to, the following:

- Bus operation and defensive driving;
- Destination signs;
- Radio communication;
- Customer service;
- ADA;
- Emergency procedures; and
- Route training.

Bus Operator refresher training includes, but is not limited to, the following:

- VTT annual training;
- Accident remediation;
- Defensive driving;
- Conflict resolution;
- Policy and procedures; and
- Behind the wheel evaluations.

8.2.6 Transportation Supervisors and Managers

Supervisors and Transportation Managers training includes, but is not limited to, the following:

- Drug and Alcohol;
- Harassment Prevention;
- Management Development;
- VTT;
- De-escalation training;
- CPR; and
- Preventable accident remediation.

APPENDIX A

Bus Safety Plan
(Public Transportation Agency Plan pursuant to 49 CFR 673)

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MTS Contract-Operator at South Bay Maintenance Facility (SBMF) and East County Maintenance Facility (ECMF)

APPENDIX A

TRANSDEV BUS SAFETY PLAN

Contract Operations at

East County Maintenance Facility

and

South Bay Maintenance Facility

Table of Contents

1 Bus Agency Safety Plan Overview

1.1 Agency Information

This Bus Agency Safety Plan discusses how safety is managed for Transdev, in operating the fixed route contract for the San Diego Metropolitan Transit System (MTS). The Agency Safety Plan addresses all applicable requirements and standards as set forth in FTA's Public Transportation Safety Program and the National Public Transportation Safety Plan.

Transdev operates Fixed-Route Urban, Local, Express, Rural and Bus Rapid Transit (BRT) bus services in the San Diego Metropolitan Transit System (MTS) service area of San Diego. Services are provided under a contract agreement, to operate Fixed-Route service from the South Bay Division and East County Division, which operate a combined fleet of approximately 332 buses on approximately 56 Routes.

Table 1: Agency Information

Agency Information	
Transit Agency Name	MTS
Transit Agency Address	1255 Imperial Ave Suite 1000, San Diego, CA 92101
Name and Title of Accountable Executive	Sharon Cooney, Chief Executive Officer (CEO)
Name of Chief Safety Officer (CSO) or Safety Management System (SMS) Executive	Jared Garcia, Manager of Safety
Modes of Service Covered by This Plan	Contracted Fixed Route Bus
List Of All Funding Types:	5307, 5337, 5339
Mode(s) of Service Provided by the Transit Agency (Directly Operated or Contracted Service)	Contracted Fixed Route Bus
Does the agency provide transit services on behalf of another transit agency or entity?	No
Description of Arrangement(s)	N/A

1.2 Bus Agency Safety Plan Approvals

The Bus Agency Safety Plan has been approved by the Accountable Executive and the MTS Board of Directors (Table 2).

Table 2: Bus Agency Safety Plan Approvals

Bus Agency Safety Plan Approvals		
Name of Entity That Drafted This Plan	San Diego Metropolitan Transit System	
Safety Committee Approval	Signature of Chief Safety Officer	Date of Approval
		2/16/2023
Accountable Executive Signature	Signature of Accountable Executive	Date of Signature
		2/16/2023
Approval by the MTS Board of Directors	Signature of Chairperson of the MTS Board of Directors	Date of Approval
		2/16/2023
Certification of Compliance	Name of Individual/Entity That Certified This Plan	Date of Certification
		2/16/2023

1.3 Annual Review, Update, and Safety Performance Assessment

1.3.1 Annual Review of the Bus Agency Safety Plan

This plan will be reviewed and updated annually during the month of January by the Chief Safety Officer. Proposed changes are reviewed with the Accountable Executive, Executive Management and Key Staff. The Accountable Executive will review and approve any changes, sign the updated plan, and then forward the plan to the Board of Directors for final review and approval. Updates to this plan may be made when there are:

- Changes to: safety performance targets, safety management policy, safety risk management, safety assurance, and safety promotion;
- Changes to: The Accountable Executive, COO, or CSO;
- Significant changes to service delivery;
- Significant changes to the organizational structure;
- New process/procedures are introduced that impact safety;
- Changes to available resources or priorities that support SMS; and
- Changes required by the Federal Transit Administration (FTA), California Public Utilities Commission (CPUC), California Department of Transportation (Caltrans), San Diego Association of Governments (SANDAG), etc. or other similar oversight agency.

1.3.2 Annual Safety Performance Assessment

MTS conducts an annual safety performance assessment in conjunction with the annual review. This assessment includes a review of the prior year's performance involving the Safety Performance Targets, Key Performance Indicators and applicable Performance Incentive Program (PIP) goals. The assessment may also include reviewing identified safety deficiencies, or other areas involving safety performance.

Updates made to the Bus Agency Safety Plan will be documented (Table 3).

Table 3: Version Number and Update History of Transit Safety Plan

Version Number and Update History of Bus Agency Safety Plan			
Version Number	Section/Pages Affected	Reason for Change	Date Issued
1.0	All	N/A	July 2020
2.0	All	Bipartisan Infrastructure Law	TBA

1.4 Documentation and Recordkeeping

This Bus Agency Safety Plan and documents related to this plan will be maintained for three (3) years after date of creation and be made available upon request by the FTA or other applicable agency having jurisdiction.

2 Safety Performance Targets

2.1 Safety Performance Targets

As required by 49 CFR 673.11(a) (3), this Bus Agency Safety Plan must include performance targets associated with revenue service that are based on the safety performance measures established under the National Public Transportation Safety Plan.

MTS may adjust performance targets over time, as data is collected and as SMS implementation matures. MTS performance targets are calculated using a 3-year rolling average of the data submitted to the National Transit Database (NTD) (Table 4). The safety performance targets are evaluated for each calendar year (January 1 – December 31).

Table 4: Safety Performance Targets

Bus Safety Performance Targets (Evaluated Per Calendar Year)								
Mode of Transit Service	Fatalities (Total)	Fatalities (Rate) Per 100K	Injuries (Total)	Injuries (Rate) Per 100K	Safety Events (Total)	Safety Events (Rate) Per 100K	System Reliability (Rate) Failures/ Rev Miles	Transit Worker Assaults
Fixed Route Contracted	0.33	0.003	50	0.50	52	0.52	7,071	0

2.2 Safety Performance Target Definitions

Definitions are based on the 2022 NTD Safety and Security Policy Manual.

Assault - An unlawful attack by one person upon another.

Fatality – Death confirmed within 30 days of the event (including suicides). Fatalities that occur because of illnesses or other natural causes (including individuals who are found deceased) are not reportable.

Injury - Any damage or harm to persons that requires immediate medical attention away from the scene because of a reportable event must be reported as an injury. MTS reports each person transported away from the scene for medical attention as an injury, whether or not the person appears to be injured.

Safety Events – Collisions that meet NTD thresholds for injuries, fatalities, property damage, or evacuation; vehicle towed from the scene involving a transit revenue vehicle; fires; hazardous materials spills, acts of God; evacuations for life safety reasons; other safety events listed in NTD policy manual.

System Reliability - mean distance between major mechanical failures, is measured as revenue miles operated divided by the number of major mechanical failures.

2.3 Safety Performance Target Coordination

Safety Performance Targets are made available to state of California including the Public Utilities Commission (CPUC), Caltrans, and the San Diego Association of Governments (SANDAG), MTS's Metropolitan Planning Organization (MPO), to aid in the planning process. Coordination with these agencies, in the selection of safety performance targets is accomplished to the maximum extent practicable. MTS

officially transmits its targets in writing to the State and MPO following the annual review and certification. This transmission will take place in February of each year.

Targets Transmitted to the State[1]	**State Entity Name**	**Date Transmitted**
	California Public Utilities Commission (CPUC)	See Footnote 1
	California Department of Transportation (Caltrans)	See Footnote 1
Targets Transmitted to the MPO	**MPO Name**	**Date Transmitted**
	San Diego Association of Governments (SANDAG)	7/7/2020

3 Safety Management Policy

3.1 Safety Management Policy Statement

The Safety Management Policy Statement, signed by the Accountable Executive and approved by the MTS Board of Directors, establishes the agency's safety objectives, and documents the organizational authorities, accountabilities and responsibilities
(Figure 1).

[1] Although MTS has offered to share Bus Safety Performance Targets with CPUC and Caltrans, both have stated it is not necessary to send Bus Safety Performance Targets for their review. As required per 49 CFR 673.15, MTS will coordinate and share Bus Safety Performance Targets with state entities to the maximum extent practicable

Figure 1: Safety Management Policy Statement

San Diego Metropolitan Transit System
Safety Management Policy Statement

The San Diego Metropolitan Transit System (MTS) has established this Safety Management System Policy Statement to emphasize its overall commitment to the safety of our passengers, our operators, our staff and the general public. This Safety Management System Policy Statement provides direction for MTS's safety program, which applies to every facet of MTS operations.

The management of safety is MTS's highest priority. MTS is committed to safety throughout the entire organization, from the Board of Directors to the front line employees.

MTS will ensure that all transit service delivery activities take place under a balanced allocation of organizational resources to achieve the highest level of safety performance and meeting established standards. MTS is committed to developing, implementing, maintaining, and constantly improving our processes. As evidence of our commitment to safety, every MTS policy shall be guided by and every employee shall perform their duties in furtherance of the following safety goals:

- Supporting safety through the provision of appropriate resources that fosters a safety culture;
- Integrating the management of safety among the primary responsibilities of all managers and employees;
- Clearly defining managers and employees' responsibilities in relation to the performance of our safety management system;
- Conducting hazard identification and evaluating safety risks, which includes an employee safety reporting program, in order to eliminate or mitigate safety risks;
- Ensuring that no action will be taken against any employee who discloses a safety concern through the employee safety reporting program, unless disclosure indicates, beyond any reasonable doubt, an illegal act, gross negligence, or a deliberate or willful disregard of regulations or procedures;
- Complying with, and wherever possible exceeding, legislative and regulatory requirements and standards;
- Ensuring that sufficiently skilled and trained employees are available to implement safety management processes;
- Ensuring that all staff are provided with adequate and appropriate safety-related information and training, are competent in safety management matters, and are assigned only tasks for which they are adequately trained;
- Establishing and measuring our safety performance against realistic and data-driven safety performance indicators and safety performance targets;
- Continually improving our safety performance by ensuring appropriate safety management action is taken and is effective; and
- Ensuring externally supplied systems and services that support our operations are delivered to meet our safety performance standards.

Sharon Cooney
Chief Executive Officer
San Diego Metropolitan Transit System

July 30, 2020
Date

Nathan Fletcher
Chair of Board of Directors
San Diego Metropolitan Transit System

July 30, 2020
Date

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the mobility company

SAFETY FIRST
Our Daily Priority at Transdev

Across each of our 18 countries, Transdev always places Safety First. This commitment is present every day in all the ways we ensure the health, safety and security of our teams, passengers, and the communities we serve.

Here in the U.S., I want to emphasize safety should serve as our guiding principle and top priority in all policies, procedures, and daily practices. Our goal is to ensure that every day is a Perfect Safety Day – a day with no preventable accidents or injuries.

The prevention of accidents, injuries, unsafe incidents, and illness is the responsibility of every Transdev employee. All employees of every level are expected to lead by example and

- **Provide, foster, and deliver a safe and healthy working environment**
- **Abide by all safety policies, rules, and regulations**
- **Expect and insist upon a total commitment to safety from fellow employees**
- **Immediately raise safety concerns to their supervisor or safety representative**

I am counting on every member of the Transdev team to ensure we view all decisions through the lens of safety and we always consider **Safety First.** Thank you for your strong daily focus on our shared health, safety, and security.

Laura Hendricks
CEO, Transdev U.S.

Laura J. Hendricks

SAFETY FIRST!

MAKE TODAY A PERFECT SAFETY DAY

OUR PURPOSE:
We empower freedom to move everyday thanks to safe, reliable and innovative solutions that serve the common good.

3.2 Goals

Transdev, on behalf of MTS Transit Services, is committed to providing the safest transportation possible for our employees, customers, the citizens of San Diego, and the communities we serve. We will:

- Provide and maintain a safe and healthy working environment
- Provide a safe and courteous transit system
- Follow best practices that will safeguard employees, customers, and persons interacting with transit property and equipment

Accidents are the result of unsafe acts committed by people and the existence of hazards or unsafe conditions, both of which are controllable and must be prevented to the maximum extent practicable in order to achieve Transdev's and MTS' commitment.

Our Safety Policy and our commitment to safety are at all times guided by the following principles:

- Safety is the responsibility of each and every employee
- Management has the responsibility to train all employees to work safely and to assure all employees work in a safe manner
- Preventing accidents, injuries, and incidents is good business
- Operating risks, hazards, and exposures can be safeguarded with active and effective safety practices
- Injuries and occupational illnesses can be prevented

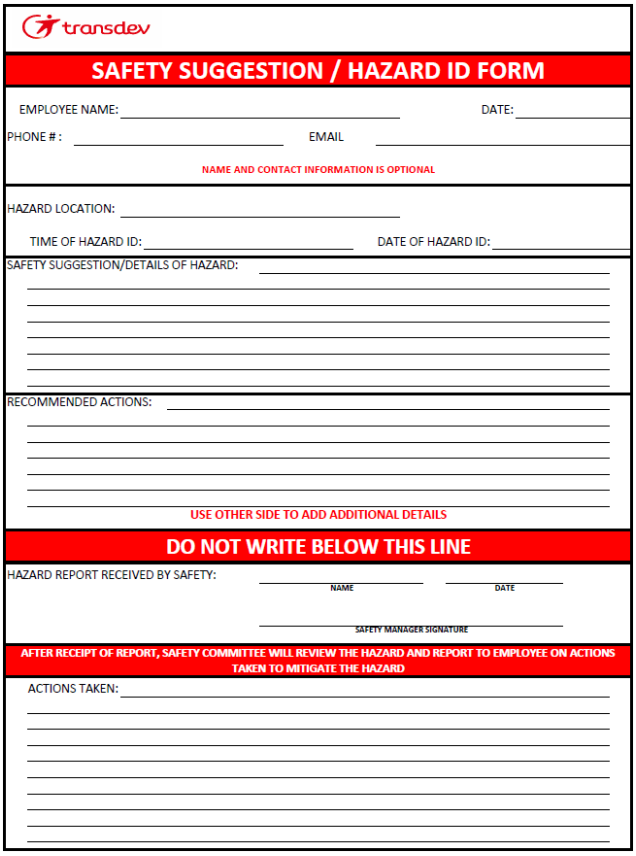
3.3 Employee Reporting Program

Employees and contractors are empowered to report safety hazards, unsafe conditions, and near misses to management. No action will be taken against an employee through the reporting program as long as the report or act was not illegal, negligent, willful, or a violation of company policy/procedure. Employees have multiple means of communicating their concerns which include:

- Verbally to their direct supervisor or other member of management;
- By use of phone/radio;
- Through their union representative;
- Completing an anonymous paper form and
- Through the Employee Safety Committee.

Hazards that cannot be adequately mitigated at the time of reporting are reported to the CSO and entered into a software database (Industry Safe or equivalent) for further assessment and mitigation (see Safety Risk Management).

Figure 2: Sample Paper Reporting Form



transdev

SAFETY SUGGESTION / HAZARD ID FORM

EMPLOYEE NAME: _____ DATE: _____

PHONE # : _____ EMAIL _____

NAME AND CONTACT INFORMATION IS OPTIONAL

HAZARD LOCATION: _____

TIME OF HAZARD ID: _____ DATE OF HAZARD ID: _____

SAFETY SUGGESTION/DETAILS OF HAZARD: _____

RECOMMENDED ACTIONS: _____

USE OTHER SIDE TO ADD ADDITIONAL DETAILS

DO NOT WRITE BELOW THIS LINE

HAZARD REPORT RECEIVED BY SAFETY: _____ NAME _____ DATE

_____ SAFETY MANAGER SIGNATURE

AFTER RECEIPT OF REPORT, SAFETY COMMITTEE WILL REVIEW THE HAZARD AND REPORT TO EMPLOYEE ON ACTIONS TAKEN TO MITIGATE THE HAZARD

ACTIONS TAKEN: _____

3.4 Safety Management Policy Communication

The Safety Management Policy Statement is communicated to all employees and contractors throughout the organization including: employees, managers, executives and the Board of Directors. This policy is communicated through:

- Employee Handbooks;
- Bulletin Boards;
- Newsletters; and
- Company Intranet

3.5 Authorities, Accountabilities, and Responsibilities

3.5.1 Board of Directors

The Board of Directors (Board) is responsible for setting policy for MTS, including Transit Services. The Board is required to approve the ASP initial document and all updates. At its regular meetings, the Board receives periodic safety briefings from Bus Operations. The Board has delegated agency management to the CEO, subject to various adopted Board policies and legal requirements**.**

3.5.2 Accountable Executive

The Board of Directors has designated the CEO as the Accountable Executive for the Agency. The Accountable Executive has ultimate responsibility for ensuring that SMS is effectively implemented and that action is taken, as necessary, to address substandard performance throughout the Agency. These responsibilities include:

- Establishing, implementing, and promoting the Safety Policy Statement;
- Authority over financial and human resources;
- Authority over all activities and operations;
- Authority over final risk assessment ranking;
- Authority over final mitigation(s) of hazards/unsafe conditions;
- Briefing the Board of Directors; and
- Responsibility for carrying out the Transit Asset Management (TAM) Plan.

The CEO has delegated the authority and the day-to-day responsibilities of the agency safety plan for Transit Services to the Chief Operating Officer (COO) of Transit Services.

3.5.3 Chief Operating Officer (COO)

The COO reports directly to the CEO and is responsible for ensuring that SMS is effectively implemented and that action is taken, as necessary, to address substandard performance throughout Transit Services. These responsibilities include:

- Implementing, and promoting the Safety Policy Statement;
- Authority over financial and human resources within Transit Services;
- Authority over all activities and operations within Transit Services;
- Authority over the risk assessment ranking within Transit Services;
- Authority over final mitigation(s) of hazards/unsafe conditions within Transit Service; and
- Briefing the Board of Directors on SMS related activities within Transit Services, as requested by the CEO.

The COO will support and encourage an open dialogue between the Chief Safety Officer and the CEO.

3.5.4 Chief Safety Officer

The Chief Safety Officer (CSO) is the Manager of Safety for Transit Services. The CSO has a dual reporting role with the COO and the CEO. As necessary to implement the Bus Agency Safety Plan and discuss relevant issues, the CSO has

a duty and a right to report directly to and consult with the CEO. The CSO has independent and direct access to the CEO as needed regarding all safety related issues. The CSO has regularly scheduled safety briefings with the CEO and COO. The CSO also reports to the COO on a day-to-day basis. The CSO is responsible for:

- Developing and maintaining SMS programs including the Bus Agency Safety Plan;
- Managing the Employee Reporting Program;
- Performing analysis of incidents, trends, and causes and making recommendations to reduce or eliminate the potential for recurrence;
- Assisting other departments with the development of training programs and procedures;
- Managing the review and analysis of all accidents, incidents and safety events to determine preventability and any other causal or contributing factors;
- Providing monitoring and follow-up with employees after preventable accidents;
- Serving as the Chair of the Employee Safety Committee;
- Coordinating with external emergency response agencies, including police, fire and emergency management agencies, regarding emergency response training, familiarization and review of emergency occurrences and Transit Services emergency preparedness plans; and
- Managing the Department of Motor Vehicles (DMV) Pull Notice Program and assuring all licenses, permits and certifications are in compliance.

3.5.5 Other Agency Leadership, Executive Management and Key Staff

3.5.5.1 Manager of Contract Operations and Passenger Facilities

The Manager of Contract Operations and Passenger Facilities directly reports to the COO and is responsible for:

- Providing day-to-day oversight of contractor compliance with the agency safety plan;
- Providing contract oversight of the Agency's multi-year transit operations contracts;
- Monitoring ongoing facility maintenance activities dictated by Agency service contracts;
- Planning, directing, coordinating and reviewing Contract Services' staff;
- Assisting with transportation activities and coordinating schedules, projects and programs as needed to ensure Contract Service quality and continuity with Agency goals and objectives;

- Overseeing the coordination of bus stop maintenance and other transit amenities, including administration of various vendor contracts;
- Working with appropriate staff to develop fleet capital replacement program; and
- Supporting Finance Department staff on discretionary and programmed grants applications.

3.5.5.2 Transit Operations Specialists

Transit Operations Specialists directly report to the Manager of Contract Operations and Passenger Facilities and are responsible for overseeing the MTS Bus Operations and BRT contract at East County and South bay Divisions. Transit Operations Specialists are responsible for overseeing Contractors efforts in:

- Implementing, promoting and monitoring compliance of the Safety Plan;
- Mitigation(s) of hazards/unsafe conditions within East County and South bay Contract Service Divisions;
- Analysis of incidents, trends, and causes, as well as recommendations to reduce or eliminate the potential for recurrence;
- Post-accident review and reporting;
- Coordinating with external emergency response agencies, including police, fire and emergency management agencies, regarding emergency response training, familiarization and review of emergency occurrences and Contractor's Transit Services emergency preparedness plans; and
- Providing monthly progress reports, as well as statistical and analytical support data.

3.5.5.3 Transdev Leadership, Executive Management and Key Staff

3.5.5.3.1 General Manager

The General Manager is Transdev's Top Executive for East County and South Bay Contract Service Divisions. Transdev's General Manager is responsible for ensuring that SMS is effectively implemented and that action is taken, as necessary, to address substandard performance throughout the East County and South Bay Contract Service Divisions. These responsibilities include:

- Establishing, implementing, and promoting MTS' and Transdev's Safety Policy Statement;
- Authority over Transdev's financial and human resources;
- Authority over all of Transdev's activities and operations;

- Authority over Transdev's final risk assessment ranking;
- Authority over Transdev's final mitigation(s) of hazards/unsafe conditions; and
- Briefing the Manager of Contract Operations and Passenger Facilities.

The General Manager has delegated the authority and the day-to-day responsibilities of the Transdev agency safety plan to the East County and South Bay Division Managers.

3.5.5.3.2 East County and South Bay Division Managers

The East County and South Bay Division Managers directly report to the General Manager, and are responsible for ensuring that SMS is effectively implemented and that action is taken, as necessary, to address substandard performance throughout East County and South Bay Contract Service Divisions. These responsibilities include:

- Directly overseeing and managing the MTS contract at East County and South bay Contract Service Divisions.
- Implementing, and promoting the Transdev Safety Policy Statement;
- Authority over financial and human resources within East County and South bay Contract Service Divisions.
- Authority over all activities and operations within East County and South bay Contract Service Divisions.
- Authority over the risk assessment ranking within East County and South bay Contract Service Divisions.
- Authority over final mitigation(s) of hazards/unsafe conditions within East County and South bay Contract Service Divisions; and
- Briefing the CSO and the Manager of Contract Operations and Passenger Facilities.

3.5.5.3.3 Director of Safety

The Director of Safety of East County and South Bay Contract Service Divisions is the designated Safety representative for Transdev. The Director of Safety directly reports to the General Manager, but is responsible for providing routine updates directly to the CSO of MTS and Administrative Staff overseeing the Transdev Contract. As necessary to implement the Transdev's Bus Agency Safety Plan and discuss relevant issues, the Director of Safety has a duty and a right to report directly to and consult with the General Manager. The Director of Safety has independent and direct access to the General Manager and MTS and Administrative Staff overseeing the Transdev Contract, as needed

regarding all safety related issues. The Director of Safety has regularly scheduled safety briefings with the General Manager and MTS and Administrative Staff overseeing the Transdev Contract. The Director of Safety also reports to the General Manager on a day-to-day basis. The Director of Safety is responsible for:

- Developing and maintaining SMS programs including Transdev's Bus Agency Safety Plan;
- Managing Transdev's Employee Reporting Program;
- Performing analysis of Transdev's incidents, trends, and causes and making recommendations to reduce or eliminate the potential for recurrence;
- Assisting Transdev's other departments with the development of training programs and procedures;
- Managing the review and analysis of all Transdev's accidents, incidents and safety events, to determine preventability and any other causal or contributing factors;
- Providing monitoring and follow-up with Transdev's employees after preventable accidents;
- Serving as the Chair of Transdev's Employee Safety Committee;
- Coordinating with external emergency response agencies, including police, fire and emergency management agencies, regarding emergency response training, familiarization and review of emergency occurrences and Transdev's emergency preparedness plans; and
- Managing Transdev's Department of Motor Vehicles (DMV) Pull Notice Program and assuring all licenses, permits and certifications are in compliance.

3.5.5.3.4 Director of Maintenance

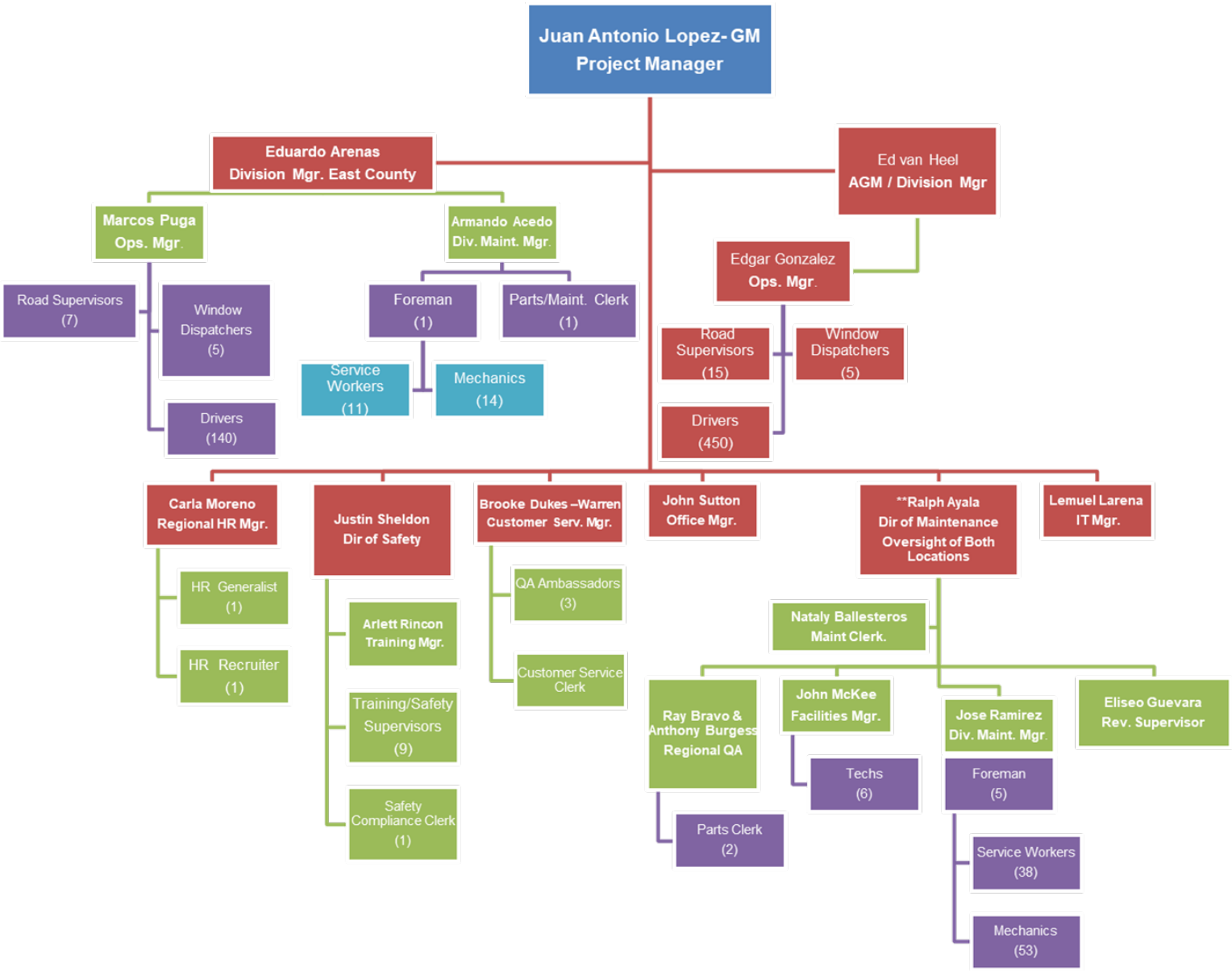
The Director of Maintenance directly reports to the General Manager and is responsible for:

- Directing, organizing, developing and planning all Transdev's directly operated bus and facility maintenance functions;
- Providing oversight, contract compliance and support for all of Transdev's contracted service fleet and facility maintenance operations;
- Directing, coordinating and supervising the development, implementation and administration of capital plans and contracts for Transdev's fleet replacement, as well as service contracts providing maintenance for all Transdev's bus facilities and fleets;
- Overseeing the administration of applicable Transdev's Collective Bargaining Agreement (CBA);

- Overseeing Transdev's maintenance employee training, including the mentoring program; and
- Providing expertise and advice regarding Transdev's staffing decisions in Fleet and Facilities, including recommendations for hiring, promotion and termination; evaluation and the implementation of discipline and other remedial measures.

4 Organization Chart

Figure 3: Organization Chart



5 Meetings

5.1 CEO Safety Briefings

The CEO, COO, and CSO meet on a regular basis to review and discuss monthly safety performance. These topics include but are not limited to:

- Accidents & Injuries
- Hazard mitigation strategies
- Training activities
- Policy & Procedures
- Committee meetings
- Contract management
- Project updates

5.2 Transit Services Executive Staff Meetings

The CSO and other agency leadership within Transit Services meet together on a weekly basis with the COO to review and discuss updates from each department. These topics include but are not limited to:

- Accidents & Injuries
- Hazard mitigation strategies
- Training activities
- Policy & Procedures
- Committee meetings
- Contract management
- Project updates

5.3 COO Meetings with Contract Services and Transdev Leadership

The COO, CSO, and Manager of Contract Operations and Passenger Facilities meet on a monthly basis with Transdev Leadership to review and discuss updates regarding safety performance, safety risk management, safety assurance, and safety promotion. These topics include but are not limited to:

- Accidents & Injuries
- Existing hazards and mitigation techniques
- Training activities
- Policy & Procedures
- Committee meetings
- KPI goals

Acronyms

ADA	Americans with Disabilities Act
Caltrans	California Department of Transportation
CBA	Collective Bargaining Agreements
CEO	Chief Executive Officer
CHP	California Highway Patrol
COO	Chief Operating Officer
CSO	Chief Safety Officer
EH&S	Environmental Health and Safety
EPN	Employer Pull Notice
KPI	Key Performance Indicators
NTD	National Transit Database
OEM	Original Equipment Manufacturer
PIP	Performance Incentive Program
PPE	Personal Protective Equipment
PUC	Public Utilities Commission
SANDAG	San Diego Association of Governments
RS	Road Supervisor
SPT	Safety Performance Targets

- Contract management
- Project updates
- Staffing levels

5.4 Transdev and MTS Contract Services Management Staff Meetings

The Director of Safety and Training and other leadership within Transdev's Executive Management Staff, meet together on a monthly basis with the Manager of Contract Operations and Passenger Facilities as well as other leadership within Contract Services to review and discuss updates from each department. These topics include but are not limited to:

- Accidents & Injuries
- Hazard mitigation strategies
- Training activities
- Policy & Procedures
- Committee meetings
- Contract management
- Project updates
- KPI goals

5.5 Transdev's Employee Safety Committee

Transdev's Employee Safety Committee meets monthly and is comprised of representatives from both bargaining units (ATU, IBT), MTS Contract Services Management Staff, as well as contractor's management representatives from the Maintenance, Safety, and Operations Departments. The purpose of the safety committee is to: (1) identifying and recommending risk-based mitigations or strategies necessary to reduce the likelihood and severity of consequences identified through the agency's safety risk assessment; (2) identifying mitigations or strategies that may be ineffective, inappropriate, or were not implemented as intended; and (3) identifying safety deficiencies for purposes of continuous improvement.

5.6 Transdev's Accident/Injury Review Meetings

Transdev Management meets with the Transdev's National Safety Director and/or Regional Vice President a weekly basis. Topics include but are not limited to:

- Workplace Injuries
- Preventable Accidents
- Hazard mitigation strategies
- Training activities
- Policies & Procedures

5.7 Regional Safety Meetings

Transdev Management meets with Transdev's National Safety Director on a Bi-weekly basis. Topics include but are not limited to:

- Open & recently closed claims
- Workplace injury claims
- Hazard mitigation strategies
- Training activities
- Policy & Procedures
- DriveCam Performance
- KPI reviews

5.8 Emergency Preparedness and Response

5.8.1 Employee Training

Employees receive varying levels of emergency response training during the initial onboarding process depending on job position. Employees also receive applicable refresher training throughout the year through training programs and topics outlined in the Safety Promotion and Safety Communication sections of this document. Topics covered for emergency training include:

- Accident/Injury reporting
- Inspection protocols
- Passenger evacuations
- Road calls/Breakdowns
- Fire suppression
- Spill prevention, control and countermeasures (SPCC)
- Hazardous waste, operations, and emergency response (HAZWOPER)
- Conflict resolution and de-escalation techniques

5.8.2 Emergency Responder Training & Coordination

Transit Services participates in external agency emergency trainings and exercises whenever requested/invited by local municipal, county, state, or federal entities. These events include emergency events specific to the transit system as well as supporting other agencies with available resources (vehicles) to aid in external emergency response. Typical training events and exercises include:

- Vehicle familiarization
- Bus hijacking/SWAT
- Rescue/heavy lift extraction
- Homeland Security canine training

- Community based evacuations & temporary shelter
- Tabletop exercises

5.8.3 Vehicle Safety Equipment

Fixed route buses are equipped with the following safety features to reduce to the likelihood/severity of an emergency:

- Two-way radio
- GPS tracking
- Security cameras
- Discreet panic button
- Fire extinguisher
- Engine fire detection & suppression system (excludes battery electric buses)
- Interlock device(s)
- Fuel leak detection alarm (CNG buses only)
- Emergency exit windows & roof hatches
- Low air pressure alarm

6 Safety Risk Management

Safety Risk Management is a decision-making process that involves the identification, evaluation, and mitigation of hazards and unsafe conditions throughout the system. Hazards are to be eliminated or mitigated to lowest practical level with consideration given to financial and operational constraints. Transdev utilizes a decentralized process where each department is responsible for managing the hazards that exist within their department.

6.1 Safety Hazard Identification

All Transdev employees are responsible for identifying and reporting hazards and unsafe conditions to their immediate supervisor/manager. The supervisor/manager is responsible for the initial evaluation and mitigation of a reported hazard. If the supervisor/manager is unable to eliminate the hazard or effectively mitigate the hazard to an acceptable level, the hazard must be reported to the Director of Safety and Training. The Director of Safety and Training is responsible for documenting the reported hazard.

Hazards are generally identified through:

- Employee Reporting Program;
- Employee Safety Committee;
- Routine inspections;
- Training activities;

- Direct observation by supervisors, managers and/or safety personnel;
- Accident and incident investigations;
- Customer Service reports;
- Daily operations activity reports;
- Safety data analysis;
- Audits;
- Data and info provided by FTA or other oversight authority;
- Design/Planning process for capital projects;
- Procurement of goods and services; and
- New service implementation

6.2 Safety Risk Assessment

The Director of Safety is responsible for assessing safety risks. Analyzing hazards is subjective. Two reasonable people could assess the same hazard and determine a different probability or severity of an unfavorable outcome. Hazards are analyzed using the probability/severity matrix within this section (Table 5, Table 6, Table 7, and Table 8). The criteria listed in the severity and probability charts are intended to be guidelines only. Each hazard is unique; therefore, in addition to the severity and probability charts, the Director of Safety should also consider common sense, similar prior/existing hazards, historical data, and their professional experience when conducting the assessment. Hazards that are “unacceptable”, “undesirable”, or “acceptable with review by management” are entered into the Risk Register by the Director of Safety. Hazards that are “acceptable without review” are not required to be entered into the Risk Register. The Director of Safety is responsible for informing the General Manager, and Transdev’s Accountable Executive of any hazard that is “unacceptable” or “undesirable.”

Table 5: Severity

Severity		
Description	**Category**	**Criteria (worst likely credible outcome)**
Catastrophic	**1**	Could likely result in death, permanent total disability, severe property damage or irreversible environmental damage.
Critical	**2**	Could likely result in permanent partial disability, injuries or occupational illness that may result in hospitalization, or reversible significant property/environmental damage.

Marginal	**3**	Could likely result in injury or occupational illness resulting in one or more lost work days(s), reversible moderate property/environmental damage.
Negligible	**4**	Could likely result in injury or illness not resulting in a lost work day, minimal property/environmental impact.

