Executive Committee Agenda

September 4, 2025

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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. Two-minutes of time is allotted per speaker, unless otherwise directed by the Chair.

Public Comments Made Via Zoom

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3. The Clerk will announce your name when it is your turn to speak
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2. Type in the zoom meeting ID found in the link and press #
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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 two 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) 398-9561** or by mail at **1255 Imperial Ave. Suite 1000, San Diego CA 92101.**

Agenda del Comité Ejecutivo

September 4, 2025

Haga clic en el enlace para acceder a la reunión:

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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.

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Teléfono:

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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 dos 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 dos 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) 398-9561** o por correo postal en **1255 Imperial Ave. Suite 1000, San Diego CA 92101.**

Metropolitan Transit System

Executive Committee

Agenda

September 04, 2025 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) 254-5252; Webinar ID: 161 953 0340, https://www.zoomgov.com/j/1619530340

NO.	ITEM SUBJECT AND DESCRIPTION	ACTION
1.	**Roll Call**	
2.	**Public Comments** This item has a two minute per speaker time limit. If you have a report to present, please give your copies to the Clerk of the Board.	
3.	**Approval of Minutes** Action would approve the June 12, 2025 Joint Audit Oversight and Executive Committee meeting Minutes.	Approve
	DISCUSSION ITEMS	
4.	**MTS Financial Sustainability (Mike Thompson)** Action would forward a recommendation to the MTS Board of Directors to provide the following direction to staff: 1) Target revenue measure for November 2028 ballot; 2) Plan on shifting $50 million in flexible funding from the Fiscal Year (FY) 2027 through FY 2030 Capital Improvement Programs (CIP) to the Operating Budget; 3) Seek minimum of 10% increase in fare revenues; 4) Seek additional funding from regional, state, and/or federal sources; and 5) Target $15 million in annual operational savings beginning with the FY 2027 Operating Budget.	Approve
5.	**Orange Line Improvement Project Update (Heather Furey and Consultant T.Y. Lin)**	Informational
	OTHER ITEMS	
6.	**Review of Draft September 11, 2025 MTS Board Agenda**	
7.	**Staff Communications and Committee Member Communications**	

8. Next Meeting Date: October 2, 2025

9. Adjournment

MINUTES

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM

JOINT AUDIT OVERSIGHT AND EXECUTIVE COMMITTEE

June 12, 2025

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

1. Roll Call

Chair Whitburn called the Joint Audit Oversight and Executive Committee meeting to order at 9:01 a.m. A roll call sheet listing Joint Audit Oversight and Executive Committee member attendance is attached as Attachment A.

2. Public Comment

There were no Public Comments.

3. Approval of Minutes

Vice Chair Goble moved to approve the minutes of the April 10, 2025, MTS Executive Committee meeting. Board Member Hall seconded the motion, and the vote was 6 to 0 in favor with Board Member Elo-Rivera absent.

DISCUSSION ITEMS

4. The Pun Group Engagement Letter for the Fiscal Year (FY) 2025 Audit (Erin Dunn)

Erin Dunn, MTS Controller, began the meeting by introducing Jennifer Pentoney, MTS Assistant Controller, and Coley Delaney, The Pun Group Audit Engagement Partner. Ms. Dunn stated that the purpose of the session was to review the interim audit and the engagement letters. Coley Delaney presented on The Pun Group Engagement Letter for the FY 2025 Audit. He discussed: the Scope of Work, management's responsibilities and auditors' responsibilities.

Public Comment

There were no Public Comments.

Committee Comment

There was no Committee Comment.

Action Taken

No action taken. Informational item only.

5. Interim Audit (Erin Dunn and Coley Delaney)

Coley Delaney, The Pun Group Audit Engagement Partner, presented on the Interim Audit. He provided details on: Interim Audit Procedures, interim audit results, and audit timeline.

Public Comment

There were no Public Comments.

Committee Comment

There was no Committee Comment.

Action Taken

No action taken. Informational item only.

6. Orange Line Improvement Project (Project) Update (Heather Furey, Mark Olsen, and Consultant T.Y. Lin)

Heather Furey, MTS Director of Capital Projects, Mark Olson, MTS Director of Marketing & Communications, and David Holman, T.Y. Lin Consultant, presented on the Orange Line Improvement Project (Project) Update. Mr. Holman presented on the Project Overview, schedule and updates. He gave an overview on Phase 1: Owner Furnished Equipment, contractor kickoff, Right-Of-Way Coordination, and Phase 2: Owner Furnished Equipment, Project Funding, project funding by phase, and SB125 Funding - $26M for Phase 1 Cost controls. Mr. Olson provided details on Communications, two primary messages, ongoing and weekend closure outreach approach, Orange Line Improvement Project communications, Pre and Kickoff construction next steps. Mr. Holman outlined information about risk management, top risks, other MTS projects, VMS replacements, Baltimore Junction & Euclid grade study, SELT Lighting and next steps.

Public Comment

There were no Public Comments.

Committee Comment

Vice Chair Goble thanked the team for delivering a very thorough presentation, expressing that it had been beneficial for everyone. He specifically praised the inclusion of the risk table, noting that identifying potential risks helped mitigate them. He remarked that when issues were anticipated, they often didn't materialize or were reduced in severity due to preparedness. He acknowledged the usefulness of that content, particularly referring to slide 16. He then brought up an observation about individuals wearing MTS branded clothing. He shared that it was unclear whether these individuals were staff or simply wearing logoed attire, which made it difficult for the public to know if they could approach them with questions. He proposed implementing some form of clear identification for ambassadors, such as a button, badge, or signage with phrases like "Ask Me" or "How Can I Help?", so that passengers could easily recognize them and feel comfortable seeking assistance. Continuing his remarks, he addressed the communication strategy. He stated that he appreciated the mailing approach, as not all customers were digitally connected. He asked whether it was possible to implement a splash screen within the Pronto app to relay critical information to riders. Mr. Olson responded that such a feature was available and confirmed that in-app message pop-ups were among the communication tools at their disposal. He explained that these pop-ups could be used to share important updates with riders directly through the app. Vice Chair Goble encouraged the team to consider using the Pronto app's splash screen as a valuable tool for sharing essential rider information, especially since riders were already using the app for fare purchases. He concluded by urging the team to pursue such communication methods.

Chair Whitburn express his appreciation for the presentation. He remarked that the project appeared to be on schedule, with both the planning and communications strategy being thoughtfully executed. He noted that while it hadn't been explicitly stated during the presentation, he assumed that materials would be made available in Spanish, and that ambassadors would be able to assist riders in Spanish as well. Mr. Olson confirmed his

assumption, stating that all materials would indeed be provided in both English and Spanish, with other languages available upon request.

Action Taken

No action taken. Informational item only.

7. Review of Draft June 26, 2025 Committee Agenda

8. Other Staff Communications and Business

9. Next Meeting Date

The next Executive Committee meeting is scheduled for July 10, 2025, at 9:00 a.m.

10. Public Comment for Closed Session

There was no public comment for Closed Session.

The Board convened to Closed Session at 9:34 a.m.

11. Closed Session – Public Employee Performance Evaluation/Conference with Labor Negotiators – Chief Executive Officer Pursuant to California Government Code Sections 54957 and 54957.6:
Agency-Designated Representative: Stephen Whitburn, Chair
Employee: Sharon Cooney, CEO

Closed Session Reconvening

The Committee reconvened to Open Session at 11:05 a.m.

Karen Landers, General Counsel, reported the following oral report of final actions taken in Closed Session:

The Executive Committee received a report from the CEO and gave instructions to negotiators.

12. Adjournment

The meeting was adjourned at 11:13 a.m.

Chairperson San Diego Metropolitan Transit System	Clerk of the Board San Diego Metropolitan Transit System

Attachment: A. Roll Call Sheet

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
EXECUTIVE COMMITTEE

ROLL CALL

MEETING OF (DATE):	June 12, 2025	CALL TO ORDER (TIME):	9:01 a.m.
RECESS:		RECONVENE:	
CLOSED SESSION:	9:34 a.m.	RECONVENE:	11:05 a.m.
PUBLIC HEARING:		RECONVENE:	
ORDINANCES ADOPTED:		ADJOURN:	11:13 a.m.

REPRESENTING	BOARD MEMBER		ALTERNATE		PRESENT (TIME ARRIVED)	ABSENT (TIME LEFT)
Chair	Whitburn	☒	No Alternate	☐	9:01 a.m.	11:05 a.m.
City of San Diego	Elo-Rivera	☐	Whitburn	☐	Absent	Absent
County of San Diego	Montgomery Steppe	☒	VACANT	☐	9:01 a.m.	11:05 a.m.
East County	Vaus	☐	Hall	☒	9:01 a.m.	11:05 a.m.
SANDAG Transportation Committee	Dillard	☒	Fernandez	☐	9:02 a.m.	11:05 a.m.
South Bay	Fernandez	☒	Fleming	☐	9:01 a.m.	11:05 a.m.
Vice Chair	Goble	☒	No Alternate	☐	9:01 a.m.	11:05 a.m.

SIGNED BY THE CLERK OF THE BOARD: Gloria Hanson

Metropolitan Transit System

Agenda Item No. 04

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
EXECUTIVE COMMITTEE

September 4, 2025

SUBJECT:

MTS Financial Sustainability (Mike Thompson)

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Executive Committee forward a recommendation to the Board of Directors to provide the following direction to staff:

1) Target revenue measure for November 2028 ballot;

2) Plan on shifting $50 million in flexible funding from the Fiscal Year (FY) 2027 through FY 2030 Capital Improvement Programs (CIP) to the Operating Budget;

3) Seek minimum of 10% increase in fare revenues;

4) Seek additional funding from regional, state, and/or federal sources; and

5) Target $15 million in annual operational savings beginning with the FY 2027 Operating Budget.

Budget Impact

None at this time. The direction from the Executive Committee and Board of Directors (Board) will be reflected in building future Operating and CIP budgets, which will be brought back to the Board for adoption.

DISCUSSION:

Background:

On February 13, 2025, staff presented to the MTS Board a five-year forecast and discussed the financial outlook for MTS. In the five-year forecast, MTS was projected to have a funding shortfall (hit the “fiscal cliff”) within the first half of FY 2028. In order to extend the timing of the fiscal cliff into fiscal year 2029, staff recommended the following:

- Exercise off-ramp provisions of the Innovative Clean Transit (ICT) mandate to delay purchasing of electric buses
- Shift funding from capital to operations in FY 2026 ($25M), FY 2027 ($35M), and FY 2028 ($50M)
- Delay all planned service enhancements after the January 2025 service change.

These short-term solutions were proposed to provide MTS with enough time to see the results of potential recurring revenue increases including a possible tax revenue measure pursued by MTS or changes to the state-wide Transportation Development Act (TDA) tax that could significantly increase MTS revenues. The Board approved the staff recommendation.

In the same meeting, the Board approved MTS hiring a contractor to perform a Comprehensive Operations Analysis (COA) to analyze MTS services and provide strategic insight into possible major service increases or decreases. The contract was awarded to Transportation Management & Design (TMD), and they are currently gathering data on our existing service. TMD will be analyzing multiple scenarios. First, they will be looking at where service would best be added if MTS were to receive supplemental funding (new revenue measure). Second, they will be looking at a scenario in which MTS has to implement major service reductions due to budget constraints. The results of the COA will provide the strategic data necessary for making any decisions on major service changes.

On May 15, 2025, staff presented and received approval of the FY 2026 operating budget at a public hearing. During this meeting, staff presented an updated five-year forecast based on the proposed FY 2026 budget as well as updated economic assumptions. Attachment A includes the five-year forecast that was included in the FY 2026 budget presentation.

Five-Year Forecast

The five-year forecast presented in May 2025 projected total recurring revenues, including operating revenues and recurring subsidy, to grow by an average of 2.7% from FY 2027 through FY 2030. During that period, expenses are projected to grow by an average of 3.9%, primarily reflecting annual inflation and growth in labor costs, with no service additions or decreases included. Below are the key assumptions of the forecast:

- Passenger revenue rebound continues, with 6.0% increase in ridership projected in FY 2026 and then gradually tapering down to an average of 3.4% growth from FY 2028 through FY 2030.
- Other operating revenue averages -0.2% growth over the forecast period, due to declining interest revenue (lower cash balances and declining interest rates).
- Recurring subsidy is projected to increase by an average of 2.2% from FY 2027 through FY 2030, particularly due to slow sales tax growth assumptions provided by San Diego Association of Governments (SANDAG). TDA and Transnet are expected to grow an average of only 1.8% in FY 2027 and 2.7% in FY 2028, before returning to more normal growth trends in FY 2029 and beyond.
- Federal revenue remains flat at FY 2026 levels throughout FY 2030.
- Board approved shifts from CIP are implemented ($25 million in FY 2026, $35 million in FY 2027, and $50 million in FY 2028).
- Senate Bill 125 Transit and Intercity Rail Capital (SB 125 TIRCP) funds are used to fund current levels of service, with the remainder of funds being used to balance the deficit.

- Expense growth represents projected inflation and labor costs while keeping service levels at current levels.

With projected expense growth exceeding projected growth in recurring revenues, the May 2025 five-year operating forecast includes projected structural deficits in FY 2026 and each subsequent fiscal year, beginning with a structural deficit of $108.0 million in FY 2026 and growing to $145.9 million in FY 2030. Non-recurring revenues, in the form of one-time shifts from the capital to budget ($25.0 million in FY 2026, $35.0 million in FY 2027, and $50.0 million in FY 2028) and SB 125 funding are projected to balance the operating budget through FY 2028. In the current forecast, MTS will hit the fiscal cliff early in FY 2029, with a projected revenue shortfall of $120.1 million.

Financial Update

The primary intent of the financial strategy (delay Zero Emission Bus (ZEB) implementation, shift funding from capital, and delay planned service increases) was to extend the timing of the fiscal cliff to allow MTS to prepare for a potential sales tax revenue measure for the November 2026 election while also conducting a COA to guide future major service increases or decreases. At this point, a revenue measure in November 2026 is unlikely and November 2028 will be a more realistic target by providing additional time to maximize public support and turnout in a presidential election year. Part of the staff recommendation is to target November 2028 for a potential revenue measure instead of November 2026.

While staff has advocated for additional state or federal subsidy solutions, none have been identified to date, and there has been no significant traction on TDA reform, SB 125 reform, or other options for providing substantial operational recurring revenue streams to transit agencies in California or nationwide. MTS is still aggressively pursuing additional revenues, but there are currently no foreseeable solutions.

Based on the staff recommendation to pursue a sales tax revenue measure in November 2028, MTS will need to balance the operating budget with existing resources for an additional two years, or through FY 2030.

Recommended Strategy

In order to balance the operating budget through FY 2030, MTS will need to cover the $266 million projected shortfall between FY 2029 and FY 2030 (see Attachment A) by implementing a variety of strategies in the short term.

First, staff recommends shifting additional funding from the CIP to operations. The current approved shifts include $25 million in FY 2026, $35 million in FY 2027, and $50 million in FY 2028. Today's updated recommendation includes changing the CIP shifts to $50 million per year from FY 2027 through FY 2030. This would bring the total shift of capital dollars to operations from $110 million over the five-year period to $225 million. This action would not impact the approved FY 2026 CIP or operating budgets. Based on forecasts, the CIP would retain approximately $90 million per year for capital improvements. During each year's budget development cycle, staff will review State of Good Repair (SGR) needs recommending the most urgent projects to be funded given that year's funding constraints, and the project funding decision would be made and approved by the MTS Board. Staff would also continue to seek additional state and federal competitive grants to supplement future CIPs.

Staff is also recommending pursuing a fare increase to generate a minimum 10% increase in projected fare revenue ($8 million per year). Staff has engaged SANDAG, and is working closely with North County Transit District (NCTD), to conduct a fare study. Fare changes require revisions to the regional fare ordinance and must be approved by the MTS, NCTD and SANDAG Boards. MTS is currently targeting the implementation of a fare increase by July 1, 2026.

Another part of the recommendation is that staff seek all available regional, state, and federal funding sources. This includes exploring potential revenue transactions with SANDAG while also continuing to lobby for additional state and federal resources. SANDAG has proposed two different options for borrowing funding in the short term, one with federal funding and one with TransNet funding. In both cases, the amount borrowed will have to be paid back in the future with MTS's share of formula TransNet funding. If TransNet funding is borrowed, it also must be paid back with interest.

After implementing the above strategies, MTS would need an additional $60 million in operational savings to balance the budget through FY 2030. Therefore, today's recommendation includes targeting $15 million in annual operational savings beginning with the FY 2027 operating budget and beyond. Operational savings would come through a variety of mechanisms likely including:

- Allocating projected savings in the FY 2025 operating budget to the operating deficit reserve and identifying structural savings to reflect in future budget projections.
- Utilize results of TMD's review of existing service conditions to implement service efficiencies. Minor changes would be implemented as soon as January 2026 with more substantial changes targeted for June 2026.
- Review current operating budget requests and only fund essential repairs/services in future budget cycles.
- Delay the start of any new projects/programs that are not deemed essential.
- Implement changes to actuarial assumptions for the San Diego Transit Corporation (SDTC) self-funded pension program to reduce annual contribution, such as:
    - Extend amortization period of Unfunded Actuarial Liability (UAL) to reduce annual contributions – re-amortizing the plan over 20-years would reduce the annual contribution by an estimated $5M per year in the short term while shifting timing of costs to late 2030s and early 2040s.
    - Increase the discount rate assumption from 6% - every 0.25% increase in the discount rate assumption is estimated to reduce the annual contribution by $700K. MTS currently has one of the lowest discount rate assumptions in public pension plans.

<u>Impact on Five-Year Forecast</u>

Attachment B includes an updated five-year forecast reflecting the impact of each of the actions detailed above. The updated forecast does show projected balanced operating budgets through fiscal year 2030.

Therefore, staff recommends that the MTS Executive Committee forward a recommendation to the Board of Directors to provide the following direction to staff:

1) Target revenue measure for November 2028 ballot;

2) Plan on shifting $50 million in flexible funding from the FY 2027 through FY 2030 CIPs to the Operating Budget;

3) Seek minimum of 10% increase in fare revenues;

4) Seek additional funding from regional, state, and/or federal sources; and

5) Target $15 million in annual operational savings beginning with the FY 2027Ooperating Budget

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachments: A. Adopted FY 2026 Operating Budget Five-Year Forecast
B. Updated Operating Budget Forecast

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
FIVE YEAR FINANCIAL PROJECTIONS ($000s)
FISCAL YEAR 2026
ATTACHMENT A

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	PROJECTED FY27	PROJECTED FY28	PROJECTED FY29	PROJECTED FY30
TOTAL OPERATING REVENUES	$ 106,909	$ 114,949	$ 121,090	$ 126,790	$ 130,718	$ 135,812	$ 139,992
RECURRING SUBSIDY FUNDING	250,426	251,722	243,984	247,282	252,369	258,766	265,676
TOTAL RECURRING REVENUES	**$ 357,335**	**$ 366,670**	**$ 365,074**	**$ 374,071**	**$ 383,087**	**$ 394,578**	**$ 405,667**
PERSONNEL EXPENSES	$ 176,883	$ 195,880	$ 206,891	$ 215,843	$ 225,210	$ 235,100	$ 245,537
OUTSIDE SERVICES	152,104	163,774	170,965	177,720	183,054	188,235	193,430
MATERIALS AND SUPPLIES	18,609	19,854	21,952	22,763	23,460	24,184	24,879
ENERGY	44,489	48,394	51,449	53,611	56,200	59,596	63,370
RISK MANAGEMENT	8,122	10,638	12,617	13,058	13,450	13,853	14,234
OTHER	7,728	9,650	9,206	9,445	9,658	9,877	10,084
TOTAL OPERATING EXPENSES	**$ 407,935**	**$ 448,190**	**$ 473,079**	**$ 492,440**	**$ 511,033**	**$ 530,844**	**$ 551,535**
RECURRING OPERATING INCOME (DEFICIT)	**$ (50,600)**	**$ (81,520)**	**$ (108,005)**	**$ (118,369)**	**$ (127,946)**	**$ (136,266)**	**$ (145,868)**
FEDERAL STIMULUS REVENUES	85,000	47,394					
SB 125 FUNDING	4,521	9,000	20,919	83,245	77,745	15,900	
SHIFT OF FLEXIBLE FUNDING FROM CAPITAL TO OPS			25,000	35,000	50,000		
NON RECURRING REVENUES	(30,505)	25,126	62,086	124	201	246	297
TOTAL OPERATING INCOME (DEFICIT)	**$ 8,417**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (120,120)**	**$ (145,571)**

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
UPDATED FINANCIAL PROJECTIONS ($000s)
ATTACHMENT B

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	PROJECTED FY27	PROJECTED FY28	PROJECTED FY29	PROJECTED FY30	PROJECTED FY31
TOTAL OPERATING REVENUES	$ 106,909	$ 114,949	$ 121,090	$ 126,790	$ 130,718	$ 135,812	$ 139,992	$ 144,986
RECURRING SUBSIDY FUNDING	250,426	251,722	243,984	247,282	252,369	258,766	265,676	269,544
TOTAL RECURRING REVENUES	**$ 357,335**	**$ 366,670**	**$ 365,074**	**$ 374,071**	**$ 383,087**	**$ 394,578**	**$ 405,667**	**$ 414,530**
PERSONNEL EXPENSES	$ 176,883	$ 195,880	$ 206,891	$ 215,843	$ 225,210	$ 235,100	$ 245,537	$ 256,572
OUTSIDE SERVICES	152,104	163,774	170,965	177,720	183,054	188,235	193,430	198,896
MATERIALS AND SUPPLIES	18,609	19,854	21,952	22,763	23,460	24,184	24,879	25,600
ENERGY	44,489	48,394	51,449	53,611	56,200	59,596	63,370	67,419
RISK MANAGEMENT	8,122	10,638	12,617	13,058	13,450	13,853	14,234	14,626
OTHER	7,728	9,650	9,206	9,445	9,658	9,877	10,084	10,297
TOTAL OPERATING EXPENSES	**$ 407,935**	**$ 448,190**	**$ 473,079**	**$ 492,440**	**$ 511,033**	**$ 530,844**	**$ 551,535**	**$ 573,408**
RECURRING OPERATING INCOME (DEFICIT)	**$ (50,600)**	**$ (81,520)**	**$ (108,005)**	**$ (118,369)**	**$ (127,946)**	**$ (136,266)**	**$ (145,868)**	**$ (158,878)**
FEDERAL STIMULUS REVENUES	85,000	47,394						
SB 125 FUNDING	4,521	9,000	20,919	30,245	39,745	48,020	57,571	1,309
SHIFT OF FLEXIBLE FUNDING FROM CAPITAL TO OPS			25,000	50,000	50,000	50,000	50,000	
FARE INCREASE				8,000	8,000	8,000	8,000	8,000
EXTERNAL FUNDING				15,000	15,000	15,000	15,000	
OPERATIONAL SAVINGS				15,000	15,000	15,000	15,000	15,000
NON RECURRING REVENUES	(30,505)	25,126	62,086	124	201	246	297	297
TOTAL OPERATING INCOME (DEFICIT)	**$ 8,417**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (0)**	**$ (134,272)**

Metropolitan Transit System

Agenda Item No. 05

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
EXECUTIVE COMMITTEE

September 4, 2025

SUBJECT:

Orange Line Improvement Project Update (Heather Furey and Consultant T.Y. Lin)

INFORMATIONAL ONLY

Budget Impact

None.

DISCUSSION:

The Orange Line Improvement Project will make Trolley system improvements at various locations along the 17.6-mile Orange Line, benefitting the riding public and the cities of San Diego, Lemon Grove, La Mesa, and El Cajon. To do so, the project will make track, signal, and grade crossing improvements along the Orange Line. For practical and grant funding reasons, the project has been divided into two phases. Phase 1 is the work between 32nd/Commercial Station and Massachusetts Avenue Station. Phase 2 is the work between Massachusetts Avenue Station and El Cajon Transit Center. Once completed, the project will allow Trolleys to safely operate at higher speeds and allow reverse-run on certain sections of the line, improving transit times and operational flexibility.

The San Diego Metropolitan Transit System (MTS) staff and external consultants, T.Y. Lin, will present an update on the Orange Line Improvement Project. The same team provided a presentation at the June 12, 2025, Executive Committee meeting, and today's presentation will share progress updates from the last three months, including the start of Phase 1 construction, continued procurement and receiving of owner-furnished materials, outreach events with MTS riders, and CPUC coordination.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Metropolitan Transit System

Board of Directors

Agenda

September 11, 2025 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) 254-5252; Webinar ID: 160 280 5839, https://www.zoomgov.com/j/1602805839

NO.	ITEM SUBJECT AND DESCRIPTION	ACTION
1.	**Roll Call**	
2.	**Public Comments** This item is limited to five speakers with two 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 July 10, 2025 Board of Directors meeting minutes.	Approve
4.	**CEO Report** Agenda Item will be provided prior to Board Meeting.	Informational
5.	**On-Call Job Order Contracting (JOC) Railroad Signals, Overhead Catenary Systems, and Track Work Construction Services – Contract Award** Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. PWL432.0-25, with HMS Construction, Inc. (HMS), for on-call railroad general electrical, communication, and traffic signal construction services, in the amount of $2,500,000.00 for one (1) year beginning October 1, 2025.	Approve
6.	**On-Call Job Order Contracting (JOC) Railroad General Electrical, Communication, and Traffic Signal Construction Services – Contract Award** Action would Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. PWL431.0-25, with Advanced Railway Innovations (ARI), for on-call railroad general electrical, communication, and traffic signal construction services, in the amount of $3,000,000.00, for one (1) year beginning October 1, 2025.	Approve

7. **Federal Fiscal Year (FFY) 2024 (SANDAG Cycle 13) Federal Transit Administration (FTA) Section 5310 Enhanced Mobility for Seniors and Individuals with Disabilities – Grant Award** — Approve

Action would 1) Accept the FFY 2024 Section 5310 Enhanced Mobility for Seniors and Individuals with Disabilities Cycle 13 awarded by the San Diego Association of Governments (SANDAG) in the amount of $848,860.86 for paratransit vehicle procurement; and 2) Authorize $418,359.84 in local matching funds to fully fund the purchase of six (6) Americans with Disabilities Act (ADA) paratransit vehicles.

8. **Fiscal Year (FY) 2025 Trolley Track Improvements – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to: 1) Execute the base bid to MTS Doc. No. PWL433.0-25 (in substantially the same format as Attachment A), with Domestic Rail Solutions Corp (DRS), a Disadvantaged Business Enterprise (DBE), for the FY25 Trolley Track Improvements in the amount of $5,451,950.41; 2) Transfer $523,058.47 from the Miscellaneous Capital account (1009128701) in the Fiscal Year 2026 Capital Improvement Program (CIP) to Cost Center 370016-571142 to provide funding to remove the sidings in contract alternates A-1 through A-5; 3) Authorize the CEO to execute contract alternates A-1 through A-5, in the amount of $523,058.47, bringing total expenditure authority to $5,975,008.88; and 4) Authorize the CEO to execute change orders totaling up to 15% of the base bid and alternates, in the amount of $896,251.33, bringing the total expenditure authority to $6,871,260.21.

9. **Janitorial Services – Contract Amendments** — Approve

Action would 1) Ratify MTS Doc. No. G2613.6-22 (Amendment 6) with NMS Management Inc. (NMS), a Disadvantaged Business Enterprise (DBE), in the amount of $51,689.98; 2) Ratify MTS Doc. No. G2613.7-22 (Amendment 7), in the amount of $69,334.11; 3) Ratify MTS Doc. No. G2613.8-22 (Amendment 8), in the amount of $26,266.70 (Attachment C); and 4) Authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2613.8-22 (Amendment 9) with NMS, in the amount of $98,393.40 (in substantially the same format as, for an updated total contract amount of $13,131,385.92.

10. **Propane Fueling Services – Contract Amendment** — Approve

Action would 1) Ratify MTS Doc. No. B0760.1-24 (Amendment 1) with Suburban Propane Partner, LP (Suburban), in the amount of $71,672.94 (Attachment A); and 2) Authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. B0760.2-24 (Amendment 2) with Suburban, to add $1,906,186.88 in additional funds for an estimated increase in ridership.

11. **Beyer Blvd Slope Improvement – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc No. PWL439.0-25, with Hazard Construction Co., in the amount of $4,072,592.00 plus 10% contingency to provide construction services for the Beyer Blvd Slope Improvement Project.

12. **Fixed Route, Paratransit, and Minibus Services – Contract Amendments** — Approve

Action would authorize the Chief Executive Officer (CEO) to: 1) Execute MTS Doc. No. B0708.6-20, with Transdev North America (Transdev), in the amount of $9,514,848.00 for a $2.00 per hour wage increase for frontline employees for the provision of fixed-route, express, and Bus Rapid Transit (BRT) bus services at the East County and South Bay Divisions through June 30, 2031; 2) Ratify MTS Doc. No. B0703.10-20 (Attachment B) with First Transit, Inc. (First Transit) in the amount of $62,614.63 for the purchase of four wireless battery-powered mobile shop lifts for use at the Copley Park Division; and 3) Execute MTS Doc. No. B0703.16-19, with First Transit in the amount of $2,505,054.00 for a $2.00 per hour wage increase for frontline employees for the provision of paratransit and fixed-route bus services through June 30, 2030.

13. **Proposed Revisions to Taxicab Advisory Committee (TAC) Guidelines** — Adopt

Action would adopt the proposed revisions to the TAC Guidelines.

14. **Orange Line Improvement Project Phase 2 Design Services – Work Order Amendment (WOA)** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute WOA356-AE-06.08 under MTS Doc. No PWL356.0-22, with Pacific Rail Enterprise, Inc. (PRE), a Women Owned Business Enterprise (WBE) and Small Business (SB), in the amount of $257,931.52 for additional civil and signal design services for Phase 2 of the Orange Line Improvement Project.

15. **Blue Barn Underground Storage Tanks (UST) Closure – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc No. PWL433.0-25, with Whillock Contracting, Inc. (Whillock) in the amount of $250,552.00, for the closure of three (3) UST and related work at the San Ysidro Freight Yard.

16. **Employee Recognition Platform – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to: 1) Execute MTS Doc No. G2982.0-25 (in substantially the same format as Attachment A), with Awardco, Inc., to provide Employee Recognition Platform software in the estimated amount of $277,193.00 for up to six (6) years; 2) Exercise the option years, at the CEOs discretion; and 3) Transfer funds from MTS departmental budgets to fund MTS's Awardco funding account, which will be used to pay the actual cost of awards selected and redeemed by employees through the platform.

17. **Bus Furniture Installation, Maintenance, and Advertising Services – Contract Award** — Approve

Action would 1) Authorize the Chief Executive Officer (CEO) to execute MTS Doc. G3112.0-26 (in substantially the same format as Attachment A), with Clear Channel Outdoor, LLC (Clear Channel), to provide bus shelter installation, maintenance, and advertising services for ten (10) base years with five (5) 1-year options; 2) Authorize the CEO to execute MTS Doc. G3113.0-26 (in

substantially the same format as Attachment B) with BriceHouse Outdoor, Inc. (BriceHouse) to provide bus bench installation, maintenance, and advertising services for ten (10) base years with five (5) 1-year options; and 3) Exercise the option years at the CEO's discretion.

18. **Public Announcement (PA) System Survey – Orange, Green, and UC San Diego Blue Line – Work Order** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute Work Order WOA355-AE-53 under MTS Doc No. PWL355.0-22 with Psomas, in the amount of $281,090.96 to provide survey services for the Orange, Green, and UC San Diego Blue Line PA System Survey.

19. **Investment Report – Quarter Ending June 30, 2025** — Informational

20. **Light Rail Vehicle (LRV) 5027 Structural and Body Repair Services - Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. L1701.0-25, with Siemens Mobility, Inc., for the provision of LRV 5027 Structural and Body Repair Services, for fourteen (14) months, in the amount of $1,997,346.52.

21. **Cloud Permitting Software – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to: 1) Execute MTS Doc. No. G2902.0-24 with GeoCivix, LLC (GeoCivix) to provide Cloud Permitting Software in the amount of $343,250.00 for a contract period of one (1) year implementation with three (3) base years and two (2) 1-year options service period; and 2) Exercise the option years of the agreement at the CEO's discretion.

22. **Fiscal Year (FY) 2026 Transportation Development Act (TDA) Claim** — Adopt

Action would adopt Resolution Nos. 25-07, 25-08, and 25-09 approving FY 2026 TDA Article 4.0, 4.5, and 8.0 claims allocating $127,968,234.00 in TDA revenues for MTS.

DISCUSSION ITEMS

23. **MTS Financial Sustainability (Mike Thompson)**

Agenda Item will be provided prior to Board Meeting.

24. **Transit Operations Insourcing Feasibility Study (Russ Chisholm with Transportation Management Design (TMD), Inc. and Mike Daney)**

Agenda Item will be provided prior to Board Meeting.

25. **Comprehensive Operational Analysis (COA) Update (Russ Chisholm with Transportation Management Design (TMD), Inc. and Brent Boyd)**

Agenda Item will be provided prior to Board Meeting.

26. Performance Monitoring Report (Brent Boyd)

Agenda Item will be provided prior to Board Meeting.

27. Annual Grants Administration Report (Julia Tuer and Kena Teon)

Agenda Item will be provided prior to Board Meeting.

OTHER ITEMS

28. Chair, Board Member and Chief Executive Officer's (CEO's) Communications

29. Remainder of Public Comments Not on The Agenda

This item is a continuation of item No. 2 (Public Comment), in the event all speakers who request to comment on item No. 2 are not called. If all Public Comment is accepted during item No. 2, no additional public comment will be accepted under this item.

CLOSED SESSION

30. Public Comment for Closed Session

31. *Agenda Item will be provided prior to Board Meeting.* Possible Action

ADJOURNMENT

32. Next Meeting Date

The next Board of Director's meeting is scheduled for October 16, 2025 at 9:00am.

33. Adjournment

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 4

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Chief Executive Officer's (CEO) Report

AGENDA ITEM WILL BE PROVIDED BEFORE BOARD MEETING

1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 • (619) 231-1466 • sdmts.com

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 05

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

On-Call Job Order Contracting (JOC) Railroad Signals, Overhead Catenary Systems, and Track Work Construction Services – 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. PWL432.0-25 (in substantially the same format as Attachment A), with HMS Construction, Inc. (HMS), for on-call railroad general electrical, communication, and traffic signal construction services, in the amount of $2,500,000.00 for one (1) year beginning October 1, 2025.

Budget Impact

The total cost of this contract is estimated to be $2,500,000.00 and the contract will be funded by various MTS capital budget accounts. Funding will be included in the budget of each project for which a work order will be issued under this agreement.

DISCUSSION:

JOC is a procurement method under which public agencies may accomplish frequently encountered repairs, maintenance, and construction projects through a single, competitively procured agreement.

The JOC program includes a catalogue of pricing for a variety of potential tasks to be performed under the contract, developed by the MTS contractor, the Gordian Group. All potential contractors are subject to the pre-pricing within this catalogue. Each contractor then includes an adjustment factor, escalating their proposed price from the catalogue price, to determine the total cost of the task order. The adjustment factor represents an average percentage increase over the catalogue price (i.e. 1.25 adjustment factor represents 25% above the catalogue price) for that respective task within the project. In order to select the lowest responsive and responsible bidder, MTS staff compares each contractor's proposed adjustment factor.