Table 6: Likelihood

Likelihood		
Description	**Level**	**Specific Individual Item (Example of Frequency)**
Frequent	**A**	Likely to occur frequently or continuously. (Weekly, 100K miles)
Probable	**B**	Likely to occur several times. (Monthly, 1 million miles)
Occasional	**C**	Likely to occur sometime. (Yearly, 10 million miles)
Remote	**D**	Unlikely but reasonable or possible to occur. (Decade, 100 million miles)
Improbable	**E**	So unlikely, it can be assumed occurrence may not be experienced.
Eliminated	**F**	This level is used when potential hazards are identified and later eliminated.

Table 7: Hazard Assessment Matrix

Hazard Assessment Matrix				
	1 - Catastrophic	**2 - Critical**	**3 - Marginal**	**4 - Negligible**
A - Frequent	**1A**	**2A**	**3A**	**4A**
B - Probable	**1B**	**2B**	**3B**	**4B**
C - Occasional	**1C**	**2C**	**3C**	**4C**
D - Remote	**1D**	**2D**	**3D**	**4D**
E - Improbable	**1E**	**2E**	**3E**	**4E**
F - Eliminated	**N/A**	**N/A**	**N/A**	**N/A**

Table 8: Acceptability Levels

Acceptability Levels	
High	**Unacceptable**
Serious	**Undesirable** with management decision
Medium	**Acceptable** with review by management
Low	**Acceptable** without review

6.3 Safety Risk Mitigation

After a risk assessment has been conducted, the Director of Safety will identify parties responsible for mitigating the hazard. The responsible parties are generally department heads, those most knowledgeable about the hazard (subject matter experts), or those with the most adequate resources to mitigate the hazard.

The following are common methods and processes responsible parties typically use to mitigate hazards:

- Eliminate hazards by repair/replacement;
- Eliminate hazards through design/change of service;
- Incorporate engineered features or devices;
- Provide warning devices, signage and alarms;
- Establish written policy and procedures to address the hazard;
- Implement training activities;
- Use of personal protective equipment (PPE); and
- Communication of hazard with employees, passengers, and general public.

Responsible parties are required to update the Director of Safety. The Director of Safety is then responsible for updating Leadership within Transdev as well as recording the mitigation progress in the Risk Registry in Industry Safe. The Risk Registry is reviewed at the monthly COO Meetings with Contract Services and Transdev Leadership. The MTS Accountable Executive has the ultimate authority when deciding mitigations and the final assessment of a hazard. Hazards that remain at an unacceptable/undesirable level will continue to be monitored and revisited during the annual budget and capital improvement process.

7 Safety Assurance

7.1 Safety Performance Monitoring and Measurement

MTS and Transdev have established several activities to monitor operations and maintenance for compliance with procedures. These processes are also used to identify any safety risk mitigations that may be ineffective, inappropriate, or were not implemented as intended. Non-compliance with procedures is generally addressed through counseling, training, and other management oversight activities. Insufficient procedures are addressed through safety risk management activities.

Transdev Management and Supervisors are responsible for upholding established policies and procedures covered in documents such as CBAs, employee handbooks, training manuals, bulletins, memos, California Vehicle Code sections, etc. Supervisors/Managers typically utilize direct observations, job briefings, facility inspections, radio communications, and investigations to determine compliance. Employees who are not compliant with these procedures may receive in-person counseling, written observation letters, re-training, and/or progressive discipline depending on the severity of the event and the employee's work record.

7.1.1 Investigations

All employees are required to immediately report safety related events to their direct supervisor or the Bus Control Center/Radio room and complete a written accident/incident report. The Transdev Manager on duty is responsible for ensuring the appropriate response to the scene (dependent on available resources) and determining if a drug and alcohol test is required.

A Road Supervisor (RS) should be sent to the scene to investigate whenever a person is injured/claiming injury or there is a collision involving a bus or other mass transit vehicle. The RS will gather statements from persons involved/witnesses, collect insurance and other contact information, take photos of the scene, etc., and complete a written report.

Following the event, the Quality Assurance Supervisors will collect video from the bus camera system and facility camera system if available. The video is generally stored in either the camera system server or a shared network drive and preserved for at least one year after the event and may be stored longer as dependent on available storage space. The Director of Safety will collect and review all information and forward all written materials to Transdev's Risk Department and/or Transdev's Safety Team).

Transdev's Safety Team is responsible for reviewing events involving: vehicle collisions, claims of injury, wheelchair ramp use, and certain braking events. The Safety Team is chaired by the Director of Safety and also includes members from the Training Department and members from the Safety Department. The Safety

Team meets regularly and reviews all available information to determine preventability and any other causal or contributing factors. The Director of Safety informs applicable management and other involved employees of the Safety Team's findings.

The Director of Safety is responsible for ensuring all safety related information is entered in MTS's TransTrack Manager for tracking purposes and data analysis. The Director of Safety is also responsible for reporting all safety related data (entered into TransTrack Manager) to the General Manager, MTS Administrative Staff overseeing the Transdev Contract, and Transdev's Accountable Executive on a monthly basis. MTS Administrative Staff overseeing the Transdev Contract will provide a summary of the data to the COO on a monthly basis. The CSO is responsible for reporting applicable required information to the National Transit Database (NTD) on a monthly basis.

7.1.2 Drug & Alcohol Program

Transdev is a drug and alcohol-free workplace and has an established drug and alcohol policy that is compliant with 49 CFR parts 40 and 655. Every employee receives initial training upon hire. Supervisors/mangers shall receive two hours of training that includes a minimum of 60 minutes of training on the physical, behavioral, and performance indicators of probable drug use and at least 60 minutes of training on the physical, behavioral, speech, and performance indicators of probable alcohol misuse and the agency policy. Drug and alcohol testing is conducted under the following circumstances:

- Pre-Employment;
- Reasonable Suspicion;
- Post-Accident;
- Random;
- Assuming Safety Sensitive Duties; and
- Return to Duty / Follow-Up.

7.1.3 Driving Hours and On-Duty Time

Bus operators' schedules are assigned on a daily basis by an Operations Manager. The Operations Manager checks hours of service before scheduling upcoming workdays. The following records for all bus operators are generated, tracked, and stored in the system:

- The scheduled assignment of all drivers including regular workdays, day off work, overtime, vacations, holidays, absences, outside employment hours;
- The time the driver reports for duty each day;
- The time the driver is released from duty each day;

- The total number of hours the driver is on duty each day;
- The total scheduled driving time each day;
- The delay time at the end of each work piece; and
- The total time for the preceding seven days for drivers used for the first time or intermittently

Title 13 of the California Code of Regulations subsection 1212 and 1212.5 establish the following limits on commercial bus operating hours:

- Operators must have at least 8 hours off between work shifts;
- Maximum 10 hours driving time per day;
- Maximum 15 hours of on duty time; and
- Maximum 60 hours on-duty in 7 consecutive days, or 70 hours on-duty in 8 consecutive days.

In addition to state law, the applicable CBA establishes the following limits on scheduling and work hours:

- Drivers have at least 10 hours off between bid-in and scheduled work shifts; and
- Scheduled on-duty/spread work day limited to 12.5 hours.

7.1.4 DMV Pull Notice

Transdev enrolls all employees in the California Employer Pull Notice (EPN) program. The program is required for all commercial drivers as a means for employers to electronically verify and monitor driving records. Employees are enrolled upon hire and removed upon termination. Records indicate license type, expiration date, special certificates, endorsements, restrictions. Notices are also sent annually and when there is a change to license status including a ticket, accident, or suspension. MTS uses a web-based software solution company to manage the EPN program.

The Director of Safety is responsible for monitoring the records of all Transdev commercial drivers and union employees. The Director of Safety is responsible for notifying each department of status changes to the employee's eligibility to operate a bus or other vehicle. Each department is responsible for notifying the employee in their department of status changes, collecting documentation, and preventing them from operating a vehicle if they are not eligible to drive.

Transdev's Human Resources Department is responsible for checking a prospective employee's three (3) year driving record during the application and interview process. Transdev's Human Resources Department is responsible for monitoring the records of all management employees who do not have a commercial license.

The California Highway Patrol (CHP) performs an audit of t Transdev's EPN program during the annual terminal inspection.

7.1.5 Customer Complaint Investigation

Customer complaints are managed overall by Support Services Department. Customers can submit a complaint by mail, in-person at MTS's and Transdev's administrative offices, through the call center, through the MTS website or through MTS's mobile application. All customer's comments or complaints are entered into the Customer Review Module in SAP. The comments then investigated by the responsible department. Investigation measures may include interviewing staff and/or collecting video if appropriate. Final resolution is handled by department managers. The findings of the investigation are then entered into the Customer Review Module.

7.1.6 Operator Evaluation

Transdev's Behind the Wheel Trainers (BTWs), Road Supervisors (RS), Safety Supervisors and Managers conduct both directed and random ride evaluations that monitor a driver's performance while in revenue service. New drivers shall receive an on-board in-service evaluation check within 30 days, 60 days and again within 90 days of completion of training. The above-mentioned staff members complete Transdev's SF-1 Driver Skills Evaluation and Refresher Training Form for each ride. The report includes; Satisfactory, Unsatisfactory, or N/A check boxes and comment fields for various categories (Table 9).

Table 9: Operator Evaluation Categories

Operator Evaluation Categories		
Pre-Trip/Post Inspection	Equipment Usage	General
Intersections	Railroad Crossing	Communicate
Backing	Leave Room	Look Ahead
Look Around	Other	

The report is verified by the Safety Supervisor and/or The Director of Safety, and emailed to the Employee's direct Supervisor for appropriate disciplinary action if deemed necessary. Coaching and/or retraining is conducted by the Safety and Training Department. The Division Managers are responsible for final resolution of the reports

7.1.7 Vehicle Pre-Trip Inspections

Pre-trip inspections are conducted in accordance with State and Federal law. Pre-trip inspections are completed by bus operators in the bus yard before the bus goes into revenue service. The pre-trip inspections also occur when bus operators make a relief on the road (excluding air brake test).

7.1.8 Vehicle Preventative Maintenance

Preventative maintenance and inspection is carried out at a minimum in accordance with the Original Equipment Manufacturer (OEM) recommendations. This process occurs based on miles and varies in the complexity based on the mileage interval. Inspections include:

- Brake inspection;
- Lube and oil filter;
- General inspection;
- Wheelchair ramp;
- Air conditioner;
- Electrical;
- Cooling;
- Compressed Natural Gas (CNG) and fire suppression;
- Farebox;
- Transmission; and
- Differential and diaphragms

All inspections are documented and kept for the life of the vehicle. Specific details on the preventative maintenance program are explained further in the Maintenance Manual that is maintained by the Maintenance Department. The California Highway Patrol (CHP) conducts an independent audit of the preventative maintenance program annually.

7.1.9 Internal Safety Reporting Programs

The Director of Safety routinely reviews safety data from various sources including: employee safety reports, safety meetings, the employee reporting program, customer service complaints, OSHA logs, and other safety communication channels that track safety performance information. The Director of Safety will review and assess the data, conduct further investigations, and use established safety risk management process as needed to ensure safety risk mitigations are effective.

7.1.10 Infectious Disease Control

Transdev monitors, implements, and updates strategies to minimize the exposure of the public, personnel, and property to hazards and unsafe conditions, consistent with current guidelines of the Centers for Disease Control and Prevention or a State health

authority, to minimize exposure to infectious diseases. In addition, Transdev also adheres to the guidance MTS' agency Infectious Disease Control and Prevention Plan.

7.2 Management of Change

Changes that may introduce new hazards or impact the agency's safety performance are assessed through various processes. These changes include but are not limited to:

- Procurement of new goods/equipment;
- Changes to route design and special event detours;
- Operations/Maintenance procedure changes;
- Introduction of new technology;
- New regulatory requirements;
- Changes to operating environment including city/regional planning;
- Design and construction of capital projects; and
- Organizational changes

If management determines that a change may impact safety performance, the proposed change should be evaluated using the Safety Risk Management Process, which includes hazard identification, risk assessment, and risk mitigation. Any change that may introduce new hazards to the system should include the safety department. Please refer to the Safety Risk Management section of this document or contact a member of the safety department for more information regarding this process. If the safety department is not consulted and engaged during the decision-making process of the change, the project manager or individual who is approving/implementing the change is responsible for ensuring adequate safety risk management is conducted prior to making any changes.

7.3 Continuous Improvement

MTS establishes Safety Performance Targets, Key Performance Indicators and PIP goals annually. These goals are tracked and reported on a monthly and annual basis. The CSO meets with the CEO, COO, executive management and other key staff regularly to review and evaluate the agency's performance. Any identified deficiencies are addressed with a plan, under the direction of the Accountable Executive or their designee.

8 Safety Promotion

8.1 Safety Communication

Management promotes and communicates safety performance throughout the entire organization. This communication includes information on hazards and safety risk relevant to employees' roles and responsibilities. Employees are also informed of

safety actions that are taken in response to reports submitted through the safety reporting program. The methods of communication include but are not limited to:

- Training Activities;
- Safety Committee;
- Meetings;
- Handbooks;
- Policies;
- Memos;
- Bulletins;
- Newsletters;
- Company Intranet;
- Job Briefings; and
- Department Information Monitors

8.2 Competencies and Training

8.2.1 Director of Safety - Training Program

The Director of Safety and Training participates in the Voluntary Bus Safety Certification Program as outlined in 49 CFR Part 672. This training includes the following courses:

- SMS Awareness;
- SMS Safety Assurance;
- SMS Principles for Transit;
- Transit Bus System Safety;
- Fundamentals of Bus Collision Investigation; and
- Effectively Managing Transit Emergencies.

The Director of Safety also includes:

- Drug and Alcohol;
- Harassment Prevention; and
- Management Development

8.2.2 Servicer Training Program

All servicers complete a comprehensive training program. This program includes: Code of Safe Practices, CNG fueling procedures, electric bus charging, bloodborne pathogen control program, Spill Prevention & Control Program (SPCC), and Maintenance Department policies and procedures.

Servicer refresher training includes but is not limited to:

- SPCC annual refresher training
- Injury Illness prevention Program
- Maintenance Safety Handbook
- Blood borne Pathogen Program
- CNG Policies and Procedures
- OSHA Training
- Hazardous Energies Lockout/Tagout
- Haz-Com Globally harmonized system
- Behind the wheel evaluations
- Preventable accident remediation

8.2.3 Mechanic Training Program

All mechanics complete an Initial 48 hours of in-house classroom training to be completed in 4 to 5 weeks, followed by 1 to 1 ½ months of on-the-job training with a mentor depending on each Mechanics previous level experience and skill set. In addition to the above mentioned, mechanics also receive the training program outlined in the servicer training program. Mechanics also receive Hazardous Waste Operations and Emergency Response (Haz-Com GHS)) training as well as forklift certification.

Mechanic refresher training includes but is not limited to:

- SPCC annual refresher training
- Injury Illness prevention Program
- Maintenance Safety Handbook
- Blood borne Pathogen Program
- CNG Policies and Procedures
- OSHA Training
- Hazardous Energies Lockout/Tagout
- Haz-Com Globally harmonized system
- Forklift recertification every 3 years
- Behind the wheel evaluations
- Preventable accident remediation
- De-escalation Training

8.2.4 Foreman and Maintenance Managers

Foreman and Maintenance Managers training includes, but is not limited to, the following:

- Drug and Alcohol;
- Harassment Prevention;
- Management Development;

- Toolbox training sessions;
- SPCC;
- HAZWOPER;
- Forklift recertification;
- Behind the wheel evaluations; and
- Preventable accident remediation.
- De-escalation Training

8.2.5 Bus Operator Training Program

All bus operators complete a 176-hour training program prior to operating a bus in revenue service on their own. The training program is comprised of both classroom and behind the wheel driving. Operators are required to receive and maintain a class B commercial driving license, with a passenger and air brake endorsement. Operators are also required to have a valid medical certificate and Verification of Transit Training (VTT) certificate. Training topics includes, but are not limited to, the following:

- Bus operation and defensive driving;
- Destination signs;
- Radio communication;
- Customer service;
- ADA;
- Emergency procedures; and
- Route training

Bus Operator refresher training includes, but is not limited to, the following:

- VTT annual training;
- Accident remediation;
- Defensive driving;
- Conflict resolution;
- Policy and procedures; and
- Behind the wheel evaluations

8.2.6 Supervisors and Managers

Supervisors and Managers training includes, but is not limited to, the following:

- Drug and Alcohol;
- Harassment Prevention;
- Management Development; and
- Preventable accident remediation

APPENDIX B

Bus Safety Plan
(Public Transportation Agency Plan pursuant to 49 CFR 673)

First Transit

MTS Contract-Operator at Copley Park Maintenance Facility (CPMF)

First Transit Agency Safety Plan

1. Transit Agency Information

Transit Agency Name	San Diego Metropolitan Transit System (MTS)			
Transit Agency Address	1255 Imperial Ave Suite 1000, San Diego CA. 92101-7490			
Name and Title of Accountable Executive	Sharon Cooney, CEO MTS			
Name of Chief Safety Officer or SMS Executive	Jared Garcia, Manager of Safety MTS			
Mode(s) of Service Covered by This Plan	Contracted Fixed Route Bus, Contracted Paratransit, Contracted Paratransit Taxi	**List All FTA Funding Types (e.g., 5307, 5310, 5311)**	5307, 5310, 5337, 5339	
Mode(s) of Service Provided by the Transit Agency (Directly operated or contracted service)	Directly Operated Light Rail, Directly Operated Fixed Route Bus, Contracted Fixed Route Bus, Contracted Commuter Bus, Contracted Paratransit, Contracted Paratransit Taxi			
Does the agency provide transit services on behalf of another transit agency or entity?	Yes	No **X**	**Description of Arrangement(s)**	
Name and Address of Transit Agency(ies) or Entity(ies) for Which Service Is Provided	San Diego Metropoliton Transit System 1255 Imperial Ave Suite 1000 San Diego CA 92101			

2. Plan Development, Approval, and Updates

Name of Entity That Drafted This Plan *(Location Code)*	**First Transit: *55826***	
Safety Committee Approval	**Signature of Chief Safety Officer**	**Date of Approval**
	Jared Garcia	11/22/2022
Signature by the Accountable Executive	**Signature of Accountable Executive**	**Date of Signature**
	Sharon Cooney	7/30/2020
Approval by the Board of Directors or an Equivalent Authority	**Signature of Board of Directors**	**Date of Approval**
	Nathan Fletcher	7/30/2020
Certification of Compliance	**Name of Individual/Entity That Certified This Plan**	**Date of Certification**
	Sharon Cooney	7/30/2020

Version Number and Updates

Record the complete history of successive versions of this plan.

Version Number	Section/Pages Affected	Reason for Change	Date Issued
Original	All pages are original version	First Official version of Safety Plan	7/30/2020
2.0	Sections 3, 4, 7	Bipartisan Infrastructure Law	TBA

Annual Review and Update of the Public Transportation Agency Safety Plan

Describe the process and timeline for conducting an annual review and update of the Public Transportation Agency Safety Plan.

This plan will be reviewed and updated annually during the month of January by the Chief Safety Officer. Proposed changes are reviewed with the Accountable Executive, Executive Management and Key Staff. The Accountable Executive will review and approve any changes, sign the updated plan, and then forward the plan to the Board of Directors for final review and approval. Updates to this plan may be made when there are:

- Changes to: safety performance targets, safety management policy, safety risk management, safety assurance, and safety promotion;
- Changes to: The Accountable Executive, COO, or CSO;
- Significant changes to service delivery;
- Significant changes to the organizational structure;
- New process/procedures are introduced that impact safety;
- Changes to available resources or priorities that support SMS; and
- Changes required by the Federal Transit Administration (FTA), California Public Utilities Commission (CPUC), California Department of Transportation (Caltrans), San Diego Association of Governments (SANDAG), etc. or other similar oversight agency.

MTS conducts an annual safety performance assessment in conjunction with the annual review. This assessment includes a review of the prior year's performance involving the Safety Performance Targets, Key Performance Indicators and applicable Performance Incentive Program (PIP) goals. The assessment may also include reviewing identified safety deficiencies, or other areas involving safety performance.

Updates made to the Bus Agency Safety Plan will be documented in the version number and updates of this plan.

At First Transit, review of safety practices is an ongoing process, not one limited to scheduled reviews. As policies/procedures and training techniques change throughout the year they are updated and communicated throughout the organization. All changes are reviewed and approved by the Senior Director of Safety and the Vice President of Safety – First Transit.

Prior to the beginning of each fiscal year, First Transit's Safety Plan is reviewed by Executive management and revised based on the safety data collected and analyzed, and changes to policies and procedures made throughout the year. The revised plan is then disseminated to San Diego location for implementation.

3. Safety Performance Targets

Safety Performance Targets

Specify performance targets based on the safety performance measures established under the National Public Transportation Safety Plan. (Evaluated per calendar year.)

MTS may adjust performance targets over time, as data is collected and as SMS implementation matures. MTS performance targets are calculated using a 3-year rolling average of the data submitted to the National Transit Database (NTD). The safety performance targets are evaluated for each calendar year (January 1 – December 31).

Definitions
Definitions are based on the 2022 NTD Safety and Security Policy Manual.

Assault: An unlawful attack by one person upon another.

Fatality – Death confirmed within 30 days of the event (including suicides). Fatalities that occur because of illnesses or other natural causes (including individuals who are found deceased) are not reportable.

Injury - Any damage or harm to persons that requires immediate medical attention away from the scene because of a reportable event must be reported as an injury. MTS reports each person transported away from the scene for medical attention as an injury, whether or not the person appears to be injured.

Safety Events – Collisions that meet NTD thresholds for injuries, fatalities, property damage, or evacuation; vehicle towed from the scene involving a transit revenue vehicle; fires; hazardous materials spills, acts of God; evacuations for life safety reasons; other safety events listed in NTD policy manual.

System Reliability - mean distance between major mechanical failures, is measured as revenue miles operated divided by the number of major mechanical failures.

Safety Performance Targets
(Rolling Average Calendar Years 2020-2022)

Mode of Transit Service	Fatalities (Total)	Fatalities (Rate) Per 100K	Injuries (Total)	Injuries (Rate) Per 100K	Safety Events (Total)	Safety Events (Rate) Per 100K	System Reliability (Rate) Per 100K	Assaults (Total)
Fixed Route	0	0	2	0.20	3	0.26	8,359	0
Demand Response	0	0	2	0.08	3	0.12	40,736	0

Safety Performance Target Coordination

Describe the coordination with the State and Metropolitan Planning Organization(s) (MPO) in the selection of State and MPO safety performance targets.

Safety Performance Targets are made available to state of California including the Public Utilities Commission (CPUC), Caltrans, and the San Diego Association of Governments (SANDAG), MTS's Metropolitan Planning Organization (MPO), to aid in the planning process. Coordination with these agencies, in the selection of safety performance targets is accomplished to the maximum extent practicable. MTS officially transmits its targets in writing to the State and MPO following the annual review and certification. This transmission will take place in February of each year.

	State Entity Name	Date Targets Transmitted
Targets Transmitted to the State[1]	California Public Utilities Commission (CPUC)	See Footnote 1
	California Department of Transportation (Caltrans)	See Footnote 1

[1] Although MTS has offered to share Bus Safety Performance Targets with CPUC and Caltrans, both have stated it is not necessary to send Bus Safety Performance Targets for their review. As required per 49 CFR 673.15, MTS will coordinate and share Bus Safety Performance Targets with state entities to the maximum extent practicable

Targets Transmitted to the Metropolitan Planning Organization(s)	Metropolitan Planning Organization Name	Date Targets Transmitted
	San Diego Association of Governments (SANDAG)	7/7/2020

4. Safety Management Policy

San Diego Metropolitan Transit System
Safety Management Policy Statement

The San Diego Metropolitan Transit System (MTS) has established this Safety Management System Policy Statement to emphasize its overall commitment to the safety of our passengers, our operators, our staff and the general public. This Safety Management System Policy Statement provides direction for MTS's safety program, which applies to every facet of MTS operations.

The management of safety is MTS's highest priority. MTS is committed to safety throughout the entire organization, from the Board of Directors to the front line employees.

MTS will ensure that all transit service delivery activities take place under a balanced allocation of organizational resources to achieve the highest level of safety performance and meeting established standards. MTS is committed to developing, implementing, maintaining, and constantly improving our processes. As evidence of our commitment to safety, every MTS policy shall be guided by and every employee shall perform their duties in furtherance of the following safety goals:

- Supporting safety through the provision of appropriate resources that fosters a safety culture;
- Integrating the management of safety among the primary responsibilities of all managers and employees;
- Clearly defining managers and employees' responsibilities in relation to the performance of our safety management system;
- Conducting hazard identification and evaluating safety risks, which includes an employee safety reporting program, in order to eliminate or mitigate safety risks;
- Ensuring that no action will be taken against any employee who discloses a safety concern through the employee safety reporting program, unless disclosure indicates, beyond any reasonable doubt, an illegal act, gross negligence, or a deliberate or willful disregard of regulations or procedures;
- Complying with, and wherever possible exceeding, legislative and regulatory requirements and standards;
- Ensuring that sufficiently skilled and trained employees are available to implement safety management processes;
- Ensuring that all staff are provided with adequate and appropriate safety-related information and training, are competent in safety management matters, and are assigned only tasks for which they are adequately trained;
- Establishing and measuring our safety performance against realistic and data-driven safety performance indicators and safety performance targets;
- Continually improving our safety performance by ensuring appropriate safety management action is taken and is effective; and
- Ensuring externally supplied systems and services that support our operations are delivered to meet our safety performance standards.

Sharon Cooney
Chief Executive Officer
San Diego Metropolitan Transit System

July 30, 2020
Date

Nathan Fletcher
Chair of Board of Directors
San Diego Metropolitan Transit System

July 30, 2020
Date

At First Transit, safety is more than a policy statement. Management believes that working safely promotes quality, productivity, and profitability. Prevention of collisions and personal injuries is of critical importance to everyone. Management is committed to providing a safe workplace, the proper training, protective equipment, and a work environment conducive to safe practices and policies.

All employees are required to perform their duties safely and with concern for the safety of our passengers, other employees and the public. **First Transit will not perform any service, nor transport or use a product, unless it can be done safely.**

First Transit employs a company-wide safety concept, **"BeSafe"**. The main purpose of BeSafe is to reduce collisions and injuries by increasing the communications between employees and managers about safety related issues. As part of this process, employees of all levels are encouraged to initiate reports of any near miss, route and security hazards, or any unsafe condition. When a report about a safety or security concern is filed, it is investigated, which includes follow-up with the reporting employee regarding the resolution of the report.

First Transit will not retaliate against nor impose any other form of retribution on any employee because of his or her good faith reporting of a safety issue/concern, another person's suspected violation of Company policies or guidelines, or any alleged violations of federal, state or local laws.

To ensure that each employee understands and performs their job functions in the BeSafe manner, the **BeSafe Handbook**, is issued to each employee and sized to fit in the safety lanyard or vest, which each employee must wear while on duty.

The **BeSafe Principles** provide the basic truths and fundamentals about working safely in our workplace and on our vehicles. All First Transit employees are expected to adopt these principles and put them into practice. Together a safe work environment is created, free from injury to each other and our passengers.

The motto for the BeSafe Principles is: **"Think Safe, Act Safe, BeSafe."** This motto is each employee's instruction to work safely at all times.

If an employee feels they cannot perform a task safely, they don't perform the task. The employee has been trained and encouraged to stop work and immediately advise management of issues preventing them from working safely and what would be required to perform the task safely.

The BeSafe Principles include:

- **Prevent injury to myself and others.**
  - Be aware of any hazardous condition or practice that may cause injury to people, damage to property, or the environment.
  - Use the BeSafe Handbook to record and report.
- **Perform all necessary safety checks and risk assessments of the work area and job to be performed before any work begins.**
  - Speak to management **before** work is started if unsure of the required safety and risk assessments.
- **Follow all safety procedures, signs and instructions.**

- If these are not understood, speak to management before work begins.

- **Keep work area clean and tidy at all times.**
  - Untidy areas could cause injury to the employee or their colleagues and waste time and energy.
- **Wear protective clothing and equipment (PPE) as required.**
  - Keep PPE in good working order, wear it correctly and ask for a replacement if it becomes damaged or unfit for use.
- **Use only the correct tools and equipment authorized and trained to use for the job.**
  - Check that they are in good condition before use and use them safely.
- **Only adjust and repair any piece of work equipment trained on and authorized to do so.**
  - Never modify any equipment that changes the designed use of the equipment or alters a safety feature.
- **Assess any load and capability to move it before lifting.**
  - Get help with any heavy or awkward items and follow the correct lifting techniques.
- **Report all injuries, incidents and near misses to management.**
  - Seek help immediately and first aid (if necessary).
- **Tell management of any suggestions to prevent injuries in the workplace**
  - Note suggestions made and discuss with management.

Safety Management Policy Communication

Describe how the safety management policy is communicated throughout the agency's organization. Include dates where applicable.

Communication of Local Safety Concerns

The Location Safety Manager is at the center of the local safety communication process and is responsible for compiling safety reports to include the following:

- Accident and injury data for previous month
- Security incident data
- Safety and security audit data and recommendations
- Safety Solutions Team (SST) meeting minutes
- BeSafe near miss and hazard reporting

This person reports directly to the Location General Manager (LGM) and routinely meets formally with the LGM, one-on-one, to provide updates on safety issues, safety priorities, and hazard management. The Location Safety Manager (LSM) also meets informally with the LGM to provide updates on safety issues on an as-needed basis.

The Location Safety Manager also participates in the Safety Solutions Team (SST) meetings to discuss safety priorities, safety issues, and hazard management, and to communicate safety-related information across all departments.

- The LSM and the LGM have the authority to correct or suspend work for conditions determined to be unsafe, or pose a hazard to customers, employees, contractor employees, the general public,

or endangers the safe passage of vehicles, until the unsafe condition or hazard can be mitigated or corrected.

The Region Safety Managers also conduct regular internal reviews of local operations. They are to ensure that each location is audited at least every two to three years, with high risk locations audited annually for compliance using the risk-based **Location Safety Review.**

Location Safety Review	
Category	**Description**
Scope of Safety Reviews	First Transit locations are selected based upon risk-based criterion. Individual locations receive a review every 2-3 years
Risk-Based Selection Criterion	Locations selected based on declining 3-year reviews; sites with new location managers; high collision/injury Accident Frequency Rate (AFR); prior year failing score
Review Format	More narrow and focused audit template which includes a balance of compliance assurance as well as location-specific risks and safety performance.
Findings and Follow-Up	Action plans are developed in conjunction with location staff and use a red/yellow/blue/green method to prioritize. All action items are entered, and incomplete action items are tracked within the **Safety Toolbox**. **Strong** **Highly Effective** **Some Improvement Needed** **Much Improvement Needed**
Escalation Process	Items requiring escalation to Senior Director of Safety/Vice President of Safety – First Transit remain intact. Through the use of Safety Toolbox, unresolved actions are designed to escalate to the Location General Manager/Region Safety Manager.

Visibility	Review results and action items are routinely shared with the Location General Manager/Region Safety Manager/Executive Management. This is augmented by the escalation process for unresolved action items as noted above.

Corporate Communication of Safety Concerns

Executive Safety Meetings are routinely held where each department discusses their concerns and progress in the area of safety and safety related concerns. Recommendations are considered, and necessary changes implemented. All complaints by departments are addressed immediately.

Minutes from the Executive Safety meeting are distributed to and posted at each location. Action items are addressed at the following meeting.

Executive safety meetings are conducted in the following formats.

First Group Executive Safety Committee (ESC)

- Consists of President, COO, and Safety Vice President of each operating group
- Discussions include safety performance, trend analysis, program oversight

First Group Safety Council

- Consists of Vice Presidents of Safety for all operating divisions
- Discussions include safety performance, trend analysis, and safety oversight

First Group America Safety Council

- Consists of Safety Senior Directors and Safety Vice Presidents
- Discussions include safety performance, trend analysis, best practices, and program oversight

Performance Review Management (PRM)

- Consists of Senior Region Vice Presidents, Region Vice Presidents, Region Directors of Operations, Region Director of Maintenance, Region Directors of Safety and Region Safety Managers
- Discussions include regions safety performance

Safety Advisory Committee

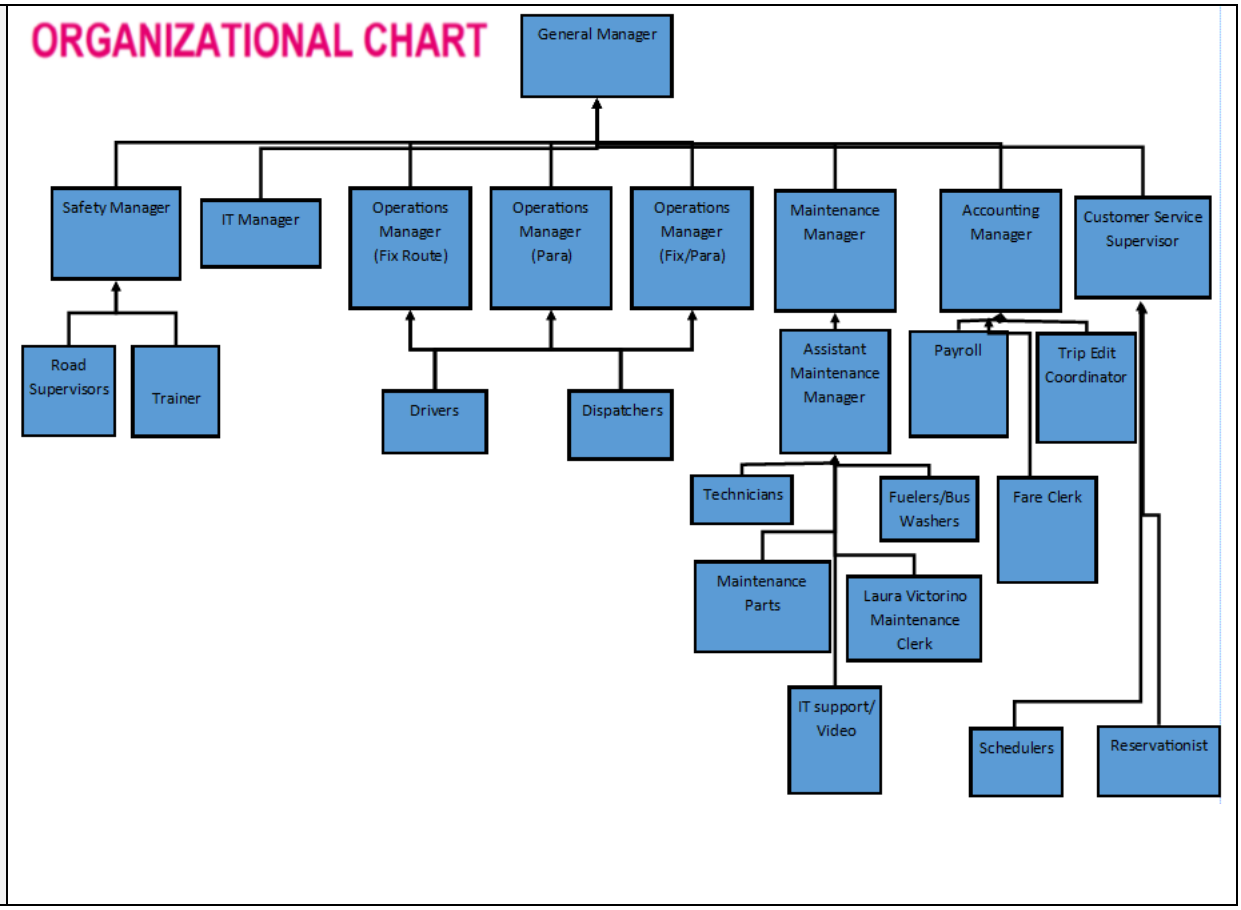
- Consists of a sampling of Location General Managers, Region Directors of Operations, Region Safety Directors and Region and Local Safety Managers
- Discussions include review of policy and procedures, training, and safety awareness

Authorities, Accountabilities, and Responsibilities	
Board of Directors	The Board of Directors (Board) is responsible for setting policy for MTS, including Transit Services. The Board is required to approve the ASP initial document and all updates. At its regular meetings, the Board receives periodic safety briefings from Bus Operations. The Board has delegated agency management to the CEO, subject to various adopted Board policies and legal requirements**.**
Accountable Executive	The Board of Directors has designated the CEO as the Accountable Executive for the Agency. The Accountable Executive has ultimate responsibility for ensuring that SMS is effectively implemented and that action is taken, as necessary, to address substandard performance throughout the Agency. These responsibilities include: • Establishing, implementing, and promoting the Safety Policy Statement; • Authority over financial and human resources; • Authority over all activities and operations; • Authority over final risk assessment ranking; • Authority over final mitigation(s) of hazards/unsafe conditions; • Briefing the Board of Directors; and • Responsibility for carrying out the Transit Asset Management (TAM) Plan. The CEO has delegated the authority and the day-to-day responsibilities of the agency safety plan for Transit Services to the Chief Operating Officer (COO) of Transit Services. The COO reports directly to the CEO and is responsible for ensuring that SMS is effectively implemented and that action is taken, as necessary, to address substandard performance throughout Transit Services. These responsibilities include: • Implementing, and promoting the Safety Policy Statement; • Authority over financial and human resources within Transit Services; • Authority over all activities and operations within Transit Services; • Authority over the risk assessment ranking within Transit Services; • Authority over final mitigation(s) of hazards/unsafe conditions within Transit Service; and • Briefing the Board of Directors on SMS related activities within Transit Services, as requested by the CEO. The COO will support and encourage an open dialogue between the Chief Safety Officer and the CEO.