MTS's enabling legislation at Public Utilities Code Section 120222 authorizes MTS to use any procurement method authorized for state or local agencies under state or federal law. Certain public entities in California are expressly authorized to use the JOC process within limited

parameters. MTS's ability to utilize the JOC contracting process is premised upon the statutory allowance granted to such entities. MTS shares in the same general limitations imposed on the JOC process by this statutory framework. Public Contract Code Section 20128.5 allows the board of supervisors of a county to utilize JOCs up to $3,000,000 annually, adjusted annually to reflect the percent change in the California Consumer Index. Calculations to June 2025 are $6,534,000 annually. Staff estimates that $2,500,000 in capacity is needed, based on projected project needs. MTS maintains internal contract administration guidelines to ensure compliance with the annual maximum in JOC work orders.

The JOC contract under consideration includes a railroad signal, overhead catenary system and trackwork improvements, including main line and trolley line railroad signals, grade crossing warning devices, overhead catenary, traction power, trackwork, special trackwork and related switch gear and wiring, traction power substations, and related civil construction improvements work; and all required incidental professional and technical services required for quality control monitoring and testing.

On June 5, 2025, MTS issued an Invitation for Bids (IFB) seeking a contractor to provide JOC railroad construction services, with the award provided to the contractor with the lowest cumulative adjustment factor weighted as follows:

Item 1: Normal Working Hours (Non-Railroad Right-of-Way) –15%
Item 2: Other Than Normal Hours (Non-Railroad Right-of-Way) – 3%
Item 3: Normal Working Hours Along Railroad Right-of-Way – 75%
Item 4: Other Than Normal Hours Along Railroad Right-of-Way – 2%
Item 5: Restricted Work Shift – 5%

On July 25, 2025, a total of two (2) bids were received, one (1) from HMS and one (1) from Balfour Beatty Infrastructure Inc. (Balfour Beatty). Staff determined that the solicitation was conducted in a fair and open manner.

Given that the award is made to the Bidder with the lowest cumulative adjustment factor over the pre-priced catalogue, MTS determined that HMS was the lowest responsive and responsible bidder.

Contractor	Firm Disadvantaged Business Enterprise (DBE) or Other Certification	Total Score
HMS	N/A	1.3120
Balfour Beatty	N/A	1.3595

Based on historical results for these and other JOC services, Procurement staff determined HMS's factor adjustment to be fair and reasonable.

Today's action authorizes award of this on-call contract to HMS. However, no specific project or spending is authorized. Individual projects/task orders will be processed according to the signature authority set forth in Board Policy No. 41 (e.g. task orders under $150,000 will be approved by the CEO; task orders over $150,000 will require Board approval). Any individual work order estimated to be over $1,000,000 will require compliance with MTS's Project Labor Agreement. If subcontractors are needed for any individual work order, Contractor will designate the list of subcontractors at that time.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. PWL432.0-25, with HMS, for on-call railroad general electrical, communication, and traffic signal construction services, in the amount of $2,500,000.00 for one (1) year beginning October 1, 2025.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachment: A. Draft Standard Construction Agreement, MTS Doc. No. PWL432.0-25

Metropolitan Transit System

STANDARD CONSTRUCTION AGREEMENT

FOR

MTS DOC. NO. PWL432.0-25

JOC RAILROAD SIGNALS, OVERHEAD CATENARY SYSTEMS, AND TRACK WORK CONSTRUCTION SERVICES

THIS AGREEMENT is entered into this _____ day of _____, 2025 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: HMS Construction, Inc. Address: 2885 Scott St.

Vista CA 92081
City State Zip

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

Email: cmorales@hmsconco.com

Telephone: 760-727-9808

Authorized person to sign contracts Chris Morales CFO
Name Title

The specified Contract Documents are part of this Agreement. The Contractor agrees to furnish to MTS services and materials, as follows:

Contractor shall furnish all necessary management, supervision, labor, materials, tools, supplies, equipment, plant, services, engineering, testing and/or any other act or thing required to diligently and fully perform and complete the Project as specified in the Scope of Work (Exhibit A), Bid Proposal (Exhibit B), and in accordance with the Standard Construction Agreement and Special Conditions (Exhibit C), Federal Requirements (Exhibit D),JOC Special Conditions (Exhibit E), Technical Specifications Prepared by Gordian (Exhibit F), Construction Task Catalog (Exhibit G), Invitation for Bids (Exhibit H), Contractor Bonds (Exhibit I) and Contractor Forms (Exhibit J). All Exhibits to this agreement are attached separately on PlanetBids.

SCOPE OF WORK.

Contractor, for and in consideration of the payment to be made to Contractor as hereinafter provided, shall furnish all plant, labor, technical and professional services, supervision, materials and equipment, other than such materials and equipment as may be specified to be furnished by MTS, and perform all operations necessary to complete the Work in strict conformance with the Contract Documents (defined below) for the following public work of improvement:

JOC RAILROAD SIGNALS, OVERHEAD CATENARY SYSTEMS, AND TRACK WORK CONSTRUCTION SERVICES

Contractor is an independent contractor and not an agent of MTS. The Contractor and its surety shall be liable to MTS for any damages arising as a result of the Contractor's failure to comply with this obligation.

CONTRACT TIME.

This agreement shall be valid for a period of one (1) year, effective October 1, 2025 through September 30, 2026. Time is of the essence in the performance of the Work for each subsequent Work Order. The Work shall be commenced by the date stated in MTS's Notice to Proceed in the first Work Order of the Contract. The Contractor shall complete all Work required by the Contract Documents within the days specified in each Work Order.

CONTRACT PRICE.

MTS shall pay to the Contractor the value of any executed Work Orders under the Contract as full compensation for the performance of the Work Order, subject to any additions or deductions as provided in each Work Order. The Contract is an indefinite-quantity contract for construction work and services. There is no Minimum Contract Value of Work Orders that the Contractor is guaranteed the opportunity to perform under this Contract. The Maximum Contract Value is $2,500,000.00 over one (1) year.

The Contractor shall perform all work required, necessary, proper for or incidental to completing the Detailed Scope of Work called for in each individual Work Order issued pursuant to this Contract for the Unit Prices set forth in the Construction Task Catalog® and the Adjustment Factors, as provided under the Bid Form.

PROVISIONS REQUIRED BY LAW.

Each and every provision of law required to be included in these Contract Documents shall be deemed to be included in these Contract Documents. The Contractor shall comply with all requirements of the California Labor Code applicable to this Project.

INDEMNIFICATION.

Contractor shall provide indemnification as set forth in the General Conditions.

PREVAILING WAGES.

Contractor shall be required to pay the prevailing rate of wages in accordance with the Labor Code which such rates shall be made available at MTS's Administrative Office or may be obtained online at http://www.dir.ca.gov and which must be posted at the job site.

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

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 06

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

On-Call Job Order Contracting (JOC) Railroad General Electrical, Communication, and Traffic Signal Construction Services – 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. PWL431.0-25 (in substantially the same format as Attachment A), with Advanced Railway Innovations (ARI), for on-call railroad general electrical, communication, and traffic signal construction services, in the amount of $3,000,000.00, for one (1) year beginning October 1, 2025.

Budget Impact

The total cost of this contract is estimated to be $3,000,000.00. The contract will be funded by various MTS capital budget accounts. Funding will be included in the budget of each project for which a work order will be issued under this agreement.

DISCUSSION:

JOC is a procurement method under which public agencies may accomplish frequently encountered repairs, maintenance, and construction projects through a single, competitively procured one-year agreement.

The JOC program includes a catalogue of pricing for a variety of potential tasks to be performed under the contract, prepared by the MTS contractor, the Gordian Group. All potential contractors are subject to the pre-pricing within this catalogue. Each contractor then includes an adjustment factor, escalating their proposed price from the catalogue price, to determine the total cost of the task order. The adjustment factor represents an average percentage increase over the catalogue price (i.e. 1.25 adjustment factor represents 25% above the catalogue price) for that respective task within the project. In order to select the lowest responsive and responsible bidder, MTS staff compares each contractor's proposed adjustment factor.

MTS's enabling legislation at Public Utilities Code Section 120222 authorizes MTS to use any procurement method authorized for state or local agencies under state or federal law. Certain public entities in California are expressly authorized to use the JOC process within limited

parameters. MTS's ability to utilize the JOC contracting process is premised upon the statutory allowance granted to such entities. MTS shares in the same general limitations imposed on the JOC process by this statutory framework. Public Contract Code Section 20128.5 allows the board of supervisors of a county to utilize JOCs up to $3,000,000 annually, adjusted annually to reflect the percent change in the California Consumer Index. Calculations to June 2025 are $6,534,000 annually. Staff estimates that $3,000,000 in capacity is needed, based on projected project needs. MTS maintains internal contract administration guidelines to ensure compliance with the annual maximum in JOC work orders.

The JOC contract under consideration includes general railroad electrical and communications work contracting services, including network communications, fiber optic network installations, Variable Message Sign (VMS), Closed Circuit Television (CCTV), fare system, train to wayside communications, traffic lights, traffic signalization and synchronization systems, and all required incidental and supplemental professional and technical services and work.

On June 5, 2025, MTS issued an Invitation for Bids (IFB) seeking a contractor to provide JOC railroad construction services, with the award provided to the contractor with the lowest cumulative adjustment factor weighted as follows:

Item 1: Normal Working Hours (Non-Railroad Right-of-Way) –15%
Item 2: Other Than Normal Hours (Non-Railroad Right-of-Way) – 3%
Item 3: Normal Working Hours Along Railroad Right-of-Way – 75%
Item 4: Other Than Normal Hours Along Railroad Right-of-Way – 2%
Item 5: Restricted Work Shift – 5%

On July 25, 2025, four (4) bids were received, one (1) from HMS Construction, Inc. (HMS), one (1) from Balfour Beatty Infrastructure Inc. (Balfour Beatty), and one (1) from ARI. VSI Technologies failed to submit a bid form and was therefore deemed non-responsive. Staff determined that the solicitation was conducted in a fair and open manner.

Given that the award is made to the Bidder with the lowest cumulative adjustment factor over the pre-priced catalogue, MTS determined that ARI was the lowest responsive and responsible bidder.

Contractor	Firm Disadvantaged Business Enterprise (DBE) or Other Certification	Total Score
ARI	DBE	1.0937
HMS	N/A	1.2120
Balfour Beatty	N/A	1.3294
VSI Technologies*	WBE	*Non-responsive – incomplete Bid form*

**Non-responsive Bidder*

Based on historical results for these and other JOC services, Procurement staff determined ARI's factor adjustment to be fair and reasonable.

Today's action authorizes award of this on-call contract to ARI. However, no specific project or spending is authorized. Individual projects/task orders will be processed according to the signature authority set forth in Board Policy No. 41 (e.g. task orders under $150,000 will be

approved by the CEO; task orders over $150,000 will require Board approval). Any individual work order estimated to be over $1,000,000 will require compliance with MTS's Project Labor Agreement. If subcontractors are needed for any individual work order, Contractor will designate the list of subcontractors at that time.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. PWL431.0-25 (in substantially the same format as Attachment A), with ARI, for on-call railroad general electrical, communication, and traffic signal construction services, in the amount of $3,000,000.00, for one (1) year beginning October 1, 2025.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachment: A. Draft Standard Construction Agreement, MTS Doc. No. PWL431.0-25

Metropolitan Transit System

STANDARD CONSTRUCTION AGREEMENT

FOR

MTS DOC. NO. PWL431.0-25

JOC RAILROAD GENERAL ELECTRICAL, COMMUNICATION, & TRAFFIC SIGNAL CONSTRUCTION SERVICES

THIS AGREEMENT is entered into this _____ day of _____, 2025 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: Advanced Railroad Innovations, Inc. Address: 1950 Cordell Ct., Suite 102

El Cajon CA 92020
City State Zip

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

Email: nick@adv-rail.net

Telephone: 971-221-2146

Authorized person to sign contracts Nicholas Bird President
Name Title

The specified Contract Documents are part of this Agreement. The Contractor agrees to furnish to MTS services and materials, as follows:

Contractor shall furnish all necessary management, supervision, labor, materials, tools, supplies, equipment, plant, services, engineering, testing and/or any other act or thing required to diligently and fully perform and complete the Project as specified in the Scope of Work (Exhibit A), Bid Proposal (Exhibit B), and in accordance with the Standard Construction Agreement and Special Conditions (Exhibit C), Federal Requirements (Exhibit D),JOC Special Conditions (Exhibit E), Technical Specifications Prepared by Gordian (Exhibit F), Construction Task Catalog (Exhibit G), Invitation for Bids (Exhibit H), Contractor Bonds (Exhibit I) and Contractor Forms (Exhibit J). All Exhibits to this agreement are attached separately on PlanetBids.

SCOPE OF WORK.

Contractor, for and in consideration of the payment to be made to Contractor as hereinafter provided, shall furnish all plant, labor, technical and professional services, supervision, materials and equipment, other than such materials and equipment as may be specified to be furnished by MTS, and perform all operations necessary to complete the Work in strict conformance with the Contract Documents (defined below) for the following public work of improvement:

JOC RAILROAD GENERAL ELECTRICAL, COMMUNICATION, & TRAFFIC SIGNAL CONSTRUCTION SERVICES

Contractor is an independent contractor and not an agent of MTS. The Contractor and its surety shall be liable to MTS for any damages arising as a result of the Contractor's failure to comply with this obligation.

CONTRACT TIME.

This agreement shall be valid for a period of one (1) year, effective October 1, 2025 through September 30, 2026. Time is of the essence in the performance of the Work for each subsequent Work Order. The Work shall be commenced by the date stated in MTS's Notice to Proceed in the first Work Order of the Contract. The Contractor shall complete all Work required by the Contract Documents within the days specified in each Work Order.

CONTRACT PRICE.

MTS shall pay to the Contractor the value of any executed Work Orders under the Contract as full compensation for the performance of the Work Order, subject to any additions or deductions as provided in each Work Order. The Contract is an indefinite-quantity contract for construction work and services. There is no Minimum Contract Value of Work Orders that the Contractor is guaranteed the opportunity to perform under this Contract. The Maximum Contract Value is $3,000,000 over one (1) year.

The Contractor shall perform all work required, necessary, proper for or incidental to completing the Detailed Scope of Work called for in each individual Work Order issued pursuant to this Contract for the Unit Prices set forth in the Construction Task Catalog® and the Adjustment Factors, as provided under the Bid Form.

PROVISIONS REQUIRED BY LAW.

Each and every provision of law required to be included in these Contract Documents shall be deemed to be included in these Contract Documents. The Contractor shall comply with all requirements of the California Labor Code applicable to this Project.

INDEMNIFICATION.

Contractor shall provide indemnification as set forth in the General Conditions.

PREVAILING WAGES.

Contractor shall be required to pay the prevailing rate of wages in accordance with the Labor Code which such rates shall be made available at MTS's Administrative Office or may be obtained online at http://www.dir.ca.gov and which must be posted at the job site.

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

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/25

Agenda Item No. 7

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Federal Fiscal Year (FFY) 2024 (SANDAG Cycle 13) Federal Transit Administration (FTA) Section 5310 Enhanced Mobility for Seniors and Individuals with Disabilities – Grant Award

RECOMMENDATION:

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

1) Accept the FFY 2024 Section 5310 Enhanced Mobility for Seniors and Individuals with Disabilities Cycle 13 awarded by the San Diego Association of Governments (SANDAG) in the amount of $848,860.86 for paratransit vehicle procurement; and

2) Authorize $418,359.84 in local matching funds to fully fund the purchase of six (6) Americans with Disabilities Act (ADA) paratransit vehicles.

Budget Impact

FTA Section 5310 grants require at least 20 percent of the total project cost to be funded by local matching funds. MTS will be required to provide $418,359.84 (33%) in local matching funds to fully fund the replacement of six (6) ADA paratransit vehicles. If the final invoice for the purchase of vehicles is higher, MTS will pay the difference using local funds to cover the remaining cost. MTS's local match will be funded using State Transit Assistance (STA) from MTS Capital Improvement Program (CIP) 30011228 - Bus Procurement Project.

DISCUSSION:

The FTA provides capital and operating assistance to agencies providing transportation through the FTA Section 5310 Program. These funds are to be apportioned by the Metropolitan Planning Organization (MPO), SANDAG, through a competitive grant application process.

Based on the requirements of this funding opportunity, MTS typically applies for ADA paratransit vehicles up to the maximum funding availability, which is also consistent with MTS's long-term fleet plan.

On September 12, 2024 (AI 20), MTS received Board approval authorizing the CEO to submit and execute a grant application up to the program's maximum allowable request totaling $1,200,000 (seeking $600,000 in FFY 2023 and $600,000 in FFY 2024 for FTA Section 5310 funding) for ADA paratransit vehicle replacements, and to authorize the commitment of up to $300,000 in local matching funds to fully fund the purchase of the vehicles, if awarded.

During the course of the grant application and award process, the pricing of the paratransit vehicles increased. This increase impacted the number of vehicles that could be purchased. SANDAG utilizes a California Association for Coordinated Transportation / Morongo Basin Transit Authority (CALACT)/(MBTA) purchasing contract to purchase the vehicles. Since the notice of the award, the CALACT/MBTA contract pricing has increased significantly due to supply chain issues, causing an increase in matching funds required by MTS to fully fund the purchase of the vehicles. At the time of application, in October 2024, the estimated per bus cost was $197,379. However, pricing was increased effective February 2025, increasing the per bus cost to $211,203.45.

On June 27, 2025, SANDAG approved the Cycle 13 Section 5310 grant awards, awarding MTS $848,860.86 of its original $1.2 million request. The SANDAG award does not require MTS to purchase a specific number of buses, so long as the minimum 20% local match is fulfilled. Since the awarded amount was under MTS's initial requested amount, staff proposes to purchase six (6) ADA paratransit vehicles, with an MTS local match of $418,359.84 (33%) to complete the purchase:

SANDAG Cycle 13 Section 5310 ADA Paratransit Vehicle Grant			
Vehicle	**Per Vehicle Cost (incl tax and fees)**	**# of Vehicles**	**Total**
Starcraft Class B Ford E450 Propane 64G	$211,203.45	6	$1,267,220.70
Funding Shares	**SANDAG Award**	**MTS Match**	**Total**
Amount	$848,860.86	$418,359.84	$ 1,267,220.70
SANDAG/MTS %	67%	33%	100%
**Note that MTS will be responsible for any cost overruns as the SANDAG grant contribution is fixed*			

Therefore, staff recommends that the Board of Directors:

1) Accept the FFY 2024 Section 5310 Enhanced Mobility for Seniors and Individuals with Disabilities Cycle 13 awarded by the San Diego Association of Governments (SANDAG) in the amount of $848,860.86 for paratransit vehicle procurement; and

2) Authorize $418,359.84 in local matching funds to fully fund the purchase of six (6) Americans with Disabilities Act (ADA) paratransit vehicles.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/04/2025

Agenda Item No. 08

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Fiscal Year (FY) 2025 Trolley Track Improvements – Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to:

1) Execute the base bid to MTS Doc. No. PWL433.0-25 (in substantially the same format as Attachment A), with Domestic Rail Solutions Corp (DRS), a Disadvantaged Business Enterprise (DBE), for the FY25 Trolley Track Improvements in the amount of $5,451,950.41;

2) Transfer $523,058.47 from the Miscellaneous Capital account (1009128701) in the Fiscal Year 2026 Capital Improvement Program (CIP) to Cost Center 370016-571142 to provide funding to remove the sidings in contract alternates A-1 through A-5;

3) Authorize the CEO to execute contract alternates A-1 through A-5, in the amount of $523,058.47, bringing total expenditure authority to $5,975,008.88; and

4) Authorize the CEO to execute change orders totaling up to 15% of the base bid and alternates, in the amount of $896,251.33, bringing the total expenditure authority to $6,871,260.21.

Budget Impact

The total cost of this contract, including the proposed change order contingency, is estimated to be $6,871,260.21. Funding will be through various MTS Capital Improvement Projects (CIP) and Track Operations Budget as follows:

CIP/Cost Center Number	Description	Amount
CIP 2005125701 - 599908	Replace Grade Crossing	$1,682,847.07
370016 - 536600	Replace Crossties	$3,769,103.34
370016 - 571142	Remove Sidings (Contract Alternates A-1 to A-5)	$523,058.47
	TOTAL	**$5,975,008.88**
	15% Contingency*	$896,251.33
	TOTAL INCLUDING CONTINGENCY	**$6,871,260.21**

**Contingency to be charged to applicable cost center.*

DISCUSSION:

To maintain a State of Good Repair (SGR), MTS's Trolley infrastructure requires replacement of several major track components, which are at the end of their useful life, including but not limited to worn rail and ties, and gauge tolerance issues. To address these issues, MTS's approved CIP Budget includes several track improvement projects.

This contract will cover the scope of work (Attachment B), across the above-listed CIPs. The base bid portion of the contract includes:

1. Replacement of vehicular crossings at Eastbound 25th and Commercial, Bradley Avenue, and Severin Drive.

2. Blue Line tie replacement immediately south of the Barrio Logan trolley station to just north of the E Street trolley station.

In order to ensure the base bid work could be completed within budget, additional scopes of work were added to the bid documents as "contract alternates." These contract alternates involve the removal of rail sidings along Commercial Street. This work would remove obsolete and unused rail sidings that do not serve any commercial freight customers. The sidings were recently identified as a potential hazard due to a liability claim for a bicycle accident. Today's proposed action authorizes the CEO to execute these add alternates with a fund transfer from the Miscellaneous Capital account in the Fiscal Year 2026 CIP.

Contract Alternate	Location
A-1	Commercial and 22nd - Westbound Siding remove/replace with AC
A-2	Commercial and 29th - Eastbound Siding remove/replace with AC
A-3	Commercial and 31st - Eastbound Siding remove/replace with AC
A-4	Commercial and 31st - Westbound Siding remove/replace with AC
A-5	Commercial and 30th - Eastbound Siding remove/replace with AC

On March 20, 2025, staff issued an Invitation for Bids (IFB) for the FY25 Trolley Track Improvements. The following bids were received on June 9, 2025:

Company Name	Firm Certifications	Bid Amount
MTS - Independent Cost Estimate (ICE)		*$8,889,650.24*
DRS	**DBE**	**$5,975,008.88**

Balfour Beatty Infrastructure, Inc.	N/A	$7,415,748.00
RailWorks Track Services	N/A	$7,894,052.00
Stacy and Witbeck, Inc.	N/A	$8,397,787.00
Transdev Rail, Inc.	N/A	$8,540,454.50

Based on the bids received, and in comparison with the MTS ICE, staff recommends executing the base bid and all contract alternates A-1 to A-5, a price deemed to be fair and reasonable (Attachment C).

This award is subject to the Project Labor Agreement (PLA) requirements approved under Board Policy No. 66 because the MTS ICE was over $1 million.

DRS will be utilizing the following subcontractors to perform a portion of the work, as detailed further in Attachment D.

Subcontractor Name	Firm Certifications
Cable Pipe and Leak Detection Inc	Small Business (SB)
Connor Concrete Cutting & Coring	N/A
Hudson Safe-T-Lite Rentals	N/A
Lazer West Engineering	SB

Therefore, staff recommends that the MTS Board authorize the CEO to:

1) Execute the base bid to MTS Doc. No. PWL433.0-25 (in substantially the same format as Attachment A), with DRS, a DBE, for the FY25 Trolley Track Improvements in the amount of $5,451,950.41;

2) Transfer $523,058.47 from the Miscellaneous Capital account (1009128701) in the Fiscal Year 2026 CIP to Cost Center 370016-571142 to provide funding to remove the sidings in contract alternates A-1 through A-5;

3) Authorize the CEO to execute contract alternates A-1 through A-5, in the amount of $523,058.47, bringing total expenditure authority to $5,975,008.88; and

4) Authorize the CEO to execute change orders totaling up to 15% of the base bid and alternates, in the amount of $896,251.33, bringing the total expenditure authority to $6,871,260.21.

/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.PWL433.0-25
B. Technical Specifications, Details, Drawings
C. Costs
D. Subcontractor List

Metropolitan Transit System

STANDARD CONSTRUCTION AGREEMENT

FOR

MTS DOC. NO. PWL433.0-25

TROLLEY TRACK IMPROVEMENTS PROJECT - FY 25

THIS AGREEMENT is entered into this _____ day of _____ 2025, 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: Domestic Rail Solutions Corp dba DRS Contracting

Address: 160 S. Old Springs Road Suite 102
Anaheim, CA 92808

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

Email: paul@drscontractinginc.com

Telephone: (714) 800-3797

Authorized person to sign contracts Paul Marshall (Name) Vice President/COO (Title)

The specified Contract Documents are part of this Agreement. The Contractor agrees to furnish to MTS services and materials, as follows:

Contractor shall furnish all necessary management, supervision, labor, materials, tools, supplies, equipment, plant, services, engineering, testing and/or any other act or thing required to diligently and fully perform and complete the Project as specified in accordance with the Standard Agreement and General Conditions (Exhibit A), Scope of Work, Special Conditions and Attachments (Exhibit B), Bid Price Form (Exhibit C), and Federal Requirements (Exhibit D) and Forms (Exhibit E).

SCOPE OF WORK.

Contractor, for and in consideration of the payment to be made to Contractor as hereinafter provided, shall furnish all plant, labor, technical and professional services, supervision, materials and equipment, other than such materials and equipment as may be specified to be furnished by MTS, and perform all operations necessary to complete the Work in strict conformance with the Contract Documents (defined below) for the following public work of improvement:

TROLLEY TRACK IMPROVEMENTS PROJECT - FY 25

Contractor is an independent contractor and not an agent of MTS. The Contractor and its surety shall be liable to MTS for any damages arising as a result of the Contractor's failure to comply with this obligation.

CONTRACT TIME.

Time is of the essence in the performance of the Work. The Work shall be commenced by the date stated in MTS's Notice to Proceed. The Contractor shall complete all Work required by the Contract Documents **within 270 calendar days** from the commencement date stated in the Notice to Proceed. By its signature hereunder, Contractor agrees the Contract Time is adequate and reasonable to complete the Work.

CONTRACT PRICE.

MTS shall pay the Contractor as full compensation for the performance of the Contract, subject to any additions or deductions as provided in the Contract Documents, and including all applicable taxes and costs, the sum of five million nine hundred seventy-five thousand eight dollars and eighty-eight cents ($5,975,008.88). Payment shall be made as set forth in the General Conditions.

PROVISIONS REQUIRED BY LAW.

Each and every provision of law required to be included in these Contract Documents shall be deemed to be included in these Contract Documents. The Contractor shall comply with all requirements of the California Labor Code applicable to this Project.

INDEMNIFICATION.

Contractor shall provide indemnification as set forth in the General Conditions.

PREVAILING WAGES.

Contractor shall be required to pay the prevailing rate of wages in accordance with the Labor Code which such rates shall be made available at MTS's Administrative Office or may be obtained online at http://www.dir.ca.gov and which must be posted at the job site.

PROJECT LABOR AGREEMENT.

Contractor shall comply with MTS's Project Labor Agreement in the performance of the Work.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	**DOMESTIC RAIL SOLUTIONS CORP, dba: DRS CONTRACTING**
By: _____ Sharon Cooney, Chief Executive Officer	**By:** _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	**Title:** _____

ADDENDUM NO. 5
(Issued 5/23/25)

TECHNICAL SPECIFICATIONS TROLLEY TRACK IMPROVEMENTS

SCOPE OF WORK. Contractor, for and in consideration of the payment to be made to Contractor as hereinafter provided, shall furnish all plant, labor, technical and professional services, supervision, materials and equipment, other than such materials and equipment as may be specified to be furnished by MTS, and perform all operations necessary to complete the Work in strict conformance with the Contract Documents (defined below) for the following public work of improvement:

TROLLEY TRACK IMPROVEMENTS

The contractor shall:

A. Remove (898) TF of existing Vehicular Crossings, along with asphalt concrete, sidewalk, curb and gutter, and other required incidentals under “Remove Existing Track, Vehicular Crossing”, per the drawings, details, and standard specifications as provided by MTS. Work will take place at the following locations.
   - 25th and Commercial Vehicular Crossing – Eastbound Track Only
   - Bradley Ave Vehicular Crossing
   - Severin Dr Vehicular Crossing

B. Construct a total of (898) TF of new Vehicular Crossings, timber ties, ballast, filter fabric, and all other required incidentals under “Construct New Track, Vehicular Crossing” per the drawings, details, and standard specifications as provided by MTS. Work will take place at the following locations.
   - 25th and Commercial Vehicular Crossing – Eastbound Track Only
   - Bradley Ave Vehicular Crossing
   - Severin Dr Vehicular Crossing

C. Install (5,625) SF of 8” of HMAC on ballast, and all other required incidentals under “Asphalt Concrete, (8” HMAC),” per the drawings, details, and standard specifications as provided by MTS. Work will take place at the following Locations.
   - 25th and Commercial Vehicular Crossing – Eastbound Track Only
   - Bradley Ave Vehicular Crossing
   - Severin Dr Vehicular Crossing

D. Install (421) SF of 4” Sidewalk, Curb, Curb and Gutter on Ballast or Aggregate Base, Filter Fabric, and all other required incidentals under “Install Sidewalk, w Raised Epoxy Pebble, (4” PCCP),” per the drawings, details, and standard specifications as provided by MTS. Work will take place at the following Locations.
   - 25th and Commercial Vehicular Crossing – Eastbound Track Only
   - Bradley Ave Vehicular Crossing
   - Severin Dr Vehicular Crossing

E. Replace timber crossties and required incidentals, for a total of (10,000) EA under “Crosstie Replacement (Timber Ties),” per the drawings, details, and standard specifications as provided by MTS between Barrio Logan Station and East Beyer Blvd Bridge on the Westbound track on the Blue Line.

F. Provide surfacing, purchase and placement of top ballast, and destressing, for a total of (54,260) TF under “Surfacing, Top Ballast, and Destressing” per the drawings, details, and standard specifications as provided by MTS between Barrio Logan Station and East Beyer Blvd Bridge on the Westbound track on the Eastbound track on the Blue Line. Contractor is to Purchase and Place Top Ballast, with a maximum lift of 2”.

SECTION 10
GENERAL CONSTRUCTION

10-1 GENERAL

Unless otherwise indicated, all system installation, testing, and construction workmanship shall conform to or exceed all regulations and codes indicated in Section 86-1.02, "Regulations and Code," of the Standard Specifications and the latest revisions of the regulations, codes and standards indicated herein.

NATIONAL:

1. AASHTO, American Association of State Highway and Transportation Officials
2. ACI, American Concrete Institute
3. ANSI/AWS D12.1, Reinforcing Steel Welding Code
4. ANSI/AASHTO/AWS D1.1
5. ANSI/NFPA-70, National Electric Code
6. APA, American Plywood Association
7. AREMA, American Railway Engineering and Maintenance-of-Way Association
8. ASTM, American Society for Testing and Materials
9. FCC, Part 15, Rules and Regulations, Private Land Mobile Services
10. FCC, Part 90, Rules and Regulations, Private Land Mobile Services
11. NESC, National Electric Safety Code
12. NFA-297, Guide on Principles and Practices for Communications Systems
13. NFPA-70E, Standard for Electrical Safety Requirements for Employee Workplaces
14. NFPA-71, Central Station Signaling Systems
15. NFPA-72, National Fire Alarm Code
16. NFPA-75, Protection of Electronic Computer Data Processing Equipment
17. NFPA-101, Life Safety Code
18. NFPA-130, Fixed Guideway Transit Systems
19. NFA-297, Guide on Principles and Practices for Communications Systems
20. SSPWC, Standard Specifications for Public Works Construction
21. TIA/EIA TSB67, Transmission Performance Specifications for Field Testing of Unshielded Twisted-pair Cabling Systems
22. Isolator for Metals Causing Electrolytic Action: Asphalt bitumen emulsion.

STATE:

The following General Orders (GO) of the California Public Utilities Commission of the State of California shall apply:

1. GO 26-D, Clearances of Railroads and Street Railroads as to Side and Overhead Structures, Parallel Tracks and Crossings
2. GO 52, Construction and Operating Power and Communication Lines for the prevention or Mitigation of Inductive Interference
3. GO 75-C, Protection of Crossings at Grade of Roads, Highways and Streets with Railroads
4. GO 95, Overhead Electric Line Construction
5. GO 118, Regulations Governing the Construction, Reconstruction, and Maintenance of Walkways Adjacent to Railroad Track and the Control of Vegetation Adjacent Thereto
6. GO 128, Construction of Underground Electric Supply and Communication Systems
7. GO 143-A, Rules for the Design, Construction and Operation of Light Rail Transit Systems including Streetcar Operations
8. State of California Electrical Safety Orders
9. Caltrans, California Department of Transportation Standard Plans and Specifications, 2006

10. California High Voltage Electrical Safety Orders
11. State of California Industrial Safety Orders
12. State of California Building Code (CBC)

LOCAL:

Standard Specification for Public Works Construction (SSPWC)

10-1.01 OBSTRUCTION AND UNDERGROUND FACILITIES

The Contractor's attention is directed to the existence of certain underground facilities that may require special precautions to be taken by the Contractor to protect the health, safety and welfare of workers and of the public. Facilities requiring special precautions include, but are not limited to: overhead electrical wires; conductors of petroleum products, oxygen, chlorine, and toxic or flammable gases; natural gas in pipelines greater than 6 inches in diameter or pipelines operating at pressures greater than 60 psi (gage); underground electric supply system conductors or cables either directly buried or in duct or conduit that do not have concentric neutral conductors or other effectively grounded metal shields or sheaths; and underground electrical grounded metal shields or sheaths; and underground electrical conductors with potential to ground more than 300 volts.

The Contractor shall notify the Engineer and the below stakeholders at least two working days, but not more than 14 calendar days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure:

Underground Service Alert (USA)	811
Sewer: City of San Diego Metro Waster (619) 292 – 6300 Water: City of San Diego Water	(619) 527 – 7482
Gas: San Diego Gas and Electric	(858) 636 – 6856
Phone: AT&T	(619) 266 – 4651
Cable: COX Cable	(619) 263 – 9251 ext. 5125
Fiber Optic: Sprint	(800) 659 – 9698
Cable Pipe and Leak Detection	(619) 873 – 1530
SANDAG Commute (Bike Lockers)	(619) 515 – 1177

The Contractor shall locate existing signal wires, track circuits, platform lighting cables, irrigation lines, Sprint, and other MTS underground facilities as necessary to complete the improvements without damage to existing facilities. The contractor shall have said facilities located and marked out by Cable, Pipe& Leak Detection (CPL) at (619) 873-1530 or other approved utility locating subcontractor familiar with MTS facilities. Any work on the underground facilities shall be coordinated with the Engineer. If the Contractor cannot protect in-place existing underground facilities, the Contractor shall replace any damaged or removed underground facilities in a timely manner as to not allow for extended delays to the trolley services. If the services are subject to extended delays, the Contractor shall notify MTS prior to the expiring of the original scheduled work time. All underground facilities located shall be as-built and included on the contractor’s as-built drawings.

The Contractor’s attention is directed to the existence of overhead power lines, energized trolley wires, catenary poles, signals and grade-crossing signals at the locations of work. Any one or a combination of these obstructions could exist at any one location. No obstructions shall be permitted within 10 feet of operating tracks.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section, including underground location services, not otherwise provided for, shall be considered as included in the contract prices paid for various items of work involved, and no additional compensation will be allowed therefore.

10-1.02 DUST CONTROL

Dust control shall conform to the Current Rules & Regulations of the County of San Diego Air Pollution Control District. However, the Contractor shall endeavor, whenever possible, to restrict the use of water to control dust for his convenience due to the current need to conserve water.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work involved, and no additional compensation will be allowed therefore.

10-1.03 DEVELOP WATER SUPPLY

Contractor is responsible for developing their own water supply. Existing LRT station water supply system shall not be used for construction purposes.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work involved, and no additional compensation will be allowed therefore.

10-1.04.A CONSTRUCTION AREA LIGHTING

During the hours of darkness, all working areas utilized by the Contractor to perform work shall be lighted to conform to the minimum illumination intensities established by California Division of Occupational Safety and Health Construction Safety Orders.

All lighting fixtures shall be mounted and directed in a manner precluding glare to approaching traffic and shall not be directed parallel to the track to avoid interfering with the vision of the train crews. In addition, lighting fixtures shall not obscure any railroad signals.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work involved, and no additional compensation will be allowed therefore.

10-1.04 PROJECT APPEARANCE

The Contractor shall maintain a neat appearance to the work at all times. In any area visible to the public, the following shall apply:

Broken concrete and debris developed during construction operations shall become the property of the Contractor and be disposed of concurrently with its removal. No stockpiling of demolition materials or debris will be permitted within the MTS Right-of-Way.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section, not otherwise provided for, shall be considered as included in contract prices paid for the various items of work involved, and no additional compensation will be allowed therefore.

10-1.05 WASTE MANAGEMENT

SOLID WASTE

Do not allow litter or debris to accumulate anywhere on the platform, including storm drain grates, concrete debris, construction materials, trash racks, and ditch lines. All products to be included in the construction shall not be stored on the platform. All material must be stored at ground level. Pick up and remove trash and debris from the platform daily. Contractor must monitor solid waste storage and disposal procedures on the job site.

Furnish enough closed-lid dumpsters of sufficient size to contain the solid waste generated by work activities. When refuse reaches the fill line, empty dumpsters. Dumpsters must be watertight. Do not wash out dumpsters at the job site. Furnish additional containers and more frequent pickup during the demolition phase of construction.

Solid waste includes:

1. Brick
2. Mortar
3. Timber
4. Metal scraps
5. Sawdust
6. Pipe
7. Electrical cuttings
8. Non-hazardous equipment parts
9. Styrofoam and other packaging materials
10. Vegetative material and plant containers from highway planting
11. Litter and smoking material, including litter generated randomly by the public
12. Other trash and debris

Furnish and use trash receptacles on in the platform job site yard, field trailers, and locations where workers gather for lunch and breaks.

HAZARDOUS WASTE

For hazardous material encountered in excavation, the Contractor is directed to Section 10-5.04, “Hazardous Waste In Excavation,” of these Special Provisions.

Use hazardous waste management practices if waste is generated on the job site from these substances:

1. Petroleum products
2. Asphalt products
3. Concrete curing compound
4. Pesticides
5. Acids
6. Paints
7. Stains
8. Solvents
9. Wood preservatives
10. Roofing tar
11. Road flares
12. Lime
13. Glues and adhesives
14. Materials classified as hazardous by California Code of Regulations, Title 22, Division 4.5; or listed in CFR Title 40, Parts 110, 117, 261, or 302

CONCRETE WASTE

Use practices to prevent the discharge of portland cement concrete, AC, or HMA waste into storm drain systems or watercourses.

Collect and dispose of portland cement concrete, AC, or HMA waste at locations where:

1. Concrete material, including grout, is used
2. Concrete dust and debris result from demolition
3. Sawcutting, coring, grinding, grooving, or hydro concrete demolition of Portland cement concrete, or HMA creates a residue or slurry
4. Concrete truck or other concrete-coated equipment is cleaned at the job site

SANITARY AND SEPTIC WASTE

Do not bury or discharge wastewater from sanitary or septic systems within MTS right of way. Contractor must inspect sanitary or septic waste storage and monitor disposal procedures at least weekly. Sanitary facilities that discharge to the sanitary sewer system must be properly connected and free from leaks. Place sanitary facilities at least 50 feet away from storm drains, watercourse, and flow lines.

Obtain written approval from local health agency, city, county, and sewer district before discharging from a sanitary or septic system directly into a sanitary sewer system, and submit a copy to the Engineer. Comply with local health agency provisions while using an on-site disposal system.

LIQUID WASTE

Use practices to prevent job site liquid waste from entering storm drain systems or watercourses. Liquid wastes include the following:

1. Drilling slurries or fluids
2. Grease-free or oil-free wastewater or rinse water
3. Dredgings, including liquid waste from drainage system cleaning
4. Liquid waste running off a surface including wash or rinse water
5. Other non-storm water liquids not covered by separate permits

Hold liquid waste in structurally sound, leak proof containers such as:

1. Roll-off bins
2. Portable tanks

Liquid waste containers must be of sufficient quantity and volume to prevent overflow, spills and leaks.

Store containers:

1. At least 50 feet from moving vehicles and equipment
    2. If within the floodplain, at least 100 feet from concentrated flows of storm water, drainage courses, watercourses, or storm drain inlets unless approved
    3. If outside the floodplain, at least 50 feet from concentrated flows of storm water, drainage courses, watercourses, or storm drain inlets unless approved

Remove and dispose of deposited solids from sediment traps under "Solid Waste" unless the Engineer authorizes another method.

Liquid waste may require testing to determine hazardous material content before disposal.

Drilling fluids and residue must be disposed of outside the MTS right of way.

If an approved location is available within the job site, fluids and residue exempt under California Code of Regulations, Title 23, Section 2511(g) may be dried by evaporation in a leak proof container. Dispose of remaining solid waste under "Solid Waste" of these special provisions.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for waste management shall be considered included in the contract prices paid for the various items of work requiring waste management and no additional compensation will be allowed therefore.

10-1.06 CONTRACTOR STORAGE AND LAYDOWN AREA

The Contractor shall be responsible for arranging for storage of materials and securing laydown area.

MTS will provide contractor with approximately 10,000 SF of laydown space located at the east end of Palomar Street Transit Center parking lot on the Blue Line and an area in the Wright Street yard for temporary storage, not more than three days, of removed materials prior to disposal at no cost to the contractor.

The Contractor will be permitted to temporarily store track materials within the MTS right-of-way adjacent to the work, subject to the following:

1. Track material (except rail) shall be brought onto the site on a daily basis in sufficient quantity to complete construction operations on that day. Any excess materials shall be removed from the right-of-way daily.

2. Rail shall be brought onto the site and stored as indicated in Section 11, “Trackwork.”

3. Track materials (i.e., rails and crossties) shall be bundled or stacked neatly and crosstie clips, pads, insulators, tie plates, rail anchors, and spikes shall be stored in suitable containers, etc.

4. Access must be maintained at all times to the entrance to the Trolley stations, and parking areas adjacent to the MTS right-of-way.

5. Track materials shall be located so as not to encroach within the CPUC required clearances from

operating tracks.

6. Laydown space must be fenced off and secured by the contractor.

7. Excess materials shall be removed from the right-of-way as soon as feasible after theyare determined not required in the work.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work involved, and no additional compensation will be allowed therefore.

10-1.07 SITE CONDITIONS AND ACCESS

Contractor shall arrange a meeting on-site with the Engineer a minimum of 48 hours in advance of the start of construction at each work location and any adjacent in the vicinity of the work and examine the job-site areas and conditions under which work of this section will be performed. The Contractor shall notify the Engineer in writing, within 24 hours following the on-site meeting, of all discrepancies between the existing site conditions and those shown on the contract drawings. Contractor's failure to provide written notification to the Engineer will indicate that no discrepancies exist.

All project sites are accessible through public right of way.

Contractor is to maintain access to adjacent properties at all times. Disruption to these business activities shall be kept to a minimum. The contractor shall communicate in advance with each property owner/tenant affected by its operations prior to the start of work. In addition, the contractor shall maintain a proactive relationship with the area merchants and inform them weekly of the construction schedule to assure that impacts to their businesses are kept at a minimum throughout the contract period.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work involved, and no additional compensation will be allowed therefore.

10-1.08 PROTECTION OF EXISTING FACILITIES

- Preservation of Property

Contractor shall maintain access to adjacent properties at all times. Disruption to these business activities shall be kept to a minimum.

The Contractor shall communicate in advance with each property owner/tenant affected by its operations prior to the start of work. In addition, the contractor shall maintain a proactive relationship with the area merchants and inform them weekly of the construction schedule to assure that impacts to their businesses are kept at a minimum throughout the contract period. Costs for this communication effort shall be considered included in the various items of work.

1. Protection

The Contractor shall protect existing work which is to remain in place, that is to be reused, or which is to remain the property of the owner by temporary covers, shoring, bracing, and supports. Items

which are to remain or are to be salvaged which are damaged during performance of work shall be repaired to their original condition or replaced with new by the Contractor at no additional cost to the owner. Do not overload structural elements. Provide new supports and reinforcement for existing construction weakened by demolition or removal work.

The Contractor shall protect all services and utilities which are to remain. Where removal of existing utilities and pavement is specified or indicated, provide approved barricades, temporary covering of exposed areas, and temporary services or connections for electrical utilities.

Measurement and Payment:

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work involved, therefore no additional compensation will be allowed.

10-1.09 SOUND CONTROL

The Contractor will be required to limit construction noise according to the San Diego City Municipal Code. Details are available at the San Diego City website. http://www.sandiego.gov/nccd/noise

For any night work, the Contractor will be required to obtain a Noise Permit from the City of San Diego, Development Services (telephone 619-446-5000).

Specifically, the Contractor shall limit noise during operations near residential buildings and during night and weekend construction. Permits may be required from the City of San Diego in order to be in compliance with local laws. The Contractor shall acquire all necessary permits and shall coordinate with all businesses and residences as needed to keep construction noise to a minimum.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section, including obtaining any permits required, shall be considered as included in the contract prices paid for various items of work involved and no additional compensation will be allowed therefore.

10-1.10 CONSTRUCTION SURVEYING

All field construction surveying required for accurate location of the various items of work on the contract shall be furnished by the Contractor. For track rehabilitation, the elevation and alignment of the new track shall, generally, be based on the location of the existing tracks as indicated on the plans. The Contractor shall provide the Engineer with the location and elevation of the existing track extending 100 feet beyond the project limits of any new Track Construction. The contractor must not go above 8” below the top of platform for any new Track Construction within station areas.

Construction staking shall be in conformance with Chapter 12 of the Caltrans Surveys Manual, dated September 2006. Legible copies of all construction operations staking sheets shall be provided to the Engineer two days before construction work is started at each location.

All field construction surveying required for accurate location and the construction of the various items of

work under the contract shall be performed and furnished by the Contractor.

Prior to beginning construction operations in the field, the Contractor shall tie out all such project control monuments for use in reconstructing project control monuments lost or disturbed during construction. Survey notes of control ties shall be submitted to the Engineer prior to starting construction operations in

the field.

The Contractor shall notify the Engineer, in writing, 24 hours in advance of any construction staking.

The Contractor shall be responsible for preparing and filing with the San Diego County Surveyor a Corner Record of the references to existing monuments within the area of each street or highway to be reconstructed under this contract, prior to any reconstruction, as required by Section 8771 of the Business and Professions Code (January 1, 1995).

The Contractor shall also replace all disturbed existing property corner markers, monuments, and local agencies' well monuments disturbed during construction operations. These new markers, monuments, and well monuments shall be documented by a record of survey map or corner record prepared in accordance with Section 8771 of the Business and Professions Code and all applicable laws and regulations, and filed in the Office of the County Recorder of San Diego County at the Contractor's expense.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for furnishing all construction surveying, replacing all existing property corners, monuments and well monuments, filing and recording necessary record of survey maps and layout of the work shall be considered as included in the contract prices paid for the various items of work, and no additional compensation will be allowed therefore.

10-1.11 SUBMITTALS

Submit manufacturers' catalog data, cut sheets, and certifications as appropriate for all contractor furnished materials for approval by the Engineer.

The contactor shall submit a complete list of required submittals for approval by the Engineer.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for various items of work involved and no additional compensation will be allowed therefore.

10-1.12 COORDINATION

The Contractor shall coordinate and schedule the loading, hauling, unloading, and setting of the material and equipment with the Engineer. The Contractor shall be responsible for preparing plans for traffic detours and obtaining permits to move oversized material and equipment on roads and highways. It is the contractors responsibility to get equipment on and off the track.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for various items of work involved and no additional compensation will be allowed therefore.

10-1.13 PERMITS AND RIGHT-OF-WAY REQUIREMENTS

All permits and rights-of-way needed for performance of the Work shall be obtained by the Contractor.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for various items of work involved and no additional compensation will be allowed therefore.

10-1.14 GROUND WATER AND DEWATERING

Work shall consist of dewatering as needed for the various items of work shown on the plans and as specified in these Special Provisions.

The Contractor shall note that a current environmental site assessment has not been performed and a potential for ground water contamination might exist.

Information regarding discharges to the City of San Diego sanitary sewer system can be obtained by contacting Chris Donaldson at (858) 654-4119.

NPDES discharge requirements are contained in RWQCB Order 95-25, NPDES NO. CAG919001, "General Waste Discharge Requirements for Groundwater Extraction and Similar Waste Discharges to San Diego Bay and Storm Drains or Other Conveyance Systems Tributary Thereto."

Both agencies require time to review the discharge authorization requests. The Contractor is responsible for obtaining permits, pumping and treating water and discharge monitoring. The Contractor shall discharge at all times in compliance with the discharge authorization. Treated water and discharge volumes shall be measured using a totalizing flow meter.

Measurement and Payment:

Measurement of work performed under this section shall be per the provisions of Section 12-1, "Extra Work" of the Standard Specifications.

Payment for dewatering, including treatment of extracted groundwater prior to discharge, permits, analysis, pumping, and discharge fees will be made in accordance with the provisions of Section 12-1, "Extra Work," of the Standard Specifications.

10-2 MOBILIZATION

Staging and stockpiling of equipment and materials shall be within the limits of work as shown on the plans, unless said otherwise.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work involved, and no additional compensation will be allowed therefore.

10-3 CONSTRUCTION AREA WORK PLAN

10-3.01 GENERAL

All phases of construction shall maintain minimum operational standards.

10-3.02 TRAFFIC CONTROL PLAN

The Contractor shall prepare Traffic Control Plans with elements and zone devices in accordance with Part 6 of the California MUTCD, 2010 edition and these Special Provisions. Traffic Control for striping within the city rights of way shall be in accordance with the California MUTCD, 2010 edition and the requirements of the appropriate jurisdiction.

The work shall consist of the Contractor preparing and obtaining approval of Traffic Control Plans as required by the governing agency or agencies, before doing any work within any city street right-of-way, placing and removing of traffic and pedestrian control devices, placing any temporary striping required, placing any permanent striping or markings damaged or removed during construction and working within the MTS Right-of-Way. The Traffic Control Plans shall comply with requirements set forth by the governing agency or agencies regarding types of plan submittals, information shown about sign types, sign placement, traffic phasing, detours, street closings, removals, etc.

The Contractor shall submit the draft Traffic Control Plan to the Engineer for review ten calendar days prior to submittal to the appropriate permitting agency. The Contractor shall circulate copies of the traffic control plans to the permitting agency and any third parties as required by the permitting agency. Some jurisdictions, require the Contractor to obtain City Council approval of road closures;the Contractor shall plan accordingly. Contractor shall be responsible for contacting governing public agency or agencies to determine required processing time. Contractor shall submit traffic control plans to avoid project delays. Upon receipt, a copy of the approved traffic control plan shall be submitted to the Engineer.

The Contractor shall maintain all temporary access facilities in a safe and neat condition from the time of installation to the time of removal. If any component in the traffic control system is displaced, or ceases to operate or function as specified, from any cause, during the progress of the work, the Contractor shall immediately repair said component to its original condition or replace said component and restore the component to its original location.

Any existing permanent striping that is damaged during construction shall be restored to its original state and layout. Until the permanent striping is replaced, the Contractor shall install temporary construction area traffic control. The work performed in connection with replacing the striping shall conform to the provisions in Section 84, “Traffic Stripes and Pavement Markings,” of the Standard Specification and to Drawing A20B of the Standard Plans.

Personal vehicles of the Contractor's employees shall not be parked within the railway right of way including any section closed to public traffic, except personal vehicles used in lieu of the Contractor's equipment.

The Contractor's equipment or personal vehicles used in lieu of the Contractor's equipment, and marked with permanent or temporary name plates identifying contracting firm, may park in the area of construction but only during construction operation hours.

When leaving a work area and entering a roadway or railway carrying public traffic or rail traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic or rail traffic.

Equipment, material, or debris shall not be stored or remain in the public right of way without prior acceptance by the Engineer.

When work is in progress in a trench or other excavation adjacent to the traveled way, portable delineators, conforming to Section 12-3.04, "Portable Delineators," of the Caltrans Standard Specifications, shall be placed on the edge of pavement. At other times, the portable delineators shall be placed off and adjacent to the edge of pavement. The portable delineators shall be placed as necessary

for proper delineation. The spacing between delineators shall not exceed 50 feet on tangents or 25 feet on curves.

Whenever traffic is permitted over or adjacent to trenches or other depressions, the Contractor shall furnish and maintain temporary steel plate bridging with a non-skid surface unless other means of protecting the public and the work are expressly approved by the Engineer.

Steel plates used for bridging shall extend 12 in. beyond the edges of trenches.

Steel plates (A-36 grade steel, designed for HL-93 truck loading per the AASHTO LRFD Bridge Design Specifications with California Amendments) shall conform to the following minimum thickness.

Trench Width	Minimum Plate Thickness
10 in.	1/2 in.
23 in.	3/4 in.
2 ft- 7 in.	7/8 in.
3 ft- 5 in.	1 in.
5 ft- 3 in.	1 3/4 in.

Note: For spans greater than 5 ft- 3 in., The Contractor shall have a California Registered Civil Engineer prepare and submit a structural design as specified under Section 5-1.4, “Submittals” of these Special Provisions.

Trenches shall be adequately shored, per Section 629 of the California Department of Transportation’s Encroachment Permits Manual, to support bridging the traffic loads.

Where steel plates are used for bridging, the contractor shall provide asphalt concrete tapers, utilizing cold planing to provide adequate depth to adequately feather the asphalt to the edges of the plates. A “Rough Road” sign (W33), with black lettering on an orange background shall be used in advance of steel plate bridging in addition with any other required construction signage.

Minor deviations from the requirements of this section which do not significantly change the cost of the Work may be permitted upon the written request of the Contractor if, in the opinion of the Engineer, public traffic or rail traffic will be better served and the Work expedited. Such deviations shall not be adopted until the Engineer has indicated his approval in writing. All other modifications will be made by contract change order.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for various items of work involved and no additional compensation will be allowed therefore.

10-3.03 FLAGGING

Flaggers to provide traffic control of public traffic through the work areas shall be ATSSA certified.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for various items of work involved and no additional compensation will be allowed therefore.

10-4 ABANDONMENT, DEMOLITION, REMOVAL, DISPOSAL, AND RECONSTRUCTION OF EXISTING FACILITIES

10-4.01 DESCRIPTION OF WORK

Certain existing improvements shall be abandoned, demolished, removed, disposed, stored, salvaged, reconstructed, and/or relocated as shown on the plans. See Section 11-3, “Track and Ballast Removal and/or Salvage” of these Special Provisions for track and ballast removal.

The Contractor shall be responsible for obtaining all necessary permits and approvals for accomplishing all removal and disposal operations. Unless otherwise stipulated, all materials resulting from the removal of obstructions shall become the property of the Contractor at the place of origin and shall be disposed of by the Contractor in conformance with all laws, regulations and rules legally imposed on such activities. All existing facilities removed or demolished shall be immediately loaded into trucks and removed from the site. No stockpiling of said materials shall occur on site without the express approval of the Engineer.

The Contractor shall not dispose of the improvements or materials there from by sale, gift, or in any manner whatsoever to the general public at the site, provided however that this provision shall not be construed as limiting or prohibiting the sale or disposal of such improvements or materials at the site to duly licensed contractors, and provided that the Contractor verifies that all such materials have been removed from the site.

The Contractor is encouraged to separate asphalt pavement and provide to sites for use in recycled asphalt pavement preparation. The Contractor is encouraged to use recycling as a method of disposal whenever possible.

10-4.02 PROTECTION OF TREES

Trees within the project site shall not be damaged during demolition. Only trees that are identified to be removed shall be removed, all others shall be protected in place, unless otherwise directed by the Engineer.

All trees that are to remain that are damaged during the work under this contract shall be replaced in kind unless otherwise approved by the Engineer.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for protection of existing trees shall be considered included in the contract price paid for various items of demolition work and no additional compensation will be allowed therefore.

10-4.03 REMOVAL AND DISPOSAL OF EXISTING FACILITIES

Disposal of existing facilities includes demolition, removal, and disposal of various existing facilities as shown on the plans, all as required for construction of new facilities.

Items to remain that are damaged during demolition shall be repaired or replaced as directed by the Engineer at no cost to the Owner.

A. Remove Existing Sidewalk and Subgrade

Existing concrete sidewalk, base and subgrade, shall be removed as shown on the Plans. Concrete shall be removed without damaging portions of existing concrete to remain in place by

sawcutting the concrete at the limits of removal shown on the Plans or ordered by the Engineer. Removal shall be to a depth to allow for the installation of the proposed sidewalk as indicated in the drawings.

Existing manhole frames and covers, valve boxes and vaults, and other facilities to remain in place shall be protected and preserved.

Existing sidewalk, base and subgrade identified to be removed as part of track removal shall be performed in accordance with Section 11-3, “Track and Ballast Removal” of these special provisions.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full Compensation for removing and disposing of existing sidewalk and subgrade shall be included in the contract unit price paid for under “Remove Existing Track, Vehicular Crossing,” therefore no separate payment will be made.

B. Remove Existing Concrete Pavement

Concrete shall be removed without damaging portions of existing concrete to remain in place by sawcutting the concrete at the limits of removal shown on the Plans or ordered by the Engineer.

Demolition shall consist of performing all work necessary to demolish, remove and dispose of existing concrete pavement, all as shown on the plans and specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, and for doing all the work that may be required to construct and maintain the facilities within the limits of work.

The joint between any surfacing to be removed and surfacing which is to remain in place shall be cut to a neat line with a power-driven saw to full depth prior to removal operations. Residue from saw cutting operations shall be removed from the pavement surface by vacuuming or other approved method and shall not be allowed to flow across the pavement nor be left on the surface of the pavement. Residue from saw cutting operations shall be disposed of outside the project right-of-way.

Existing concrete pavement identified to be removed as part of track removal shall be performed in accordance with Section 11-3, “Track and Ballast Removal” of these special provisions.

Existing manhole frames and covers, valve boxes and vaults, and other facilities to remain in place shall be protected and preserved.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full Compensation for removing and disposing of existing concrete pavement shall be included in the contract unit price paid for under “Remove Existing Track, Vehicular Crossing,” therefore no separate payment will be made.

C. Remove Existing Asphalt Concrete (AC) Pavement

Existing AC pavement shown on the plans to be removed shall be sawcut and removed to a depth of at least 12 inches below the grade of the existing surfacing. Resulting holes and depressions shall be backfilled with earthy material selected from excavation to the lines and

grade established by the Engineer.

The joint between any surfacing to be removed and surfacing which is to remain in place shall be cut to a neat line with a power-driven saw to full depth prior to removal operations. Residue from saw cutting operations shall be removed from the pavement surface by vacuuming or other approved method and shall not be allowed to flow across the pavement nor be left on the surface of the pavement. Residue from saw cutting operations shall be disposed of outside the project right-of-way in conformance with the provisions in Section 15-2.03, "Disposal," of the Standard Specifications.

Existing manhole frames and covers, valve boxes and vaults, and other facilities to remain in place shall be protected and preserved.

Existing AC pavement identified to be removed as part of track removal shall be performed in accordance with Section 11-3, “Track and Ballast Removal” of these special provisions.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full Compensation for removing and disposing of existing asphalt concrete (AC) pavement shall be included in the contract unit price paid for under “Remove Existing Track, Vehicular Crossing,” therefore no separate payment will be made.

D. Remove Existing Pavers

Existing brick (including sand bedding), concrete interlocking pavers and tile, including mortar, where shown on the plans to be removed, shall be removed.

Measurement and Payment

Full Compensation for removing and disposing of brick, concrete interlocking pavers and tile shall be included in the contract unit price paid for under “Remove Existing Track, Vehicular Crossing,” therefore no separate payment will be made.

10-4.04 SALVAGE EXISTING FACILITIES

10-4.04.1 GENERAL

All material scheduled for removal shall be subject to return to MTS for storage and reuse, as directed bythe Engineer, unless otherwise specified herein. The Contractor shall not damage or destroy this material and shall protect all salvaged material during the demolition and removal work. The Contractor shall not reuse any removed material without the Engineer’s written approval. The Contractor shall return and transport all material designated for salvage, together with a bill of material, to the Wright Street yard or another approved MTS storage location as directed by the Engineer. In the case of items to be salvaged to another entity, the Contractor shall make arrangements for the removal of those items to a location and in a manner acceptable to that entity prior to removal.

Existing facilities to be salvaged shall be immediately loaded onto trucks and removed to their predetermined salvage location. No stockpiling of said materials shall occur on MTS property without the expressed approval of the Engineer.

Items to remain that are damaged during demolition shall be repaired or replaced as directed by the Engineer at no cost to the Owner. Items to be salvaged that are damaged during removal shall be

repaired or replaced as directed by the Engineer at no cost to the Owner.

10-4.05 EXISTING SURVEY MONUMENTS

There are survey monuments that will be impacted by the proposed construction activities. Several of these monuments are brass disks that are a part of the Record of Survey Map No. 15487 as prepared by Philip J. Gurbino (LS 4424) of Berggren and Associates on April 17, 1997 and recorded in San Diego County on April 18, 1997, file no. 97.180859. There may be other existing monuments. The Contractor shall be responsible for any monuments and benchmarks which will be disturbed or destroyed by construction activities associated with this project. The Contractor shall have a licensed Land Surveyor or Registered Civil Engineer authorized to practice Land Surveying, reference and replace such points with appropriate survey monuments. A corner record or record of survey, as appropriate, shall be filed by the licensed Land Surveyor or Registered Civil Engineer as required by the Land Surveyors Act.

Measurement and Payment:

No separate measurement shall be made for the requirements of this section.

The labor, materials, tools, equipment, and costs associated with identifying impacted monuments, removing existing monuments, referencing, replacing monuments complete in place and filing a corner record or record of survey shall be considered incidental to the proposed construction associated with this project and no additional compensation shall be provided therefore.

10-5 EARTHWORK

10-5.02.A GENERAL

Earthwork beneath the track section shall be in accordance with Section 11, “Trackwork,” of these Special Provisions.

Contractor shall proof-roll the exposed subgrade with heavy equipment as directed by the Engineer. Where, in the opinion of the Engineer, the existing subgrade material is not suitable or yields, the subgrade shall be over-excavated and replaced with Class 2 aggregate over an approved subgrade enhancement geotextile to a minimum depth of 1 foot and a maximum depth of 2 feet or as determined by the Engineer.

10-5.02.B ROADWAY EXCAVATION

Roadway excavation shall include the removal of existing material to the elevations required for the proposed pavement sections as shown in the plans; removal, disposal or stockpiling of material excavated as required, including existing pavements; subgrade preparation; re-use of excavated material; placement and compaction of re-used material or aggregate subbase to the required elevations shown in the plans and in accordance with the Standard Specifications and these Special Provisions.

Structure Excavation and Backfill shall comply with the Standard Specifications and Section 10-5.03 of these Special Provisions.

Roadway Excavation (Track)

In the areas of track construction, the Contractor shall excavate beyond the limits of existing ballast which is required to achieve the new track section shown in the plans.

Some site soils have little cohesion. These materials may be prone to caving in drilled holes and the Contractor should anticipate the need to mitigate caving during construction. Over-excavation called out in the plans shall be considered roadway excavation.

Excavated soils may be re-used as compacted subgrade material provided they are suitable per the requirements of these Special Provisions. Excavated materials may be re-used as compacted subgrade provided they are free from organic material, contaminated material, clay lumps and rocks or debris greater than 4 inches in diameter. Excavation into cobble soils may generate oversized materials that may not be suitable for use as backfill. These may be broken into pieces that are 4 inches or smaller in diameter or disposed of offsite. Fill materials shall be free from organic and otherwise deleterious materials. Fill materials shall be free from environmental contamination. Unsuitable material shall become the property of the Contractor and shall be legally disposed of, offsite. See Section 10-5.02 C for subgrade preparation.

Compacted subgrade material may consist of re-used excavated material and/or aggregate subbase and shall be placed in horizontal lifts of approximately 8 inches in loose thickness. Prior to placing compacted subgrade material, the Contractor shall have it field tested to determine the laboratory optimum moisture content. Prior to compaction, each lift shall be watered or dried as needed to achieve a moisture content generally near the laboratory optimum, mixed, and then compacted by mechanical methods to 95 percent of its modified Proctor density as evaluated by ASTM D 1557. Successive lifts shall be treated in a like manner until the desired compacted sub-grade elevations are achieved.

In sidewalk areas, the Contractor shall place compacted sub-grade to the elevation of the underside of the crushed aggregate base as shown in the plans, details and cross-sections.

Measurement and Payment:

“Roadway Excavation (Track)” shall be included in the contract unit price paid for under “Remove Existing Track, Vehicular Crossing,” therefore no separate payment will be made.

The contract prices paid shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work involved in excavating existing surface and sub-grade material to the lines and grades indicated in the plans and specified in these special provisions; removal, disposal or stockpiling of material as required, including existing pavements; re-use of excavated material as compacted subgrade; subgrade preparation; placement and compaction of re-used material or aggregate subbase to the required elevations shown in the plans and in accordance with the Standard Specifications and these Special Provisions and legally disposing of all surplus excavated material. No additional compensation shall be provided there for.

10-5.02.C SUBGRADE PREPARATION

After demolition, clearing and grubbing, removal of existing paved areas, over-excavation of the native material to the depth specified as described above but prior to the placement of subgrade enhancement geotextile and compacted fill, the exposed ground surface shall be scarified to a depth of approximately 8 inches and watered or dried, as needed, to achieve moisture contents near the laboratory optimum. The scarified materials shall then be compacted to a minimum 90 percent of their modified Proctor density as evaluated in accordance with American Society for Testing and Materials (ASTM) test method D 1557. Prior to placement of additional compacted fill material following a delay in the grading operations, the exposed surface of previously compacted fill should be prepared to receive fill. Preparation may include scarification, moisture conditioning, and re-compaction.

Where the grade is too low as a result of the removal of excavated materials that are unsuitable for reuse as fill or as a result of buried manmade structures discovered during excavation and needing removal as determined by the Engineer, Class 2 Aggregate Base shall be added until the appropriate grade is met. The Engineer will direct corrective work and such ordered work will be paid for as extra work as provided in Section 12-1, “Extra Work,” of the Standard Specifications.

Should the R-Value of the upper 6 inches of the exposed subgrade (upon which base and sub-base

materials are to be placed) be less than 10, as determined by the Engineer, the Engineer will review and determine the necessary modifications to subgrade and/or structural section. If a structural section change is necessary, then the Engineer will direct corrective work and such ordered work will be paid for as extra work as provided in Section 12-1, “Extra Work,” of the Standard Specifications.

Measurement and Payment:

Full compensation for scarifying and compacting existing sub-grade material, furnishing labor, materials, equipment, tools, and incidentals for doing all work involved in subgrade preparation shall be included in the contract price unit price paid for under “Construct New Track, Vehicular Crossing,” therefore no separate payment will be made.

10-5.02.D SURPLUS MATERIAL

Surplus excavated material not designated or determined to contain aerially deposited lead shall become the property of the Contractor and shall be disposed of offsite. Surplus material shall not be disposed of in any MTS or public street right of way.

Surplus excavated materials determined to contain aerially deposited lead or other hazardous materials, which have special requirements for disposal, shall be disposed of in accordance with

Section 10-5.03, “Hazardous Waste in Excavation,” of these special provisions.

Measurement and Payment:

Disposal of surplus excavated material, not re-used for fill shall be included in the price paid item for Roadway Excavation. No separate payment shall be made therefore.

10-5.02.E ADDITIONAL WORK

Measurement and payment for additional required excavation above and beyond what is depicted in the construction plans as directed by the Engineer shall be in accordance with the provisions in Section 12-1, “Extra Work,” of the Standard Specifications.

10-5.03 HAZARDOUS WASTE IN EXCAVATION

General

The Contractor is solely responsible for testing, and for investigating and performing remedial actions on all hazardous materials and other related environmental requirements located on the Project site. Any hazardous materials that are encountered beyond those described in the Contract Documents or Proposal requirements, or which reasonable could not have been discovered within the time permitted, may properly be the subject of a change order request. MTS agrees that the Contractor cannot be cannot be considered a hazardous material generator. Of any such materials in existence on the Site at the time it is given possession of the site.

Measurement and Payment:

Measurement and payment for hazardous waste excavation above and beyond what is depicted in the construction plans as directed by the Engineer shall be in accordance with the provisions in Section 4.32, “Changes and Extra Work,” of the Standard Specifications.

10-5.04 TRENCH EXCAVATION AND BACKFILL

Open trenches and excavations shall be covered or barricaded to protect the general public and workers in accordance with Section 10-2, “Traffic Control Plan,” of these Special Provisions. Open trenches intraffic areas shall be covered with traffic rated trench plates or otherwise be adequately barricaded. After excavation, trenches shall promptly have conduits installed and then be backfilled.

Trench excavation and shoring requirements adjacent to the existing rail shall comply with Section 7.0, “Railroads,” of the Caltrans’ California Trenching and Shoring manual to determine railroad live loading lateral pressure for shoring design (Chart 3.6, LATERAL PRESSURE FOR COOPER RAILROAD LIVE LOAD). The shoring in areas where freight trains do not operate over or alongside trolley tacks shall be designed to accommodate LRV loads as shown in the LRV Loading Diagram of MTDB’s LRT Design Criteria. All shoring within a 1 to 1 influence line from the end of the railroad ties shall be designed for a minimum Cooper E-80 load per bogie/axel.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for excavating and backfilling shall be considered included in the contract prices paid for the various related items of work and no separate payment will be made therefore.

10-6 NOT USED

10-7 NOT USED

10-8 NOT USED

10-9 TRAFFIC STRIPES, PAVEMENT MARKINGS AND SIGNAGE

10-9.01 THERMOPLASTIC TRAFFIC STRIPES AND PAVEMENT MARKINGS

Thermoplastic material for traffic stripes shall be applied at a minimum thickness of 0.1 inch.

The location and type of new pavement markings shall, generally, be based the existing pavement markings within the Vehicular Grade Crossing construction limits.

Where striping joins existing striping, as shown on the plans, the Contractor shall begin and end the transition from the existing striping pattern into or from the new striping pattern a sufficient distance to ensure continuity of the striping pattern.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Thermoplastic Traffic Stripes and Pavement Markings shall be measured and paid for under “Construct New Track, Vehicular Crossing,” therefore no separate payment will be allowed.

10-9.02 PAVEMENT MARKERS

Pavement markers shall, generally, be based the existing pavement markings within the Vehicular Grade Crossing construction limits.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Pavement Markers shall be measured and paid for under “Construct New Track, Vehicular Crossing,” therefore no separate payment will be allowed.

10-10 SUBBASES AND BASES

10-10.01 DESCRIPTION OF WORK

The work in this section includes aggregate base backfill materials.

10-10.02 AGGREGATE BASE

This work shall consist of furnishing and placing aggregate base as shown on the Plans and where determined necessary by the Engineer.

Contractor shall utilize Class 2 aggregate base below the StarTrack Support System Units, as shown in the project details.

All new Asphalt Concrete, and Concrete Sidewalk shall be placed on top of new Class 2 Aggregate Base or Track Ballast as shown in the project details.