Chief Safety Officer or SMS Executive	The **Chief Safety Officer (CSO)** is the **Manager of Safety for Transit Services**. The CSO has a dual reporting role with the COO and the CEO. As necessary to implement the Bus Agency Safety Plan and discuss relevant issues, the CSO has a duty and a right to report directly to and consult with the CEO. The CSO has independent and direct access to the CEO as needed regarding all safety related issues. The CSO has regularly scheduled safety briefings with the CEO and COO. The CSO also reports to the COO on a day-to-day basis. The CSO is responsible for: • Developing and maintaining SMS programs including the Bus Agency Safety Plan; • Managing the Employee Reporting Program; • Performing analysis of incidents, trends, and causes and making recommendations to reduce or eliminate the potential for recurrence; • Assisting other departments with the development of training programs and procedures; • Managing the review and analysis of all accidents, incidents and safety events to determine preventability and any other causal or contributing factors; • Providing monitoring and follow-up with employees after preventable accidents; • Serving as the Chair of the Employee Safety Committee; • Coordinating with external emergency response agencies, including police, fire and emergency management agencies, regarding emergency response training, familiarization and review of emergency occurrences and Transit Services emergency preparedness plans; and • Managing the Department of Motor Vehicles (DMV) Pull Notice Program and assuring all licenses, permits and certifications are in compliance. •
MTS Executive Management Leadership and Key Staff	**Manager of Paratransit and Mini Bus** The Manager of Paratransit and Mini Bus directly reports to the COO and is responsible for: • Organizing, developing, planning and directing all of MTS' Paratransit and Mini Bus functions and ensuring alignment of these functions with the goals and critical business outcomes of MTS • Manages the MTS Americans with Disabilities Act ("ADA") Paratransit program, and ensures full compliance with ADA regulations with respect to operations, client certification, call center operations and revenue service. • Manages the fixed route "Mini Bus" program and oversees the operations and management contract between MTS and the service provider(s). • Prepares operating and capital budgets, monitors service performance, conducts community outreach, represents MTS on disabled advocacy and transportation committees, and evaluates existing and proposed transit services. • Serves as the primary contact for paratransit and minibus service and consultant contracts.

	Supervisor of Paratransit and Minibus The Supervisor of Paratransit and Minibus directly report to the Manager of Paratransit and Minibus and is responsible for overseeing the MTS Fixed Route Minibus and Paratransit contract at the Copley Park Division. The Supervisor of Paratransit and Minibus is responsible for overseeing Contractors efforts in: • Implementing, promoting and monitoring compliance of the Safety Plan; • Mitigation(s) of hazards/unsafe conditions within the Copley Park Division; • Analysis of incidents, trends, and causes, as well as recommendations to reduce or eliminate the potential for recurrence; • Post-accident review and reporting; • Coordinating with external emergency response agencies, including police, fire and emergency management agencies, regarding emergency response training, familiarization and review of emergency occurrences and Contractor's Transit Services emergency preparedness plans; and • Providing monthly progress reports, as well as statistical and analytical support data
First Transit Executive Management Leadership and Key Staff	<u>Region Staff</u> • Senior Vice President: Works closely with the region staff to ensure quality service at the location. He ensures that the location adheres closely to First Transit's safety mission and vision. • Region Vice President: is responsible for making certain all region management members to maintain quality service and client satisfaction. He provides direction and assistance to location managers, including P&L, budgets, and personnel He is responsible for hiring and training new managers at the location. • Region Director of Operations: is responsible for overseeing daily operations, system performance, location safety, budget preperation, and location staffing levels. • Region Safety Manager: The Region Safety Manager ensures management services are provided according to policies, as well as maintaining quality and client satisfaction, and that the location has the current safety programs in place. • Region Director of Maintenance: provides oversight, technical assistance, training, and "best practices" for the location. <u>Location Staff</u> • General Manager: Participates fully with the client to ensure the operation is running effectively and acts as mediator when safety related problems arise. The GM is also responsible for ensuring implementation of the National Safety Program.

	• Operations Manager/Assistant General Manager: Supervises the day-to-day operations of Access, MiniBus and the SVCC operations. Other important roles include team building, training, client relations, and employee relations. • Safety Manager: The SM routinely is in contact with the operation and is responsible for ensuring their locations have the current safety programs in place; auditing local safety efforts; reviewing all accident and injury claims; reviewing safety statistics; and coordinating corporate assets to address specific deficiencies found on the local level. • Accounting Manager: Rresponsible for financial oversight such as budgeting, accounting and payroll. Implements policies and procedures related to accounting, budgeting, payroll and fare collection. • IT Manager: Reviews drivers' pre- and post-trip inspections from the night before, looking for technological issues. Responsible for all IT-related functions including setting up new user accounts, maintaining fare box technology, maintaining Apollo technology and installations on new vehicles, and system trouble-shooting. • Maintenance Manager: Provides oversight of maintenance functions, carefully motitring maintenance standards, departmental efficiencies, an maintenance training programs. He ensures that all scheduled and unscheduled vehicle repairs and general maintenance at the facility are completed on time. • Operations Manager Paratransit: Responsible for instituting new policies and procedures to ensure safe, cost effective, on-time performance of the Access operation. The Operations Manager Paratransit is also the point of contact for the investigation and documentation of customer complaints for MTS Access. • Operations Manager Fixed-route: Manages the day-to-day operations of MTS MiniBus/SVCC, instituting new approaches and procedures to ensure safe, cost-effective, and on-time performance of the MiniBus/SVCC operations.


ORGANIZATIONAL CHART
General Manager
Safety Manager
IT Manager
Operations Manager (Fix Route)
Operations Manager (Para)
Operations Manager (Fix/Para)
Maintenance Manager
Accounting Manager
Customer Service Supervisor
Road Supervisors
Trainer
Drivers
Dispatchers
Assistant Maintenance Manager
Payroll
Trip Edit Coordinator
Technicians
Fuelers/Bus Washers
Fare Clerk
Maintenance Parts
Laura Victorino Maintenance Clerk
IT support/ Video
Schedulers
Reservationist

Additional Accountability

(Local Staff Responsibility)

To ensure safety responsibility and accountability throughout the organization from local operations to corporate management, First Transit uses the following **Safety Responsibility and Task Matrix**. Responsibilities are assigned at the local level.

The responsibilities and tasks are assigned to Maintenance, Operations, or Human Resources and the responsible person for each is identified for each First Transit location.

This process ensures that the pertinent safety items are covered, and that each person knows his or her areas of responsibility.

Safety Responsibility and Task Matrix					
Responsibilities and Tasks	**OPS**	**MNT**	**HR**	**OTHER**	**Responsible Personnel**
Establish annual safety objectives for submission to the GM at the beginning of each fiscal year				x	Safety Manager
Submit a report on the safety performance at the end of each fiscal period				x	Safety Manager
Submit the following: period operations and safety data; accident and incident reports; and site safety review results				x	Safety Manager
The GM or their designee has the authority to direct that work or conditions have been determined to be unsafe or pose a hazard to customers, employees, contractor employees, the general public, or endangers the safe passage of buses be suspended or restricted until the unsafe condition or hazard can be mitigated or corrected	x				Operations Manager
Management of system safety, occupational health				x	Safety Manager

		and safety, accident and incident investigation, environmental protection and monitoring the implementation of the Safety Management System (SMS) Program Plan						
		Review of all safety aspects of departmental procedures including: First Transit policies/instructions; Standard Operating Procedures; HR policies; safety and health policies	x	x	x	x	All Managers	
		SMS Review and Modification				x	Safety Manager	
		Safety Solutions Team Meetings	x			x	Operations and Safety	
		Daily Safety & Health Walkthrough	x			x	Operations and Safety	
		Safety related reports to external agencies				x	Safety Manager	
		Near miss and route hazard report investigations	x			x	Operations and Safety	
		Investigation of safety related trends				x	Safety Manager	
		Coordination with United States and State Departments of Labor and Occupational Safety and Health Administration (OSHA)				x	Safety Manager	
		Environmental Management Oversight				x	Safety Manager	
		Hazard Management Process		x		x	Operations and Safety	
		Managing Safety Validation of Change Process				x	Safety Manager	

	Safety Data Reporting				x	Safety Manager
	Investigations				x	Safety Manager
	Advise to update SOPs, Rules, and Emergency Plans				x	Safety Manager
	Emergency Response	x	x	x	x	All Managers
	Fire Protection	x	x	x	x	All Managers
	Shop Safety Hazardous Tools Inspections		x			Maintenance
	Review Vehicle Maintenance and Failure Data		x			Maintenance
	Perform Vehicle Maintenance Inspections/Audits		x			Maintenance
	Training, Certification, Review, and Audit		x		x	Maintenance and Safety
	Personal Protective Equipment Review		x		x	Maintenance and Safety
	Hazardous Materials Management		x		x	Maintenance and Safety
	Drug and Alcohol Abuse Program				x	Safety Manager
	Procurement				x	Safety Manager

Meetings & Oversight	
CEO Safety Briefings	The CEO, COO, and CSO meet on a regular basis to review and discuss monthly safety performance. These topics include but are not limited to: • Accidents & Injuries • Hazard mitigation strategies • Training activities • Policy & Procedures • Committee meetings • Contract management • Project updates
Transit Services Executive	The CSO and other agency leadership within Transit Services meet together on a weekly basis with the COO to review and discuss updates from each department. These topics include but are not limited to:

Staff Meetings	• Accidents & Injuries • Hazard mitigation strategies • Training activities • Policy & Procedures • Committee meetings • Contract management • Project updates
COO Meetings with Contract Services and First Transit Leadership	The COO, CSO, and Manager of Paratransit and Minibus meet on a quarterly basis with First Transit Leadership to review and discuss updates regarding safety performance, safety risk management, safety assurance, and safety promotion. These topics include but are not limited to: • Accidents & Injuries • Existing hazards and mitigation techniques • Training activities • Policy & Procedures • Committee meetings • KPI goals • Contract management • Project updates • Staffing levels
First Transit and MTS Contract Services Management Staff Meetings	The Director of Safety and Training and other leadership within First Transit's Executive Management Staff, meet together on a monthly basis with the Manager of Paratransit and Minibus as well as other leadership within Contract Services to review and discuss updates from each department. These topics include but are not limited to: • Accidents & Injuries • Hazard mitigation strategies • Training activities • Policy & Procedures • Committee meetings • Contract management • Project updates • KPI goals
First Transit's Safety Solution Team (SST) Meeting	First Transit's Safety Solution Team is a joint labor-management committee that is comprised of an equal number of employee representatives and management representatives, compliant with the Bipartisan Infrastructure Law, § 5329(d)(5). The Bipartisan Infrastructure Law requires the Safety Committee to approve an agency's Agency Safety Plan (ASP) and any updates to the ASP. This approval must occur before the agency's Board of Directors approves the ASP or update.

	Frontline employee representatives are selected by the labor organization(s) that represents the plurality of the agency's frontline workforce employed by the agency or a contractor, to the extent labor organizations represent the frontline workforce. The Safety Committee also is responsible for, at a minimum: (1) identifying and recommending risk-based mitigations or strategies necessary to reduce the likelihood and severity of consequences identified through the agency's safety risk assessment; (2) identifying mitigations or strategies that may be ineffective, inappropriate, or were not implemented as intended; and (3) identifying safety deficiencies for purposes of continuous improvement. First Transit's Safety Solution Team meets on the 2nd Thursday of each month. The team representatives are from Maintenance, Safety, Trainer, Operations Departments, Road Supervisors, Call Center, drivers and General Manager. The purpose of the SST is to: create, improve, promote and maintain a heightened safety culture within the organization; inform, educate and influence employees through awareness campaigns and training activities designed to prevent and reduce accidents and injuries; and to provide a forum for employees to actively participate in safety programs that address and resolve safety issues in a timely manner.
First Transit's Claims Review Meetings	First Transit Local and Regional team meet on a monthly basis. Topics include but are not limited to: • Open & recently closed claims • Workers comp claims • Litigation updates • Hazard mitigation strategies • Training activities • Policy & Procedures • Review trends • Create resolutions • Create action plans
Regional Safety Meetings	First Transit Management meets with First Transit Regional Managers on a monthly basis. Topics include but are not limited to: • Open claims • Workers comp claims • Hazard mitigation strategies • Training activities • Policy & Procedures • Review trends and resolutions • Touch Points

Employee Safety Reporting Program

Describe the process and protections for employees to report safety conditions to senior management. Describe employee behaviors that may result in disciplinary action (and therefore, are excluded from protection).

First Transit is committed to conducting business with honesty and integrity. Employees are encouraged to speak up and raise questions and concerns promptly about any situation that may violate our safety protocols, policies and procedures, the laws, rules, and regulations that govern our business operations.

Employees are expected to tell others when witnessing unsafe work practices or conditions. When employees are not comfortable discussing these unsafe conditions with fellow employees, they are encouraged to discuss the situation with management or report it in writing.

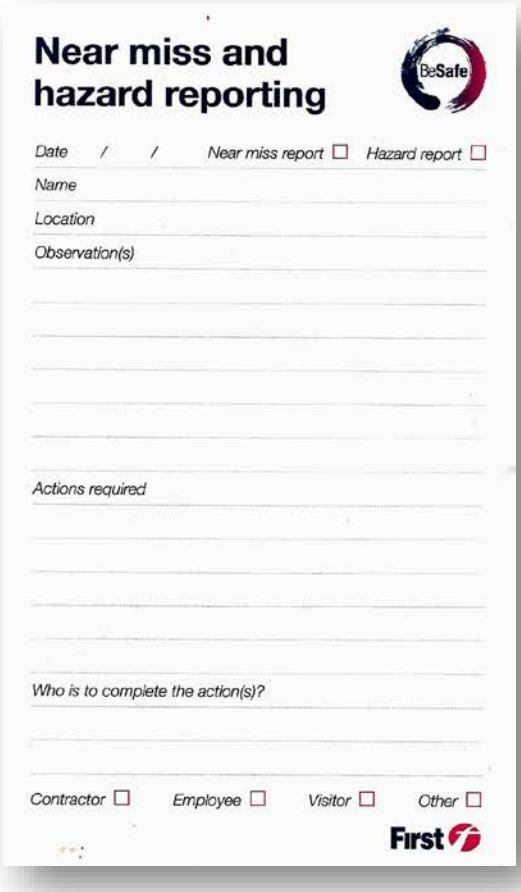
However, where the matter is more serious, or the employee feels that management has not addressed the concern, or they are not comfortable reporting to their immediate manager, they can report it to the next level manager, or the Region Safety Manager or Human Resources Manager. Employees may also directly file a written or verbal complaint by calling the confidential Ethics and Compliance Toll-free Hotline at 1.877.3CALLFG, (1.877.322.5534); contacting the Hotline intake site at ethicsfirst.ethicspoint.com; or emailing Compliance@firstgroup.com.

Retaliation against anyone who, in good faith, reports observations of unsafe or illegal activities; or who cooperates in any investigation of such report, is strictly prohibited and is not tolerated, regardless of the outcome of the complaint.

In other words, employees are protected for speaking up in good faith under this Policy. Any manager, or co-worker who retaliates against a complaining employee or anyone involved in an investigation of a complaint is subject to discipline and/or termination.

Managers are charged with assuring that they and their staff comply with the whistleblower protections and that no retaliation occurs because of a reported safety related issue.

Reporting Options


Near miss and hazard reporting

BeSafe

Date / / Near miss report ☐ Hazard report ☐

Name

Location

Observation(s)

Actions required

Who is to complete the action(s)?

Contractor ☐ Employee ☐ Visitor ☐ Other ☐

First

Near Miss and Hazard Reporting

In the interest of employee and passenger safety, each First Transit employee is issued a **"Near Miss and Hazard Reporting"** pad for documenting and reporting safety, route, and security concerns; and is encouraged to report any near miss incidents and hazards.

If an employee is involved in a near miss or determines something they see to be a hazard, we ask for their help in reporting the event so we all may learn the lessons from it and perhaps prevent a collision or injury from occurring in the future.

Near miss: An event you witnessed where no harm was caused, but there was the potential to cause injury or ill health; a dangerous occurrence

Hazard: Anything that may cause harm in the near future

If the safety or security hazard requires immediate attention, dispatch is notified immediately. If immediate attention is not required, the employee is encouraged to submit the information to management by the end of their workday. Our managers then initiate conversations with employees about their observations of both safe and unsafe behaviors.

The employee's contribution to the cause of the injury or collision is considered in disciplinary action, up to and including termination. If after analysis it has been determined that the incident resulted from an overt decision, disciplinary action is indicated. If not, then the appropriate counseling and/or training is indicated.

SOP #806 – Near Miss & Hazard Reporting describes the reporting process

Threatening or Suspicious Activity

First Transit encourages anyone who sees, hears, or learns of any conduct or statement that seems threatening or suspicious, and/or any weapons on company premises or in company vehicles, to immediately report such conduct or statement, either to his/her Supervisor or Manager, to the Human Resources Department, FirstGroup America Security, and/or to the confidential Ethics and Compliance Hotline at 1.877.3CALLFG, (1.877.322.5534), contact the Hotline intake site at ethicsfirst.ethicspoint.com, or email Compliance@firstgroup.com.

If there is an immediate risk or imminent threat of violence, serious harm, or life-threatening conduct, employees should immediately call 911, local police, or other law enforcement.

Open-Door Policy

A workplace where employees are treated with respect and one that is responsive to their concerns is important to each of us. At First Transit, we recognize that employees may have suggestions for improving our workplace, as well as complaints about the workplace. We feel that the most satisfactory solution to a

job-related problem or concern is usually reached through a prompt discussion with an employee's manager. Each employee is encouraged to do so.

If the matter cannot be resolved with one's immediate manager, the employee may:

- Speak with their Location General Manager or Region Safety Manager who will attempt to facilitate a solution.
- If an employee is unable to resolve the matter through the management chain of command in their location, the employee may choose to speak directly to anyone in division management or Human Resources.

First Transit's Open-Door Policy also allows employees to voice their concerns anonymously.

- If an employee would like to submit an anonymous concern, they may contact the Ethics and Compliance Toll-free Hotline at 1.877.3CALLFG, (1.877.322.5534), contacting the Hotline intake site at ethicsfirst.ethicspoint.com, or emailing Compliance@firstgroup.com.

This Open-Door Policy applies to every employee not covered by a collective bargaining agreement. It also extends to contractors and subcontractors.

In situations involving discrimination or harassment, employees should follow the Complaint Procedure described in the Discrimination, Harassment and Retaliation Reporting Procedure section of their First Transit Employee Handbook without fear of reprisal and should not follow this Open-Door Policy complaint process.

In situations requiring immediate attention, an employee may bypass the chain of command, which begins with his or her manager, and contact any level of management or Human Resources directly, without fear of reprisal, and without the need to follow this Open-Door Policy complaint process.

- This may be done in person, by direct contact, phone call, letter, or email message or by utilizing the Ethics and Compliance Hotline. The Ethics and Compliance Hotline can be reached by calling 1.877.3CALLFG, (1.877.322.5534) or emailing Compliance@firstgroup.com.

Accidents/Incidents

First Transit finds accidents and incidents to be a very serious matter and a valuable learning opportunity to improve safety. **SOP #700 – Accident & Safety Data Acquisition and Reporting**, and the supporting **SOP's, 700a – Auto and General Liability Claim Form; 700b – Courtesy Card; 700c – Operator Incident Report**; ensure that the appropriate actions happen at the scene for the safety and security of First Transit passengers and employees; and that the appropriate data is collected to evaluate the incident, determine preventability and any other causal or contributing factors; and develop actions to limit or eliminate the possibility of the incident occurring in the future.

Accidents

Operators are to report all accidents and collisions to Dispatch immediately upon occurrence. When reporting to Dispatch, the employee must state that he or she is reporting an accident and then answer any questions asked by Dispatch.

Additionally, **SOP #700c – Operator Incident Report** and **SOP #700a – Auto & General Liability Claim Form**, must be completed by the Operator involved and location management for accidents, possible claims of accidents, damage to equipment, injury and possible injury not later than one hour after completion of shift on the day of occurrence. Any vehicle defects that may have contributed to an accident shall be included in the report. To help ensure that this deadline is met, employees are paid to complete the form.

Employees who fail to report an accident may be subject to disciplinary action up to and including termination.

Employees must provide transit management with any additional accident information immediately upon request.

Incidents

Incidents with passengers involving slips and falls on or near the vehicle, fights, police action, or removal of a passenger, must be reported to Dispatch immediately; and require a **SOP #700a – Auto & General Liability Claim Form** to be completed by management before going off duty for the workday.

All other incidents and occurrences out of the norm, no matter how slight, are to be reported to Dispatch upon return to the yard.

The following are examples of incidents that must be reported:

- Broken or cracked windows from unknown causes,
- Cut seats,
- Service delays,
- Passing up passengers,
- Insufficient or excessive running time in schedule,
- Overloads, etc.

If in doubt, immediately contact Dispatch.

Operators Witnessing an Accident shall notify Dispatch immediately, even though their vehicle may not be involved.

Required Courtesy Cards

In the event of an accident or an incident, Operators must distribute **SOP #700b – Courtesy Cards** then retrieve as many as possible from passengers and persons in the immediate area of the accident or incident who may have witnessed the event.

Duty to Report Wrongdoing

First Transit is committed to investigating all good faith claims of wrongdoing so that corrective action may be taken. To that purpose, First Transit encourages any employee, contractor or vendor to report wrongdoing or illegal acts to location management so long as they are not believed to be involved in the fraud, waste or abuse being reported. Management within First Transit ensures the matter is reported to Group Security and First Transit will investigate and take appropriate steps to correct the wrongdoing or potential violation.

Alternatively, reports may be made anonymously using the FGA Ethics & Compliance line at 1.877.3CALLFG, (1.877.322.5534) or by emailing Compliance@firstgroup.com. You may also contact the Healthcare Compliance Officer directly.

Self-Reporting

Self-reporting is also encouraged. Anyone who reports his/her own violation will receive due consideration regarding disciplinary action that may be taken.

Duty to Report Law Enforcement Actions

Employees are required to report any arrests, indictments or convictions to their immediate manager or Human Resources immediately, but no later than prior to the next scheduled work shift, to the extent permitted by applicable law. If the circumstances and the offense charged, in our judgment, present a

potential risk to the safety and/or security of our customers, employees, premises and/or property, such events may result in disciplinary or other appropriate action to the extent permitted by applicable law.

Operators and safety sensitive employees are required to report all Driving Under the Influence (DUI) or Driving While Intoxicated (DWI) related charges, vehicular collisions, and any moving violation citations received in any vehicle immediately if possible, but no later than prior to their next scheduled work shift, consistent with applicable law.

Possible Disciplinary Actions

First Transit uses a tiered approach to determine possible disciplinary actions. Infractions that lead to disciplinary action are categorized into four categories;

- Class 1 – Dischargeable Offenses, the most serious and unacceptable behavior
- Class 2 – Serious violations of the First Transit performance code
- Class 3 – Secondary violations of the First Transit performance code
- Class 4 – Lesser violations of the First Transit performance code that may result in disciplinary action depending on the circumstances or repeated violations

Applying Disciplinary Actions

Although employment may be terminated at-will by either the employee or First Transit at any time in accordance with applicable law, without following any formal system of discipline or warning, First Transit may exercise discretion to utilize forms of discipline that are less severe than termination.

Whenever an employee is subject to discipline, the employee's work record, including violations occurring in the relevant time period, is reviewed before determining penalty. The chart below describes how disciplinary actions are applied.

Class of Infraction	Discharge	Suspension	Written Warning
1	1st Offense	----------	----------
2	2nd Offense*	1st Offense	----------
3	3rd Offense*	2nd Offense*	1st Offense
4	4th Offense*	3rd Offense*	1st & 2nd Offense*

*Within 12 months of first offense, 36 months for safety

Additionally, First Transit may use the following criteria to determine discipline specific to any type of traffic violation or preventable accident.

Major Offenses	Action
One violation	Discharge

Serious Violations	Action
One violation	Written warning
Two violations within any 36-month period	Discharge

Moving Violations	Action
Two violations within any 36-month period	Three-day Suspension
Three violations within any 36-month period	Discharge
Two violations within any 12-month period	Discharge

Preventable Vehicle Accidents	Action
One preventable accident	Written warning
Two preventable accidents within any 36-month period	Five-day Suspension
Three preventable accidents within any 36-month period	Discharge
Two preventable accidents within any 12-month period	Discharge

Details of First Transit's reporting requirements, infractions of company policy, and disciplinary actions that may be taken are described in more detail in the **First Transit Employee Handbook.**

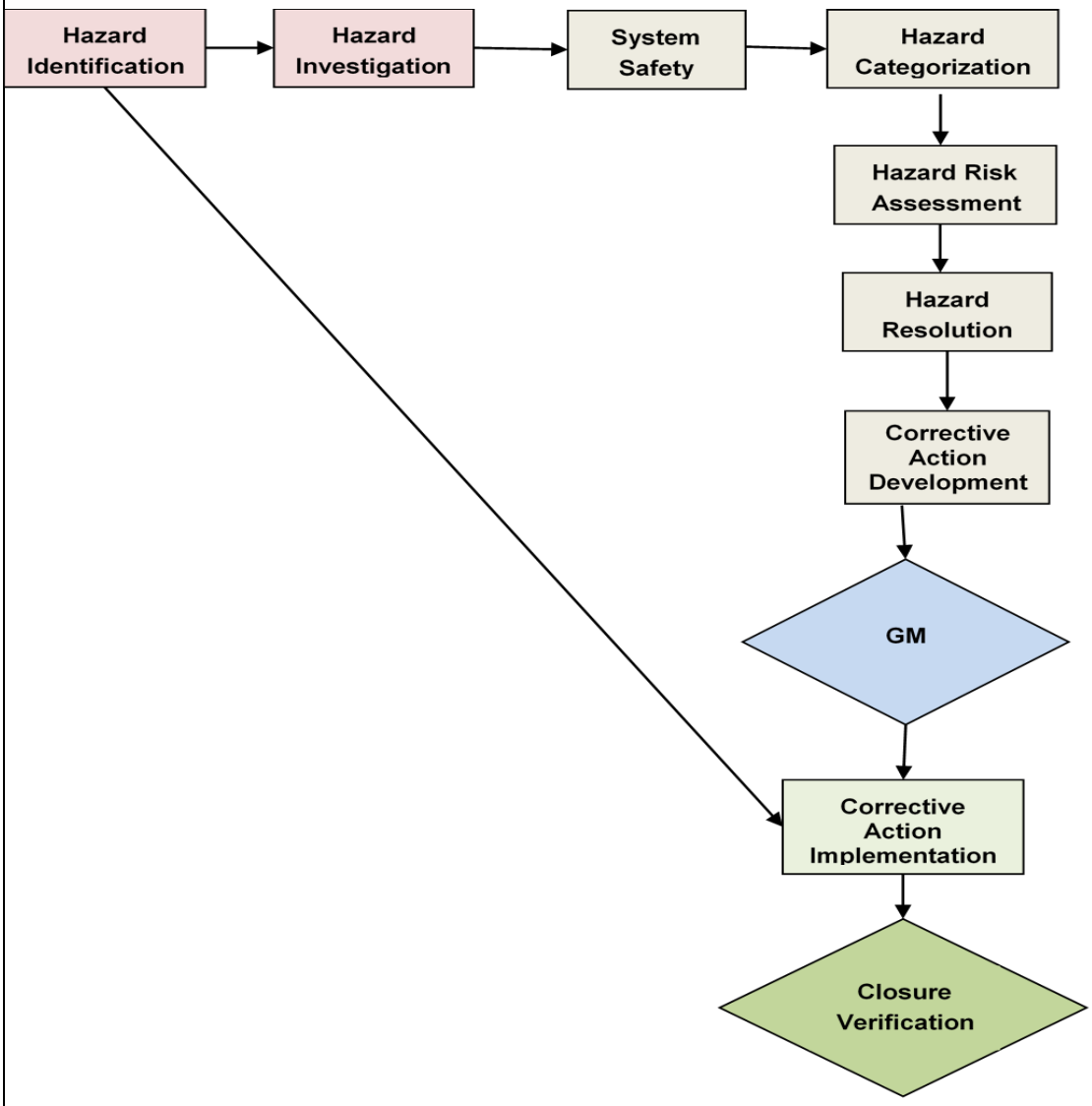
5. Safety Risk Management

Safety Risk Management Process

Describe the Safety Risk Management process, including:

- *Safety Hazard Identification: The methods or processes to identify hazards and consequences of the hazards*
- *Safety Risk Assessment: The methods or processes to assess the safety risks associated with identified safety hazards*
- *Safety Risk Mitigation: The methods or processes to identify mitigations or strategies necessary as a result of safety risk assessment*

Safety management is at the core of everything done at First Transit. All employees are responsible for performing their jobs in a safe manner, which includes identifying safety risks and participating in developing and implementing effective mitigation techniques. The process for managing hazards, from identification through corrective action and closure, is illustrated by the following flowchart.



As described earlier, a corporate structure exists to address all safety concerns. To ensure safety at the local levels, each location is required to form a Safety Solutions Team (SST), Accident Review Committee (ARC), and a Local Client Liaison Committee. To ensure consistency at each location, **SOP's #803; #803a; #803b Safety Solutions Team**, and **SOP #702 – Accident Review Committee** describe the procedures which are to be followed in creating and operating a Safety Solutions Team and Accident Review Committee.

These groups are responsible for reviewing safety related accidents and incidents to determine culpability; identify the causes associated with each event; and develop mitigation measures to reduce the risk of the events occurring in the future. Having these groups at each location provides a way for employees to report safety risks in a timely manner and to teams that understand the conditions associated with each specific location. Additionally, the opportunity exists for more timely, appropriate, and effective mitigation measures.

Several tools are used by the Region Safety Managers, Region Safety Directors and the Senior Director of Safety to monitor the local risks and risk management. Among them are Safety Data Reports which outline

the monthly and Year to Date safety performance statistics. Also used is a Target & Goal Worksheet to track and analyze the data collected and to target reactive and proactive performance improvement measures.

Safety Hazard Identification

This process is a vital component in First Transit's efforts to reduce safety risks and improve overall delivery of service. Safety Hazard Identification data from internal sources such as employee reporting, customer feedback, maintenance records; and external sources such as the Federal Transit Administration and local oversight authority is used to implement immediate corrective actions and to proactively identify hazards and potential consequences before they cause future accidents or incidents.

The objective of hazard identification is to identify those conditions that can cause an accident or create an unsafe condition and determine possible consequences if the unsafe condition is not corrected. First Transit routinely analyzes records from our operation and external sources as they become available to identify accident causation based on history. Current traffic conditions are periodically analyzed, and management inspection of established prevention processes are routinely performed.

First Transit also takes an additional proactive step with its **SOP #208 – Safety Validation of Change** to identify hazards and consequences **PRIOR** to implementing any changes to operations.

First Transit relies on employees to assist in the hazard identification and resolution process. Working with the location safety personnel and through a structured process, employees help:

- Identify Critical Factors in Mitigation of safety risk
- Develop and Recommend an Action Plan
- Implement Action Plan
- Measure Performance Against Safety Objectives
- Monitor the Process
- Modify the Process
- Secure Outside Assistance (when needed)
- Audit for Compliance

Several tools exist for hazard identification. Among them are:

- **SOP #802 and #802a - Daily Safety & Health Walkthrough and Checklist**
  - A routine safety and health check walkthrough to promptly identify hazardous conditions at our facilities and notify employees of the hazards identified and mitigation measures to help protect them from personal injury.
- **SOP #804 - Positive Check-In Procedures & Reasonable Suspicion**
  - Positive Check-In procedures are to ensure our operators reporting to work are fit-for-duty.
- **SOP #900 – Facility Hazard Recognition Manual**
  - This Hazard Recognition Manual is intended to be a tool for recognizing potential hazards that may be present at First Transit facilities. Although it does not represent all conditions that could exist, the photos and narrative provide:
    - A reference guide for conducting safety inspections at a facility, and
    - A training document to educate and train employees to conduct effective safety inspections.
- **Vehicle Maintenance Risk Assessment**

- All employees who perform maintenance and repairs to vehicles within transit centers and bus yards or on road calls complete a risk assessment using **SOP #503a – Vehicle Maintenance Risk Assessment Form** prior to performing any work on a vehicle.
- The Risk Assessment process, **SOP #503 – Vehicle Maintenance Risk Assessment**, requires employees about to perform a maintenance task to confirm they possess the training, skills, knowledge, abilities, tools, and equipment to safely perform the task at hand. The assessment includes determining the following.
  - Are You Properly Trained to Perform the Task?
  - If Task Requires Lifting, Are Lifts Secured, Are Jack Stands Used Correctly?
  - Are You Wearing the Appropriate Personal Protective Equipment (PPE)?
  - Have You Performed the Proper Lock-Out/Tag-Out (LOTO) procedures?
  - Are You Aware of the Potential Risks of Performing this Repair?
- If the answer is "NO" to any of the above assessments the technician is to immediately contact their manager.

- **Pre-Survey Job Hazard Analysis**
  - Prior to beginning a job hazard analysis, a pre-survey of the working conditions, using **SOP #503b – Pre-Survey Job Hazard Analysis Form**, under which the job is performed is conducted to evaluate the general conditions. A few of the potential hazards being considered include:
    1. Are there tripping hazards in the job vicinity?
    2. Is the lighting adequate for work conditions?
    3. Are there explosive hazards associated with the job?
    4. Are there electrical hazards associated with the job?
    5. Are tools associated with the job in good condition?
    6. Is the noise level excessive (below 85-dba)?
- **Facility Parking Risk Management Assessment**
  - Inadequate turning areas, blind corners, uneven walking surfaces can all cause collisions or employee injury in parking areas. **SOP #501 - Facility Parking Risk Assessment** will help identify and prevent these types of collisions for both buses and personal vehicles.
  - The Location Manager must ensure compliance with all provisions of this SOP.
  - The risk of each facility is assessed as follows:
    - Annually
    - Unscheduled – Whenever a significant vehicle collision or a pedestrian strike occurs in the bus yard or on company premises
    - Start-up locations – Before operating out of the new location.
    - **SOP #501a – Facility Parking Risk Assessment Guide**, and
    - **SOP #501b – Facility Parking Risk Assessment Form** are tools to help with this assessment.

Accident/Incident Hazard Identification

Procedures exist and are followed regarding resolution of accidents and incidents and capturing data. Although this information is used proactively, First Transit takes advantage of these opportunities to determine which, if any hazards existed that may have contributed to the accident or incident and develop mitigation measures to reduce the risk of a recurrence.

There are five (5) main areas reviewed in this Hazard Identification process:

1. **Environment**
   a. Weather
   b. Road Surface Condition
   c. Visibility

2. **Transit Service Characteristics and Agency Policies**
    a. Incentives for Safe Driving
    b. Equipment Maintenance Policies
    c. Stop Intervals
    d. Route Design
    e. Driver Scheduling
    f. Passenger Demand Schedules
3. **Operator**
    a. Experience
    b. Physical Ability
    c. Personality
    d. Psychological Condition
    e. Physical Condition
4. **Road Layout**
    a. Width
    b. Speed Limit
    c. Geometric Design
    d. Traffic Volume
    e. Capacity
    f. Parking
    g. Adjacent Lane Use
    h. Street Lighting
    i. Pedestrian Volume
5. **Hazard Identification – Accident Prevention/Resolution**
    1st: Identify the Hazard
    2nd: Remove the Hazard
    3rd: When the Hazard cannot be removed, Train for the Hazard as a “known condition”

- **On-Board Video Technology**
    - **SOP #704 – On-Board Video Technology** provides a summary of the on-board video system and Company standards that all First Transit employees must follow when operating a company or customer vehicle equipped with onboard video technology.
    - This technology is a valuable resource and another tool that helps First Transit instill positive driving behaviors by providing opportunities to view recorded driving events, driver history and company trends.
    - The goal of this in-cab camera technology is to proactively identify unsafe behaviors and improve those identified behaviors through coaching, retraining and, if necessary, disciplinary measures in accordance with the provisions of the Employee Handbook and applicable Collective Bargaining Agreements.