Aggregate base shall be Class 2. Full compensation shall include furnishing labor, materials, equipment, tools, and incidentals, for doing all work involved in the spreading, compaction and installation of the aggregate base complete in place and to correct grade, as shown on the plans, specified in these Special Provisions, and as directed by the Engineer.

Measurement and Payment:

Full compensation for Aggregate Base shall be included in the contract price unit price paid for under “Asphalt Concrete, (8” HMAC),” and “Install Sidewalk, w Raised Epoxy Pebble, (4” PCCP),” therefore no separate payment will be made.

Full compensation shall include furnishing labor, materials, equipment, tools, and incidentals, for doing all work involved in the spreading, compaction and installation of the aggregate base complete in place and to correct grade, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer. No additional payment shall be allowed therefore

10-11 SURFACINGS AND PAVEMENTS

10-11.01 DESCRIPTION OF WORK

Surfacings and pavements shall include final surface preparation for the paving, providing and installing asphalt concrete and portland cement concrete paving.

10-11.02 ASPHALT CONCRETE

This work shall consist of placing and compaction of Asphalt Concrete between and adjacent to

new grade crossing panels within the limits shown on the plans. Asphalt Concrete shall be Type B.

The Asphalt Concrete shall conform to the following requirements:

A. Asphalt Concrete shall be produced from commercial quality asphalt and aggregates.

B. Aggregate for base course shall conform to the 3/4-inch maximum. The first lift shall consist of base course paving. Base course shall be 3” thick minimum.

C. Aggregate for wearing course shall conform to the 1/2-inch maximum. Wearing course shall be 2” thick minimum. A wearing course paving mix shall be provided when only a single lift is required.

D. Paving asphalt to be used as binder shall be PG 64-10.

E. The amount of asphalt binder to be mixed with the aggregate will be 5.0 to 7.0 percent by weight of the dry aggregate as determined by the Engineer.

Placement and compaction of Asphalt Concrete around the new panels shall be done with special care to avoid damaging or covering the panels or rail. Geotextile fabric shall be installed between the Asphalt Concrete paving and the existing ballast or subgrade. Asphalt used adjacent to the grade crossing panels shall be placed as shown in the Plans.

A paint binder (tack coat) shall be applied to all surfaces such as existing asphalt paving to be joined, curbs and gutters, and construction joints.

The elevation of the completed asphalt pavement surface shall be such that water will not pond on either side of the longitudinal contact joint with the existing parallel asphalt pavement.

Provide asphalt end ramps at the ends of the vehicular track crossing panels on an 8:1 slope (max) as indicated on the plans and details.

Provide asphalt end ramps at the ends of the pedestrian crossing panels as indicated on the plans and details

Aggregate

Recycled materials shall be permitted on this project in accordance with the Standard Specifications.

The aggregate from each separate bin used for asphalt concrete, Type B, except for the bin containing the fine material, shall have a Cleanness Value of 57 minimum for contract compliance and a value of 65 minimum for operating range as determined by California Test 227, modified as follows:

A. Tests will be performed on the material retained on the 2.36-mm (#8)sieve from each bin and will not be a combined or averaged result.

B. Each test specimen will be prepared by hand shaking for 30 seconds, a single loading of the entire sample on a 305-mm (12-inch) diameter, 4.75-mm (#4) sieve, nested on top of a 305-mm (12-inch) diameter, 2.36-mm (#8) sieve.

C. Where a coarse aggregate bin contains material which will pass the maximum size specified and is retained on a 9.5-mm (3/8 inch) sieve, the test specimen mass and volume of wash water specified for 25-mm (1 inch) x 4.75-mm (#4) aggregate size will be used.

D. Samples will be obtained from the weigh box area during or immediately after discharge from each bin of the batching plant or immediately prior to mixing with asphalt in the case of continuous mixers.

E. The Cleanness Value of the test sample from each of the bins will be separately computed and reported.

At drier-drum and continuous plants with cold feed control, Cleanness Value test samples will be obtained from the discharge of each coarse aggregate storage. An aggregate sampling device shall be provided which will provide a 25-kg (55 lb.) sample of each coarse aggregate.

If the results of the Cleanness Value tests do not meet the requirements specified for operating range but meet the contract compliance requirements, placement of the material may be continued for the remainder of that day. However, another day's work may not be started until tests, or other information, indicate to the satisfaction of the Engineer that the next material to be used in the work will comply with the requirements specified for operating range.

If the results of the Cleanness Value tests do not meet the requirements specified for contract compliance, the material which is represented by these tests shall be removed. However, if requested by the Contractor and approved by the Engineer, material having a Cleanness Value of 48 or greater may remain in place and accepted on the basis of a reduced payment for material left in place.

Asphalt concrete that is accepted on the basis of reduced payment will be paid for at the contract prices for the items of asphalt concrete involved multiplied by the following factors:

Test Value	Pay Factor
56	0.90
55	0.85
54	0.80
53	0.75
52	0.70
51	0.65
50	0.60
49	0.55
48	0.50

If asphalt concrete is accepted on the basis of reduced payment due to a Cleanness Value of 48 to 56 and also accepted on the basis of aggregate grading or Sand Equivalent tests not meeting the contract compliance requirements, the reduced payment for Cleanness Value shall apply and payment by the Contractor to MTS for asphalt concrete not meeting the contract compliance requirements for aggregate grading or Sand Equivalent shall not apply.

Measurement and Payment:

Full compensation for “Asphalt Concrete” shall be included in the contract price unit price paid for under “Asphalt Concrete, (8” HMAC),” therefore no separate payment will be made

Full compensation for “Asphalt Concrete” used for End Ramps, shall be included in the contract unit price paid for under “Construct New Track, Vehicular Crossing,” therefore no separate payment will be made.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in placing the asphalt concrete in lifts, including end ramps, geotextile fabric, Paint Binder, and seal coat, complete in place, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

10-12 MISCELLANEOUS CONCRETE CONSTRUCTION

10-12.01 CAST-IN-PLACE CONCRETE

10-12.02 MINOR CONCRETE - CONCRETE CURBS, GUTTERS, SIDEWALKS, AND

MISCELLANEOUS SURFACE IMPROVEMENTS

Concrete sidewalk, curbs, on-platform and off-platform planter curbs, combined curb and gutter, utility pads, vending machine pads, and curb ramps, shall conform to the provisions in Section 73, "Concrete Curbs and Sidewalks," of the Standard Specifications, unless required otherwise by the local jurisdiction, and these special provisions. Where conflict exists the local jurisdiction will apply.

A. Curb and Combined Curb and Gutter

Concrete curb and combined curb and gutter shall conform to the applicable San Diego Regional Standard Drawings referenced on the plans. Curb height and gutter width shall match existing adjacent curb and gutter where applicable. Combined curb and gutters shall include extended gutters at pedestrian walkways as shown in the plans.

When curb and curb and gutter are installed in areas of existing AC pavement, pavement shall be sawcut 1 foot from the face of the new curb, or 1 foot from the gutter lip as applicable and as shown on the plans. Pavement replacement shall be in accordance the Type J Pavement Schedule as shown in the City of San Diego Standard Drawings and Section 10-11.12 of these special provisions.

Curb, combined curb and gutters, shall be placed on a minimum of 6" of aggregate base, unless otherwise required by the local jurisdiction. Where conflict exists within the jurisdiction's right-of-way, the local jurisdiction will apply.

Measurement and Payment:

Full compensation for concrete curbs and combined curb and gutters shall be included in the contract price unit price paid for under "Install Sidewalk, w Raised Epoxy Pebble, (4" PCCP)," therefore no separate payment will be made

B. Sidewalk

Minor concrete construction for sidewalks shall conform to the San Diego Regional Standard Drawings referenced in the plans, and the details shown on the plans, including ramp details at grade crossings.

4" crushed aggregate base shall be provided, placed and compacted in accordance with Section 10-10.03, "Aggregate Base" of these Special Provisions.

Placement of expansion joints shall conform to the San Diego Regional Standard Drawings.

Sidewalk improvements shown on the plans vary in size, geometry. See the site construction plans for the geometric layout of sidewalks and ramps.

Sidewalk shall include an 18" wide epoxy pebble curb as shown in the details.

Measurement and Payment:

Full compensation for concrete sidewalks shall be included in the contract price unit price paid for under "Install Sidewalk, w Raised Epoxy Pebble, (4" PCCP)," therefore no separate payment will be made

10-12.03 EXPANSION JOINT FILLER AND JOINT SEALANTS FOR SIDEWALKS

All finished concrete surfaces shall have a ½" continuous expansion joint at locations indicated on the plans and notes and shall be located either parallel or perpendicular to the curb line. When not otherwise indicated all expansion joints located in or adjacent to sidewalk concrete shall be sealant Type “A” Per section 201-3 of the Regional Standard Specifications and colored to match the color of the concrete surface.

Contractor shall provide joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of jointsubstrates.

Contractor shall submit product data from the manufacturer of each joint sealant product required, including instructions for joint preparation and joint sealer application. Contractor shall also submit samples for initial selection purposes in form of manufacturer's standard bead samples, consisting of strips of actual products showing full range of colors available, for each product exposed to view. Samples shall be submitted to Engineer. Submit complete schedule of type (and location where type is to be used) of each sealant.

Contractor shall engage an experienced Installer who has completed joint sealant applications similar in material, design, and extent of this Project that have resulted in construction with a record of successful in-service performance. Contractor shall submit list of completed projects to the Owner, demonstrating capabilities and experience.

Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

Provide color selections made by Engineer from manufacturer's full range of standard colors for products of type indicated. Color shall match French Gray color concrete. Sealant color parallel to curb line shall match color of adjacent concrete sidewalk.

Measurement and Payment:

Expansion joints and sealants shall be included in the pay items for the individual paving types, and no additional compensation shall be provided therefore.

10-13 NOT USED

10-14 NOT USED

10-15 STORM WATER POLLUTION PREVENTION PROGRAM

10-15.01 DESCRIPTION

Contractor shall conform to local, state and federal water pollution control regulations. Contractor shall utilize Best Management Practices to control storm water pollution as shown in the contract drawings, in conformance with local, state and federal water pollution control regulations.

The Contractor shall perform water pollution control work in conformance with the requirements in the “California Stormwater Quality Association Construction Stormwater Best Management Practices Handbook” and the "Storm Water Pollution Prevention Program (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual" and addenda in effect on the day the Notice to Contractors is dated. These manuals are referred to as the “Preparation Manual” and can be obtained from:

http://www.casqa.org/

or

http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

The Contractor must comply with the following Permits:

a. State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS000002, General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), as adopted, amended, and/or modified (see http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml); and

b. Regional Water Quality Control Board (RWQCB) Order No. R9-2007-0001, NPDES Permit No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority (Municipal Permit) as amended, and/or modified (see_ http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/stormwater/sd_stormwater.shtml).

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work involved, and no additional compensation will be allowed therefore.

TECHNICAL SPECIFICATIONS (CONTINUED)

SECTION 11

11-1 GENERAL

11-1.01 DESCRIPTION OF WORK

The work perfumed shall include, but not limited to, the following:

A. Track reconstruction, which includes:

1. Removal of existing full-depth grade crossing systems, asphalt concrete, and sidewalk;
2. Removal of existing tracks (rail, ties and ballast), existing vehicular crossings, ballast, and asphalt pavement;
3. Removal and salvage of existing impedance bonds and other track materials as directed by Engineer.
4. Installation of ballasted track including: furnishing and installing filter fabric; ballast, new timber crossties, new track hardware, installing owner furnished new 115 RE rail; and installing new or salvaged impedance bonds;
5. Furnishing and installing new vehicular pre-cast grade crossing concrete panels on 10’ timber crossties;
6. Installing new track hardware; installing owner furnished 115 RE rail on existing concrete crossties; and installing new or salvaged impedance bonds;

B. Rail and Tie Replacement, which includes:

1. Removal and salvage of existing impedance bonds and other track materials as directed by the Engineer.
2. Replacement of existing timber ties including: furnishing and installing new 8’-6” timber crossties, and installing new and salvaged other track materials as required.

C. Contract Alternates 1 – 5: Removal of track sidings in Commercial Street

1. Remove and dispose of the existing turnout, ties, rail, asphalt, ballast, subgrade, and required incidentals as marked out by engineer. The area to be removed is approximately 10-ft wide by 17 inches deep, the length as shown in plans.
2. Procure and install **nine (9)** inches of class II Aggregate Base within the removed section.
3. Procure and install **eight (8)** inches of Asphalt Concrete on top of new class II Aggregate Base within the removed section.
4. Install all required pavement markings that were removed during demolition.

11-1.02 CODES AND STANDARDS

Applicable codes and standards include, but are not limited to:

A. AREMA Manual for Railway Engineering. (Latest Edition in effect at time of bidding)

AREMA Portfolio of Trackwork Plans (Latest Edition in effect at time of bidding)

B. San Diego Standard Drawings, used in conjunction with the latest City adopted editions of the "GREENBOOK" and the "WHITEBOOK".

Federal Railroad Administration (FRA):

Mainline trackwork shall meet or exceed the requirements of Federal Railroad Administration (FRA) Class 4 Track. Siding trackwork shall meet or exceed the requirements of FRA Class 3 Track.

California Public Utilities Commission (CPUC) General Orders:

26-D Clearances on Railroads and Street Railroads with Reference to Side and Overhead Structures, Parallel Tracks, Crossings of Public Roads, Highways and Streets.

143-B Safety Rules and Regulations Governing Light Rail Transit

118 Construction and Maintenance of Walkways and Vegetation Control

ASTM International (ASTM):

ASTM C 29	Test Method for Unit Weight and Voids in Aggregate.
ASTM D 75	Methods for Securing Test Samples.
ASTM C88-99a	Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C117-95	Materials Finer than No. 200 Sieve in Mineral Aggregates by Washing
ASTM C127	Standard Test Method for Density, Relative Density, and Absorption of Coarse Aggregate
ASTM C131-96	Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C142-97	Clay Lumps and Friable Particles in Aggregates
ASTM C 535	Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Abrasion Machine
ASTM D3786	Standard Test Method for Bursting Strength of Textile Fabrics
ASTM D4491-99a	Water Permeability of Geotextiles by Permittivity
ASTM D4533	Standard Test Method for Trapezoid Tearing Strength of Geotextiles
ASTM D4632-91	Grab Breaking Load and Elongation of Geotextiles
ASTM D4716	Standard Test Method for Determining the (In-plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic using a Constant Head
ASTM D4751	Standard Test Method for Determining Apparent Opening Size of a Geotextile
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D4833-00	Index Puncture Resistance of Geotextiles, Geomembranes and Related Products

ASTM D4886	Standard Test Method for Abrasion Resistance of Geotextiles
ASTM E10-01	Standard Test Method for Brinnel Hardness of Metallic Materials

ASTM E164-97	Standard Practice for Ultrasonic Examination of Welds

Caltrans Transportation Laboratory – California Test Methods (CTM):

CTM 202	Sieve Analysis of Fine and Coarse Aggregates
SSPC	SP-10 - Near-White Blast Cleaning

11-1.03 SUBMITTALS

A. General:

1. Submit manufacturers' catalog data and certification of compliance on filter fabric
2. Submit quarry source(s), gradation(s), and quality certification(s) on ballast
3. Submit manufacturers' catalog data, cut sheets, and certifications as required by these specifications for all contractor furnished materials for approval by the Engineer.

The Contractor shall submit a complete list of required submittals for approval by the Engineer.

B. Trackwork Work Plan:

The Contractor shall submit a comprehensive work plan for all trackwork for the Engineer's approval.

1. Designate the line and profile rails to be used
2. Specify working hours taking into consideration the city of jurisdictions Traffic Engineer's requirements, environmental considerations, and local business and residential access requirements, and scheduled freight movements.
3. Establish procedures for distributing, handling and storing owner furnished rail.
4. Include a detailed cutting plan for owner furnished rail.
5. Include CWR work plan.
6. Do not cut rail strings except as required to fit rail turnouts, crossings or limits of work.
7. Establish a ballast tamping procedure.
8. Establish welding procedures, qualification test result reporting, and a welding crew qualification test result reporting. Welding crew shall be certified by the manufacturer.
9. Establish a method for production welding test result reporting.
10. Establish procedures for unloading, stockpiling, distributing and handling ties.
11. Include a method for reporting temperature records for CWR track anchoring
12. Provide an installation procedure for all trackwork, and removal of existing trackwork.
13. Provide a method for handling all existing and removed ballast

14. Provide a submittal for the manufacture and installation of end plates for use on wood ties.

Any changes in the work plan shall be submitted 10 working days prior to the institution of that change.

11-1.04 QUALITY ASSURANCE/QUALITY CONTROL

A. Manufacturers shall have a minimum of five (5) years' experience in a fixed location of the large-scale manufacture of the material it is to supply. The Contractor shall submit proof of compliance to the MTS Project Manager/Engineer.

B. Manufacturers shall have in place a quality assurance program, adhering to the requirements of ISO 9001, of these special provisions. This may include, but is not limited to first article inspections, source inspections, and on-site surveys. Such compliance shall promote thoroughly tested material that will render long service life to the user. Prime concern must be focused on the necessary formal assurance requirements to insure that material failure cannot be attributed to actions or lack of actions by the manufacturer. A copy of the manufacturer's QA procedures shall be submitted to the Engineer for approval.

C. Manufacturers shall show to the satisfaction of the Engineer that it has, or can obtain, the necessary and proper equipment, tool, facilities and means, and that it has the experience, ability and financial resources to perform the work within the time specified to the quality standards required.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for various items of work involved and no additional compensation will be allowed therefore.

11-2 MATERIALS

11-2.01 TRACKWORK MATERIALS, OWNER FURNISHED

The following trackwork materials will be furnished by MTS free of charge and are available to the Contractor in the quantities and at the locations specified herein:

1. Up to **1,980** LF of head hardened 115 RE rail will be furnished by MTS for the work. The rail will be located between J and L Streets Street in 330' nominal lengths on the Blue Line. If the contractor needs additional rail besides what has been provided, they are responsible for purchasing and providing the additional rail at the Contractor's expense. MTS intends to have additional rail located at this site, which is not to be used by the Contractor for this project. If the additional rail stored at the site is damaged or otherwise harmed by the actions of the Contractor; the Contractor shall have the cost for remedying the damage deducted from any payments due them by the Engineer.

2. Any track materials salvaged by the Contractor as a part of this contract may be used for trackwork on the contract if the salvaged materials meet the requirements for the subject work and are approved in writing by the Engineer. All track materials salvaged by the Contractor as a part of this contract which are unused shall become the property of the Contractor and Contractor is responsible for removal and disposal.

All MTS-furnished material shall remain the property of MTS. The Contractor shall not remove material in excess of the quantity needed to perform the work specified on the Plans and specifications. Any

excess material not used in the work shall be returned to the stock area as directed by the Engineer. The Contractor shall submit a manifest of MTS-furnished materials used to the Engineer for approval.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for loading, transporting and unloading MTS-furnished material shall be considered as included in the contract prices paid for the various items of work involved, therefore no additional compensation will be allowed.

11-2.02.A TRACKWORK MATERIALS, CONTRACTOR FURNISHED

The Contractor shall furnish materials as required to construct trackwork at the locations and to lengths specified herein in accordance with the following:

A. Qualification Of The Manufacturer:

1. Manufacturers shall have a minimum of 5 years' experience in a fixed location of the large-scale manufacture of the material it is to supply. The Contractor shall submit proof of compliance to the Engineer.

2. Manufacturers shall have in place a quality assurance program. This may include, but is not limited to first article inspections, source inspections, and on-site surveys. Such compliance shall promote thoroughly tested material that will render long service life to the user. Prime concern must be focused on the necessary formal assurance requirements to insure that material failure cannot be attributed to actions or lack of actions by the manufacturer. A copy of the manufacturer's QA procedures shall be submitted to the Engineer for approval.

3. Manufacturers shall show to the satisfaction of the Engineer that it has, or can obtain, the necessary and proper equipment, tool, facilities and means, and that it has the experience, ability and financial resources to perform the work within the time specified to the quality standards required.

B. Welding kits: Field Welding Kits for 115 RE rail field welds shall conform to Section 11-4.09, "Rail Welding," of these Special Provisions.

C. Filter Fabric: The filter fabric shall conform to Section 11-2.04, "Filter Fabric," of these Special Provisions.

D. Ballast: Shall conform to Section 11-2.03, "Ballast" of these Special Provisions.

E. Timber Crossties: Standard timber crossties shall be 7"x9"x 8'-6" and shall conform to Section 11-2.05A, "Timber Crossties," of these special provisions.

F. Transition Crossties: Transition timber crossties shall be 7"x9"x9', 7"x9"x10', and 7"x9"x11' and shall conform to Section 11-2.05A, "Timber Crossties," of these special provisions.

G. Contractor Furnished Concrete Crossties: Concrete crossties shall be 8'-3" long and shall conform to Section 11-02.05B, "Concrete Crossties," of these special provisions.

H. Vehicular Pre-cast Concrete Grade Crossing Panels: The vehicular pre-cast concrete panels shall conform to Section 11-2.06B, "Vehicular Pre-cast Concrete Grade Crossing Panels", of these Special Provisions.

I. Pedestrian Pre-cast Concrete Grade Crossing Panels: The pedestrian pre-cast concrete panels shall conform to Section 11-2.06C, "Pedestrian Pre-cast Concrete Grade Crossing Panels", of these Special Provisions.

J. Bonded Insulated Rail Joints: Insulated joints shall be glued D-Bar Type for various rail sections as manufactured by Allegheny Rail Products, Inc., VAE Nortrak, or approved equal. Contractor shall supply insulated rail joints already pre-assembled in rail plugs. The bonded insulated joints shall conform to Section 11-4.07A – "Bonded Insulated Rail Joints", of these Special Provisions

K. Track Spikes (vehicular grade crossing panels): Spikes shall be screw-type spikes inaccordance with AREMA specifications, to be used in conjunction with elastic fasteners on timber ties within vehicular grade crossing limits. Spikes shall be 6" long with 15/16 inch diameter.

L. Tie Plates for Timber Ties (vehicular grade crossing panels): Shall be designed per AREMA material standards and specifications. Tie plates shall be designed to be used in conjunction with elastic fasteners and screw spikes.

M. Rail Fastening Assembly for Transition Ties: Rail fastening systems for timber ties shall consist of galvanized Pandrol Type E Clips, or approved equal, with Pandrol mating plates for 5 ½" base rail as shown on the drawings. Galvanized Pandrol Type J Clips, or approved equal, shall be installed at insulated joints. Plates shall be manufactured for 115 RE rail and four screw spikes shall be installed on each plate.

N. Tie Pads for Timber Ties (vehicular grade crossing panels and turnouts): Rubber/fiber pads shall be designed per AREMA material standards and specifications and be capable of resisting ozone chemicals and weather shall be placed between the tie and the tie plates. Pads shall be 8" x 1/4" x 1" longer than the plate they support.

O. Track Spikes for Timber Ties (Crosstie Replacement, Timber Ties): Track spikes shall be new 5/8" track spike with reinforced throat and shall to conform with AREMA Volume 1, Chapter 5, Part 2 for "Soft Steel Track Spikes."

P. Tie Plates for Timber Ties "Crosstie Replacement, Timber Ties): Tie Plates shall be 13 in., 8-hole new double shoulder tie plates with a 40:1 cant. Tie plates and spikes shall conform to AREMA Manual Volume 1, Chapter 5, Plan No. 7, Punch Pattern A.

Q. Tie Plugs: Tie Plugs shall be hardwood tie plugs and conform to AREMA's "Specifications for Tie Plugs."

R. Rail Anchors shall be new and be one-piece Channeloc type or approved equivalent, of standard weight. They may be normally applied with a sledge hammer or manufacturer's application tool, and of a design, size and construction to properly fit the base of rail on which being applied and shall conform to AREMA Volume 1, Chapter 5, Part 7.

S. Rail Fastening Assembly for Concrete Ties: Clips, pads, and insulators for concrete crossties shall conform to Section 11-4.06, "Crosstie Placement," of these Special Provisions.

11-2.03 BALLAST

The Contractor shall furnish new ballast in accordance with these Special Provisions and as shown on the Plans. The work shall include the furnishing of ballast material and transporting new ballast.

A. Materials:

Ballast shall conform to Chapter 1, Part 2, "Ballast," of the AREMA Manual of Railway Engineering. Ballast shall be crushed quarry rock, composed of hard, dense particles of an angular structure providing sharp corners and cubical fragments. Crushed river rock (gravel), slag ballast or limestone will not be acceptable.

1. Deleterious material in the ballast shall not exceed the following amounts, as determined by the appropriate testing method listed:

Minus 200 Sieve	1.0 percent max. (ASTM C 117)

Clay lumps and Friable Particles	0.5 percent max. (ASTM C 142)

2. Wear of the material shall not exceed the recommended values by AREMA, when tested in accordance with ASTM C 535 and C 131.

   Loss shall not exceed 5 percent after five cycles when tested in accordance with ASTM C88 for Soundness (Sodium Sulfate).

Gradation Requirements:

Gradation of ballast shall be determined by testing in accordance with ASTM C 136.

Ballast installed and completed in track shall conform to AREMA Size No. 4A, with the following gradation requirements:

Percent by Weight	
Sieve Size, Inches	Passing Percentage
2-1/2	100
2	90-100
1-1/2	60-90
1	10-35
3/4	0-10
3/8	0-3

Handling:

Ballast meeting these requirements for grading shall have not less than 95 percent crushed particles with three (3) or more faces and not more than one-half percent of uncrushed particles.

This gradation is referred to as AREMA No. 4A, nominal 2" – 3/4," for identification only. AREMA No. 5 Ballast gradation shall be used on ballast shoulder intended for the maintenance walkway area as shown on the Drawing.

Ballast shall be kept clean and free of segregation during handling operations.

Inspection:

Ballast is subject to inspection by the Engineer at any time between quarry production and compaction in track. Ballast that does not conform to this Specification shall not be used and Engineer will notify the Contractor to stop further ballast operations until the fault has been corrected and defective material has been disposed of without cost to MTS.

Testing:

Qualification Testing: Ballast at the Quarry shall be qualified prior to production by certified test results submitted for the Engineer's approval not less than five working days prior to beginning of production of ballast. Additional sampling and testing shall be performed if, in Engineer's opinion, there are significant changes in the quarry operation. The Engineer's written approval is required prior to ballast production.

The quality of the source material to be used for ballast shall be determined prior to its acceptance by the Engineer. A test sample of not less than 150 pounds shall be subjected to the following tests by the Contractor's certified testing laboratory or by an on-site certified technician approved by the Engineer:

a. Deleterious substances (ASTM C 142).

b. Los Angeles abrasion (ASTM C 535).

c. The percentage of flat and elongated particles (ASTM D 4791).

d. Sodium sulfate soundness (ASTM C 88).

e. Weight per cubic yard (ASTM C 29).

f. Sieve analysis (ASTM C 136).

g. Bulk specific gravity and percentage of absorption (ASTM C 127).

Quality Control Testing:

The Engineer will sample ballast at the time of deposit on the trackbed to ensure uniformity and conformance with the gradation requirements. Test results will be furnished to the Contractor.

The Engineer may take additional samples at the quarry and from the in-place ballast. The Contractor shall assist the Engineer in taking the samples. The ballast source shall not change without written authorization from the Engineer.

Placement of Ballast:

Subsequent to the excavation of the existing trackway and evidence that the subgrade is satisfactory as prescribed within these Special Provisions, the Contractor shall place filter fabric as described herein. Subsequently, ballast shall be placed as prescribed in Section 11-4.05, "Ballast Placement and Compaction," of these Special Provisions.

All new Asphalt Concrete and Concrete Sidewalk shall be placed on top of new Class 2 Aggregate Base or Track Ballast as shown in the project details.

Measurement and Payment

No separate measurement will be made for Ballast.

Full compensation for furnishing and installing Ballast (as required), shall be considered included in the contract unit price paid for under “Install New Track, Vehicular Crossing,” Asphalt Concrete, (8” HMAC),” “Install Sidewalk w Raised Epoxy Pebble, (4” PCCP),” and “Surfacing, Top Ballast and Destressing,” therefore no additional payment will be made therefore.

11-2.04 FILTER FABRIC

This work shall consist of furnishing and installing filter fabric (geotextile) on the subgrade, beneath the ballast, for the purpose of stabilizing the Roadbed as defined by AREMA. The filter fabric shall be installed as shown on the Plans and in accordance with the manufacturer’s recommendations and these Special Provisions.

Contractor shall place filter fabric on subgrade prior to placement of ballast under any new track section show in the plans and prior to placement of aggregate base course under any new asphalt, or sidewalk section as shown in the plans.

A. Materials:

The filter fabric shall conform to the provisions in Chapter 1, Part 10, “Geosynthetics,” of the AREMA Manual and these Special Provisions. Filter fabric weighing 16 ounces per square yard (Extra Heavy) shall be used and shall be non-woven, manufactured from polyester, polypropylene, or polypropylene- nylon material, with the following properties. The following tests shall be qualification tests made on two samples of filter fabric. The Engineer will choose the samples and the proposed test shall be conducted by an independent laboratory approved by the Engineer. Results of the test shall be submitted to the Engineer for approval. All testing shall be at no additional cost to MTS. Ballast shall not be placed on filter fabric until the Engineer has given written approval to the test results.

Grab Tensile Strength, ASTM D 4632-91	350 lbs. minimum
Elongation, ASTM D 4632-91	20% minimum
Permittivity, ASTM D 4491-99a	0.20 1/sec.
Puncture Strength, ASTM 4833-00	185 lbs. minimum

Handling:

Handling, storage and installation, including overlapping, shall conform to the recommendations of the manufacturer. All sheeting damaged during installation or weakened by exposure to sunlight shall be replaced prior to placement of ballast.

Placement:

Filter Fabric shall be placed in accordance with AREMA Chapter 1, Section 10, Part 1.5, “Construction Details and Methods.” Specifically, Filter Fabric shall be placed with an overlap of 2 feet in both the longitudinal and transverse directions.

Measurement and Payment:

No separate measurement will be made for Filter Fabric.

Full compensation for furnishing and installing Filter Fabric shall be considered included in the contract prices paid for under “Construct New Track, Vehicular Crossing,” Asphalt Concrete, (8” HMAC),” and “Install Sidewalk, w Raised Epoxy Pebble, (4” PCCP),” therefore no separate payment will be allowed.

11-2.05A TIMBER CROSSTIES

1.01 SUMMARY

A. This Section specifies the material requirements and performance criteria for the Timber Railroad Ties to be furnished in accordance with Contract Documents or required by the Engineer.

B. Work included in this Section encompasses work necessary for the manufacturing, production and handling of wood switch ties, crossties, and grade crossing ties.

1.02 REFERENCES

A. AWPA: American Wood Preserver's Association:

1. M2 – Standard for Inspection of Wood Products Treated with Preservatives.

2. M4 – Standard for the Care of Preservative – Treated Wood Products.

3. P2 – Standard for Creosote Solution.

4. P3 – Standard for Creosote – Petroleum Solution.

B. American Railway Engineering and Maintenance of Way Association (AREMA):

1. Manual for Railway Engineering and Portfolio of Trackwork Plans.

C. RTA: Railway Tie Association – Specifications for Timber Crossties and Switch Ties.

1.03 DEFINITIONS

A. Anti-Splitting Device – Any device applied to the end or near the end of a tie or timber such as anti-splitting iron, dowel or nail plate to reduce its splitting.

B. The word "Vendor" used in this Specification shall mean the Contractor.

C. Boulton Drying Process – A process for drying wood by removing moisture from it by heating in preservatives under sufficient intensity of vacuum to evaporate water from the material at the temperature of the preservative used.

D. Creep – The time-dependent deformation of a material under load.

E. Empty Cell – A treatment in which the cell walls in the treated portion of the wood remain coated with preservative, the cell being empty or only partially filled.

F. Hardwood – One group of trees (deciduous) which have broad leaves. The term has no reference to the hardness of the wood.

G. Softwood – One of the group of trees (conifers) which have needle-like or scale- like leaves. The term has no reference to the softness of the wood.

1.04 SUBMITTALS

A. The Vendor shall submit supporting information within 60 days of award documenting the past successful performance in furnishing the materials included in the Schedule of Quantities and Prices. Provide references and contact numbers at the railroads where the wood railroad ties have been placed in service.

B. The Vendor shall submit certificate of compliance that the material delivered is in compliance with the specification within 60 days of approval of payment.

C. The Vendor shall submit wood railroad ties packaging, loading, shipping, and handling method.

D. The Vendor shall submit for MTS's review and approval quality control and quality assurance plans and related certifications such as ISO 9001, "six sigma" or equivalent demonstrating that the Vendor has the processes, personnel and systems to produce high quality wood railroad ties included in the Schedule of Quantities and Prices.

E. The Vendor shall submit data documenting past performance and projects within the last ten (10) years furnishing wood railroad ties to Class 1 Freight, passenger or commuter railroads.

F. Tests: Certified test results, as required to demonstrate compliance of materials specified herein shall be submitted to MTS before any wood ties are used.

1.05 QUALITY ASSURANCE

A. Vendor's Quality Control Program (QCP) shall be in accordance with the AAR M- 1003 or MTS approved equivalent quality control program.

B. Testing and inspection of tie manufacture shall be performed by Vendor in conformance with AREMA Manual, RTA and AWPA.

C. Ties may be inspected by MTS, at suitable and convenient times and places including points of manufacture, shipment, or destination.

D. MTS reserves the right to examine any equipment used for any process or method of treatment at any stage of tie production.

E. Material not meeting the requirements of this Specification shall not be used in the Work.

F. MTS shall have access to Manufacturer's plant during normal working hours and all Project related procurement and production records for inspection any time during the Contract period of performance.

1.06 DELIVERY, STORAGE AND HANDLING

A. Tie shall be unloaded and stored by contractor.

B. Banding of ties by length or grade for shipment shall be done by applying bands in a tight manner (2,500 pounds of tension) to prevent warping, splitting, and slipping during storage or shipment. Two steel bands per bundle (T = 5,450 pounds, 1¼"x0.029" or better) shall be applied within one foot of each end of cross ties or switch ties. Three bands shall be applied to bundles of switch ties. No more than 9 switch ties shall be bundled together. No more than 25 cross ties shall be bundled together.

C. No steel cables, steel rods, chains, or wooden strips, or any other sticker material shall be shipped in any bundle to MTS.

D. All rejects shall be marked with an "X" on the end. This is to preclude the accidental shipment of less than grade ties to MTS. Treated ties not handled directly from tram to car shall be carefully and neatly stored. Different size classifications shall be kept separate, and all bundles or stacks shall be marked with MTS, grade or length, and treatment date. Ties shall be stacked to ensure that tie straightness is not impaired during temporary storage. Treated stringers shall be placed underneath all stacks of treated ties. No loose windrows of MTS treated ties shall be allowed. Shipments shall be made from the oldest stacks first. If any ties become excessively bleached during storage, they shall be retreated or replaced by the supplier. Yard drainage conditions shall provide rapid drainage of water from beneath stacks of treated ties. Storage areas shall be kept free of grass and weeds to aid free flow of air and to minimize the possibility of fire. The Vendor

shall be liable for all fire damage. A minimum 10 foot weed-free zone shall be maintained around MTS stored inventory at all times. Care shall be exercised in handling of MTS ties for storage or shipment to prevent damage.

E. Ties shall be stored to avoid contamination of water and soil by the ties.

F. Long-term tie storage shall not be located within 250 feet of an open road crossing or residences.

G. Ties temporarily located within 250 feet of a public road crossing or residences shall be covered by an impervious sheet material to control odor and vapor emitted by the crossties by MTS.