Information learned from this identification process is used to improve training and reduce or eliminate the underlying causes.

Safety Risk Assessment

Once the hazard has been identified, they are categorized into the following severity levels. The categorization of hazards is consistent with risk-based criteria for severity; it reflects the principle that not all hazards pose an equal amount of risk to personal safety.

Category 1 – Catastrophic: operating conditions are such that human error, design deficiencies, element, subsystem or component failure, or procedural deficiencies may cause death or major system loss.

Category 2 – Critical: operating conditions are such that human error, subsystem or component failure, or procedural deficiencies may cause severe injury, severe occupational illness, or major system damage.

Category 3 – Marginal: operating conditions are such that they may result in minor injury, occupational illness or system damage and are such that human error, subsystem or component failures.

Category 4 – Negligible: operating conditions are such that human error, subsystem, or component failure or procedural deficiencies will result in less than minor injury, occupational illness, or system damage.

The next step in assessing the hazard is to determine the probability of it occurring. Probability is determined based on the analysis of transit system operating experience, evaluation of First Transit safety data, the analysis of reliability and failure data, and/or from historical safety data from other passenger bus systems. The following chart describes the probability categories.

Likelihood Per FTA review guidance of Occurrence of a Hazard			
Description	**Probability Level**	**Frequency for Specific Item**	**Selected Frequency for Fleet or Inventory**
Frequent	A	Likely to occur frequently	Continuously experienced
Probable	B	Will occur several times in the life of the item	Will occur frequently in the system
Occasional	C	Likely to occur sometime in the life of an item	Will occur several times in the system
Remote	D	Unlikely but possible to occur in life of an item	Unlikely but can be expected to occur
Improbable	E	So unlikely, it can be assumed occurrence may not be experienced	Unlikely to occur but possible

Identified hazards are placed into the following Risk Assessment Matrix to enable the decision makers to understand the amount of risk involved in accepting the hazard in relation to the cost (schedule, cost, operations) to reduce the hazard to an acceptable level.

Hazard Frequency	**Severity Category 1**	**Severity Category 2**	**Severity Category 3**	**Severity Category 4**
Frequent (A)	1A	2A	3A	4A
Probable (B)	1B	2B	3B	4B
Occasional (C)	1C	2C	3C	4C
Remote (D)	1D	2D	3D	4D
Improbable (E)	1E	2E	3E	4E

Based on company policy and the analysis of historical data, MTS and First Transit has made the following determinations regarding risk acceptance.

Hazard Risk Index	Criteria by Index
1A, 1B, 1C, 2A, 2B, 3A	Unacceptable
1D, 2C, 2D, 3B, 3C	Undesirable (Management decision)
1E, 2E, 3D, 3E, 4A, 4B	Acceptable with Management Review
4C, 4D, 4E	Acceptable without Management Review

Safety Risk Mitigation

Mitigation Determination

After the assessment has been completed, the follow-up actions will be implemented as follows.

- **Unacceptable:** The hazard must be mitigated in the most expedient manner possible before normal service may resume. Interim corrective action may be required to mitigate the hazard to an acceptable level while the permanent resolution is in development.
- **Undesirable:** A hazard at this level of risk must be mitigated unless the Location General Manager and Location Safety Manager issue a documented decision to manage the hazard until resources are available for full mitigation.
- **Acceptable with review:** The Location General Manager and Location Safety Manager must determine if the hazard is adequately controlled or mitigated as is.
- **Acceptable without review:** The hazard does not need to be reviewed by the management team and does not require further mitigation or control.

Hazard Resolution

Safety hazard resolution or mitigation consists of reducing the risk to the lowest practical level. Not all safety risks can be eliminated completely. Resolution of hazards will utilize the results of the risk assessment process. The objectives of the hazard resolution process are to:

1. Identify areas where hazard resolution requires a change in the system design, installation of safety devices or development of special procedures.
2. Verify that hazards involving interfaces between two or more systems have been resolved.
3. Verify that the resolution of a hazard in one system does not create a new hazard in another system.

The SST, who was identified earlier in this plan as the team responsible for local safety review, uses the following methodologies to assure that system safety objectives are implemented through design and operations, and hazards are eliminated or controlled:

1. Design to eliminate or minimize hazard severity. To the extent permitted by cost and practicality, identified hazards are eliminated or controlled by the design of equipment, systems and facilities
2. Hazards that cannot reasonably be eliminated or controlled through design are controlled to the extent practicable to an acceptable level through the use of fixed, automatic, or other protective safety design features or devices.
3. Provisions are made for periodic functional checks of safety devices and training for employees to ensure that system safety objectives are met.

4. When design and safety devices cannot reasonably nor effectively eliminate or control an identified hazard, safety warning devices are used (to the extent practicable) to alert persons to the hazard.
5. Where it is impossible to reasonably eliminate or adequately control a hazard through design or the use of safety and warning devices, procedures and training are used to control the hazard.
6. Precautionary notation is standardized, and safety-critical issues require training and certification of personnel.

Mitigation of Safety Risk Management and Tracking

Resolution of identified hazards are managed by the Location General Manager and/or the Location Safety Manager. The mitigation of safety risk process is managed through the **"Safety Toolbox"**, which is an online tool used by management, from Road Supervisors to Executive Management, to record the occurrence of safety-related events, review safety critical data, and track corrective actions as necessary.

The Safety Toolbox is a powerful tool to help understand the work area's safety environment. This includes:

- Understanding and improving observations of safety critical behaviors
- Reviewing recorded debriefs to ensure that the "BeSafe" process is in place and working.
- Reviewing findings from BeSafe tours and determine if tasks/actions have been closed out

The Safety Toolbox includes information regarding:

- BeSafe (BeSafe Debriefs, BeSafe Tours, BeSafe Touchpoints)
  - Debrief meetings conducted in order to assure quality.
  - Safety Critical Behavior is the main focus of touchpoints; and shared and discussed during debrief meetings.
- Contacts (e.g. Near Misses, Hazard reports, Commendation, Safety Issue)
  - **Near Misses.** Reporting an event that occurred and could have caused injury.
  - **Hazard Reports.** Reporting an event that occurred and could have caused injury.
  - **Commendation.** A report of commendable safety actions/conduct performed by a colleague within the business.
  - **Safety issues.** A report on any safety issue that has a specific cause – i.e. maintenance, housekeeping, environment and behavior etc.
- Safety Leadership Activities (e.g. Participate in safety meetings, risk assessment, section observation)
  - **Participation in a Safety meeting.** Actively leading or participating in the location in-service safety meeting.
  - **Intersection observation or risk assessment.** Risk assessment or driver observations conducted at nearby intersections, and delivery of positive reinforcement or coaching as indicated.
  - **Rail section observation or risk assessment.** Risk assessment or driver observations conducted at rail crossing(s), and delivery of positive reinforcement or coaching as indicated.
  - **Planned general inspections.** A systematic inspection where a location is forewarned.
  - **High interest driver.** A report of a driver's performance that has indicated a level of risk taking through observations, review scores, and skills evaluations.

Additional documentation, such as corrective action plans, are developed for those hazards requiring complex and multifaceted resolutions.
First Transit will provide MTS a monthly update on Safety Performance Goals, Collision and Passenger Injury Trends and updates of any Critical Events occurring during the month.

6. Safety Assurance

Safety Performance Monitoring and Measurement

Describe activities to monitor operations to identify any safety risk mitigations that may be ineffective, inappropriate, or were not implemented as intended.

As discussed in Section 1 of this plan, First Transit employs a Resident Management Team at each operation location. This team consists of a Location General Manager and a Location Safety Manager, who oversee the safety of the operation.

Additionally, each location employs Street Supervisors, Dispatchers, and Instructors; all of whom are responsible for oversight of the daily operations and training. All safety risks identified are reported to the Location General Manager and Location Safety Manager. Any risks that can be addressed immediately are corrected but still reported. Each location also establishes a Safety Solutions Team (SST), described in Section 5: Safety Risk Management of this plan, which uses the following methodologies to ensure a proactive approach to safety at each location.

- Routine hazard management
- Accident and incident investigation
- Safety data collection and analysis
- Routine internal safety audits
- Facility, equipment, systems and vehicle inspections
- Routine proficiency checks for all vehicle operators and maintenance employees
- Compliance evaluations including onsite inspections
- Regularly communicating safety and hazard data to all employees

A higher level of oversight is conducted by Region management, which includes the Region Safety Manager, Region Safety Director, Region Maintenance Director, and the Region Vice President. From this level, any identified risks and mitigations are shared with other Region local operations as a proactive means to reduce risks.

The last “local level” review comes from the Vice President of Safety and the Vice President of Maintenance. These are corporate level positions that share the identified risks and mitigations throughout the organization as a proactive means to reduce risks. Additionally, the Vice President of Safety and Vice President of Maintenance assist executive level management in using this information to impact operational and budget decisions.

Describe activities to conduct investigations of safety events to identify causal factors.

First Transit has a “zero” tolerance for preventable injuries and collisions. Elimination of preventable injuries and collisions is our number one goal.

Any injury, collision or incident that occurs is investigated to determine preventability or non-preventability. Investigations include all instances in which:

- a vehicle was damaged
- a vehicle leaves the traveled roadway
- a passenger is injured or
- an employee is injured

SOP #700-Accident & Safety Data Acquisition describes the data collection process including

- Defining the Event & What to Do
- Accidents – Defining the Accident
- “Five Cardinal Rules That Apply to an Accident”
- Operator Responsibility
- Dispatcher on Duty Accident Investigation Responsibility

SOP #700 also describes the Operators and the Dispatchers responsibilities for protecting the customers and managing the scene.

The groups described in **SOP #702 – Accident Review Committee** (ARC), and **SOP #803 – Safety Solutions Team** (SST), review the data collected to determine if the accident/incident was preventable or non-preventable,(ARC); and identify measures to reduce the risk of the accident/incident occurring in the future (SST).

Describe activities to monitor information reported through internal safety reporting programs.

The Location Safety Manager (LSM) and/or Location General Manager (LGM) routinely reviews all location safety and hazard data, which includes searching for repetitive events that might have safety implications. When accident/incident reports and statistics indicate repetitive accidents/incidents, the LSM and LGM investigate to determine the root cause.

The following chart describes how the hazard data flows and is monitored by First Transit; from each operating location, to Region management, to corporate and parent company management.

Information Collected Daily	Location	Third Party Data Collected	Risk Dept	Safety Dept	Location	MTS
Collisions/ Injuries/ Workers Comp	Incident Occurs, claim report created, then sent to Third Party Data Collector via website, phone, fax.	Report received from Location.	Information from Third Party Data Collector created as weekly report then sent to Region Safety.	Weekly reports are reviewed and distributed for weekly management oversight conference calls.	Review data with Senior Region Leadership during weekly teleconference.	MTS Administrative Staff overseeing the First Transit Contract meeting with First Transit Management on a monthly basis; MTS Administrative Staff will provide a summary of the data to the COO on a monthly basis; The CSO is responsible for reporting applicable required information to the National Transit Database (NTD) on a monthly basis
	Risk Dept	**Shared Services Dept**	**Region Safety Managers**	**Shared Safety Services Dept**		
Collisions/ Injuries/ Workers Comp	Send all raw risk data gathered from weekly reports to the Shared Safety Services Dept.	Reorganizes raw data regionally then distributes to Region Safety Dept.	Review period data and distribute to locations.	Develops company, region, and location specific performance measures and distributes through Target & Goal Spreadsheet.		

Period Data Analysis								
	Shared Services Dept	**UK**	**Safety Dept**	**First Group Executive Safety Committee (ESC)**	**First Group Safety Council**	**First Group America Safety Council**	**Performance Review Management (PRM)**	**Safety Advisory Committee**
Collisions/ Injuries/ Workers Comp	Final reports sent to UK and Directors of Safety for each business group.	Processes data; analyzes; creates reports; categorizes risk factors; and gathers commentary from First Group companies for trend analysis.	Processes data; analyzes; creates reports; categorizes risk factors; and creates commentary for trend analysis.	This committee consists of President, COO, and Safety Vice President of each operating group. Discussions include safety performance, trend analysis, program oversight.	This committee consists of Vice Presidents of Safety for all operating divisions. Discussions include safety performance, trend analysis, and safety oversight.	This committee consists of Safety Senior Directors and Safety Vice Presidents. Discussions include safety performance, trend analysis, best practices, and program oversight.	This review consists of Senior Region Vice Presidents, Region Vice Presidents, Region Directors of Operations, and Region Safety Managers. Discussions include regions safety performance.	This committee consists of Location General Managers, Region Directors of Operations, and Region and Local Safety Managers. Discussions include review of policy and procedures, training, and safety awareness.

Management of Change

Describe the process for identifying and assessing changes that may introduce new hazards or impact safety performance.

First Transit employs a proactive process, **SOP #208 – Safety Validation of Change**, that addresses the procedures to be followed to evaluate the risk of any changes proposed at all levels of the organization. The overall purpose of this process is to provide assurance that any proposed changes which impact operations will not increase safety risk; or where additional risk is identified, that controls are put in place **prior to the changes being implemented**.

Changes to organizational structure; the nature or extent of operations; or to facility or equipment assets; as well as mergers and acquisitions of new businesses are proactively managed through this process to avoid introducing or increasing safety risks.

- The resources required to complete the validation process, in terms of people, finance and materials is included in this validation process.
- The allocation of responsibilities considers the competence of the individuals that are required to carry out the safety validation roles.
- All employees who may be affected by the proposed changes are consulted as part of the process.

The extent and scope of safety validation applied to any change proposal is proportional to the risks (safety, operational, and other risks) associated with its introduction. *(For example, a major change, such as a reorganization of Region Executive roles and responsibilities or start-up of a large new bus operation, requires a more rigorous safety validation than a minor change.)*

In the case of smaller, less complex or well understood changes, the safety validation of change process may be implemented as part of normal operations, using existing organizational arrangements and meeting structures to deliver the required level of assurance.

The process is generally described in the following chart.

Safety Validation of Change Process			
Main Steps	Key Activities	Checklists & Guidance	Completed By
1. Identify Proposal for Change	• Raise change proposal (including Capital Expenditure Approval) • Inform relevant functional Director(s) and Manager(s)	• Complete **SOP #208a – Safety Validation of Change Form**, Section A1	Change proposer

2. Determine Classification of Change Significance	• Classify level of safety validation required • Ensure the extent and scope of validation is proportional to the level of risk	• Complete **SOP #208a – Safety Validation of Change Form**, Section A2	**Category A:** Group Safety Director **Category B:** Divisional head of Safety **Category C:** Location head of Safety
3. Allocate Roles & Responsibilities	• Formally allocate change sponsor and change authorizer • Identify other required resources and roles for consultation	• Complete **SOP #208a – Safety Validation of Change Form**, Section A3	Change proposer (with guidance)
Submit Change Proposal Form			Change proposer
Decide whether safety validation should proceed			Change proposer
4. Prepare Safety Validation of Change Case	• Prepare safety validation documentation • Complete risk assessment of proposed change • Submit for review • Revise and finalize documentation	• Complete risk assessment and document findings • Complete Safety Validation of Change as described in **SOP #208 – Safety Validation of Change** • Complete **SOP #208a – Safety Validation of Change Form**	Change proposer
Submit Safety Validation Checklist with supporting documentation			Change proposer
Approve and Implement, or Reject Change			Change authorizer (or delegated representative)
5. Monitoring and Review	• Monitor implementation of change and safety performance	• Check compliance as part of Region Safety Monitoring • Review effectiveness	Location Safety Manager Corporate Safety Management

	• Review performance process	of the process as part of Region oversight	Vice President of Safety - First Transit

Changes proposed at the Corporate level typically have an impact on the Region and Local levels. To ensure the risks associated with any change consider all levels of the organization, each level must complete **SOP #208 – Safety Validation of Change** as part of the process to ensure specific safety concerns have been identified and addressed.

Similarly, changes proposed at the Region level will typically have an impact on the Local level. Consequently, the Local level must also complete **SOP #208 – Safety Validation of Change** as part of the process to ensure specific safety concerns have been identified and addressed.

Additional responsibilities in the Safety Validation of Change process include:

- The Region Safety Management team provides safety expertise/support to those carrying out the safety validation.
- The Senior Director of Safety:
  - Reviews and approves each Region's safety validation of change process
  - Decides on the level of safety validation required (consulting with other functional heads as necessary) for Category A changes
  - Is consulted on any Category B change proposal
  - Provides safety expertise/support to Region Safety Managers and Vice President of Safety – First Transit during safety validation activities as required.
  - Provides safety expertise/support to those carrying out the safety validation for Category A changes.

An electronic log of all proposed changes, whether approved or not, are maintained by the Region Safety Director.

Communication of changes to policies/procedures regarding safety issues comes from Executive Leadership. This information is then carried down through the Vice President of Safety – First Transit, Senior Director of Safety, Region Safety Directors, Region Safety Managers. Location General Managers, Location Safety Managers, and employees. Notification to the client is communicated through the Location General Manager.

Continuous Improvement

Describe the process for assessing safety performance. Describe the process for developing and carrying out plans to address identified safety deficiencies.

The process described previously in this section for monitoring safety data incorporates continuous improvement. As safety risk is identified, then reported on, a determination is made as to whether the risk can be mitigated immediately or requires more time and resources.

Risk mitigations that can address the safety concerns immediately are carried out but still reported. The reporting of these concerns includes the mitigation steps that have been taken. Monitoring of the risk continues to ensure that the mitigation strategy is effective.

Section 5 of this plan, Safety Risk Management, describes the risk assessment and mitigation procedures used that determine how to proceed with improvement strategies that require more time and resources.

Which improvement strategies to implement for longer term issues is based on severity and probability of risk occurrence. Additionally, safety hazard identification data is used to implement immediate corrective actions and to proactively identify hazards before they cause future accidents or incidents.

The objective of hazard identification is to distinguish those conditions that can cause an accident or create an unsafe condition. First Transit routinely analyzes records from our operation to identify accident causation based on history. Current traffic conditions are periodically analyzed, and management inspections of established prevention processes are routinely performed.

The Risk/Safety Data Flow Chart previously described in this section, illustrates how this information is shared throughout the organization.

7. Safety Promotion

Competencies and Training

Describe the safety training program for all agency employees and contractors directly responsible for safety.

The education and training process at First Transit is a highly regimented and professionally developed program built around a curriculum featuring learning opportunities in two major domains:

- Knowledge (education)
- Skills (training)

Various delivery mechanisms such as classroom, multimedia presentations, closed course, observation and behind-the-wheel skills building are used to support the learning process. Learning is evaluated through written quizzes, driving tests and customer service skills evaluations.

Driver Instructors

Successful new operator training starts with selecting and certifying good instructors.

1. **Classroom Instructor:**

   The classroom instructor is responsible for facilitating the classroom portion of New Operator Training. Classroom training requires the development of lesson plans.

2. **Behind-the-Wheel Instructor:**

   The Behind-the-Wheel (BTW) Instructor is responsible for conducting closed course exercises and behind the wheel instruction. The New Operator Training program consists of instructional DVDs, which are accompanied by facilitator guides and participant study guides. The BTW Instructor uses the Operator Proficiency Workbook to document each trainee's progress.

   **New Instructor Candidates can obtain certification as both a Classroom Instructor and a Behind-the-Wheel Instructor.*

3. **Master:**

   The Master Instructor, along with the Regional Director of Safety and Region Safety Manager(s), is responsible for training the Safety Supervisors. The Master Instructor is also responsible for the certification programs for Behind-the-Wheel and Classroom Instructors and the ongoing Train-the-Trainer workshops.

Training the Instructor is a process by which a Certified Instructor works with the selected New Instructor Candidate. During this time, the Certified Instructor conducts a review of all state laws, First Transit policies and procedures, local policies, and client-specified programs and requirements.

The Certified Instructor also provides a review of the Behind-the-Wheel Manual, Classroom Manual, and all First Transit video-based courses.

In addition to the above training, the New Instructor Candidate must complete the Instructor Development Curriculum, which includes the following three self-directed courses:

1. How to Train
2. Coaching the Adult Learner
3. Learning Basics

There are three types of Instructor Certification:

1. Temporary
2. Certified
3. Master

1. Temporary (Silver)

Temporary certificates are issued at the local level. A temporary certificate is issued to a New Instructor Candidate upon successful completion of the New Instructor training program at his or her location, conducted by a certified trainer at that location. Certificates are issued throughout the year prior to the annual Train-the-Trainer program.

Temporary certificates are valid for one year, and one year only, from the date of issue. Temporary certification is accompanied by silver achievement emblems for Classroom, BTW or both.

To continue in the program, a New Instructor must obtain Gold Certification.

2. Certified (Gold)

The Certified Instructor certificate is issued to a New Instructor who has successfully completed the annual Train-the-Trainer program, conducted by a Master Trainer. The annual Train-the-Trainer program combines all elements of the temporary certification, with the exception of the classroom evaluation. At the annual Train-the-Trainer program, Classroom Instructor Candidates are required to develop a lesson plan and give a presentation.

Prior to attending the annual Train-the-Trainer program, all New Instructors must complete the “Safety Leadership” course and pass the final exam with a grade of 90% or above.

The Senior Director of Safety is the only person authorized to approve and issue a Certified Instructor certificate with gold achievement emblems for Classroom, BTW, or both.

3. Master

The Master Instructor Certification program ensures that First Transit Policies and Procedures are correctly implemented throughout the company.

Master Instructor Certification is required for all area safety managers and above.

The Master Instructor:

- Provides support to the Location General Manager and the Region Safety Manager,
- Is involved with training new Safety and Training Supervisors, and re-training current Safety and Training Supervisors if required,
- Conducts the annual Train-the-Trainer program for BTW and Classroom Instructor Certification

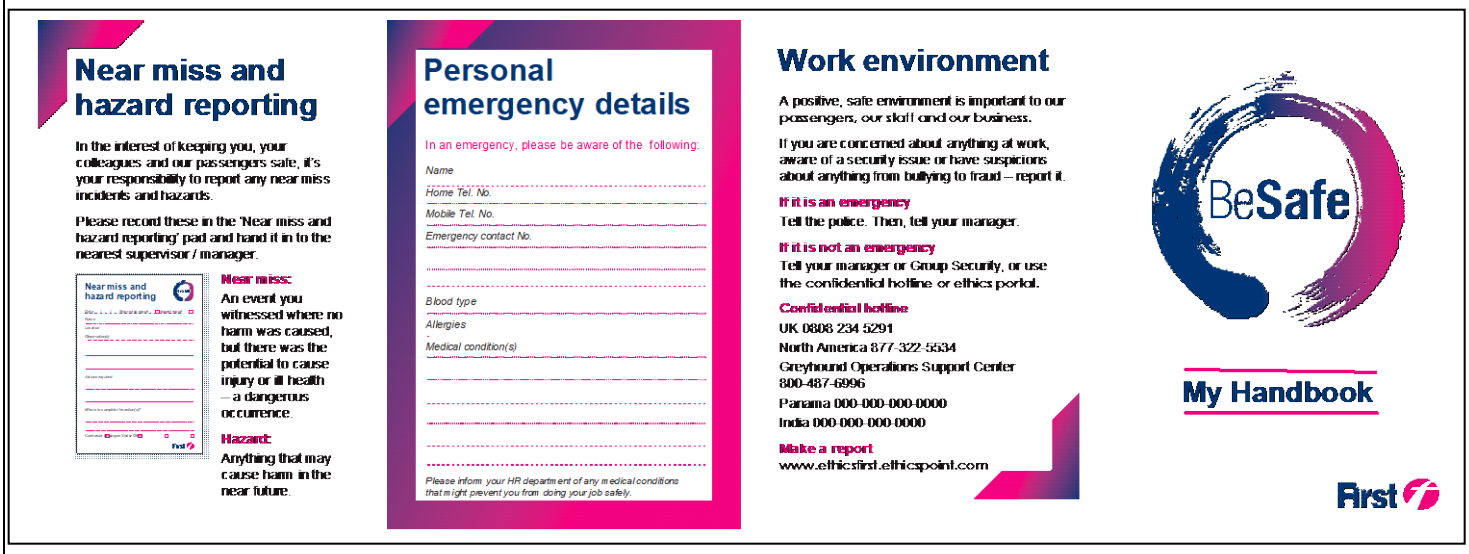
- Conducts Safety and Training audits in the region and reports the findings to the Region Safety Manager, if required.

Employee Training

Training employees to assess risks and recognize and avoid hazards in the workplace is critical to the overall safety of the workplace. Every First Transit employee is trained in **"BeSafe"** and **"Safe Work Methods"**, which are described later in this section.

"BeSafe" is our company-wide approach to safety management. This program takes our safety performance to the next level through behavioral change. "BeSafe" is inclusive, collaborative and focuses on recognizing and acknowledging safe behavior and actions through positive reinforcement such as debriefs, tours, and touchpoints. All employees are trained in the principles of "BeSafe"

The "BeSafe" concept is described in the following brochure.



Near miss and hazard reporting

In the interest of keeping you, your colleagues and our passengers safe, it's your responsibility to report any near miss incidents and hazards.

Please record these in the 'Near miss and hazard reporting' pad and hand it in to the nearest supervisor / manager.

Near miss:
An event you witnessed where no harm was caused, but there was the potential to cause injury or ill health – a dangerous occurrence.

Hazard:
Anything that may cause harm in the near future.

Personal emergency details

In an emergency, please be aware of the following:

Name
Home Tel. No.
Mobile Tel. No.
Emergency contact No.
Blood type
Allergies
Medical condition(s)

Please inform your HR department of any medical conditions that might prevent you from doing your job safely.

Work environment

A positive, safe environment is important to our passengers, our staff and our business.

If you are concerned about anything at work, aware of a security issue or have suspicions about anything from bullying to fraud – report it.

If it is an emergency
Tell the police. Then, tell your manager.

If it is not an emergency
Tell your manager or Group Security, or use the confidential hotline or ethics portal.

Confidential hotline
UK 0808 234 5291
North America 877-322-5534
Greyhound Operations Support Center 800-487-6996
Panama 000-000-000-0000
India 000-000-000-0000

Make a report
www.ethicsfirst.ethicspoint.com

BeSafe

My Handbook

First

Be Safe What is it?

Be Safe is our Group-wide safety commitment, taking our safety performance to the next level through behavioural change.

It builds on our compliance with existing policies and safety management systems. Be Safe, whilst not ignoring unsafe acts, harnesses the power achieved where positive behaviour and habits are shown and recognised.

Be Safe is inclusive, collaborative and focuses on recognising and acknowledging safe behaviour and actions through positive reinforcement.

Be Safe Our objectives

Be Safe has three clear objectives:

1. To make progress on our way to "Zero Harm".
2. To make safety a personal core value through behaviour change.
3. To improve business performance.

Everyone in FirstGroup takes ownership for safety in the workplace and encourages colleagues to do the same.

We have a personal stake in safety for ourselves, our colleagues and our customers.

By sharing the right attitude, skills and knowledge we will create the best safety environment to achieve our objectives and Be Safe.

Be Safe principles

These principles all support our Group value of being Dedicated to Safety.

Knowledge
Our greatest efforts will be directed at the key safety behaviours that will help reduce incidents.

Recognition
Whilst not ignoring actions that undermine safety, the focus will be on acknowledging colleagues "doing it right" and positively reinforcing these actions.

Openness
Regular positive coaching interactions, or "touchpoints" will take place and communication at "debriefs" will be open and honest.

Learning
Reporting of incidents and near misses will be seen as learning opportunities to continuously improve work place safety.

Courage
We are all empowered to accept responsibility for our own safety and the safety of our colleagues and customers. If you assess something to be unsafe, you should have the courage to stop and find a safer way of doing things.

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First Transit's **"Safe Work Methods"** is designed to educate employees on how to identify conditions and actions posing risks to their well-being and that of their coworkers. This training is to be used:

1. In training new hire employees
2. In leading supervisors in identifying root causes of workplace injuries
3. In retraining injured workers so that re-occurrences are avoided
4. To supplement First Transit's First Occupational Rehabilitation Management (F.O.R.M.) light duty and return to work management program, in controlling workers compensation losses

The "Safe Work Methods" training curriculum includes:

- **New Hire Training**
  New hire training is designed to educate the new employee to the hazards commonly found in the transportation environments including in vehicle maintenance shops, bus yards, fuel islands, wash bays, and office environments. The program also makes employees aware of injuries that can result from physical activities such as entering and exiting vehicles, assisting persons with disabilities, and handling mobility devices.
  - PPE program including requirements for appropriate
    - Safety eyewear
    - Safety footwear
    - Safety hand wear
    - Hi-Vis vests
    - Disposal contaminated materials
  - Risk Assessment and Injury Avoidance
    - Walking & Climbing
    - Lifting, Carrying, Holding, and Lowering Objects
    - Pushing, Pulling, & Twisting
    - Burns, Scalds
    - Exposed Fluids, Chemicals, Smoke
    - Cuts, Punctures, Abrasions, Lacerations
    - Mobility Device Lifts/Ramps

1. Requirements for Operator Training

Applicants are required to successfully complete a comprehensive training program prior to transporting passengers. Trainees are continually evaluated and tested throughout the training program. Trainees who do not demonstrate the required level of proficiency are provided additional training or are removed from training. The Operator training program combines instructor-led sessions, video instruction, facilitated discussion, and opportunities for the trainees to practice what they have learned. Training topics include:

Classroom Training
The first part of Operator training at First Transit, classroom training, begins the process of instilling the safety culture into each Operator. Helping the student Operators understand the importance of keeping themselves and each passenger safe; and their responsibilities in maintaining a safe environment, is a theme integrated throughout.

- **Unit 1 - Introduction**
  - Welcome and Introduction
  - Title VI Civil Rights Act 1964
  - Employee Handbook
  - BeSafe - Making Safety Personal
  - Hazardous Communication
  - Bloodborne Pathogens

- **Unit II - Fundamentals**
  - Safe Work Methods
  - Basics of Safety
  - Managing Emergencies
  - Security Awareness
  - Map Reading
  - Communication Devices
  - Navigation and Fare Policies
  - Smith System
- **Unit III - The Operator**
  - Drug and Alcohol Awareness
  - Distracted Driving
  - Fatigue and Sleep Apnea Awareness
- **Unit IV - Transporting Passengers with Disabilities**
  - Transporting Passengers with Disabilities
  - Interacting with Passengers
  - Diffusing Conflict
  - Passenger Care While Loading and Unloading
  - Mobility Aids and Devices
- **Unit V - Driving Fundamentals**
  - Driving Fundamentals I
  - Driving Fundamentals II
  - Roadway Types
  - Railroad Crossings

Behind-the-Wheel Training
Behind-the-Wheel training is conducted in three phases. Since most people coming to work as a Bus Operator have not been exposed to driving the types of vehicle used at First Transit, the first part of behind-the-wheel training takes place on a closed course. This provides the opportunity for the Instructors to evaluate the skill levels of each employee; and gives each employee the opportunity to make and learn from their mistakes in a safe environment.

The next phase of Behind-the-Wheel training takes place on the road, but in a controlled manner. During the road phase of the training, each student Operator works one-on-one with a First Transit Instructor. The road work begins with the basics; intersections, service stops, and backing. The next advanced stage of the road work addresses roadways, highway driving, and continues the instruction on intersections and service stops. The “Smith Driving System” principles are incorporated throughout the entire Behind-the-Wheel training phase.

- **Closed Course (Group Work)**
  - Vehicle Orientation
    - Pre-Trip Inspection
    - Seat Adjustment
    - Mirror Adjustment
    - Braking, Accelerating, and Transmission
    - Wheelchair Securement
  - Reference Points
    - Lane Position
    - Right Side / Left Side
    - Backing Point
    - Forward Stop

        - Pivot Points
        - Turning Points
    - Vehicle Control
        - Straight in Lane
        - Left Turn
        - Right Turn
        - Lane Changing - Moving Right or Left
- **One on One Instruction Behind the Wheel**
    - **Basic Road Work**
        - "Smith System"
        - Intersections
        - Service Stops
        - Backing
- **Advanced Road Work**
    - "Smith System" Commentary Driving
    - Roadways
    - Expressway / Highway Driving
    - Intersections
    - Service Stops
- **Final Evaluation**
  Upon completion of the training program, before an Operator can be placed into service, they must successfully demonstrate their mastery of the skills and practices learned during the training program.
- **Cadet Training**
  Once a new Operator has been placed into service there is period of observation where an experienced Operator, Instructor, or Supervisor periodically rides-along to ensure the skills learned in training have successfully transferred to providing service. This includes the securement and transportation of a person with a disability.

2. Requirements for Maintenance Training

Maintenance personnel are trained in shop safety, OSHA standards, and vehicle maintenance, in addition to receiving training in driving techniques and safety. Trainees are continually evaluated and tested throughout the training program. Trainees who do not demonstrate the required level of proficiency are provided additional training or are removed from training.

Maintenance training includes:

- Introduction to First Transit policies & procedures
- Injury prevention and risk assessment
- Substance Abuse Policy
- Defensive Driving
- "Smith System"
- NTI - Security Awareness Warning Signs
- Shop Safety Handbook
- Maintenance Lift Safety
- Driver Vehicle Inspection (DVI) Procedures
- SafeWork Methods
- Wheel Torque Specifications
- Workplace Violence
- OSHA (R-T-K / SDS / PPE Training)

- De-escalation training

Servicer Training Program

All servicers complete a comprehensive training program. This program includes passing a written and behind the wheel test for a commercial driver license. Other major topics covered in the training program include: Code of Safe Practices, LPG fueling procedures, electric bus charging, bloodborne pathogen control program, Spill Prevention & Control Program (SPCC), Maintenance Dept. policies & procedures.

Servicer refresher training includes but is not limited to:

- Weekly during toolbox safety flyers
- SPCC annual refresher training
- Hazard Communication Training
- Behind the wheel evaluations
- Preventable Accident remediation

Mechanic

All mechanics hired are to be ASE certified with two years of maintenance work experience, mechanics also receive the training program outlined in the servicer training program. Mechanics also receive Hazardous Waste Operations and Emergency Response (HAZWOPER) training as well as forklift certification before operating.

Mechanic refresher training includes but is not limited to:

- Weekly during toolbox safety flyers
- SPCC annual refresher training
- Hazard Communication Training
- Forklift recertification every 3 years (if operating)
- Behind the wheel evaluations
- Preventable accident remediation

Foreman and Maintenance Managers

Foreman and Maintenance Managers training includes but is not limited to:

- Drug and Alcohol
- Harassment Prevention
- Management Development
- Toolbox training sessions
- SPCC
- HAZWOPER
- Forklift recertification
- Behind the wheel evaluations

- Preventable accident remediation

3. Requirements for Staff Training

Staff personnel are trained in Safety Leadership and "BeSafe" (described in item #1)

- **Safety Leadership**

  This is an interactive CD-ROM course consisting of 5 CD's and leaders guides which are designed to educate all levels of First Transit management on the behaviors surrounding accidents. Every level of management takes the course and successfully pass an online test, found on the Safety Resource Center (SRC), with a passing grade of 90% or better.

  The course outline is as follows:

  - Safety Leadership
    - Accidents
    - Behavior
    - Leadership
  - Supervisor Development
    - The Role of the Supervisor
    - Communication
    - Building Trust
    - Conflict Resolution
    - Performance Management
    - Decisions

- **Additional Safety Training**
  - Drug and Alcohol
  - Supervisor's Report of Reasonable Suspicion
  - Code of Conduct
  - Customer Service
  - De-escalation training
  - OSHA Requirements
  - Hazard Abatement FORM – CA Only
  - TSI – Introduction to Paratransit
  - TSI – Vehicle Operations
  - TSI – Managing Emergencies
  - TSI – Customer Relations
  - SMS – First Transit Safety Policy
  - SMS – First Be Safe Principles
  - SMS – Be Safe
  - SMS – Personal Protective Equipment
  - SMS – Parking
  - SMS – Personal Safety
  - SMS – Risk Assessment
  - SMS – Prevention of Workplace Violence

4. Requirements for Continuing Training and Evaluations

First Transit provides ongoing employee training and evaluations.

The objective of ongoing evaluations is met through a broad spectrum of regularly scheduled management activities including:

- road observations,

- ride along evaluations, and
- daily safety contacts.

Where evaluations and observations identify unsafe acts or conditions, retraining is provided to improve skill levels in accordance with corporate standards.

In addition to First Transit's formal employee training program, the following safety training is also conducted.

Safety Meetings

- Twelve (12) safety meetings are issued to the locations annually with required topics identified by the location and region safety management
- Each meeting is to be a minimum of one (1) hour in length unless otherwise required by state, client or local regulations
- A required topic along with a safety campaign including posters and DVD is sent to each location for presentation to all employees
- Attendance is a condition of employment and is mandatory for all Operators, Management, Operational staff, and Maintenance personnel. *(Unless stated otherwise in the CBA.)*
    - Failure to attend all meetings will result in disciplinary actions up to and including termination.
- Client/Contract requirements may require safety meetings to be conducted on a more frequent basis than the First Transit minimum standards

Retraining

First Transit has a "zero" tolerance for preventable injuries and collisions, elimination of preventable injuries and collisions is our number one goal.

An employee involved in a preventable injury or collision is placed on administrative leave pending completion of the investigation and completion of any required retraining.

Safety Communication

Describe processes and activities to communicate safety and safety performance information throughout the organization.

Safety Awareness Programs

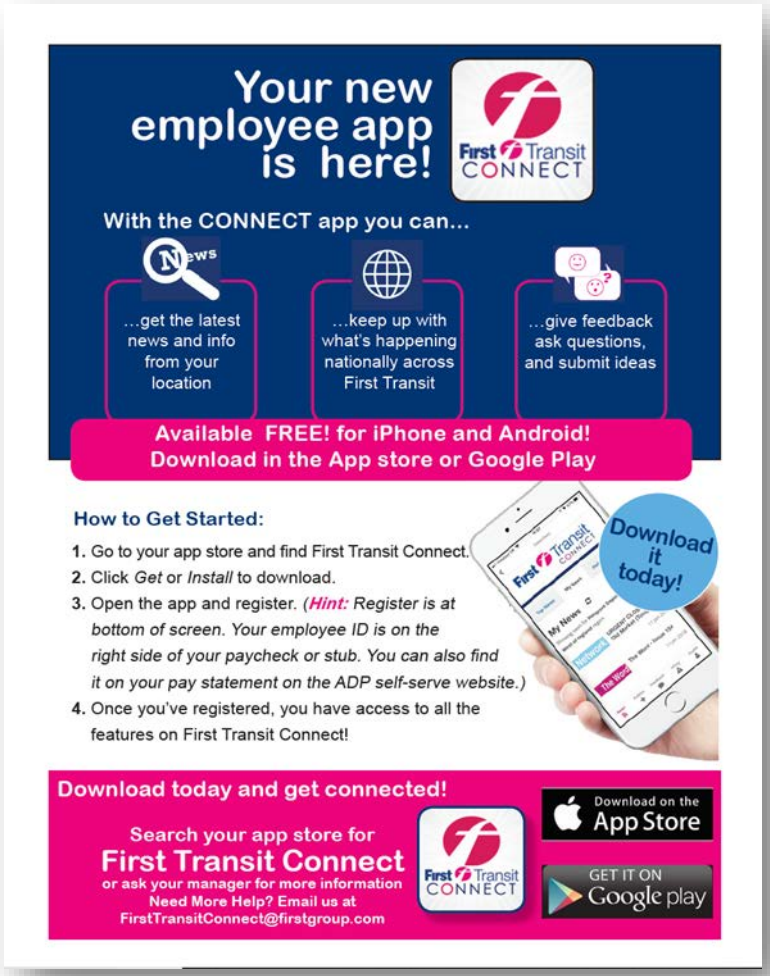
Establishing and maintaining a culture that demands safe behavior at all times is at the core of First Transit's safety plan. This is done, in part, by providing a regular flow of positive information and recognizing those who are performing safely.

This is where our **"BeSafe"** program provides the structure and foundation for communicating safety messages and inspiring safe job performance at all levels. "BeSafe" takes safety to a more personal level. It is a company-wide commitment to safety, with the objective of continuous improvement by making safety a personal goal and incorporating behavioral change as a mitigation measure.

"BeSafe" focuses on positive change through routine personal "touchpoints" and coaching interactions between front-line employees and management. To reinforce the touchpoints, discussions and feedback sessions are conducted as needed.

This program inspires safe behavior among employees at all levels by;

- Generating system-wide participation in safety issues through positive reinforcement
- Encouraging all employees to "take ownership" for safety results
- Communicating safety policies, procedures and processes
- Engaging executives and managers at all levels, encouraging their active participation in safety management and communication
- Sharing safety results at the individual, project, region and national levels by celebrating success stories
    - **Individual Motivators – Individual Achievement Awards:** The "cultural carrot" to help affect individual safety improvement through the use of personal recognition awards. Currently established safety awards for First Transit employees are:
        - Annual Safe Driver Awards
        - Safety Solutions Team Recognition
- **A Safety Leadership Group - The Safety Solution Team (SST):** Four to 10 location teammates dedicated to making safety "top-of-mind" by identifying and resolving safety issues.
    - SST
        - Review the safety concerns they have worked on and improvements that have been implemented
        - Record and distribute SST meeting minutes
    - GM
        - Review "Daily Safety & Health Walkthrough"
    - GM and SST
        - Recognize individuals who have earned years of safe driving
        - Pins and Certificates
        - Include bullets from SST Meeting minutes
- **A Communication Tool:** "First Transit Connect" employee app, a peer to peer safety communication tool offering safety tips, best practices, recognition, offering ideas on "What Works", Safety Happenings, and Safety Pep Rallies


Your new employee app is here!
First Transit CONNECT
With the CONNECT app you can...
...get the latest news and info from your location
...keep up with what's happening nationally across First Transit
...give feedback ask questions, and submit ideas
Available FREE! for iPhone and Android!
Download in the App store or Google Play
How to Get Started:
1. Go to your app store and find First Transit Connect.
2. Click Get or Install to download.
3. Open the app and register. (Hint: Register is at bottom of screen. Your employee ID is on the right side of your paycheck or stub. You can also find it on your pay statement on the ADP self-serve website.)
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or ask your manager for more information
Need More Help? Email us at
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Additional Information

Supporting Documentation

Include or reference documentation used to implement and carry out the Safety Plan that are not included elsewhere in this Plan.

Numerous standard operating procedures (SOP's), in addition to those mentioned in this plan, have been developed and incorporated into the operating practices at each First Transit location.

The SOP's have been designed to create operational consistency, increase awareness of risks and hazards, and provide easily duplicated processes for identifying and mitigating the risks associated with providing transit service. Some of those SOP's are as follows.

- High Interest Driver SOP's #206; #206a; #206b; #206c: #206d
- SOP #207 - Railroad Crossing Assessment
- SOP #502 – Sub-Contractors Working on Company Property
- Fire Prevention Plan SOP's #504; #504a; #504b; #504c; #504d
- Winter Safety – Snow Removal Action Plan SOP's #505; #505a; #505b; #505c
- Vehicle Fueling Spill Control SOP's #506; #506a; #506b; #506c; #506d
- SOP #507 - Pedestrian Visibility and Movement on Company Property
- SOP # 508 - Service Truck & Service Vehicle Visibility
- Emergency Action Plan SOP's #806; #806a; #806b; #806c; #806d
- First Transit Shop Safety Handbook
- Safety & Security Planning Manual
- MTS Infectious Disease Control and Prevention Plan

List of Acronyms Used in the Safety Plan

Acronym	Word or Phrase
ARC	Accident Review Committee
BTW	Behind-the-Wheel
DOT	Department of Transportation
DUI	Driving Under the Influence
DWI	Driving While Intoxicated
ESC	Executive Safety Committee
FGA	First Group America
F.O.R.M.	First Occupational Rehabilitation Management
FTA	Federal Transit Administration
HR	Human Resources
LGM	General Manager
LOTO	Lock-Out/Tag-Out
LSM	Location Safety Manager
MNT	Maintenance
OPS	Operations
OSHA	Occupational Safety & Health Administration
PPE	Personal Protective Equipment
PRM	Performance Review Management
SMS	Safety Management System
SOP	Standard Operating Procedure
SRC	Safety Resource Center
SST	Safety Solutions Team
UK	United Kingdom
VP	Vice President

Infectious Disease Preparedness and Response Plan (COVID-19 Prevention Program)

Version 2.0, June 2022

Metropolitan Transit System

TABLE OF CONTENTS

1 INTRODUCTION

The Infectious Disease Preparedness and Response Plan was developed to document current best practices that are utilized by MTS to effectively limit the spread of viruses, and other types of potentially infectious materials throughout the transit system. The objectives of the plan are:

- Reduce the potential spread of viruses, infectious diseases or related illnesses throughout the transit system
- Educate and protect employees, customers, and business partners
- Maintain essential business activities
- Describe actions to effectively manage future infectious diseases if needed
- Establish and implement an effective written COVID-19 Prevention Program (CPP) pursuant to the Emergency Temporary Standards in place for COVID-19, California Code of Regulations (CCR), Title 8, section 3205(c)

A pandemic will affect many business functions due to several factors including but not limited to employee absenteeism, shortage of supplies, health department restrictions on public gatherings, and reduced ridership.

MTS has developed this Plan based on current infection prevention and hygiene best practices. It focuses on the need to implement engineering, administrative, work practice controls, and personal protective equipment (PPE). This written plan draws on the best information available from:

- World Health Organization (WHO)
- Center for Disease Control (CDC)
- Occupational Safety and Health Administration (OSHA)
- American Public Transit Association (APTA)
- California Department of Public Health (CDPH)
- San Diego County Public Health Service

It is recognized that advice on infection prevention will change over time as new information becomes available. MTS will continue working with these agencies to obtain the latest information as well alter its operations, policies and procedures to follow current requirements imposed by federal, state and local entities. MTS will update the Plan to address additional specific exposure risks, sources of exposure, routes of transmission, and other unique characteristics of SARS-CoV-2 (i.e., compared to other influenza viruses) as needed.

1.1 EMPLOYEE ACCESS TO THE PLAN

The Plan is available electronically to all employees at all times during working hours, from the MTS intranet, Environmental Health and Safety page.

Paper copies can be printed from the intranet, and are also available upon request, for examination and copying, to all employees, external agencies (or their respective designees).

When a division head or supervisor receives a request from an employee's designated representative, or external agency to review this Plan, the division head or supervisor shall provide the requested document (s) at no cost to the requesting party.

2 ACRONYMS

APTA	American Public Transit Association
CDC	Center for Disease Control
CDPH	California Department of Public Health
MTS	San Diego Metropolitan Transit System
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
SOP	Standard Operating Procedure
WHO	World Health Organization

3 RESPONSIBILITIES

MTS will be guided based upon the threat levels identified by the WHO, CDC, as well as other Federal, State and local health agencies.

In San Diego County, the Public Health Services Department has responsibility for health issues and has the authority to implement public activity restrictions if needed. Since each pandemic is unique, MTS will coordinate with Public Health to identify and confirm appropriate actions for dealing with public health issues concerning infectious diseases, such as COVID-19, to help protect employees and the riding public.

Each MTS employee is required to carry out specific responsibilities consistent with their position. All levels of management are accountable for the implementation of this Plan within their respective work areas. The information provided below describes the position and responsibilities of that position.

Position	**Plan Responsibilities**
All MTS Employees	Adhere to established training, policies and procedures. Participate in the identification and evaluation of hazards. Report symptoms, potential exposures or positive test results to Human Resources and their immediate supervisor. Practice good personal hygiene, social distancing, and donning of PPE. Protect and respect individuals Health Insurance Portability and Accountability Act (HIPAA) rights.
Department Directors, Managers, and Supervisors	Implement and maintain the Plan in their assigned work areas. Provide adequate, usable, department-appropriate informational material about business-essential job functions and worker health and safety, including proper hygiene practices and the use of workplace controls (i.e. PPE).

	Ensure employees receive answers to questions about the program in a language they understand. Conduct contact tracing for employees within their department and notify employees of potential exposure.
Chief Executive Officer	Uphold accountability across all departments within the agency. Allocate available capital and financial resources needed to maintain the plan. Promote a positive safety culture throughout the agency. Communicate with the Board of Directors. Maintain communication with other government agencies to obtain the latest information and/or guidelines. Lobby local, State and Federal entities for additional resources. Retain the ultimate responsibility for the management of this plan.
Chief Financial Officer	Oversees all agency financial revenues and expenses, ensures financial compliance with contractual terms, financial forecasting and budgeting, and the procurement of all goods (including PPE and cleaning resources) and services necessary for implementation of the Plan.
Chief Operating Officer (COO) of Rail	Manage day to day operations and maintenance for Rail. Direct the implementation of this plan for Rail. Evaluate the performance of this plan for Rail. Establish core roles and responsibilities to ensure business continuity; Make the decision to limit or shut down service when absence rates or other factors threaten safety or business continuity.

Chief Operating Officer (COO) of Transit	Manage day to day operations and maintenance for Transit. Direct the implementation of this plan for Transit. Evaluate the performance of this plan for Transit. Establish core roles and responsibilities to ensure business continuity. Make the decision to limit or shut down service when absence rates or other factors threaten safety or business continuity.
General Counsel	Interpret applicability of existing laws, regulations, emergency orders, etc., to ensure agency policies and practices are in compliance. Oversees Risk and Workers' Compensation Department.
Human Resources	Maintain personnel medical records including vaccination and testing status. Develop, implement, adjust, and communicate workplace sick leave, attendance, healthcare, return to work, and remote work policies and protections. These include: Employer or government-sponsored leave benefits employees may be entitled to receive when sick or required to quarantine, for example Families First Coronavirus Response Act (FFCRA) etc. Actively encourage sick employees to stay home if the condition warrants it; Ensure that sick leave policies are flexible and consistent with public health guidance and that employees are aware of these policies so they are more likely to stay home when required/needed. Respond to workers' concerns about sick leave, and other related issues that may arise. Work with insurance companies providing employee health benefits and state and local health agencies to provide

	information to employees about medical care in the event of an infectious disease outbreak.
Information Technology (IT) Department	Oversees the management of technology and computer systems that support the Plan; Establish infrastructure to support employees that have been approved for working remotely; Make web-based/VPN access available to allow secure network access from home if necessary; Set up a system to facilitate virtual conferences for Board and other meetings.
Marketing Department	Oversees the communication and distribution of information internally and externally as it relates to the Plan.
Planning Department	Oversees internal planning efforts and coordinates with external stakeholders to ensure safety concerns, as they relate to the Plan, are addressed in design and location of transit amenities. Evaluates service levels and develops service modification relative to needs, safety concerns, policies and resources. Identify essential bus routes, if reduction of service levels is needed to maintain continuity of operations.
Safety Department	Develop, maintain, and update this plan as needed. Respond to workers' concerns about safety and/or hazards. Assist departments within the agency to provide adequate, usable, department-appropriate informational material about business-essential job functions and worker health and safety, including proper hygiene practices and the use of workplace controls (i.e. PPE).

	Review safety data sheets (SDS) for new chemical product requests as necessary, with guidance from appropriate regulatory agencies.
Supply Chain and Operations	Establish and maintain communication with key vendors and contractors for continuous services and supplies. Increase min/max stock to ensure PPE and cleaning supplies can meet increased demand. Establish mechanism to procure any needed PPE in large quantities on an emergency basis with very short time frames (1-2 days). Ensure timely and accurate delivery of good purchased, and work with vendors to expedite deliveries when possible. Distribute PPE to departments as requested and maintain proper inventory levels to ensure continuity of supply. Communicate with Department Directors/Managers when items are on backorder and/or supplies are low in stock.

4 INFECTION PREVENTION MEASURES

Safety professionals use a framework called the “hierarchy of controls” to select ways of controlling workplace hazards (**Figure 1**). The best way to control a hazard is to systematically remove it from the workplace, rather than relying on workers to reduce their exposure. During a pandemic, or infectious disease outbreak, it may not be possible to eliminate the hazard. Protection measures from most effective to least effective are: Elimination, Substitution, Engineering, Administrative, and PPE.

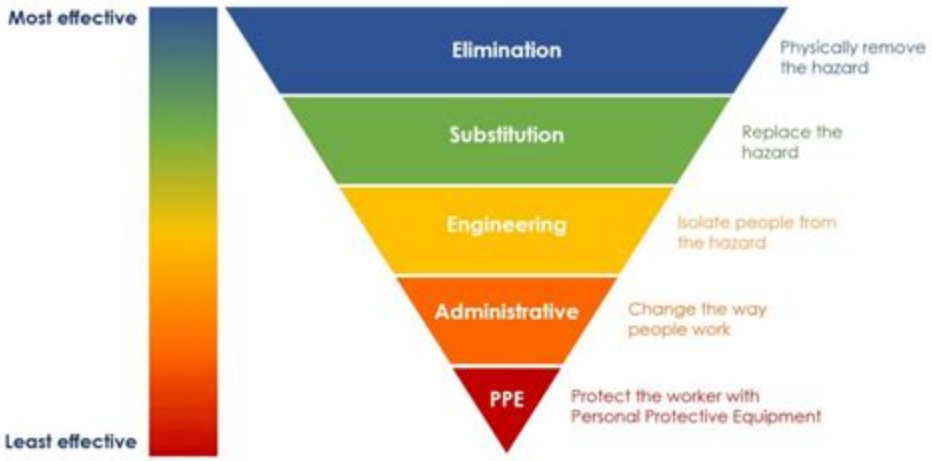


Figure 1: Hierarchy of Controls

There are advantages and disadvantages to each type of control measure when considering the ease of implementation, effectiveness, and cost. In most cases, a combination of control measures will be necessary to protect workers from exposure to a virus or infectious disease.

Engineering controls involve isolating employees from work-related hazards. In workplaces where they are appropriate, these types of controls reduce exposure to hazards without relying on worker behavior.

Administrative controls change the way people interact, depend on compliance of the correct procedure by workers, and are best when combined with other controls. Administrative controls include safe work practices. Safe work practices are procedures used to reduce the duration, frequency, or intensity of exposure to a hazard.

While engineering and administrative controls are considered more effective in minimizing exposure to viruses and infectious diseases, PPE may also be needed to prevent certain

exposures. Correctly using PPE can help prevent some exposures, however it should not take the place of other prevention strategies.

4.1 CLEANING AND DISINFECTING PROTOCOLS

Cleaning with products containing soap or detergent reduces germs on surfaces by removing contaminants and decreases risk of infection from surfaces. Routine cleaning for high-touch surfaces should be done to the maximum extent practicable. Once surfaces have been cleaned, they should be disinfected using a product from EPA List N: https://www.epa.gov/coronavirus/about-list-n-disinfectants-coronavirus-covid-19-0 when supply is available. The manufacturer's instructions should be followed for use of all cleaning and disinfection products (e.g., concentration, application method and contact time, PPE). Diluted household bleach solutions (5 tablespoons per gallon of water), or alcohol solutions with at least 70% alcohol may also be used when appropriate for some surfaces. Approved sanitizing wipes may also be used on high touch surfaces when practical.

At a minimum, thorough cleaning on high traffic areas and high touch surfaces within buildings, transit centers and in vehicles should be performed daily. These areas include shared office spaces and work areas, break rooms, restrooms, stairways, elevators, etc. High touch surfaces in these areas include but is not limited to:

- Doorknobs and handles
- Handrails and grab bars
- Elevator and door buttons
- Seats and benches
- Kiosks, touch screens, timecard machines, etc.
- Copiers and printers
- Keyboards and mice
- Telephones and microphones
- Breakroom tables and microwaves
- Shared tools and equipment
- Bathroom surfaces

Vehicles should be thoroughly cleaned daily using approved products that are known to be effective against viruses and other pathogens. Additional mid-day cleaning of vehicles may be necessary depending on conditions such as positive test rates within the community and cleaning staff availability. Bus/Train Operator areas should be wiped

down with approved sanitizing wipes at the beginning and ending of each shift in addition to daily cleaning.

4.2 PERSONAL HYGIENE

Promoting good personal hygiene is an essential element of reducing the risk of virus transmission. Promoting good personal hygiene includes but is not limited to:

- Providing adequate hand washing stations for employees throughout the system.
- Using alcohol-based hand sanitizer with greater than 60% ethanol or 70% isopropanol as active ingredients when hand washing is not practical.
- Wearing/removing gloves as a supplement to hand washing for tasks such as handling commonly touched items, or when hand washing is not practical.
- Operators should wear gloves before, and sanitize their hands after assisting passengers using a wheelchair or other mobility device.
- Requiring regular hand washing or use of alcohol-based hand sanitizer after using the restroom, after removal of gloves, or prior to meal/smoking breaks.
- Washing hands when they are visibly soiled and after removing any PPE.
- Encouraging respiratory etiquette, including covering coughs and sneezes.
- Discouraging employees from using other workers' phones, desks, offices, or other work tools and equipment, when practical.
- Instructing employees not to share unwashed dishes, drinking glasses, cups or eating utensils.
- Providing hand washing stations for the public at transit centers where practical.

4.3 PHYSICAL BARRIERS

Physical barriers are typically transparent materials such as glass or plexiglass used to reduce the spread of aerosol droplets from coughs and/or sneezes. These barriers are generally used in work areas with high traffic volume or when social distancing may not be practical. The following includes but is not limited to locations that may warrant a physical barrier:

- Check-in counters or kiosks
- Health screening locations (temperature checks, COVID testing)
- Bus Operator area near farebox
- Lobby, reception, and Transit Store areas between employees and the public
- Workstations or cubicles that are less than 6 feet between workers
- Storeroom counter between general employees and clerks

- Any practical location where individuals are unable to physically distance

4.4 SOCIAL DISTANCING

Social distancing is a strategy to reduce virus transmission by physically separating individuals from one another. Social distancing should be a minimum of 6-feet when practicable. The following includes but is not limited to measures that may be taken to promote social distancing:

- Install floor markings, signs, arrows, etc. that inform individuals preferred path of travel and standing/sitting locations.
- When practicable, maintain normal service levels, add service, or use larger vehicles to enable passengers to distance from each other while onboard.
- Reduce onboard maximum occupancy to support physical distancing.
- Communicate the updated ridership practices and any changes to the frequency of service timetables to the public.
- Request passengers to avoid standing or sitting within six feet of operators, including moving the standee line aft where appropriate.
- Encourage passengers to purchase tickets through electronic or cashless ticketing system (Pronto App) to limit time at farebox.
- Permit rear door boarding for buses not yet equipped with physical (germ) barriers or as needed.
- Allow/encourage passengers to verbally request a stop to avoid having to touch the stop request signal.
- Utilize single passenger trips for ADA passengers on Access.
- Conduct fare checks at station platforms instead of inside vehicles.
- Limit public access to MTS non-revenue facilities, and lobbies.
- Reconfigure, or restrict indoor common areas.
- Limit number of occupants indoors for training or other purposes.
- Increase distance between tables/chairs in breakrooms to separate employees and discourage congregating during breaks.
- Where possible, create outdoor break areas for employees with shade/rain covers and seating.

4.5 FACE COVERINGS

Face covering means a surgical mask, a medical procedure mask, a respirator worn voluntarily, or a tightly woven fabric or non-woven material of at least two layers that

completely covers the nose and mouth and is secured to the head with ties, ear loops, or elastic bands that go behind the head or ears. Gaiters may be worn as long as there are at least two layers of fabric, or it is folded to make two layers. A face covering is a solid piece of material without vents, slits, visible holes, or punctures, and must fit snugly over the nose, mouth, and chin with no large gaps on the outside of the face. A face covering does not include a scarf, ski mask, balaclava, bandana, turtleneck, collar, or single layer of fabric.

Employees may be required to wear clean, undamaged face coverings and ensure they are properly worn over the nose and mouth in various situations depending on current requirements issued by Federal, State, or local authorities. Some conditions that may require individuals to wear a face covering include but is not limited to:

- When conducting personal health screenings
- When inside a public transit vehicle or at a public transit station
- When indoors in common work areas, meeting rooms, hallways, elevators, etc.
- When outdoors and less than six feet away from another person
- When unvaccinated

The following may be exceptions to the use of face coverings:

- While actively eating or drinking, provided employees are at least six feet apart.
- When use of a face covering would affect the safe operation of a vehicle and/or equipment.
- Employees who cannot wear face coverings due to a medical or mental health condition or disability, or who are hearing-impaired or communicating with a hearing-impaired person. Upon request, employees may ask for alternatives to be considered by contacting Human Resources. Reasonable modifications will be made on a case-by-case basis as required by law.

Additionally, employees may wear a face covering at their discretion as long as it is appropriate for the business environment and does not interfere with the safe operation of a vehicle or other equipment. Retaliation for the optional use of a face covering regardless of vaccination status is illegal.

4.6 ALTERNATIVE AND REMOTE WORK

Minimizing personal contact among workers, clients, and customers by replacing face-to-face interactions with virtual communications should be utilized when practicable. The following includes but is not limited to alternative work suggestions:

- Limit customers' and the public's access to the worksite, or restrict access to only certain workplace areas, where appropriate.
- Temporarily suspend in person ADA eligibility evaluations.
- Discontinue nonessential travel to locations with ongoing COVID-19 outbreaks.
- Replace in-person meetings with conference calls/virtual meetings (Zoom, WebEx, Teams, etc.)
- Stagger employee working hours and breaks, in compliance with wage and hour regulations, to promote physical distancing protocols.
- Relocate business activities outdoors when practical
- Permit remote work for administrative and management staff

4.7 PERSONAL PROTECTIVE EQUIPMENT (PPE)

While engineering and administrative controls are considered more effective in minimizing exposure to SARS-CoV-2, PPE may also be needed to reduce chance of exposure. PPE is considered the last line of defense and should not take the place of other prevention strategies. Examples of PPE include: gloves, goggles, face shields, or face masks. Recommendations for PPE specific to occupations or job tasks may change depending on job type, job location, updated risk assessments for workers, and new information on PPE effectiveness in preventing the spread of COVID-19 or other viruses.

All types of PPE must be:

- Selected based upon the hazard to the worker,
- Properly fitted,
- Consistently and properly worn when required,
- Regularly inspected, maintained, and replaced, as necessary, and
- Properly removed, cleaned, and stored or disposed of, as applicable, to avoid contamination of self, others, or the environment.

4.8 PERSONAL HEALTH SCREENINGS

MTS may ask employees to evaluate their health before reporting to work. Health screenings may include non-contact temperature checks, virus testing, or reporting of symptoms associated with being ill such as fever, cough, sore throat, body ache, etc. All health screenings shall be provided to employees at no cost. Screeners should avoid close contact with employees by using physical barriers when practical. Both screeners and employees should wear face coverings during the screening. Employees who

exhibit symptoms or other signs of infection must be immediately removed from the workplace and sent for professional medical testing/evaluation before being permitted to return to the workplace.

4.9 AIR QUALITY

Managing indoor air quality can be complex. Indoor air quality can be affected by several variables that cannot always be easily controlled or changed. HVAC design, availability of fresh air, ambient temperatures, and humidity, can all affect indoor air quality. Generally speaking, indoor air quality can be improved through the following methods:

- Reduce/remove source(s) of airborne viruses
    - Reduce number of occupants that may be sick/contagious
    - Use masks/face coverings to reduce amount of virus going into air
- Reduce/remove amount of airborne virus through improved filtration
    - Increase MERV rating on air filters to highest practical level without negatively impacting HVAC system(s)
    - Increase scheduled replacement/cleaning of air filters
- Reduce/remove amount of airborne virus through introduction of fresh air
    - Open doors/windows assuming this doesn't increase safety/security risk
    - Adjust HVAC controls to increase outdoor air intake if configurable

5 TRAINING AND COMMUNICATION

Training staff and riders on how to manage and mitigate risks associated with infectious disease is essential. Management works proactively and transparently with labor leadership to ensure employees participate in the identification and evaluation of hazards. This process is primarily conducted through the employee safety committee. Policies and procedures will be communicated as they are developed and are tailored to the education level and language of the intended audience.

5.1 INTERNAL TRAINING & COMMUNICATIONS

MTS uses the following media to communicate and train individuals within the organization:

- Emails
- Bulletin boards
- Text messages
- Virtual and in-person training sessions
- Company intranet

Under the Emergency Temporary Standards (ETS), Cal OSHA requires the following training topics be provided to all employees:

- Policies and procedures to protect employees from COVID-19 hazards and how to participate in the identification and evaluation of those hazards.
- Information regarding COVID-19-related benefits, either from the employer or from federal, state or local government, that may be available to employees impacted by COVID-19. Information on COVID-19 benefits, such as paid sick leave and workers' compensation benefits, is posted on the Department of Industrial Relations' Coronavirus Resources webpage.
- COVID-19 is an infectious disease that can be spread through the air when an infectious person talks or vocalizes, sneezes, coughs or exhales; that COVID-19 may be transmitted when a person touches a contaminated object and then touches their eyes, nose or mouth, although that is less common; and that an infectious person may show no symptoms.
- Proper use of face coverings and the fact that face coverings are not respiratory protective equipment.
- The conditions under which face coverings must be worn at the workplace.
- That employees can request face coverings from the employer at no cost to the employee and can wear them at work regardless of vaccination status, without fear of retaliation.

- That respirators such as N95s are more effective at preventing COVID-19, an airborne disease.
- The employer's policies for providing respirators, and the right of employees who are not fully vaccinated to request a respirator for voluntary use, without fear of retaliation and at no cost to employees.
- When respirators are provided for voluntary use, how to properly wear them and perform a seal check, and the fact that facial hair interferes with a seal.
- The importance of frequent hand washing for at least 20 seconds and use of hand sanitizer when handwashing facilities are not available.
- The symptoms of COVID-19 and the importance of not coming to work and of getting tested if an employee has symptoms.
- Information about the employer's COVID-19 policies; how to access COVID-19 testing and vaccination; and the fact that vaccination is effective at preventing COVID-19, protecting against both transmission and serious illness or death.

Temporary or contract workers at MTS facilities are also trained in prevention policies and have necessary PPE. These responsibilities are discussed ahead of time with the contractor or organization supplying contract workers.

5.2 EXTERNAL TRAINING & COMMUNICATIONS

MTS created the Clean Ride Campaign to inform and educate the public on new requirements and prevention measures when using the transit system. MTS uses the following media to communicate the Clean Ride Campaign externally:

- Website
- Digital ads
- Social media
- Local radio and television
- Flyers and ad cards inside vehicles

Messaging topics to inform and educate the public includes but is not limited to:

- Changes in policies
- Precautionary measures the agency is taking.
- Do not ride if you have any indication that you might be ill or have been exposed to an infectious disease; if riding transit is your only way to get help, wear a mask, cough into your elbow, and minimize touching surfaces with your hands.
- Use public transit for essential trips only.
- Wear a cloth mask or facial covering.
- Socially distance from other customers when practical.

- Limit interactions with employees and respect their need to distance from passengers.
- If the vehicle is full, consider taking the next vehicle.
- Encourage passengers to carry alcohol-based hand sanitizer and/or alcohol-based wipes for disinfection of frequently touched surfaces
- Use of contactless fare
- Communicate boarding considerations such as “rear door boarding” on buses

6 REPORTING PROCEDURES

All employees are responsible for promptly reporting to management when they are sick, experiencing flu-like symptoms, or have had a close contact to someone who has tested positive for COVID-19 or other infectious virus. Employees can report symptoms, possible close contacts and hazards without fear of reprisal. Human Resources will provide information regarding COVID-19-related benefits to which the employee may be entitled under applicable federal, state, or local laws. This includes any benefits available under legally mandated sick and vaccination leave, if applicable, workers' compensation law, local governmental requirements, the employer's own leave policies, leave guaranteed by contract, etc.

7 CONTACT TRACING

Following notice of a sick individual, management will conduct an interview(s) with the affected person(s) to determine if there are additional close contacts within the workplace. “Close contact” means being within six feet of a COVID-19 case for a cumulative total of 15 minutes or greater in any 24-hour period within or overlapping with the infectious period, regardless of the use of face coverings, unless close contact is defined by regulation or order of the CDPH. If so, the CDPH definition shall apply. If additional employees are determined to have potentially been exposed or had close contact, MTS will notify employees in writing as soon as possible and no later than within one business day. MTS may require employees who have had such an exposure, seek medical treatment and/or testing. Testing will be conducted at no cost to the employee and conducted during normal working hours (when possible). MTS will require employees and contractors to adhere to applicable isolation and quarantine requirements mandated by Federal, State, or local health agencies. Confidentiality will be maintained and the identity of those affected will not be disclosed to other employees in accordance with HIPPA regulations. Following the notification of employees, Management will investigate the exposure and evaluate workplace conditions to ensure potential hazards are properly mitigated.

8 RETURN TO WORK PROCEDURES FOR CLOSE CONTACT AND POSITIVE TEST

The following return to work criteria shall apply to COVID-19 cases and close contact exposures. Contact MTS Human Resources for any questions related to return to work procedures.

8.1 CLOSE CONTACT FULLY-VACCINATED EMPLOYEES

Employees who are fully vaccinated and have received a booster dose or are vaccinated and not yet eligible for a booster shot, may continue to work following exposure if they are not experiencing symptoms. It is recommended, but not required, that the exposed employee test five days after the most-recent exposure. Following the most recent exposure, the employee must wear a well-fitting N-95 mask or other appropriate face covering and maintain six feet of distance from other at the workplace for fourteen days.

8.2 CLOSE CONTACT UNVACCINATED EMPLOYEES

Unvaccinated employees (including those who have tested positive for COVID-19 within the last 90 days) who have not completed their vaccine series and/or are booster eligible but have not received a booster shot, must quarantine for five days following their most-recent exposure. On the fifth day of quarantine, they should take a COVID-19 rapid test, and may return to work if the results are negative and they have no symptoms. The employee must wear a well-fitting N-95 mask or other appropriate face covering and maintain a six feet distance from others at the workplace for fourteen days.

This applies regardless of whether an employee has previously been excluded or other precautions were taken in response to an employee's close contact or membership in an exposed group. If an order to isolate, quarantine, or exclude an employee is issued by a local or state health official, the employee shall not return to work until the period of isolation or quarantine is completed or the order is lifted.

8.3 EMPLOYEES WHO HAVE TESTED POSITIVE

Employees who have tested positive may return to work if they take and pass a COVID-19 test with the specimen collected five or more days after the initial positive test **and** their symptoms are resolving **and** no fever is present.

If the employee returns to work, they must wear a well-fitting N-95 mask, or other appropriate face covering for a minimum of ten days after the initial positive test.

Employees who continue to test positive, or unable to test between days five and ten, may return to work after day ten if no fever is present and symptoms are resolving.

9 RESPONDING TO VEHICLE AND FACILITY EXPOSURES

For all vehicle and facility considerations below, cleaning and disinfection shall be done using appropriate disinfectants approved by the EPA for effectiveness against the infectious disease. For example EPA's "List N" identifies appropriate disinfectants for use against SARS-CoV-2. PPE, and other instructions required by the manufacturer of the disinfectant shall also be implemented.

9.1 VEHICLE CONSIDERATIONS

The following protocol is for cleaning and disinfecting a vehicle after a person with a virus or infectious disease was known to be in the space:

- Use appropriate lockout procedures to ensure nobody occupies/uses the vehicle while quarantined, such as placing caution/warning signs on or inside the vehicle.
- Park the vehicle in a secured designated area.
- Leave the engine running with HVAC turned on at maximum fan speed.
- Open windows and vehicle doors, if possible.
- Personnel wearing appropriate PPE (mask, gloves, etc.) can enter the vehicle for cleaning/disinfection after a minimum of 30 minutes of having the doors and/or windows open with the HVAC fan running.

9.2 FACILITY AND BUILDING CONSIDERATIONS

The following protocol is for cleaning and disinfecting areas of a facility/building after a person with a virus or infectious disease was known to be in the space:

- Use appropriate lockout procedures to ensure nobody occupies/uses the space while quarantined, such as placing caution/warning signs in the area.
- Consider factors such as the size of the room and the ventilation system design (including flowrate [air changes per hour] and location of supply and exhaust vents) when deciding how long to close off rooms or areas before beginning disinfection.
- Open windows and doors to outside areas if practicable.
- Once an appropriate amount of time has passed based on current guidance/regulations from the CDC, health department, etc., cleaning personnel wearing appropriate PPE (mask, gloves, etc.) can enter to disinfect surfaces.

10 CONTINUITY OF OPERATIONS AND RESTORING MASS TRANSIT SERVICE

10.1 TRACKING EXPENSES

MTS manages financial forecasts, inventory management and PPE stock levels using SAP. Special charge codes should be set up in the accounting module to track infectious disease-related operating and capital expenses, for:

- Reimbursement under federal grant funding such as the CARES Act;
- Documenting where a waiver of FTA regulatory requirements may be required to ensure reimbursement of expended funds; or
- Documenting damages related to infectious disease outbreaks such as COVID-19, that may be eligible in the event that future FEMA grant opportunities become available.

10.2 LONG-TERM FINANCIAL CONSIDERATIONS

MTS will adapt its financial forecasts based on the availability of emergency funding streams such as the federal CARES Act funding for the COVID-19 pandemic. Typically, MTS maintains a healthy 12.5% reserve balance of its operating budget with the intention of bridging any financial gap during periods of unbalanced budgets, until such time as the agency is again financially sustainable.