PART 2 - PRODUCTS

2.01 GENERAL

A. Wood railroad ties shall be new and conform to MTS Engineering Standards.

B. Wood railroad ties ordered to the Engineering Standards shall be produced in conformance to these specifications and AREMA Specifications.

2.02 WOOD CROSS TIES AND SWITCH TIES

A. The following hardwood species can be used for cross ties, switch ties and grade crossing ties:

1. Oak-Hickory Group: Red Oak, White Oak and Hickories.

2. Mixed Hardwoods Group: Gums, Ashes, Cherry, Walnuts, Birches, Maples, Beech, Locusts, Sycamore, Elms and Cypress

B. The following species are not acceptable:

1. Oak-Hickory Group: Live Oak and Blackjack Oak.

2. Mixed Hardwoods & Softwoods: Douglas Fir, Hem-Fir, Ponderosa Pine, Lodgepole, Pine, Larch, Cottonwood, Willow, Basswood, Hackberry and Poplar.

C. Oak and elm ties shall be of compact wood throughout the top fourth of the tie.

D. All cross ties shall be the full length specified; double end trimmed, and should have full body and full face.

1. Ties with greater than 1” of wane within the 20” and 40” rail-bearing sections, when measured from the center of the tie, are not acceptable.

a. Thickness and width tolerance shall be not more than ¼” thinner or narrower than the specified size.

E. Vendor shall provide a maximum of 50 percent of the ties from oak-hickory species and the remaining 50 percent from mixed hardwoods from list of ties specified under Attachment A, Part E, Section 1 through 4.

1. Oak ties must be air seasoned unless otherwise directed by MTS and preapproved and specified in writing.

2. Mixed Hardwoods must be air seasoned unless otherwise directed by MTS and preapproved and specified in writing.

2.03 GENERALTIE REQUIREMENTS

A. All wooden ties shall be made from sound, straight, live timber and shall be free from any defects that may impair their strength or durability, such as bark, splits, shakes, large or numerous holes or knots, pitch seams, pitch rings, slanting grain or other imperfections.

1. Decay and/or insect damage in any form is not acceptable.

B. All ties shall be well sawn on all four sides and cut square at the end to the full dimensions specified.

1. All ties shall be straight and opposite faces shall be true and parallel, and with all bark entirely removed.

C. All ties shall be straight.

1. A tie shall be considered straight when:

a. Timber Cross Tie: When a straight line from a point on one end to a corresponding point on the other end is no more than 1-1/2" from surface at all points.

b. Timber Switch Ties: When straight line from a point on one end to a corresponding point on the other end is no more than 2" from the surface at all points.

D. A tie is not well sawn when its surfaces are cut with score marks more than ½" deep, or when its surfaces are not even.

E. The top and bottom of a tie shall be considered parallel, if any difference in the thickness at the sides or ends does not exceed ½".

F. For proper seating of nail plates, tie ends must be flat and will be considered square with a sloped end of up to ½", which equals a 1 in 20 cant.

2.04 ANTI-SPLITTING DEVICES

A. Anti-splitting devices are required.

1. Anti-splitting devices (endplates) shall be multi-nail plates as specified in AREMA Manual, Volume1, Chapter30, Part3.1.6, Specifications for Devices to Control the Splitting of Wood Ties.

a. Structural type, Grade "C", 18 gauge galvanized steel, ASTM A653 or better with ultimate strength of 55,000 psi and yield strength of 40,000psi.

b. Galvanizing per ASTM A653, G60 coating.

c. 4-5 teeth per square inch.

d. ½" to 9/16" length of tooth.

2. This application should enable the plate to hold both vertical and horizontal splits.

3. End plates shall be applied by a mechanical device capable of squeezing any splits; bringing the tie back to its original (cross section) dimensions prior to application.

4. End plates for 7”x9” ties are to measure 6” x 7” or 6-1/4” x 7”.

5. No part of the end plate is to be within ¼” of any side

6. All anti-split end plates shall have rounded corners and a smooth perimeter.

B. Embossed on all end plates will be “MTS” and manufacturer name followed by the year of manufacture and Treating Plant. End plates will be installed with the letters “MTS” upright with the tie oriented with heartwood down.

2.05 DIMENSIONS

A. All cross ties shall have a 7”x 9” cross-section and shall be double end trimmed, unless otherwise ordered.

B. Length of ties shall be as ordered in each shipping release.

1. Ties will be ordered as 8’-6” or in one (1) foot increments from 9’-0” to 24’- 0”.

C. The length, thickness, and width specified are minimum.

1. Ties with thickness and width more than ¼” thinner or narrower than specified will be rejected. Ties over 1” longer shall be rejected.

2. Tie dimensions shall not be averaged.

2.06 PRESERVATIVE

A. The preservative shall consist of a mixture of 50 percent by volume of P-1 creosote oil conforming to AWPA Specifications (AWPA P3 and AWPA P4), and 50 percent by volume of an approved petroleum residuum oil.

1. The creosote and oil shall be thoroughly mixed in the working tank until the mixture is of uniform composition. (Note: use of treatment with P-2, 7lbs / cu ft is an approved equal).

B. The residuum oil shall be approved asphalt base petroleum residuum oil.

1. It shall be free from water and any foreign substance that might interfere with its penetrating qualities.

2. The flash point of the residuum oil shall not be less than 210˚F as determined in the Cleveland Open Cup.

3. The viscosity of the residuum oil shall be such that a blend of 50 percent residuum oil and 50 percent creosote shall have a viscosity exceeding 50 seconds Saybolt Universal 180˚F.

4. BS&W shall not exceed one (1) percent and the creosote oil mixture shall show no sludge formation upon standing. (Note: AWPA P4 is acceptable as an approved equal for residuum oil).

2.07 APPROVALS AND REJECTIONS

A. Ties with any type of decay will be rejected.

B. Rejection of ties for holes and knots. All such holes and knots as defined shall be allowed if they occur outside the sections of the tie between 20” and 40” from its middle.

1. A “large hole” is any hole more than ½” in diameter and 3” in depth within the rail bearing area, or more than 1” in diameter and 3” deep outside the sections of the tie between the 20” and 40” rail bearing area measured from the center of the tie.

2. “Numerous holes” are any number of holes equaling a large hole in damaging effect. Such holes, whether caused in manufacture or otherwise, will because for rejection.

3. A “large knot” within the rail bearing area is one whose average diameter is more than 1/3 the width of the surface on which it appears. “Numerous knots” are any number, which, in total, equal a large knot in damaging effect. A cluster of knots will be judged as if it were a large knot in damaging effect.

C. Ties with shake more than 1/3 the width of the tie, and nearer than 1” to any surface, will be rejected.

1. Fire scar will be considered as bark seam and graded accordingly.

D. Except in woods with interlocking grain, ties with a slant grain in excess of 1 in 15 will be rejected.

E. Ties with continuous checks whose depth in a fully seasoned and/or treated tie is greater than ¼ the tie thickness and longer than ½ the length of tie will be rejected.

F. Any other imperfections that are within the limits of current AREMA and RTA Specifications will be allowed.

G. A split is a separation of the wood extending from one surface to an opposite or adjacent surface.

1. A split 1/8” wide and 4” long in an unseasoned cross tie is acceptable.

2. A split more than ¼” wide and/or 9” long on the face on which it occurs in a seasoned cross tie will be rejected.

3. Do not count the end as a surface.

H. Bark seam or pocket is a patch of bark partially or wholly enclosed in the wood.

1. Bark seams will be allowed outside the rail bearing area provided they are not more than 2” below the surface, ¼” wide, and not more than 5” long.

I. Ties with heart – checks that go into the tie plate area will be rejected if the check is more than a cumulative ½” wide or if the check causes the plate area to be concave or convex.

J. Holes:

1. Ties having solid holes on any surface within the rail bearing areas greater than ½” diameter and greater than 3” deep will be rejected.

2. Ties having solid holes on any surface outside the rail bearing areas greater than 1” in diameter or greater than 3” deep will be rejected.

3. Stump pull will be graded the same as a split in the end of a tie.

4. A stump pull that goes into the interior of the tie more than 5” will be rejected.

5. Numerous holes are defined as having any number equaling a large hole in damaging effect. Such holes may be caused in manufacture or otherwise.

6. Mechanically damaged ties shall be replaced by the party that damages the tie.

PART 3 - EXECUTION

3.01 GENERAL

A. Comply with the MTS Engineering Standards unless specifically noted or excepted within these specifications. Promptly notify MTS of any conflicts, omissions or needed clarifications arising from the use of the designated drawings, standards or specifications.

3.02 PLANT EQUIPMENT

A. Treating plant shall be equipped with the thermometers and gauges necessary to indicate and record accurately the condition of all stages of treatment, and all equipment shall be maintained in acceptable, proper working condition.

B. All green ties should be checked periodically for moisture content prior to going in the cylinder.

1. Twenty (20) borings per charge shall be taken from cross ties, so that the moisture content level can be measured, to determine the amount of water that is to be removed from the crossties.

C. Material shall be conditioned by air seasoning

D. All material, either under vacuum or at atmospheric pressure, should be handled in such a manner that will not cause degrading, checking, splitting, warping or render it unfit for the service intended.

3.03 AIR SEASONING

A. When air seasoning is used, material shall be treated before it begins to deteriorate. Air seasoned material must be given a preliminary heating in the preservative for not more than three (3) hours at a temperature of not more than 210˚F, just before the regular treating operation.

1. All Oak/Hickory ties will be seasoned for approximately 10 months to obtain moisture content not to exceed 45 percent on 2” cores.

2. Mixed Hardwood ties will be seasoned for approximately five months to obtain a moisture content not to exceed 40 percent on 2” cores.

3.04 BOULTONIZING

A. Ties shall only be Boultonized as directed by the MTS Engineer or a designated MTS representative. Cross ties and switch ties scheduled for Boultonizing shall be separated by size and species, incised, and forwarded to the tramming station for handling prior to initiation of the drying process. Hickory ties must be Boultonized with oaks. Each layer of ties on the tram shall be separated with one ¾” steel cable, steel rod, or ¼” Grade 30 steel chain placed on alternate ends as the layers are built. Switch ties will require two cables, rods, or chains per layer for 9’–12’, and three cables, rods, or chains per layer for 13’–16’ + lengths. All steel or wooden stickers must be removed prior to shipment to MTS.

B. When boultonizing, the oils shall cover the material in the cylinder.

1. The temperature of the oil during the conditioning period shall not exceed 210˚F.

2. When a vacuum is then drawn, it shall be of sufficient intensity to evaporate water from the material at the temperature of the oil.

3. The intensity of the vacuum or the temperature of the oil, or both, shall be adjusted so as to regulate the evaporation of the waters.

4. The conditioning shall continue until the materials are sufficiently heated and enough water removed from the cylinder before an empty-cell process is applied for pressure treatment.

5. The Boultonized process used is to conform to AWPA section C1-00 Section 1.3.3, most recent version.

6. Maximum moisture content is to be 50 percent for oak-hickory and 40 percent in mixed Hardwoods before press cycle begins.

3.05 MANNER OF TREATMENT

A. Following the conditioning period, material shall be treated by an empty-cell process to obtain as deep and uniform penetration as possible with the retention of preservative stipulated.

1. The range of pressure, temperature and time duration shall be controlled so as to get the maximum penetration by the quantity of preservative injected.

3.06 EMPTY CELL PROCESS (LOWRY AND RUEPING)

A. Treatment shall be by the empty cell method with a creosote/coal tar solution or creosote/petroleum (50percent-50 percent) solution in accordance with AWPA Standard P-2, P-3, and P-4. The preservative solution shall be tested monthly according to AWPA Standard A-1 with a copy of the results forwarded to the MTS representative. In no case shall treatment be less than that required for AWPA U1, UC4B.

B. Material shall be subjected to atmospheric air pressure or to higher initial air pressure of the necessary intensity and duration.

1. The preservative shall be introduced until the cylinder is filled while the air pressure is being maintained during the filling operation.

C. The Pressure shall be raised on not more than 210lbs/sq inch.

1. Material shall be held under pressure until there is adequate preservative injected to meet specified retention.

D. The temperature of the preservative during the entire pressure period shall not be more than 210˚F but shall average at least 180˚F.

E. After pressure is completed, the cylinder shall be emptied speedily of preservative, and a vacuum of not less than 22” at sea level created promptly and maintained until the wood can be removed from the cylinder free of dripping preservative, or;

1. After pressure is completed, and before removal of preservative from tie cylinder, the preservative surrounding the material may be preheated to a maximum of 215˚F, either at an atmospheric pressure or under vacuum; the steam to be turned off the heating coils and the leader lines opened immediately after the minimum

temperature is reached.

2. The cylinder shall then be emptied speedily of preservative and a vacuum of not less than 22" at sea level created promptly and maintained until the wood can be removed from the cylinder free of dripping preservative.

F. At the completion of treatment, material may be cleaned by final steaming (when authorized) at a temperature not more than 240˚F for not more than 30 minutes.

3.07 RESULTS OF TREATMENT RETENTION

A. No charge shall contain less than 75 percent or more than 110 percent of the quantity of preservative specified for the class of material except when the character of the wood in any charge makes these requirements impracticable despite treatment to refusal.

1. The amount of preservative retained shall be calculated from readings of working tank gages or scales or weights before and after treatment of loaded trams on suitable track scales, with the necessary corrections for changes in moisture content.

B. The column of oil preservatives shall be calculated on the basis of 100˚F.

1. Calculations of volume or weight shall be made by the use of temperature of specific gravity factor contained in the Volume of Specific Gravity Correction Tables of the AWPA.

3.08 PENETRATION

A. Penetration of ties shall not be less than the following for at least 80 percent of the pieces bored in each charge.

Thickness (inches)	Depth (Inches)	Percent of
Sapwood 5 and over	½	90

B. Penetration of ties shall be determined by boring not less than two (2) ties in each tram in each charge or more than 20 ties per charge.

C. Penetration of timber and ties shall be determined by boring approximately midway between ends and midway between top and bottom on 7" side of tie.

1. Only material meeting the penetration requirements shall be accepted.

D. Any charge not conforming to stipulated minimum requirements may be retreated and re-offered for acceptance.

E. Any holes, which may be bored, shall be filled with tight fitting treated plugs.

F. Process and preservative to be used on material and retention required shall be as follows, unless otherwise specified, for all ties.

	50 percent Oil Process	50 Percent Creosote Process
Hardwood	7 ½ lbs or Ref.	L&R
Oak	7 ½ lbs or Ref.	L&R or Bethel

G. Retention will be determined by gauge. The amount of preservative solution retained shall be determined from readings of working tank gauges or scales made before and after treatment. The retention of preservative will be calculated after correcting the volume of preservative solution to 100˚F.

3.10 CARE OF TREATED WOOD

A. In handling treated material, extreme care shall be used to avoid damage to the edges of the timbers or breaking through the portions penetrated by the treatment and exposing untreated wood.

B. The use of peaveys, timber dogs, picaroons, log hooks, or other pointed tools shall be such as not to break through the treated portion of treated timber.

3.11 PLANT STORAGE

A. The storage yard for seasoning shall be in the open where the air current will circulate freely; shall not be in a low humid situation if it can be avoided; shall have good drainage; and shall be kept free from vegetation and debris, especially from scrap wood already infected with decay.

B. Treated materials shall be stored in a similar manner to untreated, but must not be piled in same area with untreated materials.

C. Unseasoned material must be stacked separately from seasoned or partly seasoned material.

3.12 STACKING

A. Sawn ties shall be stacked either 1 x 9 or 2 x 9 standard stacking method.

B. Alternate: If necessary to retard evaporation of moisture from the ties, they may be stacked parallel on edge, using cross ties as separators.

3.13 BARKING

A. Remove bark and inner skin before treatment.

Measurement and Payment:

No separate measurement will be made for timber crossties or associated track hardware.

Full compensation for furnishing and installing Timber Crossties, and the associated crosstie plates, spikes, clips, and insulators, shall be considered included in the contract unit price paid under “Crosstie Replacement (Timber Ties),” and no additional payment will be made therefore.

11-2.06B VEHICULAR PRE-CAST CONCRETE GRADE CROSSING PANELS

Grade crossing panels with attached rubber flangeways shall be Precast Concrete Panels w/ Rubber Flangeways by Omega Industries, Inc. (360.694.3221), or approved equal and shall be installed within the locations defined on the plans, and as described within these Special Provisions and per manufacturer’sinstructions.

A. Materials

1. Each panel shall be manufactured using 6000psi. Minimum compressive strength concrete. Cement shall have no more than 0.6% total alkali content. Maximum water/cement ratio = 0.44 (by weight). Air entrainment = 6% +/-1%.

2. Reinforcing steel shall conform to ASTM A706 specification, grade 60. Panels shall be manufactured for use with wood crossties.

3. Panel frames to be fabricated with minimum 3 x 3 x 3/8 inch angle conforming to ASTM A36 specification. All exposed surfaces of the angle frames shall be painted with a rust inhibitive coating.

4. Each panel shall meet AASHTO HS20-44 Highway/Bridge loading specification with a 30% impact increment.

5. Concrete surface exposed to traffic to have a light broom finish longitudinally and be sealed.

6. Each gauge panel shall be 49 ½ to 50 ½-inch width x 96 to 97 ½-inch length and manufactured to the correct height for 115 RE rail. Ties to be spaced 19- 1/2-inches on center, or as recommended by the manufacturer.

7. Each field panel shall be 27-inch width x 96 to 97 ½-inch length and manufactured to the correct height for size rail specified. Ties to be 10 feet length spaced no more than 19-1/2-inches on center.

8. Crossing panels shall be manufactured to be compatible with all common rail fastening systems and common rail anchors.

9. Each panel to have two (2) galvanized lifting hooks with a minimum 2-ton capacity and a safety factor 4. Each lifting hook shall be recessed below top surface of panel adequately to prevent vehicular wheel impact. Locations of lifting hooks shall be shown on shop drawings.

10. Tolerances:
    a. Width and height = +/- 1/8-inch
    b. Length = +/- 1/4-inch
    c. Square = 3/16-inch (measured along diagonal)
    d. Bottom flatness = +/- 3/32-inch
    e. Lag holes = +/- ½-inch in any direction
    f. Lifting hooks = +/- 1-inch in any direction

B. Panels shall have pre-attached rubber flangeway fillers that remain stationary and secure throughout their service life. The rubber flangeway fillers shall have the following dimensional and physical properties:

1. Field side shall be 2 ½” width +/-1/4-inch from ball of rail to concrete panel.

2. Gauge flangeway width shall be 2 1/2-inch, conforming to current ADA requirements.

3. Gauge flangeway depth shall be 1 ¾-inch to 2 ¼-inches from top of concrete panel.

4. Flangeway fillers shall have an electrical resistivity of 3.11 x 106 Ω/cm or greater.

C. The field and gauge flangeway fillers shall fit in a manner to insure proper fit between the rail and the concrete panels. The attached flangeway fillers shall accommodate rail anchors and clips.

D. Track curvature greater than 3° requires custom panels to fit radius. Panels will be tapered equally at each end. Use of filler plates is not allowed. Manufacturer shall provide shop drawings detailing tie spacing, panel arrangement, and special instructions.

E. Manufacturer shall provide owner and engineer with a six (6) year manufacturer's limited warranty.

Measurement and Payment:

No separate measurement will be made for Vehicular Pre-cast Concrete Grade Crossing Panels.

Full compensation for furnishing and installing Vehicular Pre-cast Concrete Grade Crossing Panels shall be considered included in the contract unit price paid for "Construct New Track, Vehicular Crossing," and no additional payment will be made, therefore.

11-3 TRACK AND BALLAST REMOVAL

11-3.01 REMOVE EXISTING TRACK

The work in this section shall consist of, in general, the removal and disposal, re-installation, or salvage of the existing trackwork materials including rail, turnouts, crossovers, timber crossties, clean ballast, and contaminated ballast.

The work in this section applies to "Remove Existing Track, Vehicular Crossing" and as shown in the plans and specified in these Special Provisions.

The Contractor is directed to Section 10-1.03, "Obstruction and Underground Facilities," where it is stated that all existing underground facilities within the limits of the Project site are to be protected in-place, unless stated otherwise. The Contractor shall use caution when working near existing switches and be careful not to damage existing switch components. The Contractor shall be replace any damagedfacilities.

A. General

Existing facilities to be salvaged shall be immediately loaded onto trucks, transported, and removed to their predetermined salvage location. No stockpiling of said materials shall occur on MTS property without the approval of the Engineer.

Items to be salvaged to MTS that are damaged during removal shall be repaired or replaced as directed by the Engineer at no additional cost to the owner. Salvaged materials shall be protected from theft and damage until such time the materials are delivered and unloaded to the MTS storage facility designated by the Engineer. The Contractor shall provide 5 days minimum notice prior to delivering and unloading materials to the MTS storage facility. The Contractor shall also provide a complete log of materials delivered. The Contractor is responsible to provide the necessary equipment to safely deliver and unload salvaged materials to the MTS storage facility. All trackwork material removed and not shown on the plans or in the special provisions to be salvaged shall become the property of the Contractor and shall be disposed of in accordance with Section 15-2.03, "Disposal," of the Caltrans Standard Specifications, and with all applicable laws and

regulations.

Existing preservative-treated timber crossties that are removed during trackwork demolition and are not to be salvaged shall be disposed of in a safe manner in accordance with the relevant Health and Safety Codes of Practice.
Prior to cutting any existing continuous welded rail (CWR) at any point, install rail anchors beyond the ends of rails to be cut for 200 feet to anchor CWR when the rails are cut. Maintain rail bonding at all times or use jumpers to maintain track circuits. Rail bonding and track circuits are to be located in accordance with Section 10-1.03 “Obstructions and Underground Facilities” of these Special Provisions.

Track circuits shall be arranged such that signals show red when rails are removed. Switch points on crossovers shall be clamped and protected so that out-of-service track cannot be used.

B. Remove Existing Trackwork Material

Existing 115LB rail material, timber crossties, tie plates and spikes, joint bars, anchors, and other improvements shown on the plans to be removed shall be removed and disposed of by the Contractor.

All trackwork material removed and approved to be disposed of by the Engineer shall become the property of the Contractor, unless stated otherwise, and shall be disposed of in accordance with Section 14-10, “Solid Waste Disposal and Recycling,” of the Caltrans Standard Specifications and with all applicable laws and regulations.

C. Remove Existing Ballast

Existing ballast shall be removed within the track limits shown on the track removal sheets. The method of removal shall not disturb the compaction of the underlying materials except where the profile of the track is to be lowered. Existing ballast to be removed shall be tested in situ for contamination and properly disposed of by Section 15-2.03, “Disposal,” of the Caltrans Standard Specifications, and with all applicable laws and regulations., and with all applicable laws and regulations. For ballast identified as contaminated by initial, in situ, testing, additional testing of the contaminated ballast shall be performed prior to disposal as required by the disposal facility, with the following minimum testing anticipated:

1. One test per each identified location of contaminated ballast,

2. Four tests per one hundred cubic yards up to 500 cubic yards,

3. One test per 500 yards up to 5,000 cubic yards

4. Additional tests at the frequency required by the disposal facility.

Removal of existing subgrade material below the ballast section shall conform to the requirements of Section 10-4.01, “Earthwork” of these Special Provisions.

Measurement and Payment:

“Remove Existing Track, Vehicular Crossing” shall be measured for payment by the track foot removed.

The contract price paid per track foot for “Remove Existing Track, Vehicular Crossing” shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in demolition and removal of the concrete and/or rubber crossing material, asphalt concrete, existing rail, filter fabric, visqueen, and ballast shown in track removal sheets, crossties, fastening systems, and other track hardware; maintaining rail bonding and track circuits; and loading, transporting and disposing of all removed materials.

Full compensation for installing rail anchors, maintaining rail bonding and track circuits, and clamping and protecting turnouts and crossovers shall be considered as included in the contract prices paid for various items of work involved and no additional compensation will be allowed therefore.

11-4 TRACK CONSTRUCTION

The work in this section shall consist, in general, of preparing subgrade, installing filter fabric, installing timber or concrete crossties, placing ballast, installing 115 RE rails, installing bonded insulated rail plugs conforming to the 115 RE rail section, making rail welds and bolted connections, realigning existing track, lining and surfacing track, and compacting and regulating ballast, all as specified hereafter.

The work in this section shall apply to other work in Section 11 as indicated by reference.

11-4.01 GENERAL REQUIREMENTS

The Contractor shall maintain rail bonding at all times to preserve negative return track circuits. The bonds shall conform to the detail for Typical Joint Bond – 250 MCM, SANDAG Standard Plan DWG S-14, "Signaling, Typical Impedance Bond Layout, and Bonding Details."

The Contractor shall be responsible for disconnecting and reconnecting all track joint bonds and cables within the proposed area of work as needed to install the new improvements. If existing track joint bonds and cables are disturbed, damaged, or destroyed as a result of the Contractor's operations, they shall be repaired or replaced by the Contractor.

After repair or replacement of track joint bonds and cables is complete, the Contractor shall demonstrate to the Engineer that the repaired or replaced facilities operate properly.

11-4.02 TRACK ALIGNMENT AND GEOMETRY

A. General: Track shall be lined to the alignment and top of rail profile indicated on the Plans or such revised profile grade established by the Engineer, within the tolerances specified.

B. Profile Rail: Top of low (inside) rail on all curves shall be used as grade control. Superelevation shall be obtained only by raising the outer rail in relation to the inner rail. Full superelevation shall be attained within the length of the spiral. Superelevation tags shall be placed on the ties on the gauge side of the high rail. Tags shall be placed with the numbers parallel to the track centerline to read from the track centerline in ¼ inch increments. The tag that indicates full elevation shall be placed perpendicular to the track centerline to read from the low superelevation direction.

C. Line Rail: High (outside) rail on all curves shall be used as line rail.

11-4.03 TOLERANCES

Deviations from indicated gauge, cross level, horizontal line, profile grade, and tie spacing shall conform to the following requirements and A, B, and C shall not vary more than 1/8 inch in 31 feet:

A. Gauge: Track gauge shall be 4' 8-1/2," ± 1/8 inch.

B. Cross Level: Cross level, taken at top of rail, shall be ± 1/8 inch from level on tangent or design superelevation on curve.

C. Deviation from Horizontal Alignment:

1. ± 1/8 inch in 31 feet

2. ± 1/2 inch from the planned alignment

3. + 1/4 inch and minus 0 inches from the planned alignment adjacent to LRT platforms

D. Deviation from Horizontal Circular Curves:

1. Adjacent midordinates of 62-foot chords, with half-chord overlaps, shall not vary more than ± 1/8 inch.

2. Average midordinate shall not vary by more than ± 1/4 inch from theoretical midordinate.

E. Deviation from Horizontal Spiral Curves: Midordinate of 62-foot chords, with half-chord overlaps, shall not vary by more than ± 1/8 inch from straight line rate of change.

F. Deviation from Top of Rail Profile Grade: Deviation from top of rail profile grade shall not exceed ± 1/8 inch in 31 feet, and ± 1/2 inch from the vertical alignment shown on the Plans.

G. Crosstie Spacing: Distance between centerline of adjacent crossties shall not vary more than ± one inch from the indicated spacing. Timber ties shall include 22 ties per 39 feet. Concrete ties shall include 20 ties per 40 feet.

11-4.04 TOOLS AND EQUIPMENT

A. On-track equipment shall conform to Chapter 27, Part 2, "Specifications for On-Track Roadway Machines" of the AREMA Manual.

B. Wheel profile shall conform to AAR G-4, 1963, as shown in Chapter 27, Part 2, "Axle Wheel and Hub Specifications for Work Equipment" of the AREMA Manual.

C. Tools used in track construction shall conform to AREMA "Specifications and Plans for Track Tools," or approved equal. All tools shall be calibrated as appropriate for the use.

D. Equipment shall be maintained to the manufacturer's standards and shall be subject to inspection by the Engineer or MTS.

11-4.05 BALLAST PLACEMENT AND COMPACTION

A. Placement of Ballast:

1. After removal of the existing ballast and grading as required, the Contractor shall ensure that the existing subgrade is compacted to 95% relative compaction. The Contractor shall submit a detailed plan for the compaction process to the Engineer for approval. Ballast shall be placed on filter fabric as specified in Section 11-2.03 of these Special Provisions.

2. Ballast spreading and compacting shall conform to Section 25-1.04, "Spreading," and Section 25-1.05, "Compacting," of the Caltrans Standard Specifications. Vibratory squeeze- type tampers and ballast regulator shall be used for ballast compaction. Ballast shall be tamped tightly under and around the crosstie from a point 18 inches inside each rail on both sides of the crosstie to beyond the ends of the crosstie. Ballast around the center of the crosstie between the above limits shall not be tamped.

3. An initial layer of ballast shall be uniformly distributed over the filter fabric and compacted before crosstie distribution, except that ballast shall not be distributed on the roadbed until the subgrade has been accepted by the Engineer. The initial layer of ballast shall be limited to a total compacted depth that will establish the track surface at least four inches below final.

4. Each lift of ballast within the initial layer shall be uniformly spread and compacted with not less than four passes of a vibratory compactor with the following characteristics:

Gross weight: 5000 pounds minimum

Drum width: 58 inches minimum
Drum diameter: 42 inches minimum

5. Each compacted lift within the initial layer shall not exceed a depth of four inches.

   The vibratory compactor shall have a weight of not less than 5,000 pounds and shall be capable of applying a dynamic load of not less than 18,000 pounds at a frequency between 1100 to 2000 vibrations per minute. The compacting equipment selected by the Contractor shall be subject to inspection and acceptance by the Engineer.

B. Tamping Procedure:

   A detailed ballast tamping procedure covering tamping equipment and method shall be prepared and submitted to the Engineer before start of ballast placement. The procedure shall include a complete description of equipment to be used and variables that can be adjusted, such as the number of insertions of tamping tools per crosstie and the depth of penetration.

C. Rejected Procedures: If tamping does not produce ballast meeting the criteria stated herein, tamping variables shall be adjusted and the procedures repeated until all criteria is met.

Measurement and Payment:

Ballast supply shall be measured and paid for per Section 11-2.03, “Ballast” of these Special Provisions.

Full compensation for preparation and compaction of subgrade, ballast placement and compaction, including placement, compaction, tamping, and removal of rejected ballast shall be considered as included in the contract price paid for under “Construct New Track, Vehicular Crossing,” therefore no separate payment will be made.

Full compensation for preparation and 2 inches of top ballast placement and compaction, including placement, compaction, tamping, and removal of rejected ballast shall be considered as included in the contract price paid for under “Surfacing Top Ballast, & Destressing,” and therefore no separate payment will be made.

11-4.06 CROSSTIE PLACEMENT

A. General

   Attention is directed to Section 11-2.05A, “Timber Crossties,” Section 11-2.01, “Trackwork Materials, and Section 11-2.05B, “Contractor Furnished Concrete Crossties,” of the Special Provisions

B. Installing Timber Crossties

   Prior to installation, Contractor shall perform a final visual inspection of the ties to ensure all new timber crossties to be installed are bored, branded, incised, and without defects. If any new ties are damaged or determined to be defective, Contractor shall replace ties at no additional cost.

   Contractor shall distribute and place ties in their final locations and shall install ties perpendicular to the track alignment based on the required tie spacing as indicated in the plans and these Special Provisions unless otherwise approved by the Engineer.

   Ties shall be placed within plus or minus ½ inch of the required spacing. Any discrepancies in tie spacing shall not be additive.

   Ties shall be placed with the heart wood down and ensure the bottom of each tie is fully supported

on the initial ballast layer.

Timber crossties shall be Douglas fir. Timber ties may be reused at the discretion of the Engineer. All ties to be reused shall be plugged.

C. Tie Plates (Timber Crossties)

Tie plates shall be positioned so the batter of the plate will cant the rail to the gauge side and shall be centered on the tie and so applied as to obtain proper bearing of rail. Care should be taken so the outside (field side) shoulders of all tie plates have full bearing against base of rail. Tie plates shall be used as shown on the plans and approved shop drawings.

Tie plates for “Construct New Track on Timber Tie” locations shall be attached to the crossties with screw spikes installed as indicated. Spikes shall be so placed that there will not be less than 2 inches from the center of spike to the edge of the crosstie. Installation of screw spikes and specified resilient fasteners shall be in accordance with manufacturer’s recommendations.

Tie plates for “Crosstie Replacement (Timber Ties)” shall be attached to the crossties with cut spikes installed as indicated in the plans. Spikes shall be so placed that there will not be less than 2 inches from the center of spike to the edge of the crosstie.

D. Placement of Rail and Fastenings on Concrete Crossties

1. Crosstie Pads: Rail seats shall be clean and crossties properly positioned prior to placement of pads. Pads shall be accurately positioned and centered on the rail seat. Pads shall be compatible with the rail fastening system with a shape which provides positive means of preventing movement of the pad parallel to the rail. Use elastomer pads with a minimum thickness of 6.5mm or maximum thickness of 10.5 mm. The Rail seat pads shall meet the following specifications:

    - Hardness: 70-95 durometers, ASTM D2240
    - Tensile strength: 10.3 MPA, ASTM D412
    - Ultimate Elongation: 250 percent, minimum, ASTM D412
    - High Temperature Compression Set: not to exceed 40 percent, ASTM D395
    - Volume resistivity: 1x1012 ohms-cm.

2. Rail: Rail shall not be dropped into place. Use rollers to facilitate unloading and reduce the risk of dislocating crossties and crosstie pads. Rail shall not be brought into contact with the crosstie ends during installation. Care shall be taken to prevent damage to pads and insulators by rail heaters.

3. Fastenings: Fastenings, to include clips and insulators, shall be as shown on contract drawings. The rail clips shall be galvanized Pandrol Type “e” 2055 or approved equal. The insulators shall be glass reinforced nylon Pandrol Type INS-4263 or approved equal.

Measurement and Payment

No separate measurement will be made for installing crossties and associated track hardware.

Full compensation for furnishing and installing timber crossties at vehicular crossings, and furnishing and

installing the associated crosstie plates, screw spikes, clips, pads, and insulators (as required), shall be considered as included in the contract price paid per track foot for as included in “Construct New Track, Vehicular Crossing,” and no additional payment will be made therefore.

11- 4.07A BONDED INSULATED RAIL JOINTS

A. General

Work consists of installing bonded and insulated rail joints along the mainline tracks and sidings, as shown on the plans and as described herein.

Each crew and its foreman shall be pre-qualified before installing each type of glued joint by the manufacturer.

B. Bonded Insulated Joints

Insulated joints shall be a glued Allegheny joint bar or approved equal, and installed per contract drawings.

C. Installation of Insulated Joints

Insulated joints shall be installed at locations shown on the Contract drawings and in conformance with the manufacturer's recommended procedures. Two insulated joints, on opposite rails, shall be installed at each callout on the respective Plan, unless otherwise indicated. Contractor shall install bonded insulated rail plugs at all locations unless indicated otherwise.

The center of the joint shall be approximately centered between rail support ties.

The Engineer shall be notified no less than one working day in advance of installation of all insulated joints.

Insulated Rail Joint Electrical Test:

1. All insulated joints shall be tested after installation into track.

2. Electrical Test

The insulated joint assembly shall be tested in conformance with Section 15-14.02.F of these Special Provisions.

3. The Contractor shall submit test procedures and equipment identification for the Engineer's review at least 30 Days prior to beginning Work. The electrical test shall be performed by a certified electrician employed by the Contractor and approved by the Engineer.