If the agency is impacted by any infectious disease outbreak, pandemic, financial crisis or other interruption in operation, MTS has this contingency to provide continuity of operations whilst developing strategies to bring recurring revenues in alignment with recurring expenses. Once a recurring revenue stream can be improved or recurring expenses are reduced, reserves will then be replenished back up to 12.5% to maintain long term sustainable operations.

10.3 SUPPLY CHAIN RESILIENCY

The Storeroom Operations department works collaboratively to identify all PPE supplies, cleaning products, and disinfectants for the agency, to provide adequate supplies to employees and then establish sustainable inventory levels. Dedicated staff reviews all PPE materials required twice per week with the intent to ensure PPE materials are in adequate supply to prevent inventory falling below a level where they are unavailable to

employees. MTS forecasts all PPE usage against the existing inventory, consumption projections and lead time forecasts, and develops strategies for replenishment of these materials to ensure adequate supplies.

The supply chain for PPE is anticipated to be strained when there is a mass need for these types of supplies during an infectious disease outbreak. The PPE inventory at MTS will be maintained at significantly higher levels than previous to the COVID-19 pandemic, in anticipation of future supply chain breaks which would impact work tasks that rely on specific PPE.

10.4 DRIVER SHORTAGE

When Bus operators are not available to cover scheduled service due to strike, sick-out, major incident, or other driver shortage. Follow these steps to cover/cancel service:

1. Use SDTC Staff
    a. Use Voluntary Day Off operators
        i. Use all operators with Will Works
        ii. Use the beggar's list to call in day-off operators without Will Works
    b. Use Mandatory Call Back clause in union contract where practicable
    c. Once all union staff has been assigned/refused work, fill in with qualified SDTC supervisors and management
        i. Ensure with Safety Manager that all supervisors and managers are in the DMV Pull Notice program and that all certifications are current (health certificate, VTT, and license)
2. Use contracted operations staff
    a. Work with the Manager of South Bay and East County operations and the Manager of Paratransit and Minibus to find driver/supervisor availability, if any, to cover SDTC-operated routes.
        i. Ensure with each contractor that all employees covering service are in the DMV Pull Notice program and that all certifications are current (health certificate, VTT, and license)
3. Cancel service
    a. Review routes with peak trippers and cancel trippers
    b. Cancel short lines of routes where the full line is served by some blocks
    c. Cancel some blocks on routes with the most blocks, keeping a minimum level of service
    d. Cancel limited stop routes which have local routes covering all stops
    e. Cancel entire routes based on lowest average daily ridership to highest average daily ridership

When availability of bus operators increases, return services back to normal operation in reverse order.

11 RECORDKEEPING

Recordkeeping must be kept confidential in accordance with HIPAA rules and regulations unless disclosure is required or permitted by law. Records will be maintained by the Human Resources Department. MTS will report information about COVID-19 and other applicable health related cases and outbreaks at the workplace to the local health department whenever required by law. MTS will provide any related information requested by the local health department. MTS will report all information to the local health department as required by Labor Code section 6409.6.

12 PLAN REVIEW

This plan should be reviewed annually, and updated when necessary.

Version No.	Issue Date	Reviewer Name and Title
1	March 2021	Natalie Osborn, EHS Specialist
2	June 2022	Jared Garcia, Manager of Safety

13 REFERENCES

American Public Transportation Association. (April 13, 2020). *The COVID-19 Pandemic. Public Transportation Responds: Safeguarding Riders and Employees.*

California Department of Industrial Relations' Occupational Safety and Health Standards Board . (2020). *COVID-19 Prevention – General Industry Safety Order.* State of California, Dept of Industrial Relations (Cal OSHA).

California Dept of Public Health (CDPH). (2020). *COVID-19 Industry Guidance - Public Transit and Intercity Passenger Rail.* State of California, Dept of Industrial Relations (Cal OSHA).

OSHA Publication 3990-03. (2020). *Guidance on Preparing Workplaces for COVID-19.* Retrieved from Occupational Safety and Health Administration (OSHA): https://www.osha.gov/Publications/OSHA3990.pdf

The National Academies of Sciences, E. a. (2014). *Report 769 - A Guide for Public Transportation Pandemic Planning and Response.* Retrieved from The National Academies Press: http://nap.edu/22414

United States Environmental Protection Agency (EPA). (2020, September 10). *List N: Disinfectants for Use Against SARS-CoV-2 (COVID-19)*. Retrieved from Pesticide Registration: https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19#filter_col1

MTS SAFETY PERFORMANCE ANNUAL REVIEW

Board of Directors Meeting
February 16, 2023

Public Transportation Agency Safety Plan(PTASP) - Update

- 49 CFR 673 - Public Transportation Agency Safety Plan
- MTS Board of Directors approved the PTASP on July 30, 2020
- PTASP and subsequent updates, must be signed by the Accountable Executive and approved by the agency's Board of Directors
- MTS (SDTI) PTASP January 2023 Revision 2: Bipartisan Infrastructure Law (2021)

These rules apply to: Recipients or sub-recipients of financial assistance under 49 U.S.C. § 5307 that operate a public transportation system

Federal Transit Administration

BIPARTISAN INFRASTRUCTURE LAW PTASP REQUIREMENTS

- ✓ **Joint Safety Committee:** The Committee is comprised of an equal number of management representatives and front line employees (selected by the Union) responsible for approving the PTASP and any updates.

- ✓ PTASP must include a written **Exposure Control Plan** to minimize exposure of potentially infectious diseases based on the Centers of Disease Control and Prevention guidelines or State health authority.

- ✓ **De-escalation Training** for all transit employees. Tracking and reporting to the National Transit Database of transit worker assaults

- ✓ **Transit Worker Assaults** added as a Safety Performance category

BIPARTISAN INFRASTRUCTURE LAW

This rules apply to: Recipients or sub-recipients of financial assistance under 49 U.S.C. § 5307 that operate a public transportation system

Federal Transit Administration

Safety Performance Measures

3.1.1.1 Safety Performance Measure: Fatalities

- Aspirational target of zero (0) fatalities
- The calendar year (CY) performance target for total fatalities and total fatalities rate per 100,000 revenue miles is to achieve a reduction compared to the previous three Calendar Year average.

YEAR RANGE	TARGET	ACTUAL
2017-2019	Establish Base Line	0.12
2018-2020	< 0.12	0.11
2019-2021	< 0.11	0.08
2020-2022	< 0.08	0.08

Safety Performance Measures

3.1.1.2 Safety Performance Measure: Injuries

- The CY performance target for total number of injuries and injury rate per 100,000 revenue miles is to achieve a reduction compared to the previous three CY average.

YEAR RANGE	TARGET	ACTUAL
2017-2019	Establish Base Line	3.47
2018-2020	< 3.47	3.14
2019-2021	< 3.14	2.86
2020-2022	< 2.86	2.20

Safety Performance Measures

3.1.1.3 Safety Performance Measure: Safety Events

- The CY performance target for total number of safety events and safety events rate per 100,000 revenue miles is to achieve a reduction compared to the previous three CY average.

YEAR RANGE	TARGET	ACTUAL
2017-2019	Establish Base Line	4.65
2018-2020	< 4.65	3.62
2019-2021	< 3.62	2.30
2020-2022	< 2.30	1.83

Safety Performance Measures

3.1.1.4 Safety Performance Measure: System Reliability

- The CY performance target for system reliability rate is to achieve a reduction compared to the previous three calendar years' average. SDTI system reliability targets are calculated using a three-year average of the mean distance of train operations between failures.

YEAR RANGE	TARGET	ACTUAL
2017-2019	Establish Base Line	10,259
2018-2020	> 10,259	11,530
2019-2021	> 11,530	13,463
2020-2022	> 13,463	14,156

Safety Performance Measures

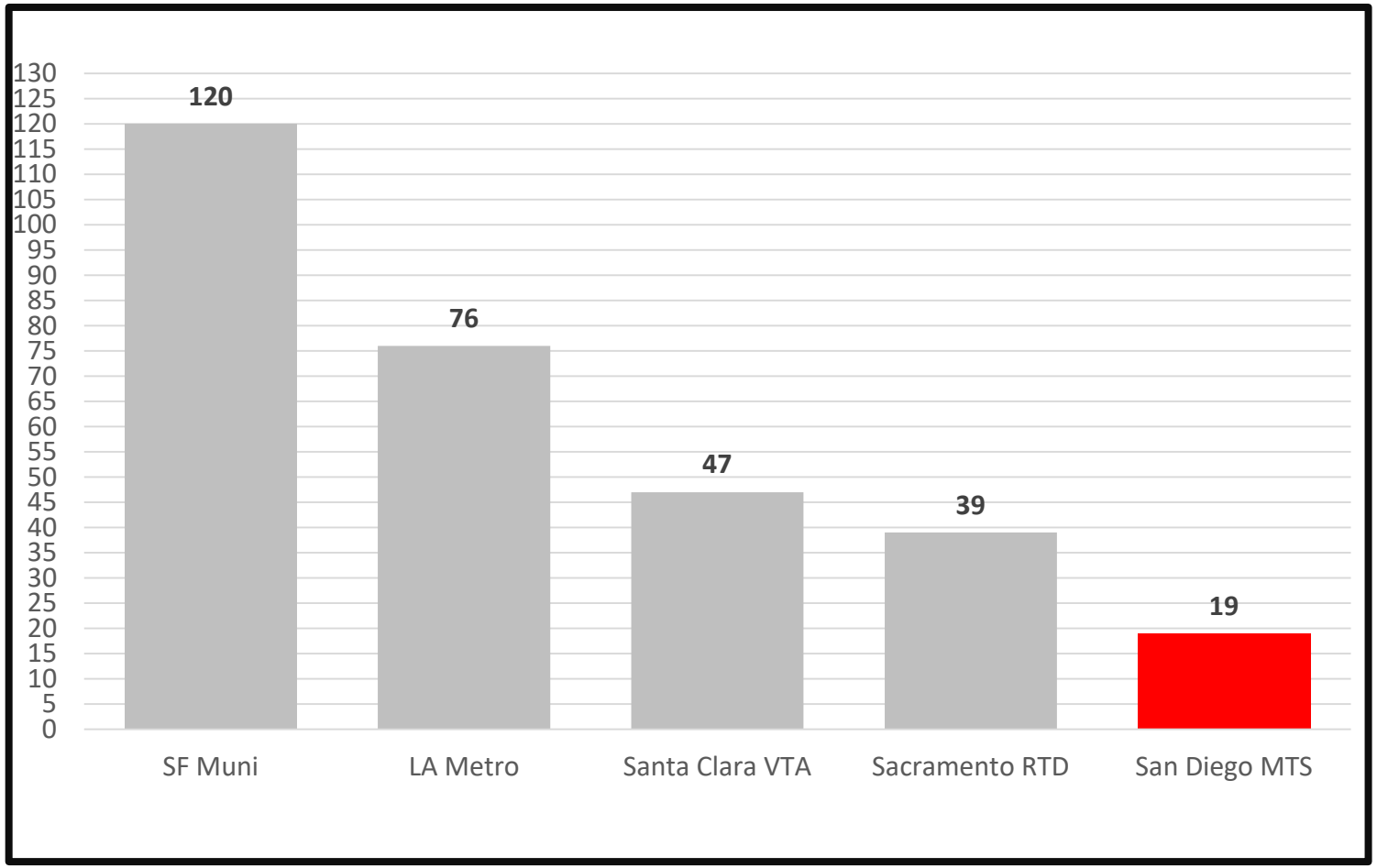
3.1.1.5 Safety Performance Measure: Other

- Emergency Brake Log - The CY performance target for total number of “Emergency Brake Applications” rate per 100,000 revenue miles is to achieve a reduction compared to the previous three CY average.

YEAR RANGE	TARGET	ACTUAL
2017-2019	Establish Base Line	11.51
2018-2020	< 11.51	11.19
2019-2021	< 11.19	11.01
2020-2022	>11.01	11.06

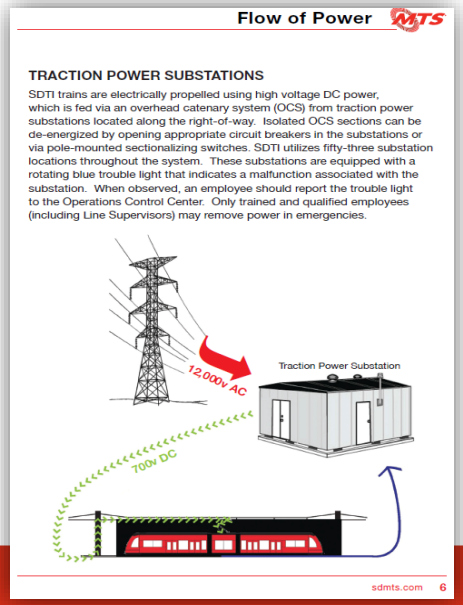
Statewide Rail Accidents

CY 2022



System and Vehicle Familiarization
Outside Agency Personnel Training & Emergency Drills (Bus & Rail)

Agency	Date	Topic
Navy Explosive Ordnance Disposal	February 17, 2022	Radioactive Element Detection
Code Compliance Inspector	August 24, 2022	Scenario Based Training
MTS K-9 Unit	September 20, 2022	Narcotics, Explosive and Controlled Aggression Training
San Diego Sherriff SWAT	November 9, 2022	LRV/Bus Vehicle Familiarization



MTS Video Segment for Electrical Safety Law Enforcement Series

Bus Performance Targets

- Prior goal was to improve upon 3-year baseline (2018-2020)
- Bipartisan Infrastructure Law (BIL) changes to 3-year rolling average
- Performance targets do not consider crimes, fault, or preventability
- All rates are based on vehicle revenue miles
- 22.4 million revenue miles travelled in CY 2022

Performance Targets – Fatalities CY 2022

Mode	Total			Rate		
	Baseline	CY 2021	CY 2022	Baseline	CY 2021	CY 2022
Fixed (MTS)	0	2	0	0	0.02	0
Fixed (Transdev)	0	0	1*	0	0	0.01
Fixed Mini (First)	0	0	0	0	0	0
Paratransit (First)	0	0	0	0	0	0
Total	**0**	**2**	**1***	**0**	**0.01**	**0.004**

Fatality - Death confirmed within 30 days of the event (including suicides).

Baseline total was aspirational goal

Rate per 100,000 vehicle revenue miles.

*Law enforcement determined MTS not at fault for accident.

Performance Targets – Injuries CY 2022

Mode	Total			Rate		
	Baseline	CY 2021	CY 2022	Baseline	CY 2021	CY 2022
Fixed (MTS)	64	51	39	0.65	0.53	0.43
Fixed (Transdev)	68	39	53	0.65	0.38	0.54
Fixed Mini (First)	4	4	1	0.34	0.33	0.09
Paratransit (First)	4	0	4	0.09	0.00	0.16
Total	**140**	**94**	**97**	**0.51**	**0.41**	**0.43**

Injury - Any damage or harm to persons that requires immediate medical attention away from the scene because of a reportable event must be reported as an injury, whether or not the person appears to be injured.

Rate per 100,000 vehicle revenue miles.

Performance Targets – Safety Events CY 2022

Mode	Total			Rate		
	Baseline	CY 2021	CY 2022	Baseline	CY 2021	CY 2022
Fixed (MTS)	65	53	47	0.66	0.55	0.52
Fixed (Transdev)	69	45	55	0.66	0.44	0.56
Fixed Mini (First)	4	2	1	0.34	0.17	0.09
Paratransit (First)	5	0	5	0.11	0.00	0.20
Total	**143**	**100**	**108**	**0.55**	**0.43**	**0.48**

Safety Event - Collisions that meet NTD thresholds for injuries, fatalities, property damage, or evacuation; vehicle towed from the scene involving a transit revenue vehicle; fires; hazardous materials spills, acts of God; evacuations for life safety reasons; other safety events listed in NTD policy manual.

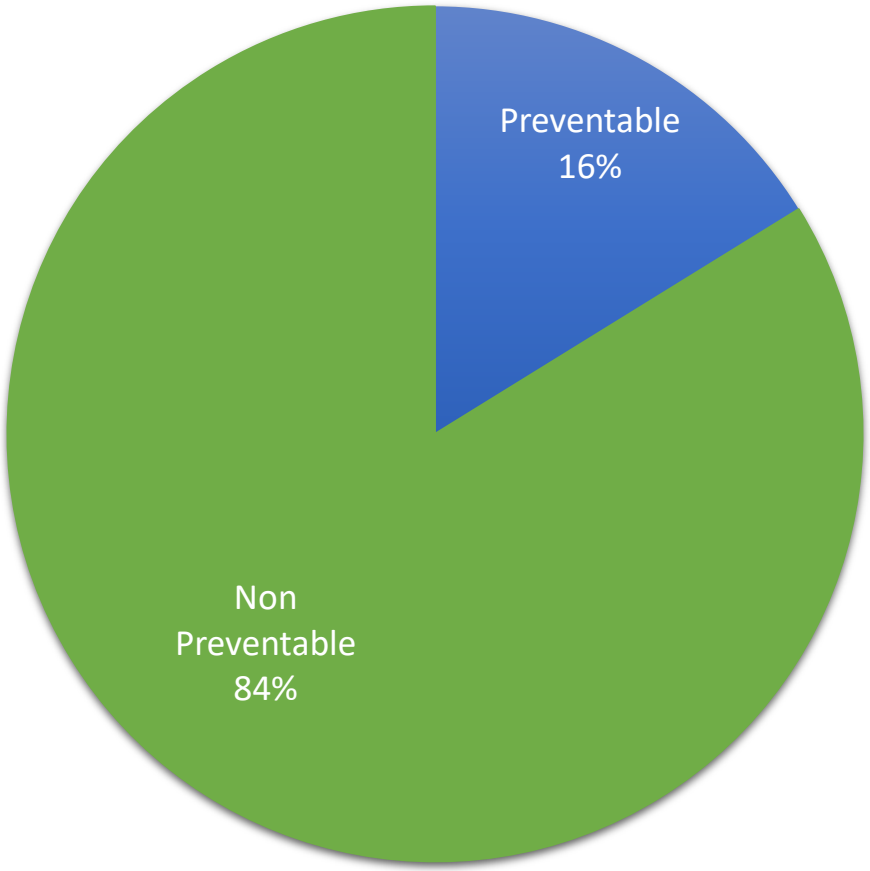
Rate per 100,000 vehicle revenue miles.

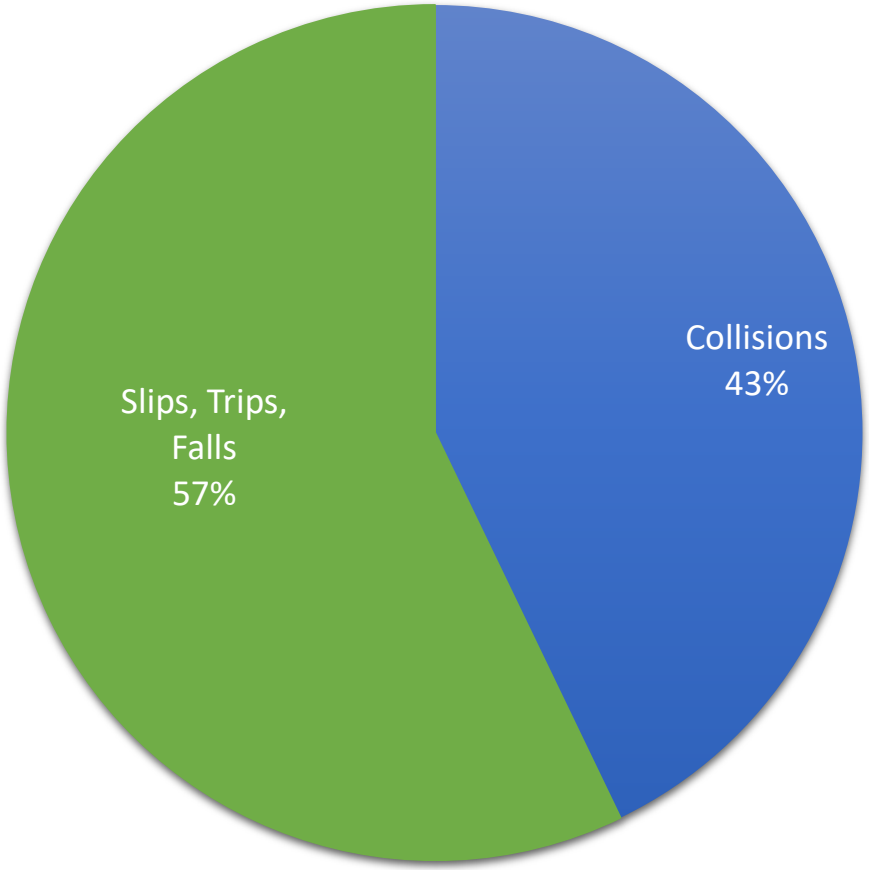
Performance Targets – System Reliability CY 2022

Mode	Rate		
	Baseline	CY 2021	CY 2022
Fixed (MTS)	4,700	6,982	6,832
Fixed (Transdev)	6,000	8,336	6,614
Fixed Mini (First)	7,500	8,654	7,948
Paratransit (First)	32,000	50,365	32,727
Total	**6,600**	**8,271**	**7,447**

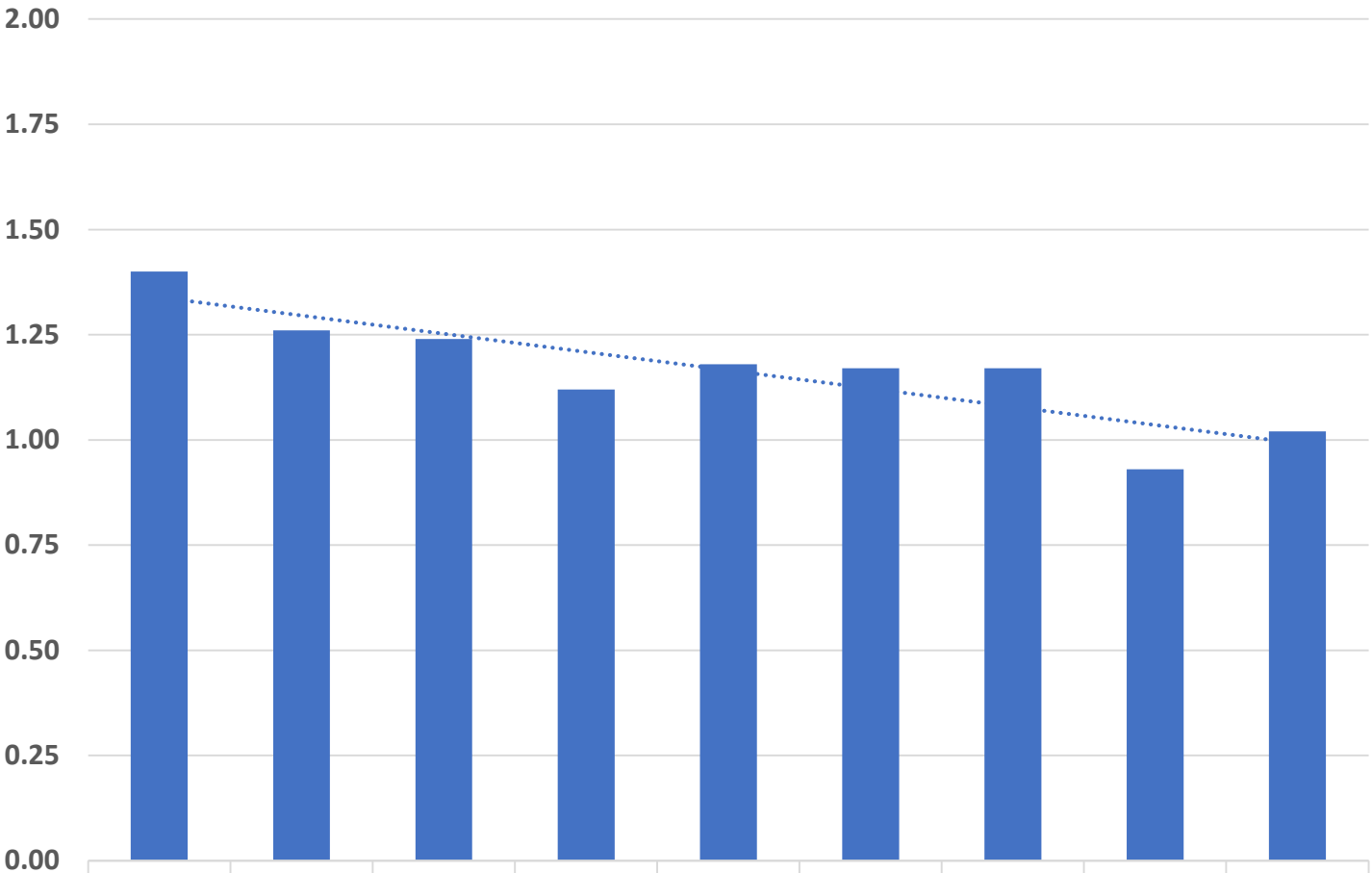
System Reliability - Distance between major mechanical failures, is measured as revenue miles operated divided by the number of major mechanical failures.

Performance Targets – Preventability & Type



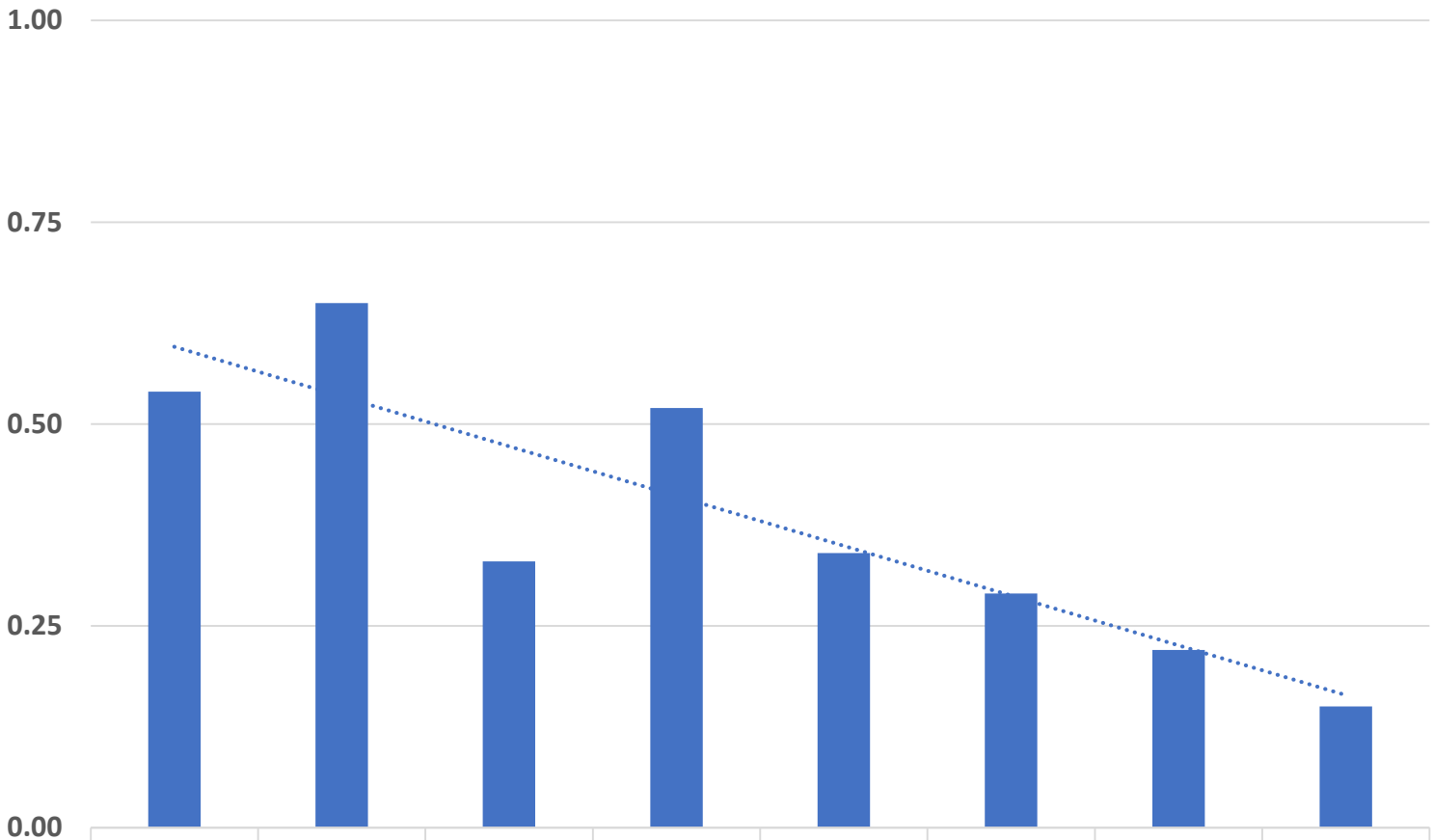


Fixed Route Preventable Accidents - KPI



	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22
Fixed Route	1.4	1.26	1.24	1.12	1.18	1.17	1.17	0.93	1.02

Rapid Preventable Accidents – PIP Goal



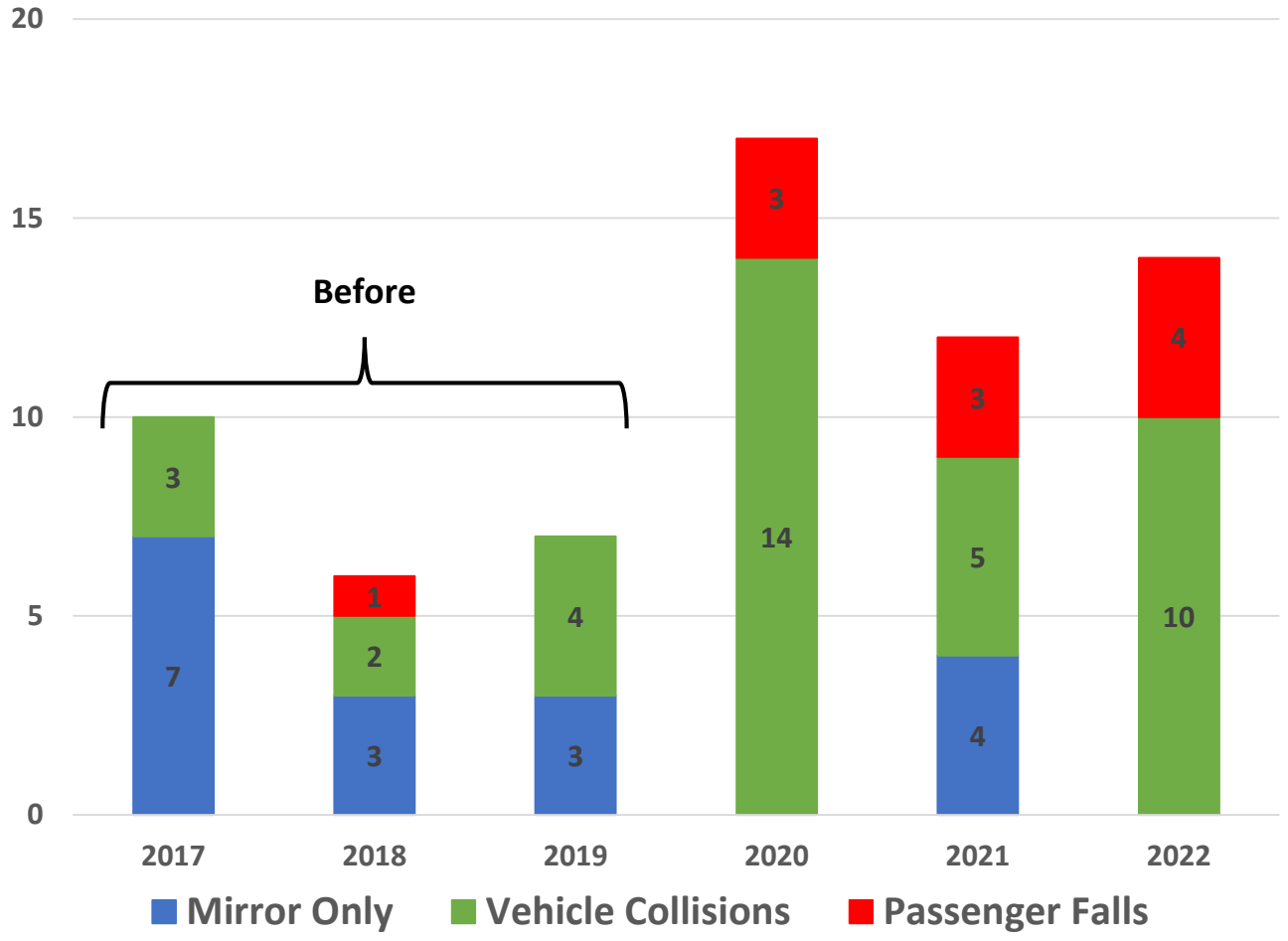
	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22
Rapid	0.54	0.65	0.33	0.52	0.34	0.29	0.22	0.15

El Cajon Blvd Bus Only Lane Pilot

- Started January 2020 as 18-month bus/bike lane pilot project
- Continuation of original vision for SANDAG's *Mid-City Rapid* project, added bus bulb-outs, right turn lanes, and signal priority
- Primary goal was to improve travel time and on-time performance

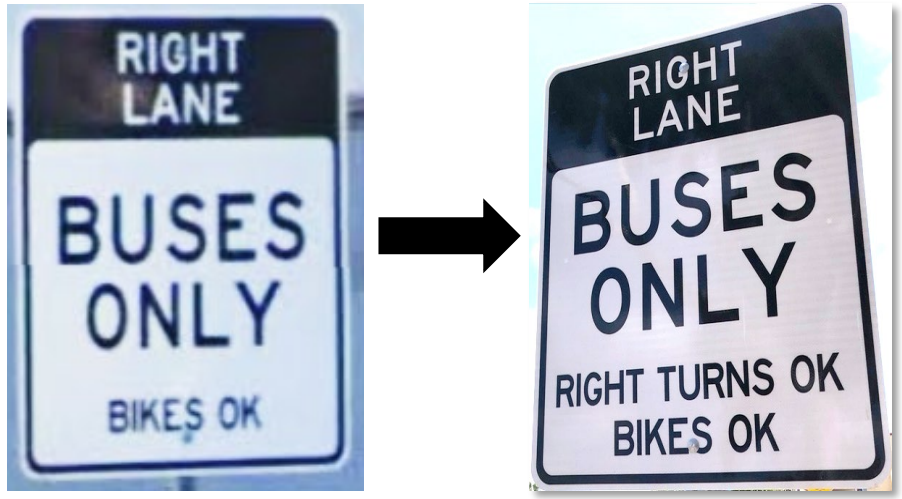
El Cajon Blvd Bus Only Lane Results

- More consistent travel times and improved OTP, with avg trip time reduced from 17 to 15 minutes
- Zero pedestrian or bike accidents
- Accident rate increased from 7.67 to 14.33 per year
- Passenger falls increased from 0.33 to 3.33 per year



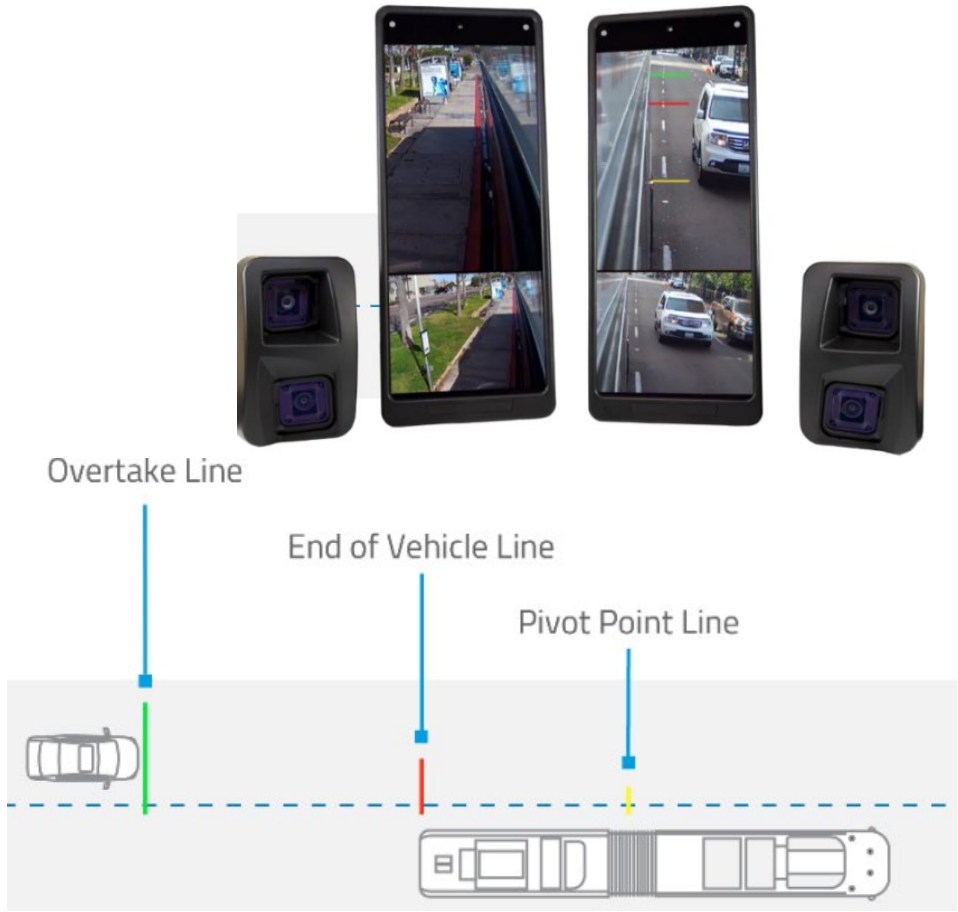
El Cajon Blvd Bus Only Lane Project Mitigations

- Implemented bus only lane training
- Restriped multiple lanes, added signage “right turns ok”, added bike sharrows and right turn arrows
- Installed caution decal on back of Rapid 215 buses
- Bus only lane now a permanent project
- Accidents reduced 18% from 2020 to 2022
- Staff to continue mitigation efforts



Electronic Mirror Pilot Begins April 2023

- Camera/monitor system could eventually replace external mirrors
- Improved visibility - less glare and brighter at night could reduce accidents and complaints for unsafe lane changes
- Slimmer exterior profile allows buses to get closer to curb line – reducing gap for passengers entering/exiting bus



CHP Annual Terminal Inspections

- Vehicle inspection and repair history
- Commercial licensing and medical exams
- Training records, driving hours, drug & alcohol testing
- 4 of 5 terminals passed inspection. First Transit received “Unsatisfactory” due to one driver record & three uncompleted log books

Electric Bus Emergency Responder Training

Facility Orientation

Vehicle Familiarization

Electrical Shutoff

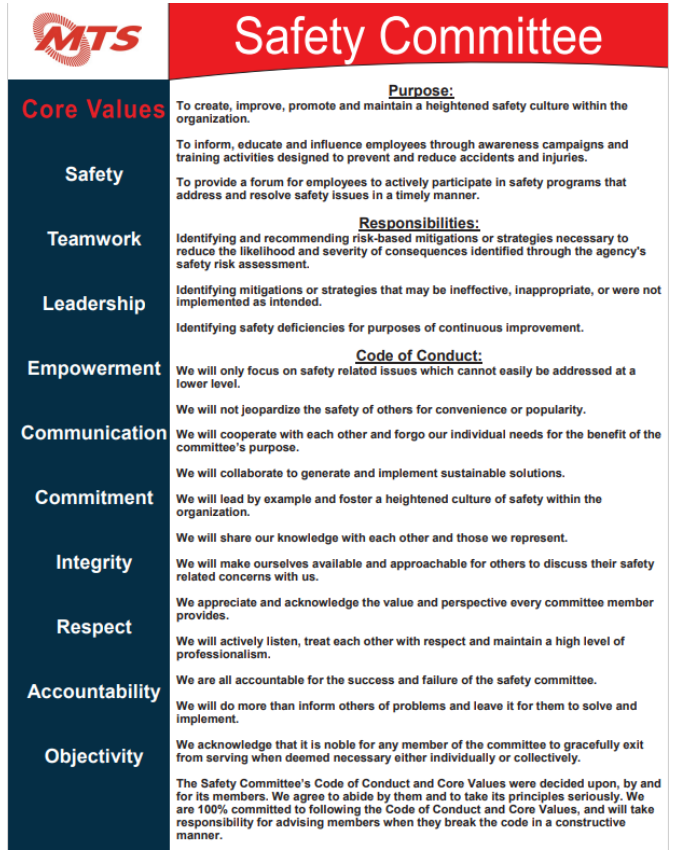
Bus – Employee Training and Recognition

Apprentice Graduation

Safe Driver Awards

Employee Safety Committee Changes

- Equal number of union and management representatives with standardized responsibilities
- All committees were reconfigured July 2022
- New committee required to approve safety plan prior to Dec 31, 2022
- All committees approved safety plan in November 2022



MTS

Safety Committee

Core Values

Safety

Teamwork

Leadership

Empowerment

Communication

Commitment

Integrity

Respect

Accountability

Objectivity

Purpose:

To create, improve, promote and maintain a heightened safety culture within the organization.