4. Results of the electrical test shall be submitted to the Engineer for approval.

5. Any insulated joint that fails the electrical test in track shall be removed, replaced and retested at Contractor's expense. Replacement procedure shall be approved by the Engineer.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved in constructing Bonded Insulated Rail Joints shall be considered as included in the contract prices paid for under “Insulated Joint Plug,” and therefore no separate payment will be allowed.

11-4.08 RAIL LAYING

115 RE Continuously Welded Rail (CWR) shall be loaded, handled, transported, unloaded, and installed in accordance with the requirements of "Handling and Transporting of Continuous Welded Rail" in Chapter 5, Part 5.2.3 of AREMA Manual of Railway Engineering, except as modified herein.

The Contractor is cautioned that rail lengths vary. Careful investigation and verification of field conditions and locations of existing rail joints where CWR is to be connected are to be noted to determine the actual lengths of rail strings required. Field welds within the limits of rail shown are not permissible unless approved in writing by the Engineer. In no case shall new rail be furnished in lengths of less than 80 feet unless approved by the Engineer.

A. Temperature Adjustment: Track shall be fully spiked (fastened), ballasted sufficiently to prevent tie movement, and lined and surfaced prior to final rail adjustment and anchoring. CWR shall be anchored after rail is adjusted to zero thermal stress at a rail temperature of 105 degrees, +10 degrees, -5 degrees F. The Contractor may heat, cool, or stretch the rail to meet this requirement.

1. Rail Temperature. Rail temperature shall be determined during rail anchoring by means of a standard AREMA rail thermometer. The Contractor shall furnish sufficient rail thermometers for the Engineer's use during field welding and de-stressing operations. Thermometers will be returned to the Contractor after completion of the work. Temperature of rail shall be determined by placing the rail thermometer on the shaded side of the rail base next to the web, and leave until no change in its reading is detected. In no case shall the thermometer be removed in less than five minutes.

2. Temperature Records. Information to be recorded shall be:

   a. Date and time for each string installed.

   b. Location by station, left or right rail, and string length.

   c. Rail temperature, air temperature, and weather conditions.

   d. Rail gap to nearest 1/16 inch.

B. Rail Cuts and End Preparation: Rails shall be cold-sawn, square across the rail, with maximum 1/32 inch deviation from square. All burrs shall be removed and ends made smooth. Bevelling of rail ends is required at all bolted joints, conforming to Plan No. 1005 in the AREMA Portfolio of Trackwork Plans.

After cutting and bevelling, rail ends in standard rail shall be end hardened by a hardening process proposed by the Contractor, which will provide a uniform hardness pattern across the top surface of the rail head for 2 inches from the end. The Brinell hardness number, when tested in conformance with ASTM E10, shall be between 370 and 401, starting 1/4 inch from the end, and shall decrease uniformly to the hardness of the untreated rail 2 inches from the end.

The Contractor shall submit a test of the hardening process, out of track, with Brinell hardness tested by an independent testing laboratory engaged by the Contractor and approved by the Engineer. Tests shall be made on the rail centerline and 3/4 inch on each side of the centerline, starting at 1/4 inch from the end and at three other cross sections, 1 inch, 2 inches, 3 inches, and 4 inches from the end. If the tests do not indicate acceptable results, the procedure shall be modified and re-tests made until acceptable test results are achieved.

After final alignment of each section of track to the specified tolerances, but prior to final acceptance, the Contractor shall grind top and gauge side of running rails using a high-speed rail mounted fine granite grinder, such as Loram "L" series or approved equal, set to grind a minimum of 0.025 mm and a maximum of 0.051 mm with each pass. The Contractor shall grind running rails, switch rails and frogs to original manufacturer's profile insuring to remove all mill scale and pits. The equipment and method of operation used by the Contractor shall be approved by the Engineer prior to initiation

of rail grinding. At the direction of the Engineer, grinding may be delayed until all of the rail at all locations has been laid.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for preparing and laying new rail and rail grinding shall be considered as included in the contract prices paid for “Construct new Track, Vehicular Crossing,” and therefore no separate payment will be allowed.

11-4.09 RAIL WELDING

All field welds shall use exothermic methods conforming to the requirements of Chapter 4, Part 2.5, “Thermite Welding – Rail Joints” of the AREMA Manual, except as modified herein.

All factory (shop) welding shall be in accordance with Chapter 4, Part 2.2 “Specifications for Fabrication of Continuous Welded Rail,” of the AREMA Manual, and these Special Provisions.

All welding shall be performed under the direct supervision of a welding foreman or supervisor with a minimum of five years documented experience supervising field welding. In addition, a manufacturer's representative experienced in thermite field welding shall be present at the job site on an as-needed basis and shall witness the making of thermite welds for acceptance.

Prior to production welding, each crew, including foreman or supervisor of that crew, shall prepare a qualification weld in 115RE rail, out of track, at the expense of the Contractor. The weld shall be prepared in accordance with the approved procedure Specification and will be witnessed by the Engineer.

Contractor is to supply and use 500 mcm jumper cables for all welds. The jumper cables shall be removed within 7 days of placement. Jumper cables shall be clamped to the rail in lieu of welding.

Testing: Testing agency shall visually inspect the crew qualification welds and perform ultrasonic testing and Brinell hardness testing on each.

Test Record: The test record shall contain the names of the crew members, including foreman or supervisor of that crew, who performed the qualification weld and briefly describe their specific duties. The test records shall also show results of visual inspection, ultrasonic testing and rail hardness test. All performance qualification records shall be submitted to the Engineer at least 14 calendar days prior to production welding. Production welding shall not commence until qualification test welding records have received written approval by the Engineer.

Requalification: The Engineer reserves the right to require the re-qualifications, at the Contractor's expense, of any crew of welders whose work fails to meet the specified requirements.

C. Weather: Field welding shall not be done during inclement weather. Inclement weather shall include, but not be limited to, rain and fog.

D. Location: Field welds shall be in accordance with the following restrictions:

1. Compromise welds in opposite rails shall be staggered at least 10 feet except where closer spacing is required by field conditions and is approved by the Engineer.
2. Field welds shall not be located within 19 feet of a bolted rail joint.
3. Field welds shall not be positioned within 3 inches from the edge of a tie plate or concrete tie. All joints, whether bolted or welded, shall be suspended between ties.

4. Field welds shall not be located within 8 feet of an existing field, shop, or factory weld.

5. Field welds shall not be located within the limits of a vehicular or pedestrian crossing.

E. Alignment: The ends of the rails to be welded shall be properly gapped and aligned to produce a weld that will conform to the following alignment tolerances. Cutting back and/or straightening of bent rail ends will be considered incidental to this work. The rail gap alignment shall be held by a hydraulic rail puller/expander and alignment jig without change during the complete field welding cycle. If the rail gap is larger than manufacturer's recommended gap after the rails have been adjusted for zero thermal stress, then sufficient rail shall be removed from one or both rails to permit insertion of a rail not less than 19 feet long, which shall provide the recommended gaps at each end of the field welding. At a location where the rail gap is smaller than the manufacturers recommended gap, the recommended gap shall be obtained by sawing a piece from one rail.

1. Alignment of rail shall be done on the head of the rail:

   a. Vertical alignment shall provide for a flat running surface. Any difference of height of the rails shall be in the base.

   b. Horizontal alignment shall be done in such a manner that any differences in the width of heads of rail shall occur on the field side.

2. Horizontal offsets at joints shall not exceed 0.040 inch in the head and 0.125 inch in the base.

3. Surface Misalignment Tolerance:

   a. Combined Vertical Offset and Crown Camber shall not exceed 0.040 inch per foot at ambient temperature.

   b. No Dip Camber shall be allowed.

4. Gauge Misalignment Tolerance: Combined Horizontal Offset and Horizontal Kink shall not exceed 0.040 inch per foot at ambient temperature.

F. De-Stressing and Final Anchoring of Field Welded Rail:

1. After each track has been surfaced and lined, and the ballast has been compacted and dressed, the rail fasteners shall be loosened and the rails adjusted to an effective zero thermal stress at a designated rail temperature of 105 degrees F (plus 10 degrees/minus 5 degrees F). De-Stressing limits shall extend 200 feet into existing track on each side of the new trackwork limits or to a restriction that prevents rail movement, whichever is greater.

2. The Contractor may heat, cool, and stretch the rails to meet this requirement using rail heaters, cooling water, and hydraulic rail expanders. If rail stretching is to be utilized, it shall be used in conjunction with heaters and during the anticipated warmest period of the day.

3. Rails shall be fully anchored to the ties and all open joints welded while the rails are maintained in the required temperature-stretched condition specified above. Prior to anchoring and welding, rails will be vibrated. Final closure shall be by a field weld with the rail fully fastened (expect immediately adjacent to the field weld as necessary to perform the weld) near or at final elevation and alignment. If post closure rail realignment is required, the Contractor shall provide sufficient longitudinal restraint either side of the location of realignment to assure the rail stress state is not changed by the realignment Work.

4. Rail temperature shall be determined during rail anchoring by means of a standard AREMA

rail thermometer. The Contractor shall furnish the Engineer with two rail thermometers at the Contractor's expense. Temperature of rail shall be determined by placing the rail thermometer on the shaded side of the rail base next to the web, and leaving it until no change in its reading is detected. In no case shall the thermometer be removed in less than 5 minutes.

5. Temperature Records: The following information shall be recorded by the Contractor:

- Date and time for each string installed.
- Location by station, left or right rail, and string length.
- Rail temperature, air temperature, and weather conditions.
- Rail gap to the nearest 1/16 inch.

G. Finishing: Projections, fins, and other surface irregularities that would interfere with testing shall be removed from all welds.

The weld shall be finished with a rail mounted rail head grinder specifically designed for the work. Finishing shall conform to the following tolerances:

1. Top of rail head, plus 0.010" to minus 0" of the parent rail section.
2. Sides of rail head, plus or minus 0.010" of parent rail section.
3. The balance of the rail section shall be finished with a hand-held grinder as required to remove notches, gouges, and other defects. All grinding shall blend to the parent rail section and shall not overheat the steel. Heavy grinding shall be completed while steel is still hot from welding.

H. Procedure: A detailed procedure shall be prepared and submitted which covers a step-by-step process to be employed in making field thermite welds. A complete description of each of the following items and any other essential characteristics shall be included in the procedure:

1. Method used for cutting and cleaning of rail ends.
2. Minimum and maximum gap between rail ends.
3. Method and equipment used for maintaining rail gap and alignment during welding.
4. Method used for preheating including time and temperature.
5. Tapping procedure including minimum time required to cool weld under the mold insulation.
6. Method used, including a description of special tools and equipment, for removing gates and riser and finishing weld to final contour.
7. Manufacturer's trade name for welding process.

I. Weld Numbering: Each weld shall be given a number in sequence as the welding progresses. The number shall be painted with aluminum paint two inches from the finished weld on the field side of the rail. Defective welds that are replaced shall be given a new sequential number. This number shall be recorded in the field welding records.

J. Field Weld Testing Procedures: All rail welds shall be tested by the Contractor through the use of an independent testing agency using the Ultrasonic test method in accordance with ASTM E164.

Each completed weld shall have full penetration and complete fusion and be entirely free of cracks. Total area of internal defects such as porosity and slag inclusions shall not exceed 0.060 inch and the largest single porosity or slag defect permitted shall not exceed 1/8 inch in diameter.

Other causes for rejection of welds shall be:

1. Cracks that show in the finished weld.
2. Pit holes that show in web and base of weld after finish grinding weld. Minor defects may be repaired by qualified welders in accordance with repair procedures approved by the Engineer.

Welded joints not meeting these specifications and tolerances will be replaced at no additional cost to the Engineer. The defective weld shall be cut out, and a new section of rail not less than 19'-6" feet long shall be inserted, welded into place as described in this section, and retested.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for rail welding and de-stressing within the trackwork limits shall be considered as included in the contract prices paid for under "Surfacing, Top Ballast and Destressing," and "Construct New Track, Vehicular Crossing," therefore no separate payment will be allowed.

11-4.10 LINING AND SURFACING

Track shall be surfaced, tamped, and lined to the tolerances indicated in Section 11-4.03 herein, as shown in the plans, and as directed below:

The track shall be lifted by methods and equipment subject to approval of the Engineer. Equipment used for this operation will be the Canron Mark II or equal. Undue bending of rail or strain on joints or damage to crossties or equipment during lining and tamping shall be prevented. Both rails shall be raised at one time

and as uniformly as possible. Track shall be lifted so that it will be necessary to give it a final lift of not less than 1 inch and no more than 2 inches to bring it to grade. Track shall be raised with a minimum of two major passes including one final surfacing pass. The final surfacing pass of the track shall be lifted by means of equipment equipped with a laser-type horizontal grade and vertical alignment control that can be set to control points.

Measurement and Payment

No separate measurement will be made for the requirements of this section.

Full compensation for lining and surfacing track at various phases of track construction or reconstruction, to permit rail traffic to operate throughout the trackwork, shall be considered as included in the contract prices paid for under "Surfacing, Top Ballast and Destressing," and "Construct New Track, Vehicular Crossing," therefore no separate payment will be allowed.

11-4.12 CONNECT TO EXISTING TRACK

The Contractor shall cut into the existing rails a sufficient distance so that proper welded joints can be made. Maintain proper stagger in jointed track and construct track on the existing timber ties with the 115RE tie plates.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work involved, and no additional compensation will be allowed therefore.

11-4.13 BALLAST DRESSING

The ballast section shall be dressed to the cross section indicated after completion of the final lining and surfacing operation. Ballast that does not conform to the indicated cross section at the time of final inspection shall be redressed at the Contractor's expense. The top of the ballast shall be one inch below the bottom of the rail unless indicated otherwise.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for dressing the ballast section shall be considered as included in the contract prices paid for under “Surfacing, Top Ballast and Destressing,” and “Construct New Track, Vehicular Crossing,” therefore no separate payment will be allowed.

11-4.14 INSPECTION

Final inspection by the Engineer may include operation of a track geometry car at MTS expense to measure gauge, cross level and deviation from specified alignment and grade. The contractor shall provide access and accommodate the required inspections within the approved work windows. Track deviations, as disclosed by this inspection, which exceed specified tolerances, shall be corrected at no additional cost to MTS.

11-4.15 MEASUREMENT AND PAYMENT

The contract unit price paid per track foot for “Construct New Track, Vehicular Crossing” shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing new Ballasted track, complete in place, including preparing subgrade, installing subballast as required, installing filter fabric, placing and compacting ballast, placing and aligning new timber crossties for vehicular crossing panels, placing asphalt concrete ramps, furnishing and placing vehicular concrete crossing panels as required per plans, furnishing, placing and aligning new 10’ timber crossties (including transition area ties outside vehicular crossing), including all other track material; installing rail, rail welding; de-stressing the rail, lining and surfacing to all specified tolerance requirements; tamping, dressing and regulating newly placed ballast complete in place, all as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

11-6 NOT USED

11-7 TIMBER CROSSTIE REPLACEMENT

11-7.01 GENERAL

The work in this section includes timber crosstie replacement and refers to localized replacement of one or more crossties in a specific area. Prior to commencement of the crosstie replacement and crosstie transition replacement work, the Engineer will perform a field walk to identify the crossties to be replaced. For crosstie transition tie replacement, the work described in this section shall be according to details in the plans. The work in this section excludes tie replacement in the limits of at-grade vehicular or pedestrian crossings or within full track replacement limits. Other provisions specified in Section 11-1 of these Special Provisions also apply. The Contractor shall submit detailed plans for approval before commencing this work. This work consists of removing rail anchors, track spikes, and tie plates from the tie to be replaced; replacing the tie; reinstalling the materials; and surfacing, tamping, and lining the track. In order to maintain track integrity, contractor will be allowed to remove every third tie at a time for all work associated with “Crosstie Replacement (Timber Ties).”

Materials:

Ballast: See Section 11-2.03 of these Special Provisions

Ties: See Section 11-2.05a of these Special Provisions

Contractor furnished Rail Anchors, See Section 11-2.02

Contractor furnished Track Spikes, See Section 11-2.02.

Contractor furnished Tie Plates, See Section 11-2.02

The Contractor shall furnish, as necessary, new rail fastening components (Spikes, tie plates, rail anchors) compatible to the existing track size and as specified in the Contract Documents. The Contractor shall also furnish new track markings, such as superelevation tags, to replace existing track markings on replaced ties.

Construction:

Perform work on this Section in accordance with applicable specification section 11-4 and provisions of the AREMA Manual

Prior to commencement of the crosstie replacement work, inspect and verify areas indicated on Contract Drawings, marked in the field, or as required by the Engineer for crosstie replacement

Replace defective ties as marked in the quantities identified in the Contract Documents or marked in the field and within the Contract limits.

In order to maintain track integrity, contractor will be allowed to remove every third tie at a time.

Perform work in such manner to best utilize time allowed under the available working time limits.

Perform work in accordance with applicable parts of Section 11-4 Track Construction, except as modified or amended herein.

Excavate the tie cribs and ends so that the old ties can be removed and new ties installed without jacking the rails, or otherwise distorting or “humping” the track.

Remove existing crossties without excessively splintering them. Dispose of these crossties including associated debris.

Contractor shall replace all removed spikes with contractor furnished spikes.

Remove and salvage existing cut spike plates and rail anchors.

Reuse existing tie plates with the following exception: Worn, bent or cracked plates and plates less than 14-inch long shall be replaced with new owner supplied tie plates. Position plates so that the batter of plate will cant rail to gauge side and be centered over the width of the tie to obtain proper bearing of rail. Ensure that outside (field side) shoulders of tie plates have full bearing against base of rail. Set spikes with a self-propelled driver/setter machine.

Center tie plates over the width of the tie, except that the plate shall be positioned up to 1/2 inch off-center if necessary to avoid spiking into an existing tie split.

Use the standard spiking pattern shown in the plans. Keep respiking of new timber ties to a minimum. Replace ties that have been excessively respiked, as determined by the Engineer, or ties that have been respiked due to the Contractor's carelessness.

Reuse existing anchors. Install anchors tight against the tie.

Repair any track that is distorted or humped, as a result of the Contractor's operation.

Install rail anchors as shown in the plans.

Spot tie replacement includes powered hand machine tamping and dressing of track.

For spot tie replacement work, submit a summary report of work performed, numbers and locations of the ties replaced, and level of ballast renewal for a station work group.

After completion of spot tie replacement, perform inspection on post work track condition. The crosstie replacement work will not be accepted as complete until the Engineer has checked and verified the final track condition.

Track shall be surfaced, tamped, and lined to the tolerances indicated in Section 11-4.03 herein, as shown in the plans, and as directed below:

Measurement and Payment

"Crosstie Replacement (Timber Ties)" shall be measured by each crosstie satisfactorily replaced.

The contract unit price paid for each "Crosstie Replacement (Timber Ties)" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in replacing each crosstie, distributed and installed as specified, complete in place, including any required demolition and replacement of surface improvements, as shown on the Plans, as specified in these Special Provisions.

"Surfacing, Top Ballast, & Destressing" measured and paid for by the track foot, measured on a horizontal line along the centerline of track between the limits of the work shown on the Plans, or to the limits as directed by the Engineer if different from that shown on the Plans. The contract unit price paid per track foot for "Surfacing, Top Ballast, & Destressing" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in purchasing and placing top ballast, rail welding; de-stressing the rail, lining and surfacing to all specified tolerance requirements; tamping, dressing and regulating newly placed ballast complete in place, all as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

11-8 WORK WINDOWS

11-8.01 GENERAL

All Contractor employees or representatives shall be trained through the MTS Railroad Worker Safety Training Program prior to the work.

Flaggers: The Contractor shall request flaggers from MTS/SD trolley, a minimal of three business days in advance of any work activity within the MTS right-of-way. The Engineer shall furnish the necessary forms to request flaggers.

Rail Trains/Carts can be loaded during revenue hours if the rail train does not occupy the mainline tracks during the operation*

Special Events: Contractor to schedule the work around special events such as Rock N Roll, Marathon

Padres, SDSU Sporting events, Comic-con etc. and to coordinate with City and MTS projects.

Should the Contractor need to work during weekend hours, a minimal of three business days in advance notice shall be given to MTS and the Engineer.

11-8.02 STANDARD WORK WINDOWS

Weekday work is to be performed between trains from 9:00 PM to 1:30 AM. Weekday non-revenue service will be from 1:30 AM to 4:00 AM - (Tuesday through Saturday).

Saturday work is to be performed between trains from 9:00 PM to 1:30 AM. Saturday non-revenue service will be from 1:30 AM to 4:30 AM – (Sunday).

Sunday work is to be performed between trains from 9:00 PM to 12:00 AM. Sunday non-revenue service will be from 12:00 AM to 4:00 AM – (Monday).

San Diego Imperial Valley Railroad will have approximately three (3) freight train deliveries per month. Contractor is to coordinate around deliveries.

11-8.03 WEEKEND SHUTDOWNS

The contractor will be allowed **three (3)** EA separate weekend shutdowns for all work associated with Vehicular Crossing**s.**

- One (1) EA Weekend Shutdown for all work associated with 25th and Commercial Vehicular Crossing, **to be scheduled to coincide with Orange Line AWWs per Section 5.2,** from the hours of 1:30 AM to Saturday at 4:00 AM on **Monday.**
- One (1) EA Weekend Shutdown for all work associated with Bradley Ave Vehicular Crossing, from the hours of 1:30 AM on Saturday to 4:00 AM on **Monday.**
- One (1) EA Weekend Shutdown for all work associated with Severin Dr Vehicular Crossing, from the hours of 1:30 AM on Saturday to 4:00 AM on Monday

The contractor will be allowed twenty-five (25) EA single track operations from 9:00 PM to 4:00 AM for all work associated with Crosstie Replacement on the Blue Line.

TECHNICAL SPECIFICATIONS (CONTINUED)

SECTION 12

12-1 Extra Work

New and unforeseen work will be classed as extra work when determined by the Engineer that the work is not covered by any of the various items for which there is a Bid price or by combinations of those items. In the even portions of this work are determined by the Engineer to be covered by some of the various items for which there is Bid price or combinations of those items, the remaining portion of the work will be classed as extra work. Extra work also includes work specifically designated as extra work in the plans or specifications.

This extra work will be initiated with a Request for Proposal (RFP) issued by the Engineer. The Contractor shall respond within five working days with a detailed cost proposal with all labor, material and equipment costs shown in a force account format. Failure of the Contractor to submit a complete cost proposal within the allotted time will constitute a waiver by the Contractor of any and all rights for additional cost and/or time associated with the change order. If the Contractor determines that a time extension is warranted, the Contractor shall submit a Time Impact Analysis with hourly not to exceed labor costs as originally submitted at the time of Contractors bid.The Contractor shall do the extra work and furnish labor, material and equipment therefore upon receipt of an approved contract change order or other written order of the Engineer, and in the absence of an approved contract change order or other written order of the Engineer, the Contractor shall not be entitled to payment for the extra work.

12-2 Mobilization

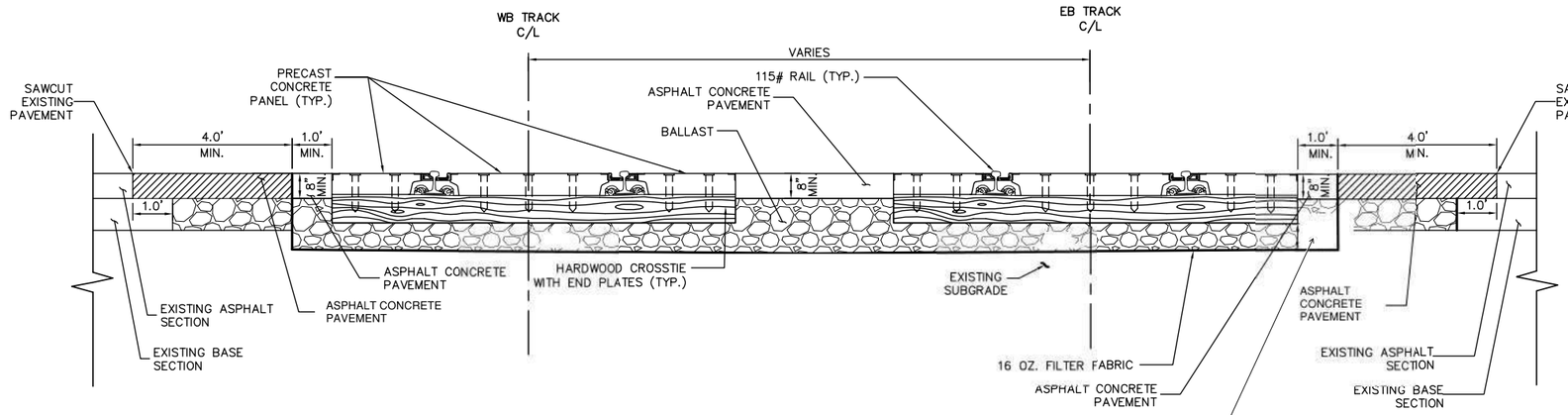
Mobilization shall conform to the provisions in Section 12, “Mobilization,” of the Standard Specifications and these Special Provisions. Staging and stockpiling of equipment and materials shall be within the limits of work as shown on the plans, unless said otherwise.

Measurement and Payment:

No separate measurement will be made for the requirements of this section.

Full compensation for complying with the requirements of this section shall be considered as included in the contract prices paid for the various items of work involved, and no additional compensation will be allowed therefore.

DETAILS



TANGENT TRACK AT VEHICULAR GRADE CROSSING

VERTICAL 1"=2'
HORIZONTAL 1"=2'

NOTES:

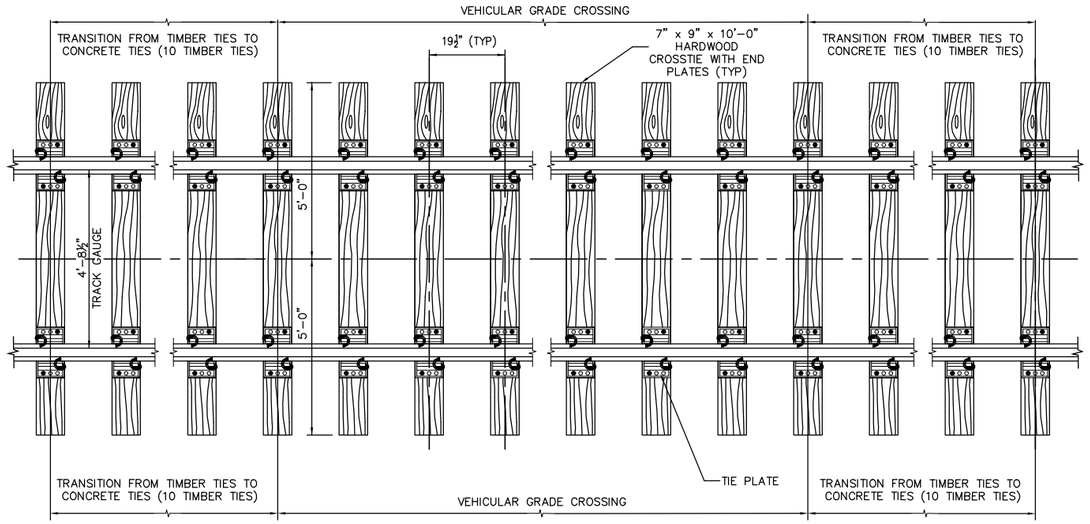
SEE DWG. NO. T-11 FOR VEHICULAR PRE-CAST CONCRETE GRADE CROSSING DETAILS.

SEE SPECIFICATIONS FOR DETAILS.

Excavation shall be 9" below tie for the following:
- 25th Street and Commercial Street

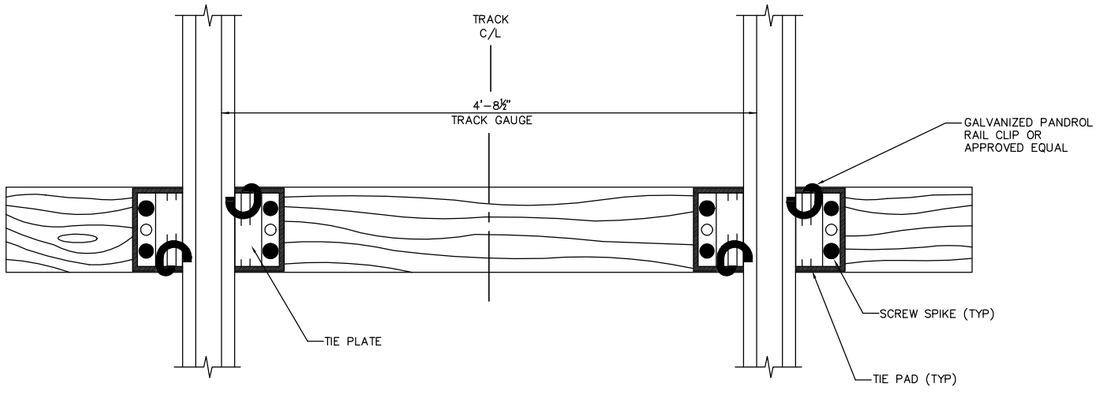
Excavation shall be 12" below tie for the following:
- W Bradley Ave
- Severin Dr

Project:	MTS
Details: TANGENT TRACK TYPICAL SECTIONS	Sheet No. **T-4**



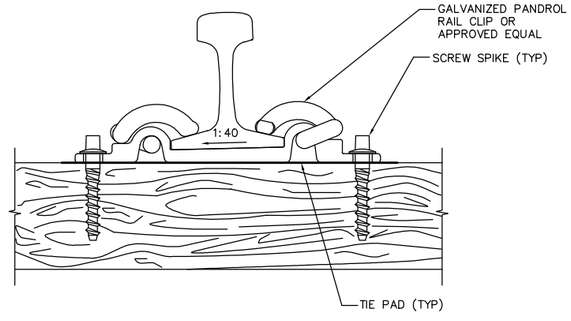
TIMBER TIE LAYOUT AT VEHICULAR GRADE CROSSING

N.T.S.



SPIKING PATTERN FOR TIMBER TIES AT VEHICULAR GRADE CROSSING (ON TANGENT)

N.T.S.

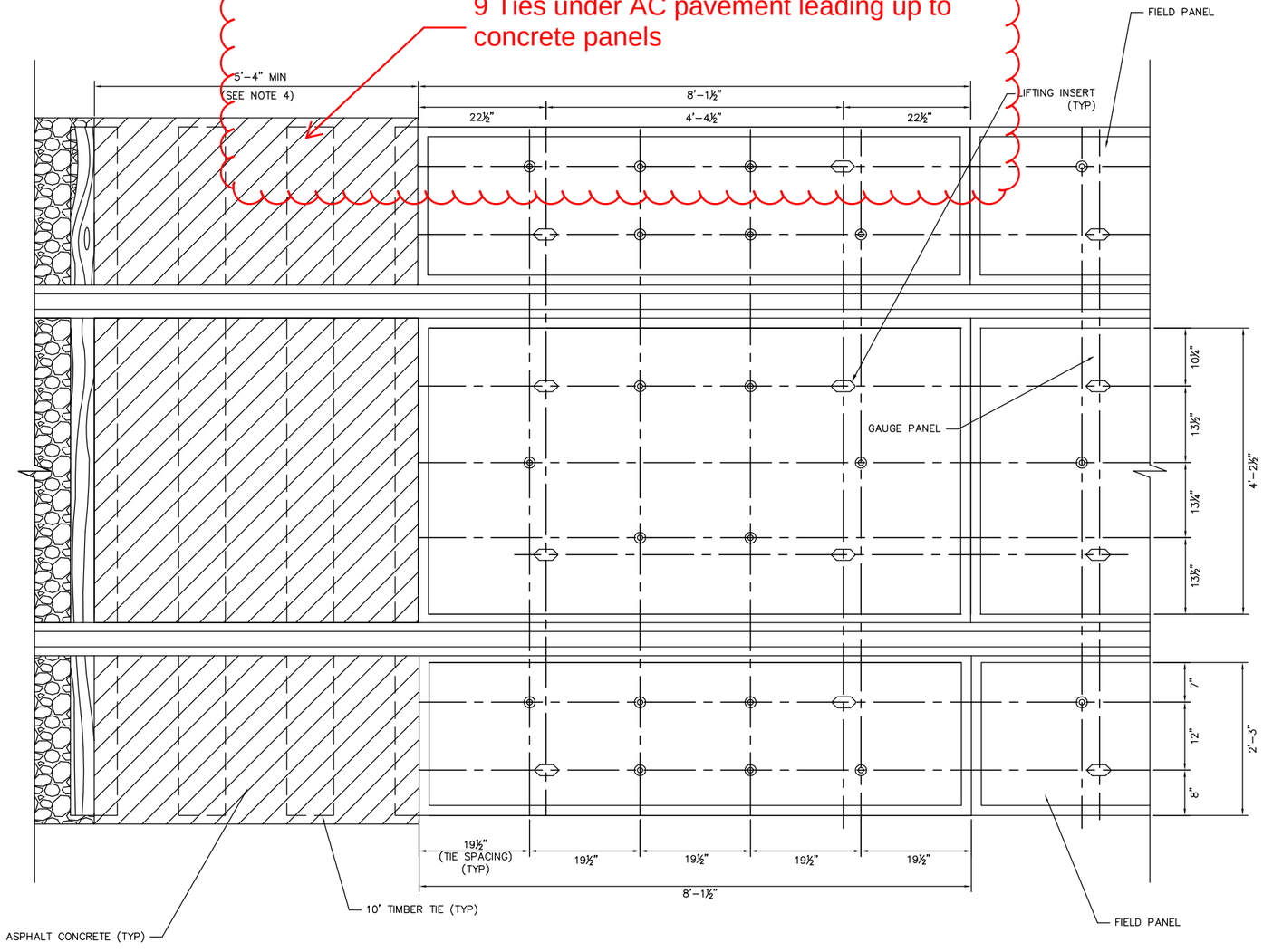


TIE PLATE AT VEHICULAR GRADE CROSSING (NON-INSULATED SHOWN)

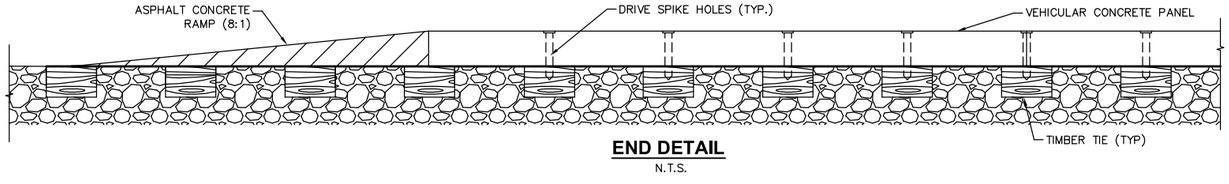
N.T.S.

Project:	MTS
Location: STANDARD BALLASTED TRACK WITH TIMBER TILES AT VEHICULAR GRADE CROSSING	Sheet No. **T-7**

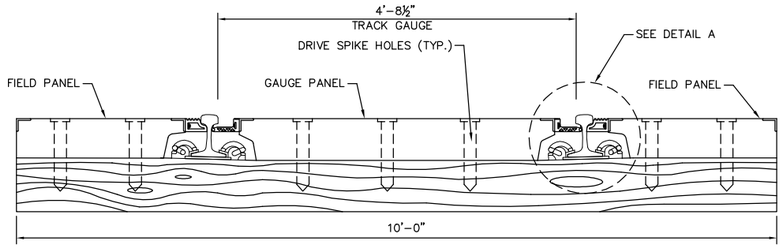
9 Ties under AC pavement leading up to concrete panels



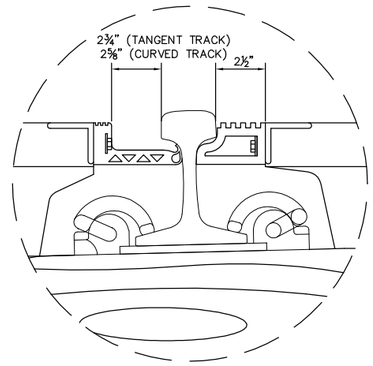
VEHICULAR PRE-CAST CONCRETE GRADE CROSSING PANELS DETAIL
N.T.S.



END DETAIL
N.T.S.



VEHICULAR PRE-CAST CONCRETE GRADE CROSSING PANELS DETAIL
N.T.S.

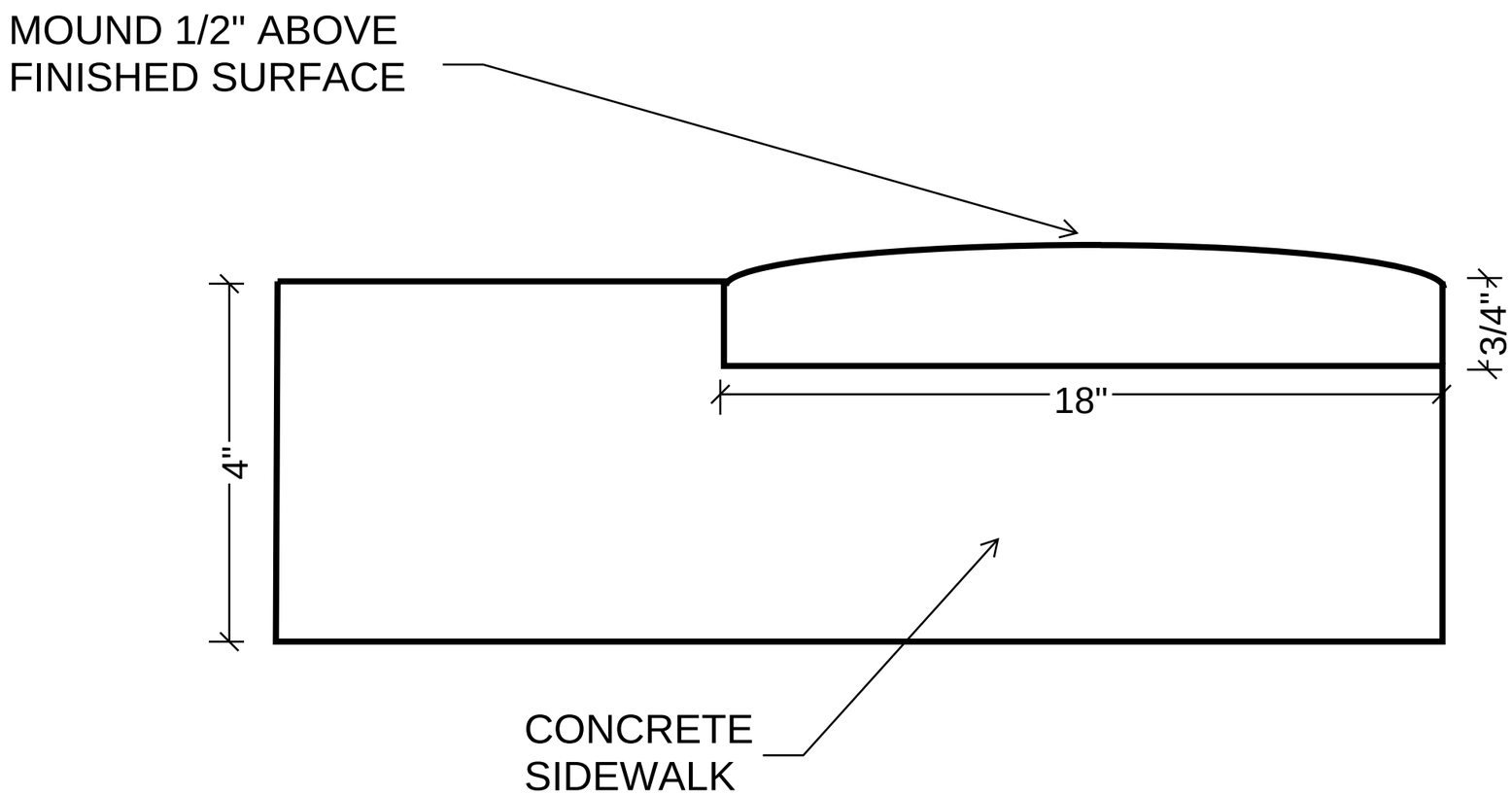


DETAIL A
N.T.S.

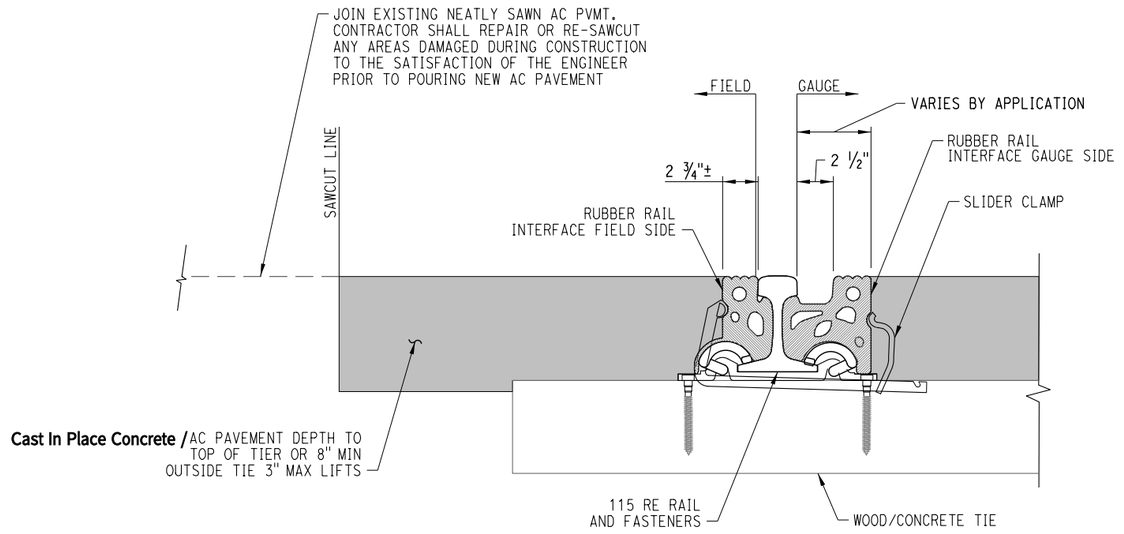
NOTES:

1. PANELS TO BE PLACED ON 10'–0" TIMBER TIES @ 19½" SPACING (SEE DWG. NO. T–7).
2. SEE VEHICULAR GRADE CROSSING SHEETS FOR PANEL LOCATIONS.
3. SEE SPECIFICATIONS FOR FURTHER PANEL DETAILS.
4. TIE SPACING MAY BE ADJUSTED TO ACCOMMODATE LOCATION OF VEHICULAR CROSSING BUT SHALL NOT EXCEED 19½".
5. CENTER ENDS OF PRECAST CONCRETE PANELS ON TIMBER TIES.

Project:	MTS
Location: VEHICULAR PRE-CAST CONCRETE GRADE CROSSING PANEL DETAIL	Sheet No. **T-11**



Project:	MTS
Location: EPOXY PEBBLE CURB DETAIL	Sheet No. **BI#9**



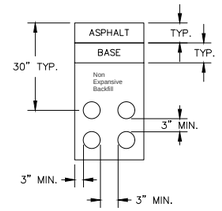
C – RUBBER RAIL INTERFACE
NOT TO SCALE

NOTE:

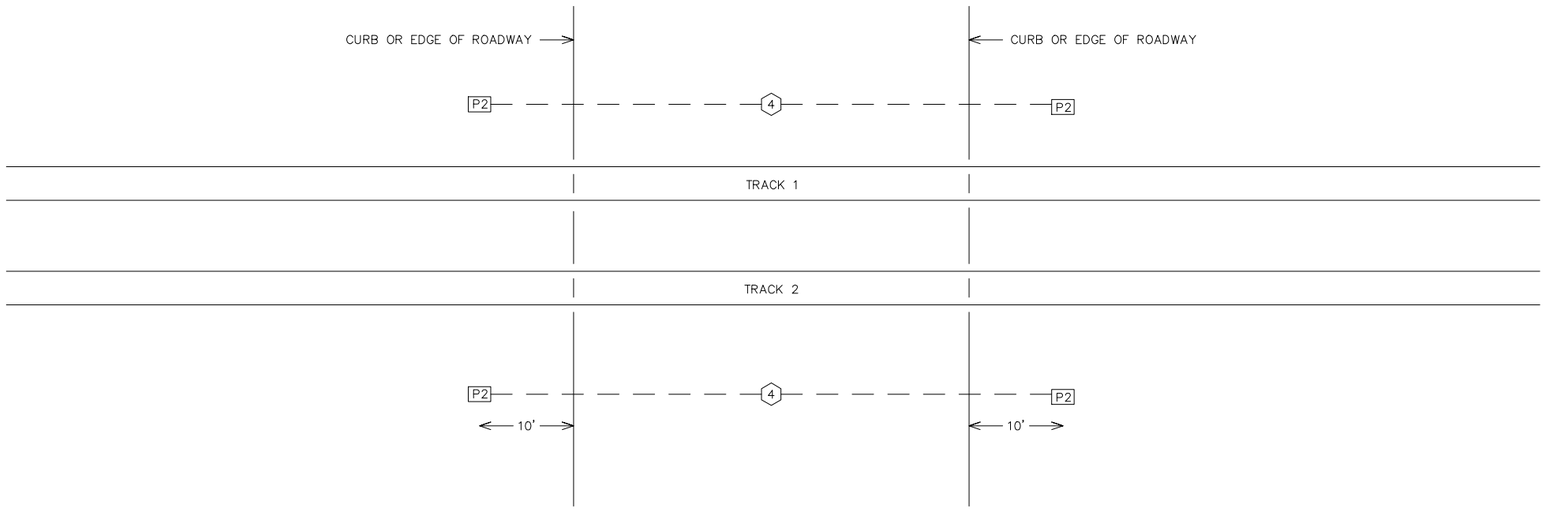
Rubber Rail Interface shall be installed:

- Outside of the pre-cast grade crossing panels outside of 25th Street & Commercial St as part of BI #2 · Construct New Track, Vehicular Crossing

Project:	MTS
Location: RUBBER RAIL INTERFACE	Sheet No. **CD01**



TYPICAL DUCTBANK UNDER ROADWAY



TYPICAL CROSSING CONDUIT LAYOUT

NOTES:

1. CONDUITS SHALL BE BURIED IN NON-EXPANSIVE BACKFILL

2. SPARE CONDUIT ENDS SHALL BE CAPPED TO PREVENT ACCESS BY RODENTS OR DEBRIS. ~~CONDUITS IN PULL BOXES AND ENCLOSURES CONTAINING CABLE AND WIRE SHALL BE SEALED WITH AN APPROVED SEALANT.~~

P2 BURIED CONDUIT ENDS SHALL BE MARKED AT THE SURFACE TO ASSIST FUTURE LOCATES.

(#) 4 IN. SCH 80 PVC (# NO. OF CONDUITS)

W/ POLYETHLENE JACKETED POLYPRPYLENE ROPE WITH 1800 PSI TENSILE STRENTH. PROVIDE BIKAMATIC "FIBER GLIDE" OR EQUAL.

Addendum 5, 5/22/2025

This detail pertains to the duct bank that will be procured and installed for BI#6 at the vehicular crossings of Bradley Avenue, Severin Drive, and 25th and Commercial.

NO.	DATE	REVISIONS	BY	CHK	APRV

DETAIL SHEET CD02

TYPICAL CROSSING CONDUIT LAYOUT

DRAWINGS

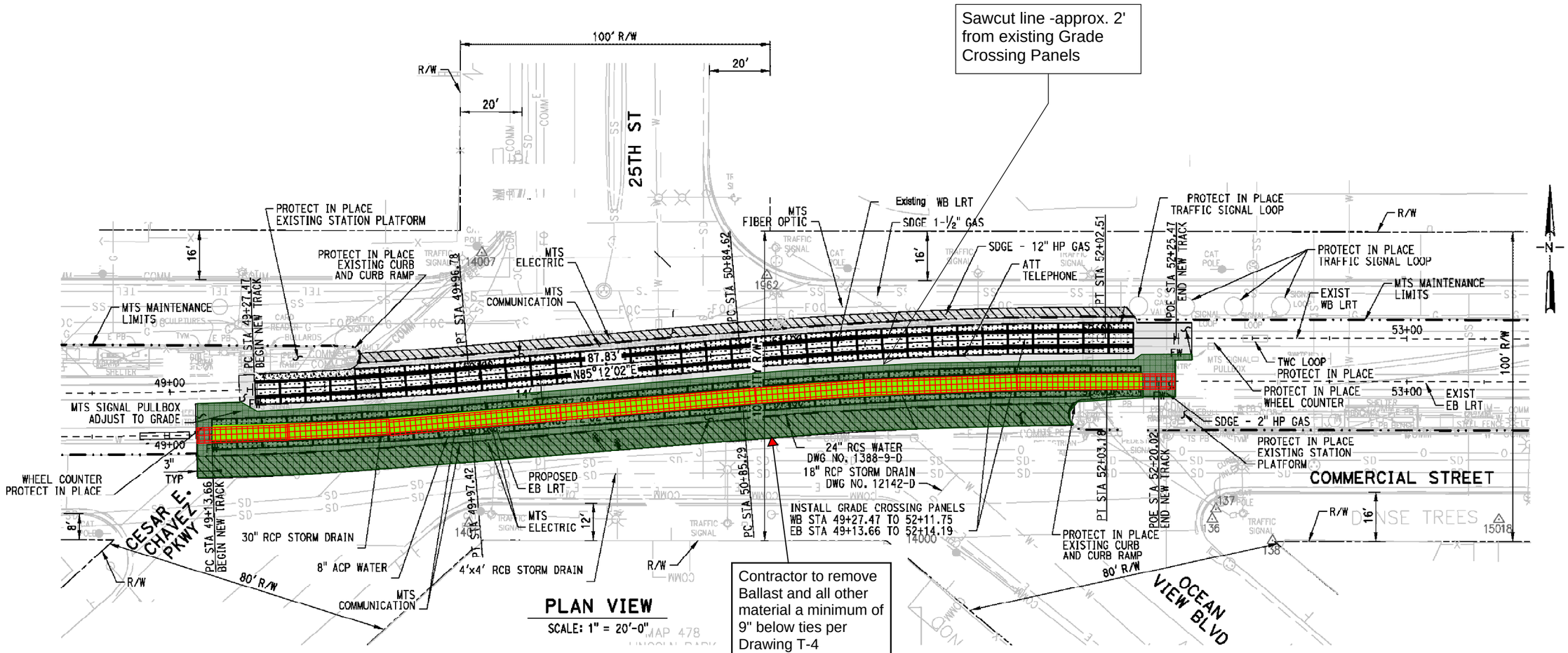
FY 25 TRACK PROJECT

Project:	MTS
Location:	Sheet No. 1

Demo - Asphalt Concrete - 4,906 SF

Demo - Concrete (PCCP) - 1,441 SF

BI #1- Remove Existing Track, Vehicular Crossing - 317 TF



Contractor to remove Ballast and all other material a minimum of 9" below ties per Drawing T-4

Project: FY 25 TRACK PROJECT	MTS
Location: 25TH AND COMMERCIAL - EB TRACK	Sheet No. 2

BI #3- Asphalt Concrete, (8" HMAC) - 3,403 SF

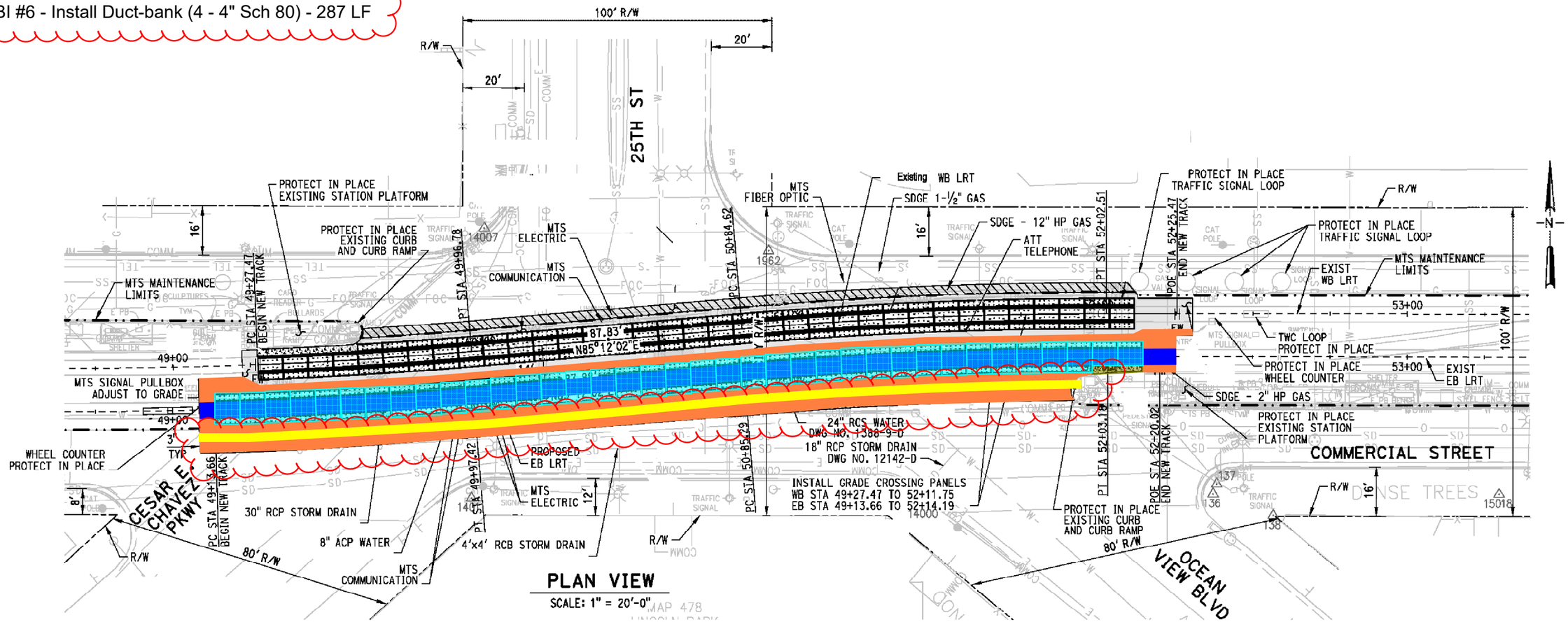
BI #2- Construct New Track, Vehicular Crossing - 317 TF

Install Grade Crossing - Panels - 35 EA

Install Grade Crossing - Panels (Without 1 EA Field Panel) - 2 EA

BI #4- Install Sidewalk, w Raised Epoxy Pebble, (4" PCCP) - 41 SF

BI #6 - Install Duct-bank (4 - 4" Sch 80) - 287 LF



PLAN VIEW

SCALE: 1" = 20'-0"

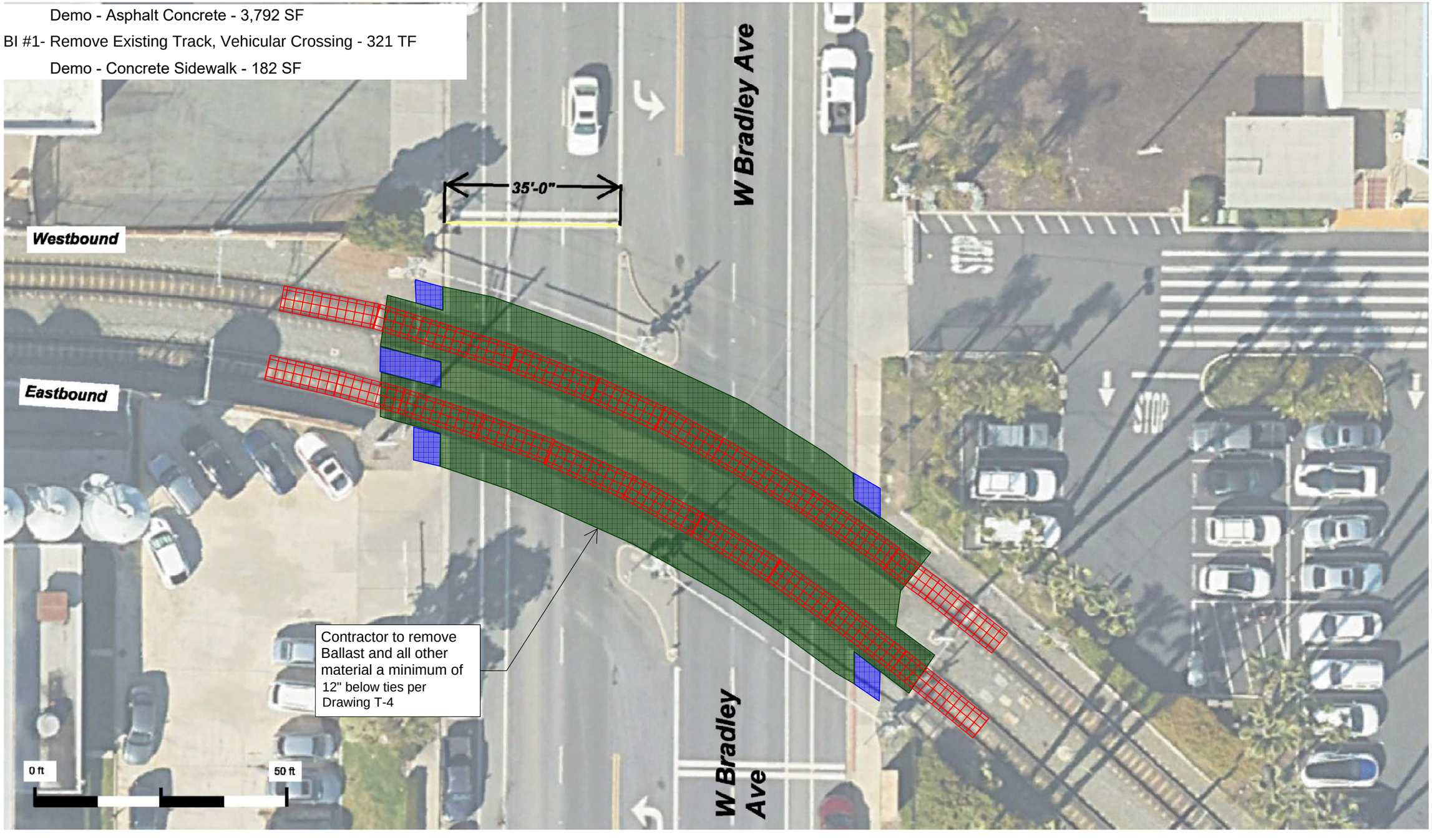
Addendum 4, 5/15/2025

Project: FY 25 TRACK PROJECT	MTS
Location: 25TH AND COMMERCIAL - EB TRACK	Sheet No. 3

Demo - Asphalt Concrete - 3,792 SF

BI #1- Remove Existing Track, Vehicular Crossing - 321 TF

Demo - Concrete Sidewalk - 182 SF

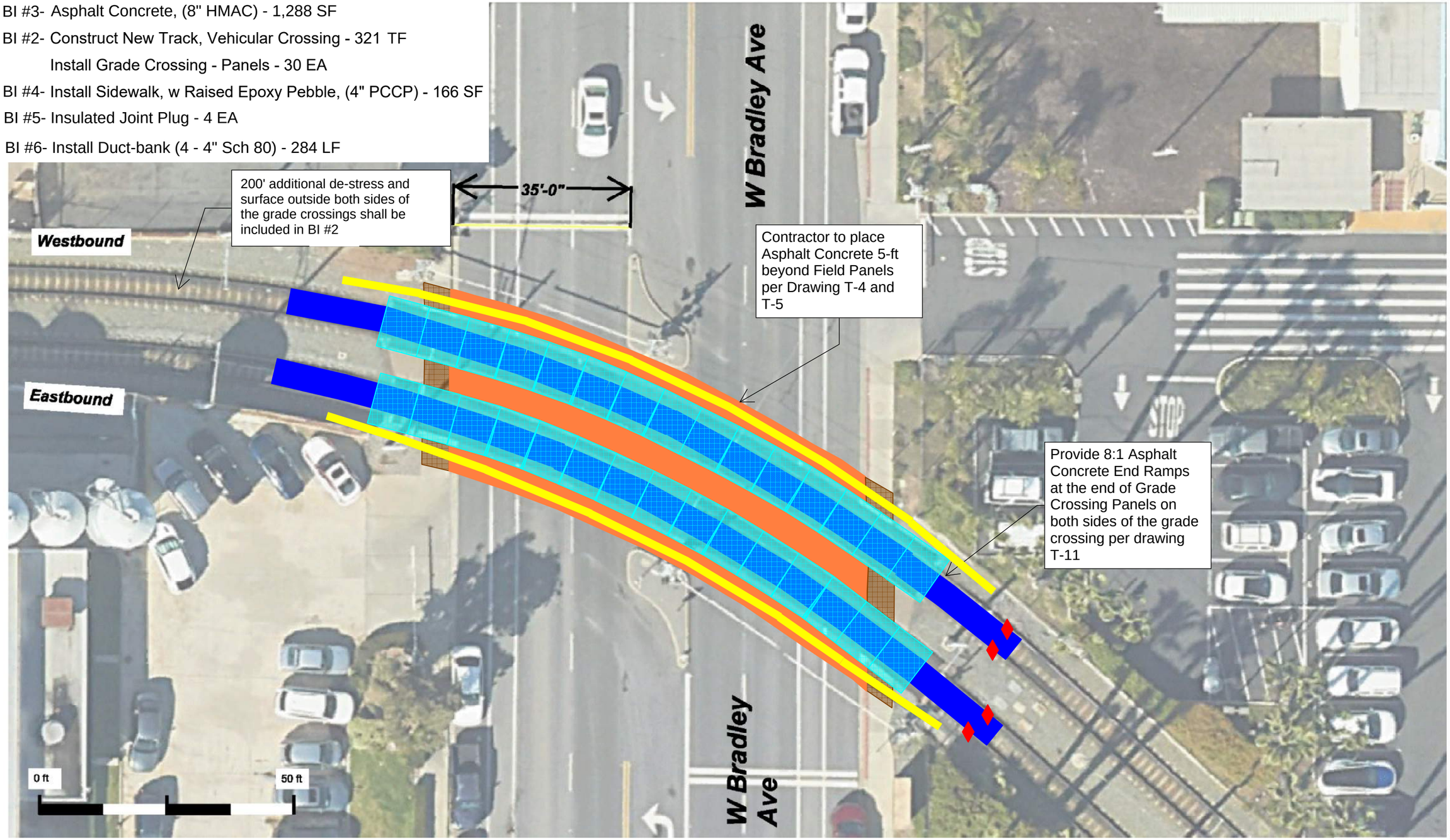


Project:
FY 25 TRACK PROJECT
Location: Bradley

MTS

Sheet No. 4

- BI #3- Asphalt Concrete, (8" HMAC) - 1,288 SF
- BI #2- Construct New Track, Vehicular Crossing - 321 TF
- Install Grade Crossing - Panels - 30 EA
- BI #4- Install Sidewalk, w Raised Epoxy Pebble, (4" PCCP) - 166 SF
- BI #5- Insulated Joint Plug - 4 EA
- BI #6- Install Duct-bank (4 - 4" Sch 80) - 284 LF



Project:
FY 25 TRACK PROJECT
Location: Bradley

MTS

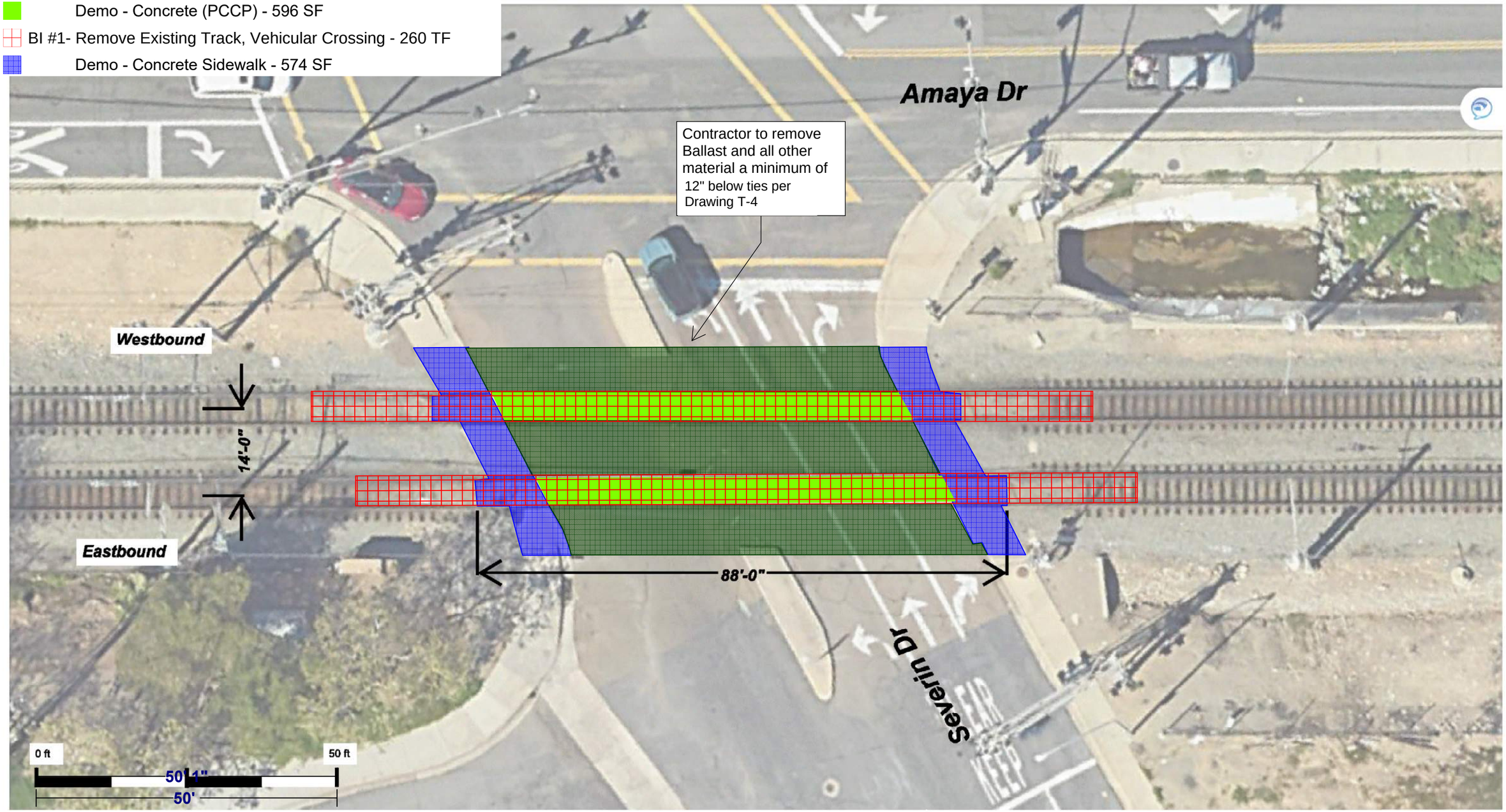
Sheet No. 5

Demo - Asphalt Concrete - 1,675 SF

Demo - Concrete (PCCP) - 596 SF

BI #1- Remove Existing Track, Vehicular Crossing - 260 TF

Demo - Concrete Sidewalk - 574 SF



N

Project:
FY 25 TRACK PROJECT
Location: Severin

MTS

Sheet No. 6

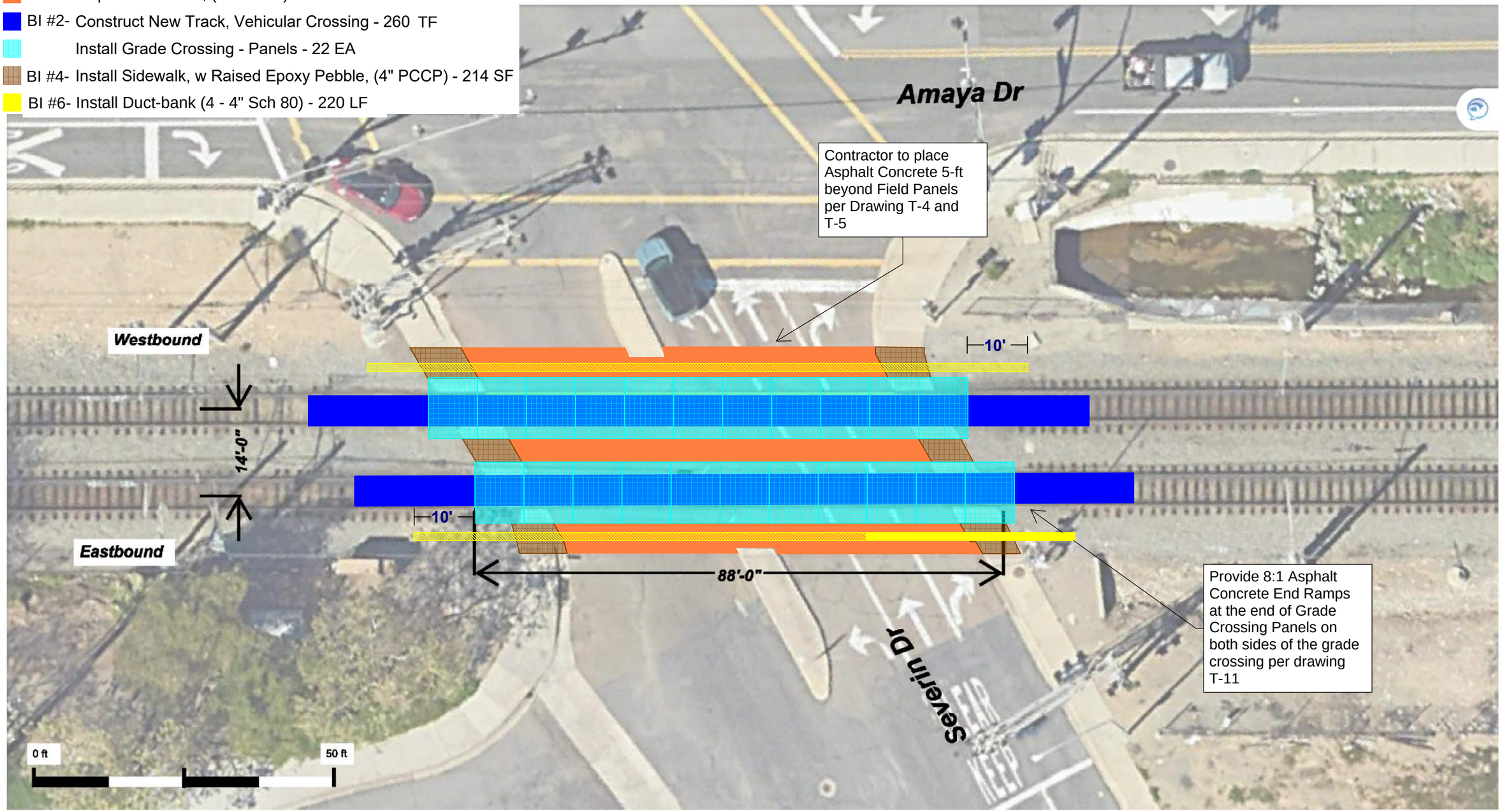
BI #3- Asphalt Concrete, (8" HMAC) - 934 SF