To inform, educate and influence employees through awareness campaigns and training activities designed to prevent and reduce accidents and injuries.

To provide a forum for employees to actively participate in safety programs that address and resolve safety issues in a timely manner.

Responsibilities:

Identifying and recommending risk-based mitigations or strategies necessary to reduce the likelihood and severity of consequences identified through the agency's safety risk assessment.

Identifying mitigations or strategies that may be ineffective, inappropriate, or were not implemented as intended.

Identifying safety deficiencies for purposes of continuous improvement.

Code of Conduct:

We will only focus on safety related issues which cannot easily be addressed at a lower level.

We will not jeopardize the safety of others for convenience or popularity.

We will cooperate with each other and forgo our individual needs for the benefit of the committee's purpose.

We will collaborate to generate and implement sustainable solutions.

We will lead by example and foster a heightened culture of safety within the organization.

We will share our knowledge with each other and those we represent.

We will make ourselves available and approachable for others to discuss their safety related concerns with us.

We appreciate and acknowledge the value and perspective every committee member provides.

We will actively listen, treat each other with respect and maintain a high level of professionalism.

We are all accountable for the success and failure of the safety committee.

We will do more than inform others of problems and leave it for them to solve and implement.

We acknowledge that it is noble for any member of the committee to gracefully exit from serving when deemed necessary either individually or collectively.

The Safety Committee's Code of Conduct and Core Values were decided upon, by and for its members. We agree to abide by them and to take its principles seriously. We are 100% committed to following the Code of Conduct and Core Values, and will take responsibility for advising members when they break the code in a constructive manner.

Staff Recommendation

- That the Board of Directors approve updates to the Public Transportation Agency Safety Plan (PTASP).

Metropolitan Transit System

Agenda Item No. 17

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

Operations Budget Status Report for December 2022 (Gordon Meyer)

INFORMATIONAL ONLY

Budget Impact

None.

DISCUSSION:

This report summarizes the year-to-date operating results for December 2022 compared to the fiscal year (FY) 2023 budget for the San Diego Metropolitan Transit System (MTS). Attachment A-1 combines the operations', administrations' and other activities' results for December 2022. Attachment A-2 details the December 2022 combined operations' results and Attachments A-3 to A-7 present budget comparisons for each MTS operation. Attachment A-8 details budget comparisons for MTS Administration, and Attachment A-9 provides December 2022 results for MTS's other activities (For Hire Vehicle Administration/San Diego and Arizona Eastern Railway Company).

MTS NET-OPERATING SUBSIDY RESULTS

As indicated within Attachment A-1, for the year-to-date period ending December 2022, MTS's net-operating income favorable variance totaled $3,798,000 (2.7%). Operations produced a $2,370,000 (1.7%) favorable variance and the administrative/other activities areas were favorable by $1,428,000.

MTS COMBINED RESULTS

Operating Revenues. Year-to-date combined revenues through December 2022 were $45,773,000, compared to the year-to-date budget of $45,075,000, representing a $698,000 (1.5%) favorable variance. Year-to-date passenger revenue was favorable by $488,000 (1.5%) through December. Passenger revenue is up by $9,852,000 (40.9%) versus the prior year, partly because September of last year was a free ride month.

Other operating revenue was favorable by $210,000 (1.8%), primarily due to favorable vehicle advertising revenue. Favorable advertising revenue is being partially offset by unfavorable

energy credit revenue. State energy credits are currently trading around $70 per credit, versus the $140 credit price included in the budget.

Operating Expenses. Year-to-date combined expenses through December 2022 were $180,912,000, compared to the budget of $184,012,000, representing a $3,101,000 (1.7%) favorable variance.

Personnel Costs. Year-to-date personnel-related costs totaled $81,565,000, compared to a budgetary figure of $80,554,000, producing an unfavorable variance of $1,011,000 (-1.3%). This is primarily due to unfavorable worker's compensation costs within bus and rail operations as well as unfavorable bus operator wages due to recent wage increases implemented to address the driver shortage.

Outside Services and Purchased Transportation. Total outside services through six months of the fiscal year totaled $59,814,000, compared to a budget of $65,732,000, resulting in a favorable variance of $5,918,000 (9.0%). This is primarily due to favorable purchased transportation costs within fixed route and paratransit operations. Purchased transportation costs are favorable on the fixed route side as a result of service levels being lower than budgeted levels as a result of the driver shortage. Demand for service within paratransit operations has been lower than anticipated as well, resulting in lower expenses. Outside Services costs within Administration are also significantly favorable, primarily due to favorable Pronto software operating and maintenance costs. MTS delayed acceptance of the software, which delayed incurrence of operating and maintenance costs.

Materials and Supplies. Total year-to-date materials and supplies expenses were $7,865,000, compared to a budgetary figure of $7,552,000, resulting in an unfavorable variance of $312,000 (-4.1%). This is primarily due to unfavorable revenue vehicle parts within Rail operations. The unfavorable experience within Rail operations is being partially offset by favorable revenue vehicle parts expenses within Bus operations.

Energy. Total year-to-date energy costs were $24,105,000, compared to the budget of $22,563,000, resulting in an unfavorable variance of $1,541,000 (-6.8%). This is primarily due to unfavorable commodity rates for compressed natural gas (CNG). Electricity expenses are also unfavorable due to high commodity rates versus budget caused by the price of natural gas.

Risk Management. Total year-to-date expenses for risk management were $3,882,000 compared to the budget of $3,837,000, resulting in an unfavorable variance totaling $44,000 (-1.2%).

General and Administrative. The year-to-date general and administrative costs were $2,880,000 through December 2022, compared to a budget of $2,977,000, resulting in a favorable variance of $97,000 (3.3%). This is primarily due to favorable fare materials costs within Administration.

Vehicle and Facility Leases. The year-to-date vehicle and facilities leases costs were $802,000 compared to the budget of $796,000, resulting in a $6,000 (-0.8%) unfavorable variance.

YEAR-TO-DATE SUMMARY

The December 2022, year-to-date net-operating income totaled a favorable variance of $3,798,000 (2.7%). These factors include favorable variances in passenger revenue, other revenue, outside services, and general and administrative costs; partially offset by unfavorable variances in personnel, materials and supplies, energy, risk management costs, and vehicle/facility lease costs.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachment: A. Comparison to Budget

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

MTS
CONSOLIDATED

COMPARISON TO BUDGET - FISCAL YEAR 2023
DECEMBER 31, 2022
(in $000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	$ 33,924	$ 33,437	$ 488	1.5%
Other Revenue	11,849	11,639	210	1.8%
Total Operating Revenue	**$ 45,773**	**$ 45,075**	**$ 698**	**1.5%**
Personnel costs	$ 81,565	$ 80,554	$ (1,011)	-1.3%
Outside services	59,814	65,732	5,918	9.0%
Materials and supplies	7,865	7,552	(312)	-4.1%
Energy	24,105	22,563	(1,541)	-6.8%
Risk management	3,882	3,837	(44)	-1.2%
General & administrative	2,880	2,977	97	3.3%
Vehicle/facility leases	802	796	(6)	-0.8%
Administrative Allocation	-	-	-	0.0%
Total Operating Expenses	**$ 180,912**	**$ 184,012**	**$ 3,101**	**1.7%**
Operating Income (Loss)	**$ (135,138)**	**$ (138,937)**	**$ 3,798**	**2.7%**
Total Non-Operating Activities	**689**	**485**	**205**	**42.2%**
Income (Loss) before Capital Contributions	**$ (134,449)**	**$ (138,452)**	**$ 4,003**	**-2.9%**

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS
CONSOLIDATED
COMPARISON TO BUDGET - FISCAL YEAR 2023
DECEMBER 31, 2022
(in $000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	$ 33,924	$ 33,437	$ 488	1.5%
Other Revenue	595	630	(36)	-5.7%
Total Operating Revenue	**$ 34,519**	**$ 34,067**	**$ 452**	**1.3%**
Personnel costs	$ 68,340	$ 67,228	$ (1,112)	-1.7%
Outside services	49,128	54,046	4,918	9.1%
Materials and supplies	7,836	7,536	(300)	-4.0%
Energy	23,512	22,035	(1,477)	-6.7%
Risk management	3,384	3,248	(136)	-4.2%
General & administrative	463	511	48	9.4%
Vehicle/facility leases	684	661	(23)	-3.5%
Administrative Allocation	16,828	16,828	-	0.0%
Total Operating Expenses	**$ 170,175**	**$ 172,094**	**$ 1,919**	**1.1%**
Operating Income (Loss)	**$ (135,656)**	**$ (138,027)**	**$ 2,370**	**1.7%**
Total Non-Operating Activities	**71**	**409**	**(338)**	**-82.7%**
Income (Loss) before Capital Contributions	**$ (135,586)**	**$ (137,618)**	**$ 2,032**	**-1.5%**

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS
BUS - DIRECTLY OPERATED (SAN DIEGO TRANSIT CORP.)
COMPARISON TO BUDGET - FISCAL YEAR 2023
DECEMBER 31, 2022
(in $000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	$ 9,169	$ 10,647	$ (1,478)	-13.9%
Other Revenue	25	72	(46)	-64.7%
Total Operating Revenue	**$ 9,194**	**$ 10,719**	**$ (1,525)**	**-14.2%**
Personnel costs	$ 42,314	$ 41,752	$ (562)	-1.3%
Outside services	850	991	142	14.3%
Materials and supplies	3,190	3,630	440	12.1%
Energy	4,876	4,129	(747)	-18.1%
Risk management	1,506	1,482	(24)	-1.7%
General & administrative	201	223	23	10.2%
Vehicle/facility leases	215	196	(19)	-9.6%
Administrative Allocation	3,899	3,899	-	0.0%
Total Operating Expenses	**$ 57,051**	**$ 56,303**	**$ (748)**	**-1.3%**
Operating Income (Loss)	**$ (47,856)**	**$ (45,584)**	**$ (2,273)**	**-5.0%**
Total Non-Operating Activities	**(86)**	**252**	**(338)**	**-134.1%**
Income (Loss) before Capital Contributions	**$ (47,942)**	**$ (45,331)**	**$ (2,611)**	**5.8%**

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS
RAIL (SAN DIEGO TROLLEY INC.)
COMPARISON TO BUDGET - FISCAL YEAR 2023
DECEMBER 31, 2022
(in $000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	$ 13,472	$ 10,909	$ 2,563	23.5%
Other Revenue	569	558	11	1.9%
Total Operating Revenue	**$ 14,041**	**$ 11,467**	**$ 2,573**	**22.4%**
Personnel costs	$ 25,607	$ 25,064	$ (543)	-2.2%
Outside services	3,222	3,479	257	7.4%
Materials and supplies	4,625	3,837	(788)	-20.5%
Energy	13,222	12,827	(395)	-3.1%
Risk management	1,863	1,752	(112)	-6.4%
General & administrative	248	278	30	10.8%
Vehicle/facility leases	285	266	(19)	-7.2%
Administrative Allocation	11,487	11,487	-	0.0%
Total Operating Expenses	**$ 60,560**	**$ 58,989**	**$ (1,570)**	**-2.7%**
Operating Income (Loss)	**$ (46,519)**	**$ (47,522)**	**$ 1,003**	**2.1%**
Total Non-Operating Activities	**-**	**-**	**-**	**-**
Income (Loss) before Capital Contributions	**$ (46,519)**	**$ (47,522)**	**$ 1,003**	**-2.1%**

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS
BUS - CONTRACTED SERVICES (FIXED ROUTE)
COMPARISON TO BUDGET - FISCAL YEAR 2023
DECEMBER 31, 2022
(in $000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	$ 10,731	$ 11,421	$ (691)	-6.0%
Other Revenue	-	-	-	-
Total Operating Revenue	**$ 10,731**	**$ 11,421**	**$ (691)**	**-6.0%**
Personnel costs	$ 336	$ 331	$ (5)	-1.5%
Outside services	38,595	42,397	3,802	9.0%
Materials and supplies	21	70	48	69.5%
Energy	4,953	4,546	(406)	-8.9%
Risk management	-	-	-	-
General & administrative	4	4	(0)	-7.7%
Vehicle/facility leases	12	27	15	54.0%
Administrative Allocation	1,226	1,226	-	0.0%
Total Operating Expenses	**$ 45,148**	**$ 48,601**	**$ 3,453**	**7.1%**
Operating Income (Loss)	**$ (34,418)**	**$ (37,180)**	**$ 2,762**	**7.4%**
Total Non-Operating Activities	**-**	**-**	**-**	**-**
Income (Loss) before Capital Contributions	**$ (34,418)**	**$ (37,180)**	**$ 2,762**	**-7.4%**

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS
BUS - CONTRACTED SERVICES (PARATRANSIT)
COMPARISON TO BUDGET - FISCAL YEAR 2023
DECEMBER 31, 2022
(in $000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	$ 553	$ 459	$ 94	20.5%
Other Revenue	-	-	-	-
Total Operating Revenue	**$ 553**	**$ 459**	**$ 94**	**20.5%**
Personnel costs	$ 82	$ 81	$ (2)	-1.9%
Outside services	6,304	7,022	718	10.2%
Materials and supplies	-	-	-	-
Energy	461	533	72	13.5%
Risk management	15	15	0	0.3%
General & administrative	10	6	(4)	-74.0%
Vehicle/facility leases	171	171	0	0.1%
Administrative Allocation	216	216	-	0.0%
Total Operating Expenses	**$ 7,260**	**$ 8,044**	**$ 784**	**9.7%**
Operating Income (Loss)	**$ (6,707)**	**$ (7,585)**	**$ 878**	**11.6%**
Total Non-Operating Activities	**-**	**-**	**-**	**-**
Income (Loss) before Capital Contributions	**$ (6,707)**	**$ (7,585)**	**$ 878**	**-11.6%**

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS
CORONADO FERRY
COMPARISON TO BUDGET - FISCAL YEAR 2023
DECEMBER 31, 2022
(in $000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	$ -	$ -	$ -	-
Other Revenue	-	-	-	-
Total Operating Revenue	**$ -**	**$ -**	**$ -**	**-**
Personnel costs	$ -	$ -	$ -	-
Outside services	157	157	-	0.0%
Materials and supplies	-	-	-	-
Energy	-	-	-	-
Risk management	-	-	-	-
General & administrative	-	-	-	-
Vehicle/facility leases	-	-	-	-
Administrative Allocation	-	-	-	0.0%
Total Operating Expenses	**$ 157**	**$ 157**	**$ -**	**0.0%**
Operating Income (Loss)	**$ (157)**	**$ (157)**	**$ -**	**0.0%**
Total Non-Operating Activities	**157**	**157**	**-**	**0.0%**
Income (Loss) before Capital Contributions	**$ -**	**$ -**	**$ -**	**-**

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
ADMINISTRATION
CONSOLIDATED
COMPARISON TO BUDGET - FISCAL YEAR 2023
DECEMBER 31, 2022
(in $000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	$ -	$ -	$ -	-
Other Revenue	10,483	10,401	83	0.8%
Total Operating Revenue	**$ 10,483**	**$ 10,401**	**$ 83**	**0.8%**
Personnel costs	$ 12,997	$ 13,090	$ 93	0.7%
Outside services	10,673	11,654	982	8.4%
Materials and supplies	29	16	(13)	-84.9%
Energy	589	525	(64)	-12.1%
Risk management	470	536	66	12.2%
General & administrative	2,370	2,434	64	2.6%
Vehicle/facility leases	111	122	11	9.0%
Administrative Allocation	(16,842)	(16,842)	-	0.0%
Total Operating Expenses	**$ 10,397**	**$ 11,535**	**$ 1,138**	**9.9%**
Operating Income (Loss)	**$ 86**	**$ (1,135)**	**$ 1,221**	**107.6%**
Total Non-Operating Activities	**852**	**76**	**776**	**1025.0%**
Income (Loss) before Capital Contributions	**$ 938**	**$ (1,059)**	**$ 1,997**	**-188.6%**

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OTHER ACTIVITIES
CONSOLIDATED
COMPARISON TO BUDGET - FISCAL YEAR 2023
DECEMBER 31, 2022
(in $000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	$ -	$ -	$ -	-
Other Revenue	771	608	163	26.9%
Total Operating Revenue	**$ 771**	**$ 608**	**$ 163**	**26.9%**
Personnel costs	$ 228	$ 236	$ 8	3.2%
Outside services	13	32	18	58.5%
Materials and supplies	0	0	0	87.5%
Energy	4	4	(0)	-4.1%
Risk management	27	53	26	49.3%
General & administrative	47	32	(14)	-44.3%
Vehicle/facility leases	7	13	6	44.9%
Administrative Allocation	14	14	-	0.0%
Total Operating Expenses	**$ 340**	**$ 383**	**$ 44**	**11.4%**
Operating Income (Loss)	**$ 432**	**$ 225**	**$ 207**	**-92.2%**
Total Non-Operating Activities	**(234)**	**-**	**(234)**	**-**
Income (Loss) before Capital Contributions	**$ 198**	**$ 225**	**$ (26)**	**-11.8%**

Metropolitan Transit System
FY23 Operating Budget – December 2022
Financial Review

MTS Board of Directors

February 16, 2023

CONSOLIDATED MTS OPERATIONS

COMPARISON TO BUDGET – DECEMBER 31, 2022 - FY 2023

TOTAL OPERATING REVENUES ($000's)

	ACTUAL	BUDGET	VARIANCE	VAR %
Fare Revenue	$ 33,924	$ 33,437	$ 488	1.5%
Other Operating Revenue	$ 11,849	$ 11,639	$ 210	1.8%
Operating Revenue	**$ 45,773**	**$ 45,075**	**$ 698**	**1.5%**

- Fare Revenue
  - Revenue favorable to prior year by $9.9M (40.9%)
  - Passenger revenue at 70.5% of pre-COVID baseline in December
- Other Operating Revenue
  - Favorable vehicle advertising (bus/trolley wraps) and interest revenue
  - Unfavorable state energy credit revenue due to low LCFS credit price

CONSOLIDATED MTS OPERATIONS

COMPARISON TO BUDGET – DECEMBER 31, 2022 - FY 2023

TOTAL OPERATING EXPENSES ($000's)

	ACTUAL	BUDGET	VARIANCE	VAR %
Personnel Costs	$ 81,565	$ 80,554	$ (1,011)	-1.3%
Purchased Transportation	$ 42,906	$ 47,199	$ 4,293	9.1%
Other Outside Services	$ 16,907	$ 18,532	$ 1,625	8.8%
Energy	$ 24,105	$ 22,563	$ (1,541)	-6.8%
Other Expenses	$ 15,429	$ 15,163	$ (266)	-1.8%
Operating Expenses	**$ 180,912**	**$184,012**	**$ 3,101**	**1.7%**

- Personnel – unfavorable worker's compensation costs within Bus and Rail operations and unfavorable bus operator wages due to CBA increase
- Purchased Transportation – favorable for both fixed route and paratransit
- Other Outside Services – favorable Pronto O&M costs, Engines/Transmissions, trolley repair/maintenance costs
- Energy – unfavorable commodity rates for CNG, electricity rates unfavorable as well

CONSOLIDATED MTS OPERATIONS

COMPARISON TO BUDGET – DECEMBER 31, 2022 - FY 2023

TOTAL OPERATING ACTIVITIES ($000's)

	ACTUAL	BUDGET	VARIANCE	VAR %
MTS Operating Revenue	$ 45,773	$ 45,075	$ 698	1.5%
MTS Operating Expenses	$ 180,912	$ 184,012	$ 3,101	1.7%
Total Net Operating Variance	**$ (135,138)**	**$ (138,937)**	**$ 3,798**	**2.7%**

- Net income favorable $3.8M through December
  - Favorable purchased transportation costs expected to continue until midyear adjustment
  - Unfavorable energy cost
  - Favorable interest and advertising expected to offset energy credit revenue declines

- FY23 budget includes $37.3M in stimulus funds to cover structural deficit
  - $37.1M of $37.3 of budgeted FY23 funds drawn to date
  - $174.8M of total $360.0M in CARES/ARP stimulus funds has been spent since apportionment
  - $185.2M in stimulus funds remaining for addressing structural deficits in operating budget

Metropolitan Transit System

Agenda Item No. 18

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

February 16, 2023

SUBJECT:

Chief Executive Officer's Report

INFORMATIONAL

In accordance with Board Policy No. 52, "Procurement of Goods and Services", attached are listings of contracts, purchase orders, and work orders that have been approved within the CEO's authority (up to and including $100,000) for the period January 18, 2023 – February 7, 2023.

CEO Travel Report (since last Board meeting)

N/A

Board Member Travel Report (since last Board meeting)

N/A

EXPENSE CONTRACTS				
Doc #	**Organization**	**Subject**	**Amount**	**Day**
G2709.0-23	SD FOODIES	PARTNERSHIP AGREEMENT	$10,500.00	1/23/2023
PWG348.0-22JOC348-04	VET ENG SVCS	TAYLOR IJ	$14,684.69	1/23/2023
PWG340.1-22	ESS	ADD FUNDS	$60,878.76	1/23/2023
PWG256.7-18	PARADIGM	EXERCISE OY 2	$68,936.28	1/23/2023
G2449.2-21	JAMISON	EX OP YEARS	$25,704.89	1/25/2023
G2604.2-22	COMPULINK	ENTERPRISE UPGRADE AND ADD LICENSES	$62,574.62	1/27/2023
G1947.0-17WOAAE16.08	HDR INC	TIME EXT	$70,000.00	1/31/2023
G2613.1-22	NMS	MGMT TRIAL SDTI	$84,761.88	1/31/2023
PWG347.0-22JOC06	ABCGC	IAD ASPH AND CONCRETE JOC	$98,446.09	2/2/2023
PWG327.1-21	URBAN CORPS	ADD FUNDS	$100,000.00	2/2/2023
PWG324.0-21JOC-24	ABCGC	AUTO AUCTION SECUREMENT	$29,980.96	2/6/2023
G2715.0-23	SKYHAWK IND INC	COURIER SERVICES	$64,892.50	2/6/2023

REVENUE CONTRACTS AND MOUs				
Doc #	**Organization**	**Subject**	**Amount**	**Day**
L0901.0-10.129	RMNG	URBINT GASLAMP	$8,000.00	1/27/2023
L0901.1-10.128	AMART	LEMON GROVE	$2,700.00	1/27/2023
PWB342.1-22	PALM ENG CON	CCO 1 ROE PERMIT AND ENG COST	$29,671.37	1/30/2023
G0868.18-03	NCTD	FUNDS TRANSFER AGREEMENT	$0.00	1/31/2023
G2712.0-23	EXPRESS METAL REC	SCRAP METAL REC SVSC1	$41,335.09	2/2/2023

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4400002210	1/23/2023	W.W. Grainger Inc		G130-SHOP TOOLS	$ 230.51	-	-
4400002211	1/25/2023	W.W. Grainger Inc		G130-SHOP TOOLS	$ 85.48	-	-
4400002212	1/30/2023	W.W. Grainger Inc		G140-SHOP SUPPLIES	$ 135.55	-	-
4400002213	1/31/2023	W.W. Grainger Inc		G130-SHOP TOOLS	$ 484.01	-	-
4400002214	2/6/2023	Office Depot		G200-OFFICE SUPPLIES	$ 59.12	-	-
4400002215	2/7/2023	W.W. Grainger Inc		M180-STATION ELECTRICAL	$ 1,769.13	-	-
4400002216	2/7/2023	Mcmaster-Carr Supply Co		G140-SHOP SUPPLIES	$ 2,285.88	-	-
4500051972	1/18/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 16,649.54	-	-
4500051974	1/18/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 3,998.61	-	-
4500051975	1/18/2023	Parts Authority, LLC		B160-BUS ELECTRICAL	$ 7,869.79	-	-
4500051976	1/18/2023	Jones Roach & Caringella, Inc.		P550-REAL ESTATE	$ 1,750.00	-	-
4500051977	1/18/2023	A to Z Enterprises, Inc.		P210-NON-REV VEH REPAIRS	$ 90.00	-	-
4500051978	1/18/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 992.19	-	-
4500051979	1/18/2023	Muncie Transit Supply		B200-BUS PWR TRAIN EQUIP	$ 75.08	-	-
4500051980	1/18/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 12,918.13	-	-
4500051981	1/18/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 12.61	-	-
4500051982	1/18/2023	Parts Authority, LLC		B160-BUS ELECTRICAL	$ 10,702.92	-	-
4500051983	1/18/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 672.36	-	-
4500051984	1/18/2023	General Signals Inc		M130-CROSSING MECHANISM	$ 6,912.83	-	-
4500051985	1/18/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 533.25	-	-
4500051986	1/18/2023	Gillig LLC		B140-BUS CHASSIS	$ 1,454.11	-	-
4500051987	1/18/2023	Industrial Maintenance Supply LLC	DBE	G150-FASTENERS	$ 328.27	-	-
4500051988	1/18/2023	Kaman Industrial Technologies		G140-SHOP SUPPLIES	$ 204.00	-	-
4500051989	1/18/2023	711 Print Enterprises Inc		G280-FARE MATERIALS	$ 11,206.00	-	-
4500051990	1/18/2023	FinishMaster Inc		F120-BUS/LRV PAINT BOOTHS	$ 3,932.45	-	-
4500051991	1/18/2023	Aztec Fire & Safety		G140-SHOP SUPPLIES	$ 1,696.11	-	-
4500051992	1/18/2023	Southern Counties Lubricants LLC		G170-LUBRICANTS	$ 4,601.40	-	-
4500051993	1/18/2023	Romaine Electric Corporation	Small Business	B160-BUS ELECTRICAL	$ 3,359.90	-	-
4500051994	1/18/2023	Trentman Corporation	Small Business	P280-GENERAL SVC AGRMNTS	$ 1,824.02	-	-
4500051995	1/18/2023	Staples Contract & Commercial Inc		B150-BUS COMM EQUIP.	$ 377.49	-	-
4500051996	1/18/2023	R.S. Hughes Co Inc		G140-SHOP SUPPLIES	$ 47.30	-	-
4500051997	1/18/2023	Sherwin Williams Company		F120-BUS/LRV PAINT BOOTHS	$ 282.20	-	-
4500051998	1/18/2023	Brady Industries of California, LLC		G180-JANITORIAL SUPPLIES	$ 246.05	-	-
4500051999	1/18/2023	Kurt Morgan		G200-OFFICE SUPPLIES	$ 846.00	-	-
4500052000	1/18/2023	Harbor Diesel & Equipment		B200-BUS PWR TRAIN EQUIP	$ 293.21	-	-
4500052001	1/19/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 7,449.35	-	-
4500052002	1/19/2023	Ninyo & Moore	Minority Owned Business	P520-A & E/DESIGN	$ 4,300.00	-	-
4500052003	1/19/2023	Bright Market LLC		I110-INFORMATION TECH	$ 359.96	-	-
4500052004	1/19/2023	Michael A. Anderson		C120-SPECIALTY CONTRACTOR	$ 3,250.00	-	-
4500052005	1/19/2023	Kenneth Place		P130-EQUIP MAINT REPR SVC	$ 435.49	-	-
4500052006	1/19/2023	Home Depot USA Inc		G200-OFFICE SUPPLIES	$ 129.16	-	-
4500052008	1/19/2023	Fastenal Company		G170-LUBRICANTS	$ 868.75	-	-
4500052009	1/19/2023	Knorr Brake Holding Corporation		R140-RAIL/LRV DOORS/RAMP	$ 7,483.24	-	-
4500052010	1/19/2023	W.W. Grainger Inc		R170-RAIL/LRV HVAC	$ 1,280.06	-	-
4500052011	1/19/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 2,345.07	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500052012	1/19/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 5,636.01	-	-
4500052013	1/19/2023	Transit Holdings Inc		B130-BUS BODY	$ 54.06	-	-
4500052014	1/19/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 264.25	-	-
4500052015	1/19/2023	Waxie's Enterprises Inc.		G180-JANITORIAL SUPPLIES	$ 889.48	-	-
4500052016	1/19/2023	Gillig LLC		B160-BUS ELECTRICAL	$ 1,015.02	-	-
4500052017	1/19/2023	Muncie Transit Supply		B130-BUS BODY	$ 52.66	-	-
4500052018	1/19/2023	Bonsall Petroleum Construction Inc		F110-SHOP/BLDG MACHINERY	$ 499.40	-	-
4500052019	1/19/2023	Industrial Maintenance Supply LLC	DBE	G150-FASTENERS	$ 130.82	-	-
4500052020	1/19/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 149.09	-	-
4500052021	1/19/2023	CDW LLC		I110-INFORMATION TECH	$ 3,222.64	-	-
4500052022	1/19/2023	Cummins Pacific LLC		B250-BUS REPAIR PARTS	$ 360.74	-	-
4500052024	1/19/2023	Kaman Industrial Technologies		B120-BUS MECHANICAL PARTS	$ 1,765.65	-	-
4500052025	1/19/2023	Staples Contract & Commercial Inc		G200-OFFICE SUPPLIES	$ 321.03	-	-
4500052026	1/19/2023	Neopart Transit LLC		B120-BUS MECHANICAL PARTS	$ 7,222.50	-	-
4500052027	1/19/2023	SD Shredding Inc	Small Business	I110-INFORMATION TECH	$ 12,707.80	-	-
4500052028	1/20/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 249.71	-	-
4500052029	1/20/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 1,133.98	-	-
4500052030	1/20/2023	Sunbelt Rentals, Inc		F190-LANDSCAPING MAT'LS	$ 1,874.21	-	-
4500052031	1/20/2023	JKL Cleaning Systems	Small Business	G180-JANITORIAL SUPPLIES	$ 22.61	-	-
4500052032	1/20/2023	3rd Generation Embroidery, Inc.		G240-UNIFORM PROCUREMENT	$ 465.90	-	-
4500052033	1/20/2023	Citywide Auto Glass Inc		R120-RAIL/LRV CAR BODY	$ 630.34	-	-
4500052034	1/20/2023	Airgas Inc		G190-SAFETY/MED SUPPLIES	$ 390.31	-	-
4500052035	1/20/2023	Cembre Inc		M120-OVRHEAD CATENARY SYS	$ 1,761.48	-	-
4500052036	1/20/2023	Staples Contract & Commercial Inc		G280-FARE MATERIALS	$ 40.88	-	-
4500052037	1/20/2023	Staples Contract & Commercial Inc		G280-FARE MATERIALS	$ 40.88	-	-
4500052038	1/20/2023	R.S. Hughes Co Inc		G140-SHOP SUPPLIES	$ 1,447.29	-	-
4500052039	1/20/2023	Brady Industries of California, LLC		G190-SAFETY/MED SUPPLIES	$ 671.37	-	-
4500052040	1/20/2023	TAKKT America Holding Inc		G210-OFFICE FURNITURE	$ 2,361.02	-	-
4500052041	1/20/2023	Shilpark Paint Corp.		F190-LANDSCAPING MAT'LS	$ 246.93	-	-
4500052042	1/20/2023	W.W. Grainger Inc		P280-GENERAL SVC AGRMNTS	$ 88.74	-	-
4500052043	1/20/2023	Madden Construction Inc		P280-GENERAL SVC AGRMNTS	$ 535.00	-	-
4500052044	1/20/2023	D's Kustom Sales & Services, LLC		M150-PWR SWITCHES/LOCKS	$ 886.25	-	-
4500052045	1/20/2023	SiteOne Landscape Supply Holding		P280-GENERAL SVC AGRMNTS	$ 343.00	-	-
4500052046	1/20/2023	Annex Warehouse Company, Inc		F120-BUS/LRV PAINT BOOTHS	$ 657.81	-	-
4500052047	1/20/2023	Allied Electronics Inc		R160-RAIL/LRV ELECTRICAL	$ 362.23	-	-
4500052048	1/20/2023	Mouser Electronics Inc		R170-RAIL/LRV HVAC	$ 618.87	-	-
4500052049	1/20/2023	Graybar Electric Co Inc		M180-STATION ELECTRICAL	$ 1,519.28	-	-
4500052050	1/20/2023	Winzer Franchise Company		G140-SHOP SUPPLIES	$ 38.58	-	-
4500052051	1/20/2023	Hitachi Rail STS USA, Inc.		M130-CROSSING MECHANISM	$ 147.34	-	-
4500052052	1/20/2023	W.W. Grainger Inc		G130-SHOP TOOLS	$ 49.29	-	-
4500052053	1/20/2023	Airgas Inc		G190-SAFETY/MED SUPPLIES	$ 259.35	-	-
4500052054	1/20/2023	Laird Plastics, Inc		M180-STATION ELECTRICAL	$ 286.62	-	-
4500052055	1/20/2023	Home Depot USA Inc		G160-PAINTS & CHEMICALS	$ 27.95	-	-
4500052056	1/20/2023	OneSource Distributors, LLC		G180-JANITORIAL SUPPLIES	$ 868.12	-	-
4500052057	1/20/2023	Fastenal Company		G190-SAFETY/MED SUPPLIES	$ 327.90	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500052058	1/20/2023	Professional Contractors Supplies		G160-PAINTS & CHEMICALS	$ 164.82	-	-
4500052059	1/20/2023	Madden Construction Inc		P280-GENERAL SVC AGRMNTS	$ 1,467.00	-	-
4500052060	1/23/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 50.21	-	-
4500052061	1/23/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 1,421.72	-	-
4500052062	1/23/2023	Carmine Bausone DVM Inc.		G120-SECURITY	$ 1,501.50	-	-
4500052063	1/23/2023	Ace Uniforms & Accessories	Small Business	G120-SECURITY	$ 1,623.36	-	-
4500052064	1/23/2023	ISC Applied Systems Corp		R150-RAIL/LRV COMM EQUIP	$ 11,313.75	-	-
4500052065	1/23/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 10,424.57	-	-
4500052066	1/23/2023	Transit Holdings Inc		B130-BUS BODY	$ 10,646.75	-	-
4500052067	1/23/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 1,302.15	-	-
4500052068	1/23/2023	HI-TEC Enterprises		R160-RAIL/LRV ELECTRICAL	$ 1,651.00	-	-
4500052069	1/23/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 2,965.37	-	-
4500052070	1/23/2023	Supreme Oil Company		A120-AUTO/TRUCK GASOLINE	$ 12,709.17	-	-
4500052072	1/23/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 3,615.71	-	-
4500052073	1/23/2023	Michael A. Anderson		C120-SPECIALTY CONTRACTOR	$ 475.00	-	-
4500052074	1/23/2023	Industrial Maintenance Supply LLC	DBE	G150-FASTENERS	$ 160.11	-	-
4500052075	1/23/2023	R.S. Hughes Co Inc		G140-SHOP SUPPLIES	$ 472.76	-	-
4500052076	1/23/2023	Transit Holdings Inc		B130-BUS BODY	$ 572.92	-	-
4500052077	1/23/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 135.12	-	-
4500052078	1/23/2023	W.W. Grainger Inc		G140-SHOP SUPPLIES	$ 69.46	-	-
4500052079	1/23/2023	Gillig LLC		B160-BUS ELECTRICAL	$ 3,214.09	-	-
4500052080	1/23/2023	All In One Poster Company, Inc.		P480-EE MAINTENANCE	$ 655.35	-	-
4500052081	1/23/2023	W.W. Grainger Inc		B130-BUS BODY	$ 940.69	-	-
4500052082	1/23/2023	Kaman Industrial Technologies		B120-BUS MECHANICAL PARTS	$ 158.69	-	-
4500052083	1/23/2023	Jeyco Products Inc		G140-SHOP SUPPLIES	$ 15.45	-	-
4500052084	1/23/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 31.12	-	-
4500052085	1/23/2023	Christopher Stone		G260-MEDIA	$ 10,500.00	-	-
4500052086	1/23/2023	Waytek Inc		G140-SHOP SUPPLIES	$ 114.59	-	-
4500052087	1/24/2023	Rodvold Enterprises Inc.		F190-LANDSCAPING MAT'LS	$ 2,348.49	-	-
4500052088	1/24/2023	Rodvold Enterprises Inc.		F190-LANDSCAPING MAT'LS	$ 1,102.93	-	-
4500052089	1/24/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 2.16	-	-
4500052090	1/24/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 26.63	-	-
4500052091	1/24/2023	Transit Holdings Inc		B130-BUS BODY	$ 1,152.29	-	-
4500052092	1/24/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 832.34	-	-
4500052093	1/24/2023	Sunbelt Rentals, Inc		F190-LANDSCAPING MAT'LS	$ 240.86	-	-
4500052094	1/24/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 1,256.79	-	-
4500052095	1/24/2023	Cummins-Allison		G290-FARE REVENUE EQUIP	$ 149.27	-	-
4500052096	1/24/2023	L&W Industries LLC		M140-WAYSIDE SIGNALS	$ 3,319.22	-	-
4500052097	1/24/2023	San Diego Hydraulics, Inc.		P210-NON-REV VEH REPAIRS	$ 1,592.63	-	-
4500052098	1/24/2023	Graybar Electric Co Inc		M180-STATION ELECTRICAL	$ 3,301.57	-	-
4500052099	1/24/2023	NMS Management Inc	DBE	P150-MAINT. CLEANING	$ 22,147.20	-	-
4500052100	1/24/2023	Cummins Pacific LLC		B140-BUS CHASSIS	$ 3,644.66	-	-
4500052101	1/24/2023	Transit Holdings Inc		B130-BUS BODY	$ 2,433.37	-	-
4500052102	1/24/2023	GMT International Corporation		R230-RAIL/LRV MECHANICAL	$ 13,922.93	-	-
4500052103	1/24/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 162.48	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500052104	1/24/2023	W.W. Grainger Inc		F110-SHOP/BLDG MACHINERY	$ 124.00	-	-
4500052105	1/24/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 2,455.73	-	-
4500052106	1/24/2023	Gillig LLC		B160-BUS ELECTRICAL	$ 405.18	-	-
4500052107	1/24/2023	Jeyco Products Inc		G140-SHOP SUPPLIES	$ 72.47	-	-
4500052108	1/24/2023	Trinity Sling Authority, Inc.		F180-BUILDING MATERIALS	$ 256.25	-	-
4500052109	1/24/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 855.73	-	-
4500052110	1/24/2023	Dell Marketing L.P.		I110-INFORMATION TECH	$ 312.46	-	-
4500052111	1/24/2023	Fastenal Company		G190-SAFETY/MED SUPPLIES	$ 2,681.59	-	-
4500052112	1/24/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 6,192.00	-	-
4500052114	1/24/2023	Fleetwash, Inc		P140-MAINTENANCE, HVAC	$ 37,346.28	-	-
4500052115	1/24/2023	Linkedin Corporation		P450-PERSONNEL SVCS	$ 64,575.00	-	-
4500052116	1/24/2023	Robert Barros		P310-ADVERTISING SERVICES	$ 5,000.00	-	-
4500052117	1/25/2023	ColorID LLC	Small Business	G230-PRINTED MATERIALS	$ 8,971.70	-	-
4500052118	1/25/2023	Transit Holdings Inc		B130-BUS BODY	$ 187.55	-	-
4500052119	1/25/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 1,474.23	-	-
4500052120	1/25/2023	Siemens Mobility, Inc.		R170-RAIL/LRV HVAC	$ 19,451.09	-	-
4500052121	1/25/2023	Home Depot USA Inc		G200-OFFICE SUPPLIES	$ 1,256.34	-	-
4500052122	1/25/2023	Pressnet Express Inc		G230-PRINTED MATERIALS	$ 732.70	-	-
4500052123	1/25/2023	LinguaLinx Language Solutions, Inc.		G230-PRINTED MATERIALS	$ 582.65	-	-
4500052124	1/25/2023	University of San Diego		P310-ADVERTISING SERVICES	$ 100.00	-	-
4500052125	1/25/2023	Data Controls Printworks Inc	Small Business	G230-PRINTED MATERIALS	$ 229.68	-	-
4500052126	1/25/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 1,811.15	-	-
4500052127	1/25/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 139.45	-	-
4500052128	1/25/2023	Industrial Maintenance Supply LLC	DBE	G150-FASTENERS	$ 138.71	-	-
4500052129	1/25/2023	Ace Uniforms & Accessories	Small Business	G120-SECURITY	$ 1,050.55	-	-
4500052130	1/25/2023	B&H Photo & Electronics Corp		R160-RAIL/LRV ELECTRICAL	$ 1,696.57	-	-
4500052131	1/25/2023	Waxie's Enterprises Inc.		G180-JANITORIAL SUPPLIES	$ 495.18	-	-
4500052132	1/25/2023	Staples Contract & Commercial Inc		G200-OFFICE SUPPLIES	$ 154.25	-	-
4500052133	1/25/2023	R.S. Hughes Co Inc		G140-SHOP SUPPLIES	$ 92.32	-	-
4500052134	1/25/2023	W.W. Grainger Inc		G180-JANITORIAL SUPPLIES	$ 693.46	-	-
4500052135	1/25/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 14,344.38	-	-
4500052136	1/25/2023	San Diego Friction Products, Inc.		B110-BUS HVAC SYSTEMS	$ 205.83	-	-
4500052137	1/25/2023	Freeby Signs		B250-BUS REPAIR PARTS	$ 281.36	-	-
4500052138	1/25/2023	Allied Refrigeration Inc		B250-BUS REPAIR PARTS	$ 71.01	-	-
4500052139	1/25/2023	Muncie Transit Supply		B120-BUS MECHANICAL PARTS	$ 28.12	-	-
4500052140	1/25/2023	Charter Industrial Supply Inc	Small Business	G140-SHOP SUPPLIES	$ 216.99	-	-
4500052141	1/25/2023	Prochem Specialty Products Inc	Small Business	G180-JANITORIAL SUPPLIES	$ 859.31	-	-
4500052142	1/25/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 11,663.91	-	-
4500052143	1/25/2023	Brand Makers LLC	Small Business	G260-MEDIA	$ 8,780.82	-	-
4500052144	1/25/2023	Winzer Franchise Company		G150-FASTENERS	$ 139.75	-	-
4500052145	1/25/2023	Shilpark Paint Corp.		G160-PAINTS & CHEMICALS	$ 140.64	-	-
4500052146	1/25/2023	Grah Safe & Lock Inc	Small Business	G200-OFFICE SUPPLIES	$ 20.20	-	-
4500052147	1/25/2023	Antonio's Metal Works, Inc.		P120-BLDG/FACILITY REPRS	$ 4,600.00	-	-
4500052148	1/26/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 16,127.26	-	-
4500052149	1/26/2023	Mohawk Mfg & Supply Co		B120-BUS MECHANICAL PARTS	$ 6.01	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500052150	1/26/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 412.46	-	-
4500052151	1/26/2023	Muncie Transit Supply		B160-BUS ELECTRICAL	$ 55.06	-	-
4500052152	1/26/2023	Transit Holdings Inc		B130-BUS BODY	$ 9,906.33	-	-
4500052153	1/26/2023	Transit Holdings Inc		B130-BUS BODY	$ 134.91	-	-
4500052154	1/26/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 41.93	-	-
4500052155	1/26/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 122.08	-	-
4500052156	1/26/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 3,465.53	-	-
4500052157	1/26/2023	Industrial Maintenance Supply LLC	DBE	G130-SHOP TOOLS	$ 230.66	-	-
4500052158	1/26/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 4,093.66	-	-
4500052159	1/26/2023	Gillig LLC		B160-BUS ELECTRICAL	$ 3,016.40	-	-
4500052160	1/26/2023	Jeyco Products Inc		G150-FASTENERS	$ 74.22	-	-
4500052161	1/26/2023	Mohawk Mfg & Supply Co		B120-BUS MECHANICAL PARTS	$ 241.69	-	-
4500052162	1/26/2023	Waxie's Enterprises Inc.		G130-SHOP TOOLS	$ 4,179.33	-	-
4500052163	1/26/2023	Staples Contract & Commercial Inc		G200-OFFICE SUPPLIES	$ 297.97	-	-
4500052164	1/26/2023	Muncie Transit Supply		B120-BUS MECHANICAL PARTS	$ 97.98	-	-
4500052165	1/26/2023	Kaman Industrial Technologies		G140-SHOP SUPPLIES	$ 28.15	-	-
4500052166	1/26/2023	Fastenal Company		G140-SHOP SUPPLIES	$ 661.24	-	-
4500052167	1/26/2023	W.W. Grainger Inc		G160-PAINTS & CHEMICALS	$ 65.97	-	-
4500052168	1/26/2023	Waxie's Enterprises Inc.		G140-SHOP SUPPLIES	$ 1,917.95	-	-
4500052169	1/26/2023	Charter Industrial Supply Inc	Small Business	B250-BUS REPAIR PARTS	$ 150.13	-	-
4500052170	1/26/2023	USSC Acquisition Corp		B130-BUS BODY	$ 758.10	-	-
4500052171	1/26/2023	Vern Rose Inc		G140-SHOP SUPPLIES	$ 105.06	-	-
4500052172	1/26/2023	Kidde Technologies Inc		B250-BUS REPAIR PARTS	$ 642.94	-	-
4500052173	1/26/2023	Reid and Clark Screen Arts Co		R120-RAIL/LRV CAR BODY	$ 1,301.08	-	-
4500052174	1/27/2023	Siemens Mobility, Inc.		R230-RAIL/LRV MECHANICAL	$ 3,631.23	-	-
4500052175	1/27/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 4,427.09	-	-
4500052176	1/27/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 1,084.90	-	-
4500052177	1/27/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 124.10	-	-
4500052178	1/27/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 2,003.91	-	-
4500052179	1/27/2023	Vehicle Maintenance Program, Inc.	Woman Owned Business	B140-BUS CHASSIS	$ 961.00	-	-
4500052180	1/27/2023	Harbor Diesel & Equipment		B200-BUS PWR TRAIN EQUIP	$ 15,709.95	-	-
4500052181	1/27/2023	Rayne - San Diego Inc		P280-GENERAL SVC AGRMNTS	$ 2,820.00	-	-
4500052182	1/29/2023	Mouser Electronics Inc		B250-BUS REPAIR PARTS	$ 78.92	-	-
4500052184	1/29/2023	W.W. Grainger Inc		F110-SHOP/BLDG MACHINERY	$ 144.17	-	-
4500052185	1/29/2023	Freeby Signs		G250-NOVELTIES & AWARDS	$ 404.06	-	-
4500052186	1/29/2023	Fastenal Company		R230-RAIL/LRV MECHANICAL	$ 2,854.94	-	-
4500052187	1/29/2023	JKL Cleaning Systems	Small Business	F110-SHOP/BLDG MACHINERY	$ 366.33	-	-
4500052188	1/29/2023	Don Oleson Inc	Small Business	B120-BUS MECHANICAL PARTS	$ 700.38	-	-
4500052189	1/29/2023	TK Services Inc		B250-BUS REPAIR PARTS	$ 452.16	-	-
4500052190	1/29/2023	Wesco Distribution Inc		B250-BUS REPAIR PARTS	$ 137.92	-	-
4500052191	1/29/2023	Trentman Corporation	Small Business	M200-YARD FACILITIES	$ 2,444.14	-	-
4500052192	1/29/2023	Hawthorne Machinery Co		P130-EQUIP MAINT REPR SVC	$ 620.00	-	-
4500052193	1/29/2023	Graybar Electric Co Inc		M180-STATION ELECTRICAL	$ 2,382.36	-	-
4500052194	1/29/2023	Continental Locks		P120-BLDG/FACILITY REPRS	$ 269.38	-	-
4500052195	1/29/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 10,781.00	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500052196	1/29/2023	Knorr Brake Holding Corporation		R140-RAIL/LRV DOORS/RAMP	$ 9,977.65	-	-
4500052197	1/30/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 3,633.57	-	-
4500052198	1/30/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 247.48	-	-
4500052199	1/30/2023	Muncie Transit Supply		B160-BUS ELECTRICAL	$ 4.91	-	-
4500052200	1/30/2023	Transit Holdings Inc		B130-BUS BODY	$ 2,447.26	-	-
4500052201	1/30/2023	Annex Warehouse Company, Inc		R240-RAIL/LRV REPR PARTS	$ 1,157.96	-	-
4500052202	1/30/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 1,498.26	-	-
4500052203	1/30/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 2,926.64	-	-
4500052204	1/30/2023	SPX Technologies, Inc.		B250-BUS REPAIR PARTS	$ 455.79	-	-
4500052205	1/30/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 2,965.37	-	-
4500052206	1/30/2023	Supreme Oil Company		A120-AUTO/TRUCK GASOLINE	$ 12,836.58	-	-
4500052207	1/30/2023	Gillig LLC		B140-BUS CHASSIS	$ 1,123.44	-	-
4500052208	1/30/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 1,358.19	-	-
4500052209	1/30/2023	Industrial Maintenance Supply LLC	DBE	G150-FASTENERS	$ 23.56	-	-
4500052210	1/30/2023	Airgas Inc		G140-SHOP SUPPLIES	$ 712.94	-	-
4500052211	1/30/2023	Western-Cullen-Hayes Inc		M130-CROSSING MECHANISM	$ 105.06	-	-
4500052212	1/30/2023	Home Depot USA Inc		G140-SHOP SUPPLIES	$ 1,458.50	-	-
4500052213	1/30/2023	Allied Electronics Inc		R160-RAIL/LRV ELECTRICAL	$ 1,837.53	-	-
4500052214	1/30/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 66.20	-	-
4500052215	1/30/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 69.80	-	-
4500052216	1/30/2023	Waxie's Enterprises Inc.		G140-SHOP SUPPLIES	$ 3,382.32	-	-
4500052217	1/30/2023	Winzer Franchise Company		G130-SHOP TOOLS	$ 394.24	-	-
4500052218	1/30/2023	Graybar Electric Co Inc		M180-STATION ELECTRICAL	$ 1,266.07	-	-
4500052219	1/30/2023	Willy's Electronic Supply Co	Small Business	M180-STATION ELECTRICAL	$ 134.69	-	-
4500052220	1/30/2023	Fastenal Company		G130-SHOP TOOLS	$ 867.94	-	-
4500052221	1/30/2023	Waxie's Enterprises Inc.		G180-JANITORIAL SUPPLIES	$ 216.06	-	-
4500052222	1/30/2023	Trentman Corporation	Small Business	P280-GENERAL SVC AGRMNTS	$ 1,734.02	-	-
4500052223	1/30/2023	Neopart Transit LLC		G190-SAFETY/MED SUPPLIES	$ 412.19	-	-
4500052224	1/30/2023	W.W. Grainger Inc		G130-SHOP TOOLS	$ 1,884.39	-	-
4500052225	1/30/2023	General Signals Inc		M130-CROSSING MECHANISM	$ 4,209.14	-	-
4500052226	1/30/2023	Robcar Corporation	Woman Owned Business	P130-EQUIP MAINT REPR SVC	$ 1,616.26	-	-
4500052227	1/30/2023	Robcar Corporation	Woman Owned Business	F150-DOORS, OVERHEAD	$ 1,551.60	-	-
4500052228	1/30/2023	Aymar Industries, LLC.		R140-RAIL/LRV DOORS/RAMP	$ 2,514.89	-	-
4500052229	1/30/2023	R.S. Hughes Co Inc		G140-SHOP SUPPLIES	$ 1,470.89	-	-
4500052230	1/30/2023	Brady Industries of California, LLC		G190-SAFETY/MED SUPPLIES	$ 680.44	-	-
4500052231	1/30/2023	Mcmaster-Carr Supply Co		R220-RAIL/LRV TRUCKS	$ 352.89	-	-
4500052232	1/30/2023	West-Lite Supply Co Inc	Small Business	M110-SUB STATION	$ 144.39	-	-
4500052233	1/30/2023	Professional Contractors Supplies		G160-PAINTS & CHEMICALS	$ 499.59	-	-
4500052234	1/30/2023	Init Innovations in Transportation		G290-FARE REVENUE EQUIP	$ 5,333.64	-	-
4500052235	1/30/2023	Init Innovations in Transportation		G290-FARE REVENUE EQUIP	$ 7,784.94	-	-
4500052236	1/30/2023	Init Innovations in Transportation		G290-FARE REVENUE EQUIP	$ 2,316.63	-	-
4500052237	1/30/2023	Init Innovations in Transportation		G290-FARE REVENUE EQUIP	$ 1,179.87	-	-
4500052238	1/30/2023	Init Innovations in Transportation		G290-FARE REVENUE EQUIP	$ 10,667.25	-	-
4500052239	1/30/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 225.75	-	-
4500052240	1/30/2023	Jeyco Products Inc		G150-FASTENERS	$ 20.71	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500052241	1/31/2023	Muncie Transit Supply		B160-BUS ELECTRICAL	$ 32.54	-	-
4500052242	1/31/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 330.56	-	-
4500052243	1/31/2023	Transit Holdings Inc		B130-BUS BODY	$ 4,464.39	-	-
4500052244	1/31/2023	Mcmaster-Carr Supply Co		B140-BUS CHASSIS	$ 604.91	-	-
4500052245	1/31/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 19.55	-	-
4500052246	1/31/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 2,799.14	-	-
4500052247	1/31/2023	Nth Generation Computing Inc		I110-INFORMATION TECH	$ 587.00	-	-
4500052248	1/31/2023	United Fastener Inc		R220-RAIL/LRV TRUCKS	$ 2,020.32	-	-
4500052250	1/31/2023	Siemens Industry Inc		R140-RAIL/LRV DOORS/RAMP	$ 2,114.06	-	-
4500052251	1/31/2023	Waxie's Enterprises Inc.		G180-JANITORIAL SUPPLIES	$ 7,238.11	-	-
4500052252	1/31/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 107.75	-	-
4500052253	1/31/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 190.18	-	-
4500052254	1/31/2023	San Diego Friction Products, Inc.		B110-BUS HVAC SYSTEMS	$ 137.22	-	-
4500052255	1/31/2023	SPX Technologies, Inc.		B190-BUS FARE EQUIP	$ 4,343.71	-	-
4500052256	1/31/2023	Professional Contractors Supplies		G140-SHOP SUPPLIES	$ 194.71	-	-
4500052257	1/31/2023	Jeyco Products Inc		G200-OFFICE SUPPLIES	$ 16.55	-	-
4500052258	1/31/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 113.24	-	-
4500052259	1/31/2023	Kurt Morgan		G200-OFFICE SUPPLIES	$ 825.92	-	-
4500052260	1/31/2023	Industrial Maintenance Supply LLC	DBE	G150-FASTENERS	$ 87.34	-	-
4500052261	1/31/2023	New Technical Solutions, Inc.		I110-INFORMATION TECH	$ 5,562.07	-	-
4500052262	2/1/2023	Home Depot USA Inc		G200-OFFICE SUPPLIES	$ 418.07	-	-
4500052263	2/1/2023	US Mobile Wireless		G120-SECURITY	$ 375.00	-	-
4500052264	2/1/2023	Brand Makers LLC	Small Business	G250-NOVELTIES & AWARDS	$ 1,080.19	-	-
4500052265	2/1/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 2,614.75	-	-
4500052266	2/1/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 1,348.50	-	-
4500052267	2/1/2023	Cummins Pacific LLC		B120-BUS MECHANICAL PARTS	$ 6,367.19	-	-
4500052268	2/1/2023	Laird Plastics, Inc		F180-BUILDING MATERIALS	$ 7,273.13	-	-
4500052269	2/1/2023	Ace Uniforms & Accessories	Small Business	G240-UNIFORM PROCUREMENT	$ 63,593.57	-	-
4500052270	2/1/2023	Flyers Energy LLC		G170-LUBRICANTS	$ 8,757.85	-	-
4500052271	2/1/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 184.03	-	-
4500052272	2/1/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 792.55	-	-
4500052273	2/1/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 1,698.03	-	-
4500052274	2/1/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 3,286.85	-	-
4500052275	2/1/2023	Siemens Mobility, Inc.		R190-RAIL/LRV PANTOGRAPH	$ 2,659.27	-	-
4500052276	2/1/2023	Merrimac Petroleum Inc	Woman Owned Business	A120-AUTO/TRUCK GASOLINE	$ 35,060.63	-	-
4500052277	2/1/2023	Muncie Transit Supply		B140-BUS CHASSIS	$ 1,616.35	-	-
4500052278	2/1/2023	Kaman Industrial Technologies		B250-BUS REPAIR PARTS	$ 220.16	-	-
4500052279	2/1/2023	Jeyco Products Inc		G130-SHOP TOOLS	$ 343.32	-	-
4500052280	2/1/2023	Kidde Technologies Inc		B250-BUS REPAIR PARTS	$ 642.94	-	-
4500052282	2/1/2023	Staples Contract & Commercial Inc		G200-OFFICE SUPPLIES	$ 68.55	-	-
4500052283	2/1/2023	Vern Rose Inc		G140-SHOP SUPPLIES	$ 123.58	-	-
4500052284	2/1/2023	Cummins Pacific LLC		B250-BUS REPAIR PARTS	$ 94.20	-	-
4500052285	2/1/2023	W.W. Grainger Inc		F110-SHOP/BLDG MACHINERY	$ 23.10	-	-
4500052286	2/1/2023	W.W. Grainger Inc		F120-BUS/LRV PAINT BOOTHS	$ 511.99	-	-
4500052287	2/1/2023	Mohawk Mfg & Supply Co		B200-BUS PWR TRAIN EQUIP	$ 349.72	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500052288	2/1/2023	R.S. Hughes Co Inc		G160-PAINTS & CHEMICALS	$ 506.17	-	-
4500052289	2/1/2023	Uline		G140-SHOP SUPPLIES	$ 137.92	-	-
4500052290	2/1/2023	Veterans Engineering Services, Inc.	Disabled Veteran Business	T110-TRACK, RAIL	$ 14,684.69	-	-
4500052292	2/2/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 1,620.35	-	-
4500052293	2/2/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 1,051.46	-	-
4500052294	2/2/2023	LinguaLinx Language Solutions, Inc.		G230-PRINTED MATERIALS	$ 29.62	-	-
4500052295	2/2/2023	Clear Sign & Design Inc	Small Business	G230-PRINTED MATERIALS	$ 604.88	-	-
4500052296	2/2/2023	Sunbelt Rentals, Inc		P160-EQUIPMENT RENTALS	$ 3,869.93	-	-
4500052297	2/2/2023	Staples Contract & Commercial Inc		G200-OFFICE SUPPLIES	$ 125.42	-	-
4500052298	2/2/2023	Governmentjobs.com, Inc		P450-PERSONNEL SVCS	$ 4,324.63	-	-
4500052299	2/2/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 96.81	-	-
4500052300	2/2/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 8,653.31	-	-
4500052301	2/2/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 2,157.05	-	-
4500052302	2/2/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 124.13	-	-
4500052303	2/2/2023	Vehicle Maintenance Program, Inc.	Woman Owned Business	B140-BUS CHASSIS	$ 586.73	-	-
4500052304	2/2/2023	Golden State Supply LLC		P210-NON-REV VEH REPAIRS	$ 499.94	-	-
4500052305	2/2/2023	Nth Generation Computing Inc		I110-INFORMATION TECH	$ 19,782.90	-	-
4500052306	2/2/2023	Gillig LLC		B130-BUS BODY	$ 884.79	-	-
4500052307	2/2/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 1,600.94	-	-
4500052308	2/2/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 1,088.96	-	-
4500052309	2/2/2023	Airgas Inc		G140-SHOP SUPPLIES	$ 143.99	-	-
4500052310	2/2/2023	TK Services Inc		B110-BUS HVAC SYSTEMS	$ 97.73	-	-
4500052311	2/2/2023	Mohawk Mfg & Supply Co		B110-BUS HVAC SYSTEMS	$ 43.58	-	-
4500052312	2/3/2023	Tony Jamison	DBE	G170-LUBRICANTS	$ 1,538.41	-	-
4500052313	2/3/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 7,596.47	-	-
4500052314	2/3/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 6,842.65	-	-
4500052315	2/3/2023	MCI Carrillo Inc	Small Business	P210-NON-REV VEH REPAIRS	$ 750.00	-	-
4500052316	2/3/2023	Inter. Assoc. for Public Trans.		P450-PERSONNEL SVCS	$ 28,908.00	-	-
4500052317	2/3/2023	Transit Products and Services		B130-BUS BODY	$ 6,896.00	-	-
4500052318	2/3/2023	NJ Criminal Interdiction, LLC		P490-MANAGEMENT TRAINING	$ 1,125.00	-	-
4500052319	2/3/2023	Industrial Maintenance Supply LLC	DBE	G150-FASTENERS	$ 40.42	-	-
4500052320	2/3/2023	Genuine Parts Co		B120-BUS MECHANICAL PARTS	$ 44.15	-	-
4500052321	2/3/2023	Fastenal Company		G140-SHOP SUPPLIES	$ 717.02	-	-
4500052322	2/3/2023	Mcmaster-Carr Supply Co		G140-SHOP SUPPLIES	$ 43.82	-	-
4500052323	2/3/2023	Vern Rose Inc		G140-SHOP SUPPLIES	$ 614.37	-	-
4500052324	2/3/2023	Freeby Signs		B130-BUS BODY	$ 72.08	-	-
4500052325	2/3/2023	ESRI, Inc		I110-INFORMATION TECH	$ 7,000.00	-	-
4500052326	2/3/2023	Kurt Morgan		G200-OFFICE SUPPLIES	$ 1,285.92	-	-
4500052327	2/3/2023	Waxie's Enterprises Inc.		G180-JANITORIAL SUPPLIES	$ 526.62	-	-
4500052328	2/3/2023	W.W. Grainger Inc		G170-LUBRICANTS	$ 104.19	-	-
4500052329	2/3/2023	Jeyco Products Inc		G160-PAINTS & CHEMICALS	$ 28.09	-	-
4500052330	2/3/2023	Office Depot		B250-BUS REPAIR PARTS	$ 452.53	-	-
4500052331	2/3/2023	OSI Hardware Inc		I110-INFORMATION TECH	$ 4,371.55	-	-
4500052332	2/3/2023	San Diego Community		P540-MAINTENANCE TRAINING	$ 431.21	-	-
4500052333	2/3/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 92.64	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500052334	2/3/2023	Staples Contract & Commercial Inc		G200-OFFICE SUPPLIES	$ 64.20	-	-
4500052336	2/3/2023	SiteOne Landscape Supply Holding		F190-LANDSCAPING MAT'LS	$ 1,240.16	-	-
4500052337	2/3/2023	Shilpark Paint Corp.		G160-PAINTS & CHEMICALS	$ 1,015.97	-	-
4500052338	2/3/2023	Home Depot USA Inc		F180-BUILDING MATERIALS	$ 104.32	-	-
4500052339	2/3/2023	OneSource Distributors, LLC		G140-SHOP SUPPLIES	$ 323.73	-	-
4500052340	2/3/2023	LinguaLinx Language Solutions, Inc.		G230-PRINTED MATERIALS	$ 49.00	-	-
4500052341	2/3/2023	All The King's Flags		G230-PRINTED MATERIALS	$ 781.73	-	-
4500052342	2/5/2023	HMS Construction Inc		T110-TRACK, RAIL	$ 26,139.44	-	-
4500052343	2/5/2023	Bender Rosenthal, Inc.		P550-REAL ESTATE	$ 17,314.60	-	-
4500052344	2/6/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 228.28	-	-
4500052345	2/6/2023	Transit Holdings Inc		B110-BUS HVAC SYSTEMS	$ 1,079.66	-	-
4500052346	2/6/2023	Harbor Diesel & Equipment		B250-BUS REPAIR PARTS	$ 13,964.40	-	-
4500052347	2/6/2023	Freeby Signs		B250-BUS REPAIR PARTS	$ 247.29	-	-
4500052348	2/6/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 3,238.48	-	-
4500052349	2/6/2023	Muncie Transit Supply		B140-BUS CHASSIS	$ 5.45	-	-
4500052350	2/6/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 4,365.47	-	-
4500052351	2/6/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 787.34	-	-
4500052352	2/6/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 422.84	-	-
4500052353	2/6/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 2,407.79	-	-
4500052354	2/6/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 2.69	-	-
4500052355	2/6/2023	Romaine Electric Corporation	Small Business	B160-BUS ELECTRICAL	$ 6,719.81	-	-
4500052356	2/6/2023	R.S. Hughes Co Inc		G140-SHOP SUPPLIES	$ 147.17	-	-
4500052357	2/6/2023	Muncie Transit Supply		B130-BUS BODY	$ 51.97	-	-
4500052359	2/6/2023	Gillig LLC		B130-BUS BODY	$ 714.97	-	-
4500052360	2/6/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 2,903.72	-	-
4500052361	2/6/2023	Supreme Oil Company		A120-AUTO/TRUCK GASOLINE	$ 13,155.10	-	-
4500052362	2/6/2023	JKL Cleaning Systems	Small Business	G140-SHOP SUPPLIES	$ 622.30	-	-
4500052363	2/6/2023	Industrial Maintenance Supply LLC	DBE	G150-FASTENERS	$ 365.90	-	-
4500052364	2/6/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 1,199.34	-	-
4500052365	2/6/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 14.09	-	-
4500052366	2/6/2023	Home Depot USA Inc		G180-JANITORIAL SUPPLIES	$ 1,554.13	-	-
4500052367	2/6/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 309.33	-	-
4500052368	2/6/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 2,820.90	-	-
4500052369	2/6/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 8,774.00	-	-
4500052370	2/6/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 11,693.03	-	-
4500052372	2/6/2023	Kaman Industrial Technologies		B140-BUS CHASSIS	$ 734.07	-	-
4500052373	2/6/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 2,087.88	-	-
4500052374	2/6/2023	Southern Counties Lubricants LLC		G170-LUBRICANTS	$ 1,418.74	-	-
4500052375	2/6/2023	W.W. Grainger Inc		M140-WAYSIDE SIGNALS	$ 797.78	-	-
4500052376	2/7/2023	Cummins Pacific LLC		B200-BUS PWR TRAIN EQUIP	$ 1,296.28	-	-
4500052377	2/7/2023	Muncie Transit Supply		B200-BUS PWR TRAIN EQUIP	$ 71.28	-	-
4500052378	2/7/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 2,520.16	-	-
4500052379	2/7/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 1,077.07	-	-
4500052380	2/7/2023	O'Reilly Auto Enterprises, LLC		G140-SHOP SUPPLIES	$ 100.19	-	-
4500052381	2/7/2023	Rambuilt Glass LLC		P120-BLDG/FACILITY REPRS	$ 4,984.00	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500052383	2/7/2023	Alpine Fence Inc.		F190-LANDSCAPING MAT'LS	$ 209.56	-	-
4500052384	2/7/2023	Myers & Sons Hi-Way Safety Inc		T110-TRACK, RAIL	$ 3,976.92	-	-
4500052385	2/7/2023	Westair Gases & Equipment Inc	Small Business	G190-SAFETY/MED SUPPLIES	$ 332.30	-	-
4500052386	2/7/2023	W.W. Grainger Inc		G130-SHOP TOOLS	$ 1,531.01	-	-
4500052387	2/7/2023	Winzer Franchise Company		G130-SHOP TOOLS	$ 766.77	-	-
4500052388	2/7/2023	Fastenal Company		G140-SHOP SUPPLIES	$ 2,533.38	-	-
4500052389	2/7/2023	Waxie's Enterprises Inc.		G180-JANITORIAL SUPPLIES	$ 2,950.48	-	-
4500052390	2/7/2023	Professional Contractors Supplies		G140-SHOP SUPPLIES	$ 501.29	-	-
4500052391	2/7/2023	JKL Cleaning Systems	Small Business	P130-EQUIP MAINT REPR SVC	$ 574.06	-	-
4500052392	2/7/2023	Reid and Clark Screen Arts Co		R120-RAIL/LRV CAR BODY	$ 2,366.19	-	-
4500052393	2/7/2023	Western-Cullen-Hayes Inc		M130-CROSSING MECHANISM	$ 620.64	-	-
4500052394	2/7/2023	Airgas Inc		G190-SAFETY/MED SUPPLIES	$ 1,171.06	-	-
4500052395	2/7/2023	Brady Industries of California, LLC		G180-JANITORIAL SUPPLIES	$ 1,767.01	-	-
4500052396	2/7/2023	JKL Cleaning Systems	Small Business	G140-SHOP SUPPLIES	$ 624.40	-	-
4500052397	2/7/2023	JKL Cleaning Systems	Small Business	F180-BUILDING MATERIALS	$ 465.95	-	-
4500052398	2/7/2023	Office Depot		G200-OFFICE SUPPLIES	$ 927.72	-	-
4500052399	2/7/2023	Dimensional Silk Screen Inc		G230-PRINTED MATERIALS	$ 2,963.13	-	-
4500052400	2/7/2023	Skyhawk Industries Inc		P420-MAIL SERVICES	$ 64,892.50	-	-
4500052401	2/7/2023	ODP Business Solutions, LLC		G210-OFFICE FURNITURE	$ 95.45	-	-
4500052402	2/7/2023	ODP Business Solutions, LLC		G210-OFFICE FURNITURE	$ 209.01	-	-
4500052403	2/7/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 118.50	-	-