BI #2- Construct New Track, Vehicular Crossing - 260 TF

Install Grade Crossing - Panels - 22 EA

BI #4- Install Sidewalk, w Raised Epoxy Pebble, (4" PCCP) - 214 SF

BI #6- Install Duct-bank (4 - 4" Sch 80) - 220 LF



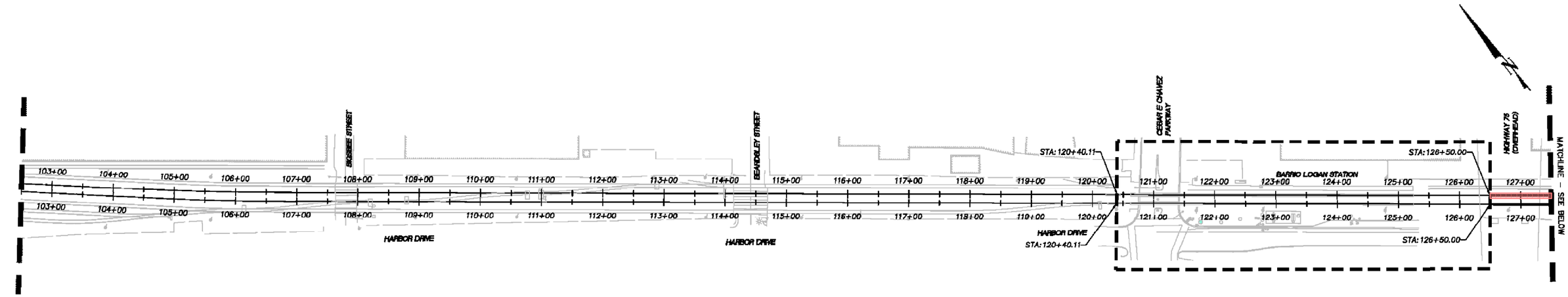
N

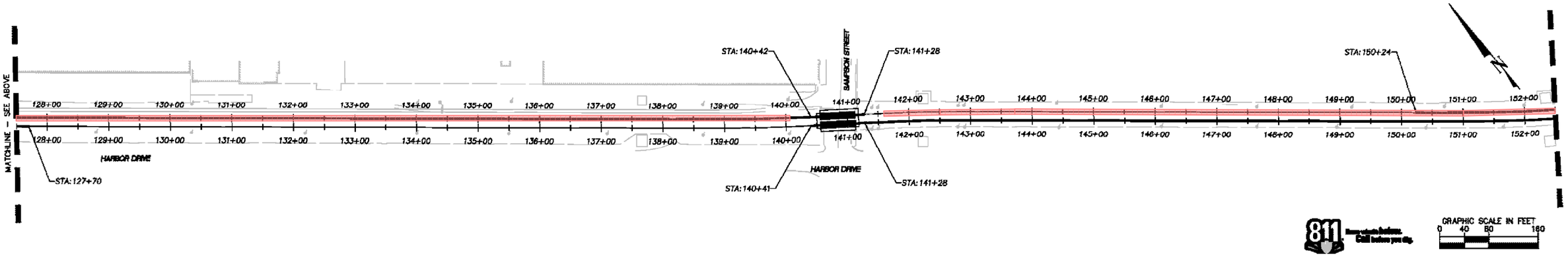
Project:
FY 25 TRACK PROJECT
Location: Severin

MTS

Sheet No. 7

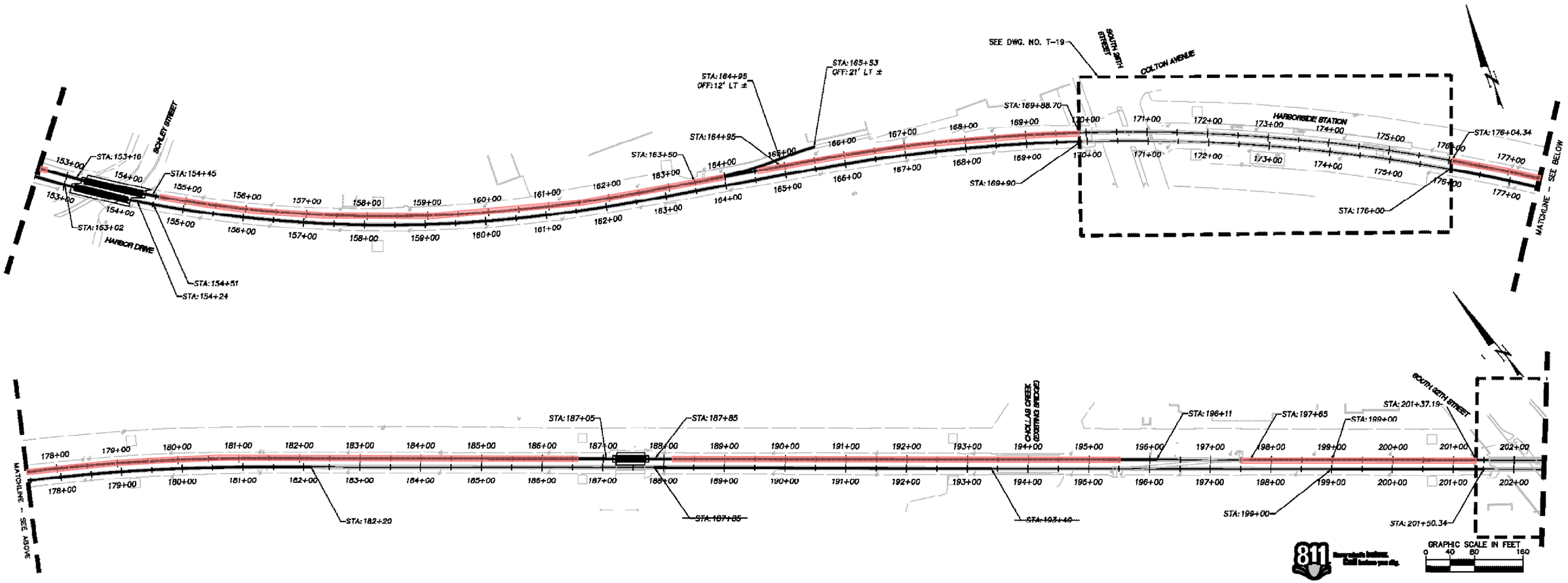
BI #8 - Surfacing, Top Ballast & Destressing - 2,440 TF





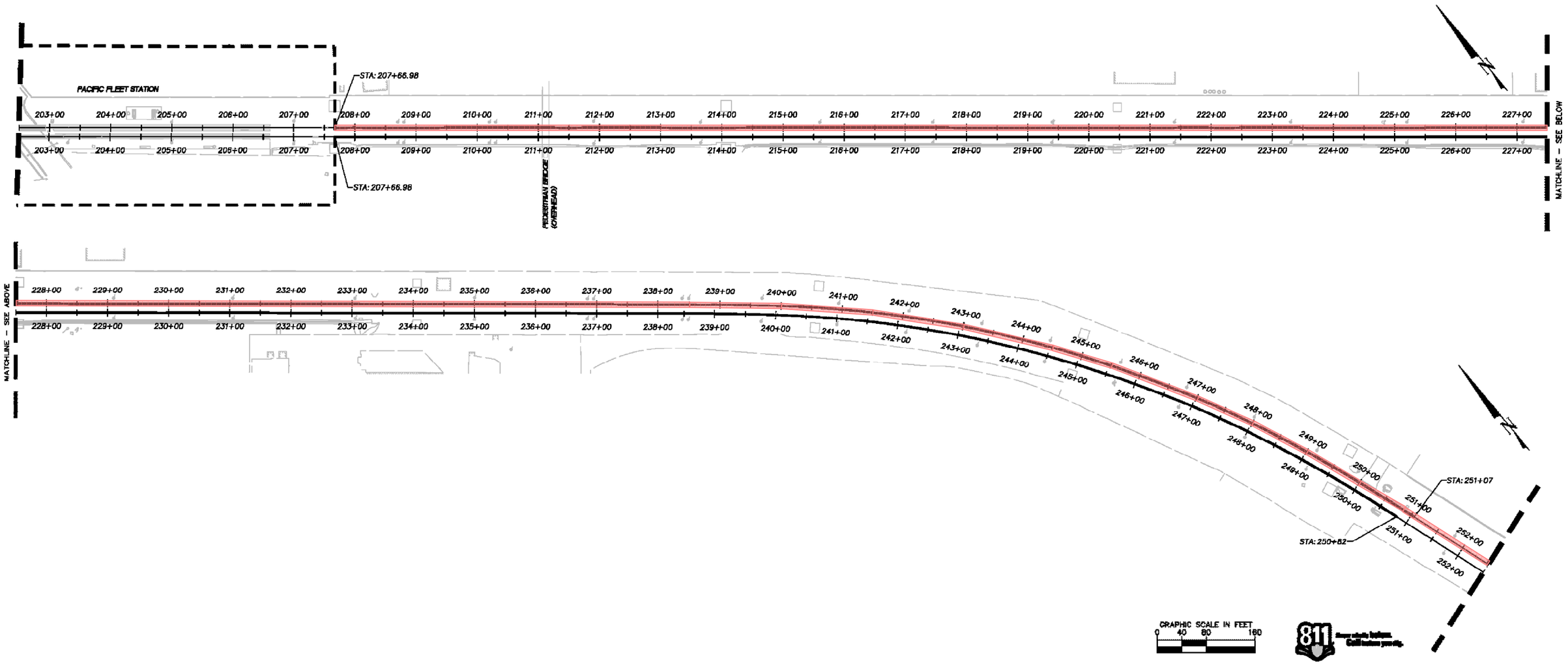
Project: **FY 25 TRACK PROJECT**	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 8

BI #8 - Surfacing, Top Ballast & Destressing - 3,677 TF



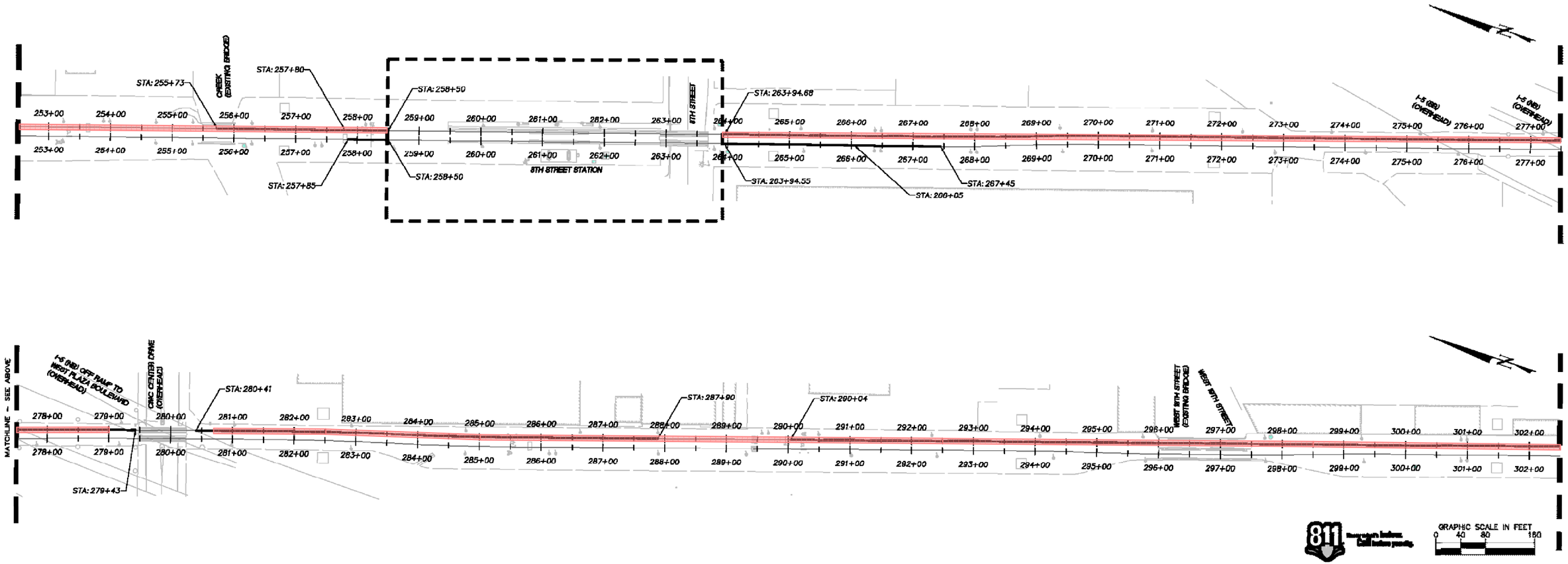
Project: FY 25 TRACK PROJECT	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 9

BI #8 - Surfacing, Top Ballast & Destressing - 4,483 TF



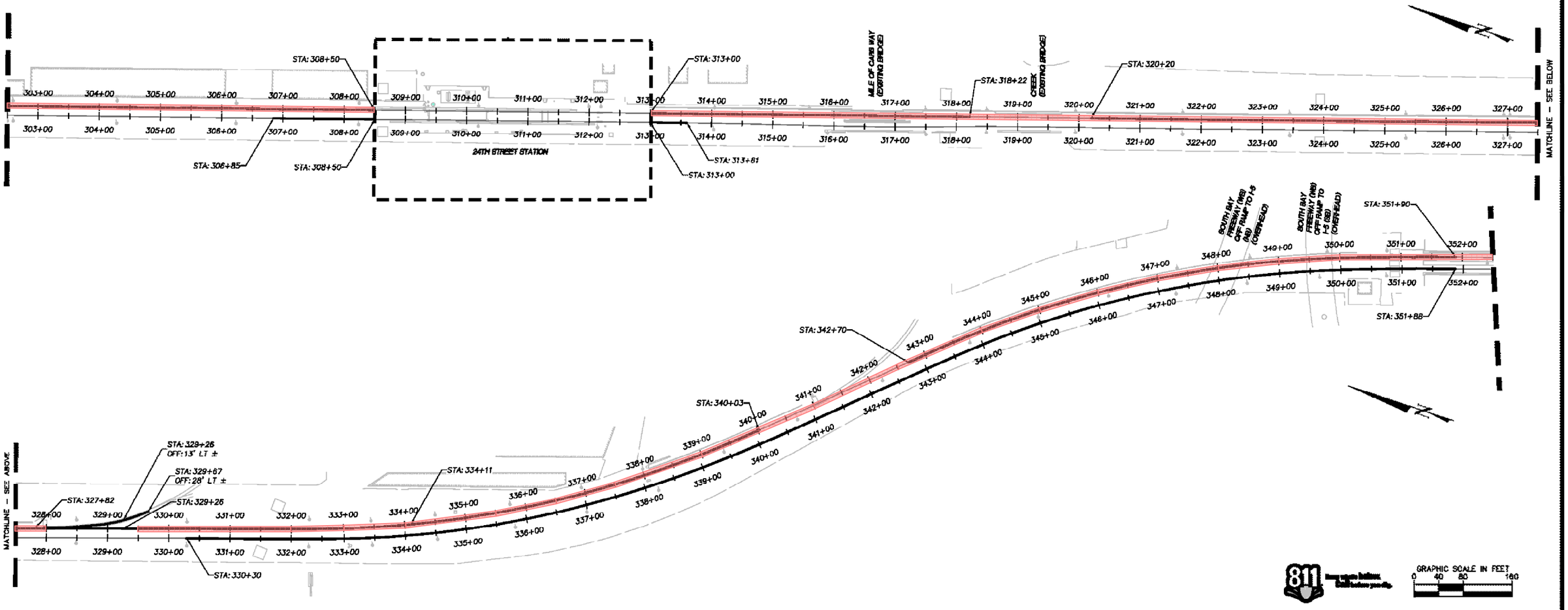
Project: **FY 25 TRACK PROJECT**	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 10

BI #8 - Surfacing, Top Ballast & Destressing - 4,262 TF



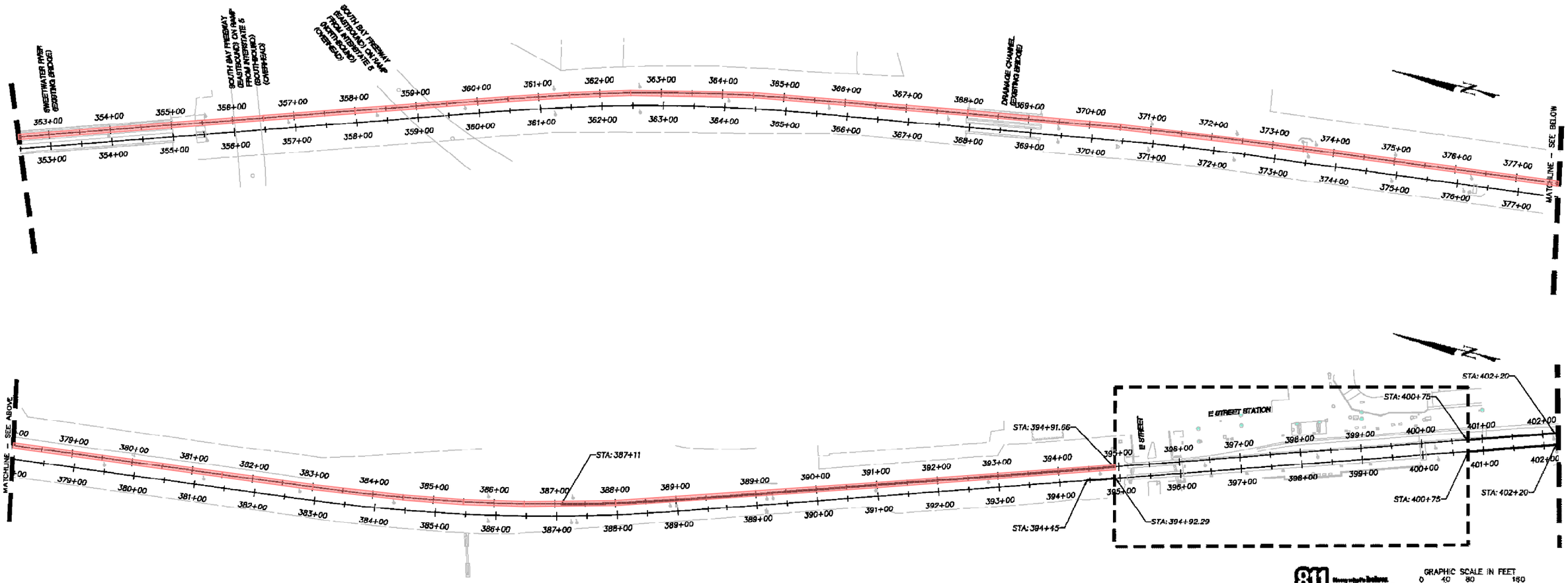
Project: **FY 25 TRACK PROJECT**	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 11

BI #8 - Surfacing, Top Ballast & Destressing - 4,439 TF



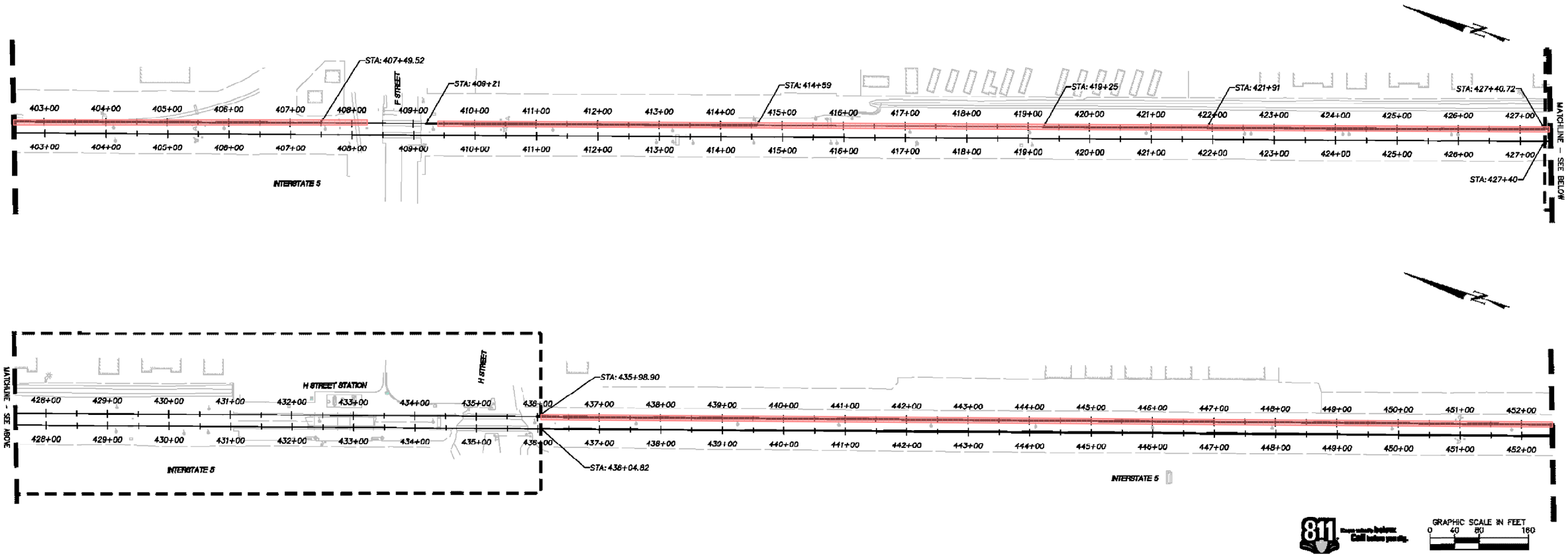
Project: **FY 25 TRACK PROJECT**	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 12

BI #8 - Surfacing, Top Ballast & Destressing - 4,361 TF



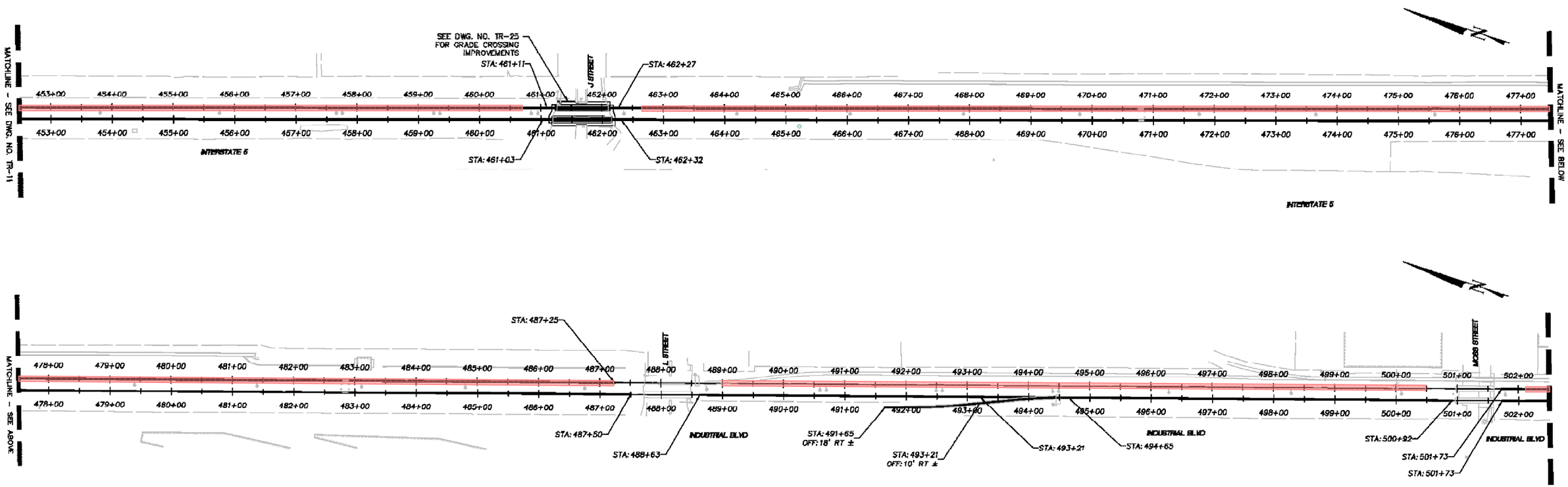
Project: **FY 25 TRACK PROJECT**	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 13

BI #8 - Surfacing, Top Ballast & Destressing - 4,049 TF



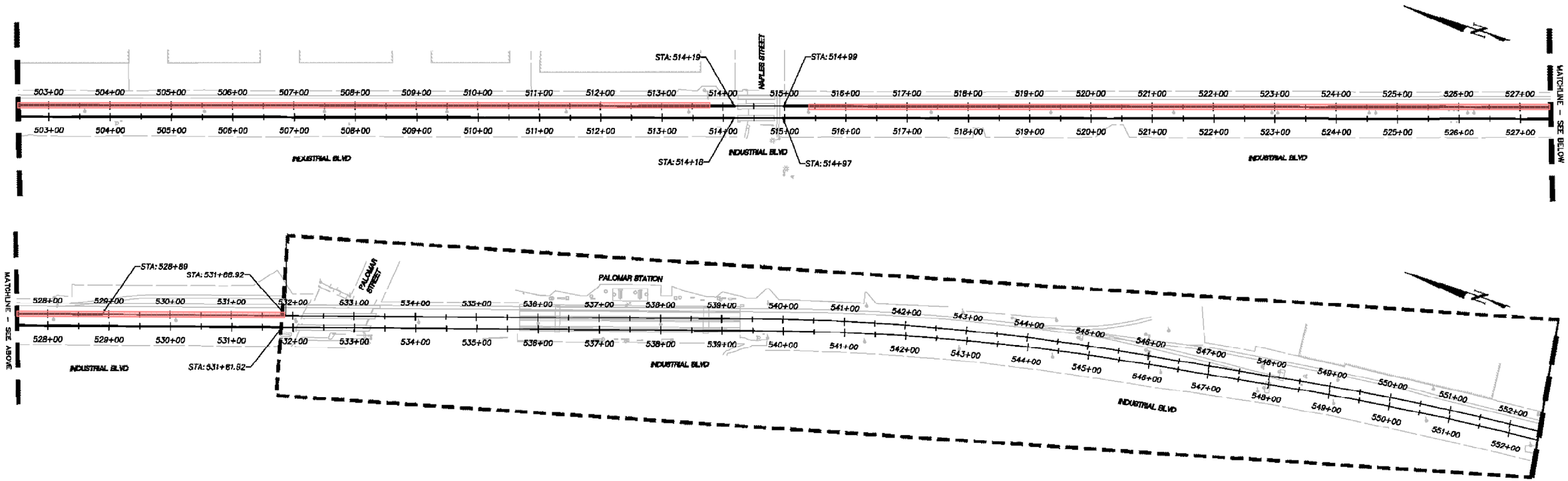
Project: **FY 25 TRACK PROJECT**	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 14

BI #8 - Surfacing, Top Ballast & Destressing - 4,481 TF



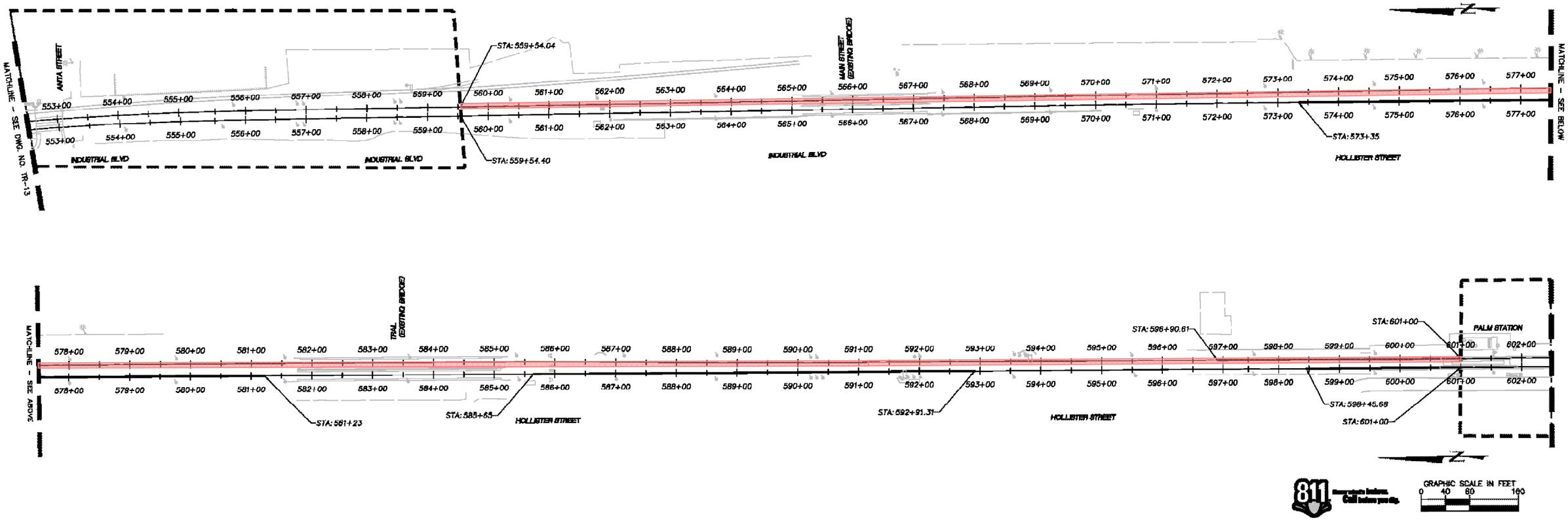
Project: **FY 25 TRACK PROJECT**	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 15

BI #8 - Surfacing, Top Ballast & Destressing - 2,771 TF



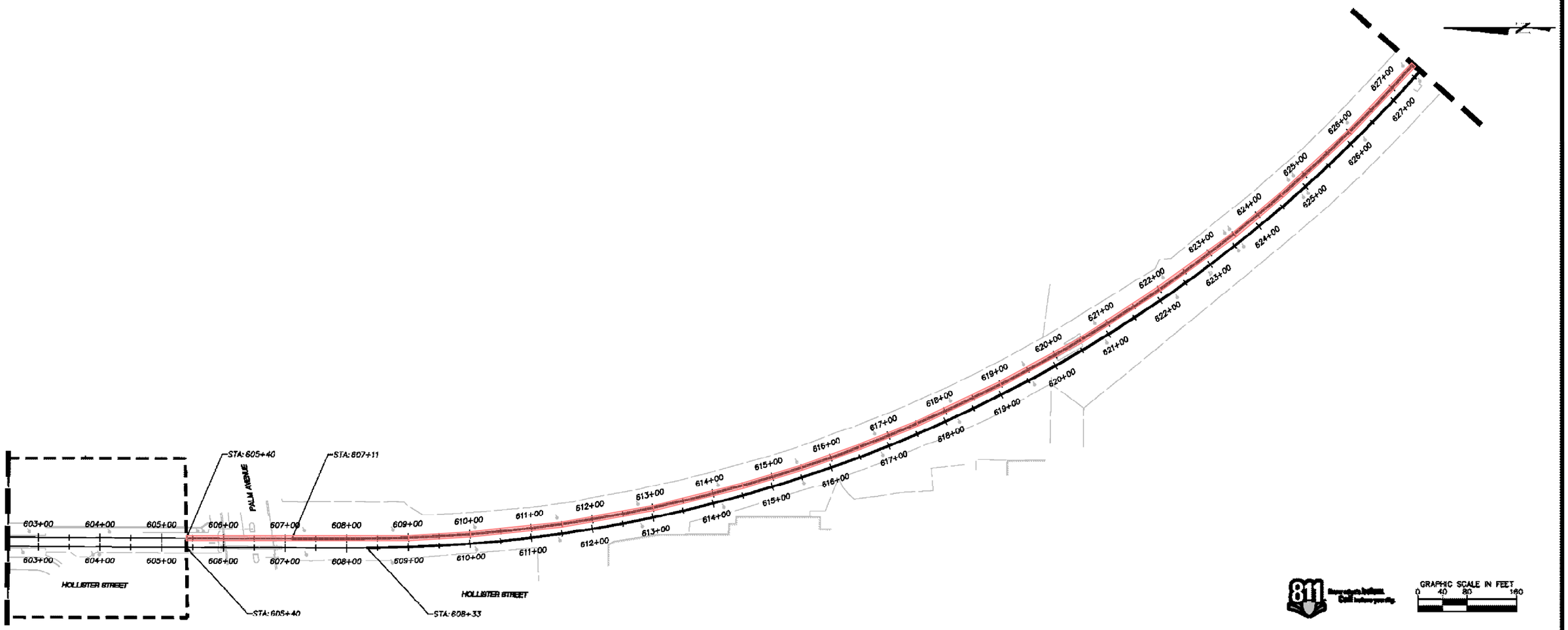
Project: **FY 25 TRACK PROJECT**	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 16

BI #8 - Surfacing, Top Ballast & Destressing - 4,175 TF



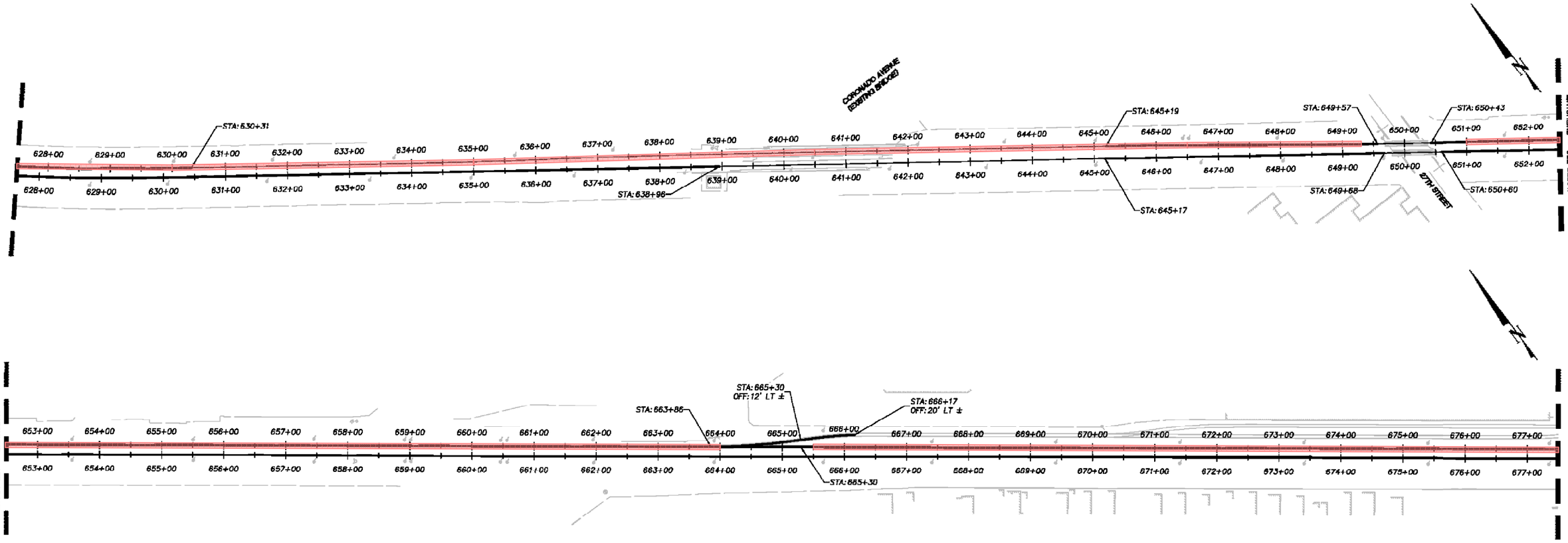
Project: **FY 25 TRACK PROJECT**	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 17

BI #8 - Surfacing, Top Ballast & Destressing - 2,218 TF



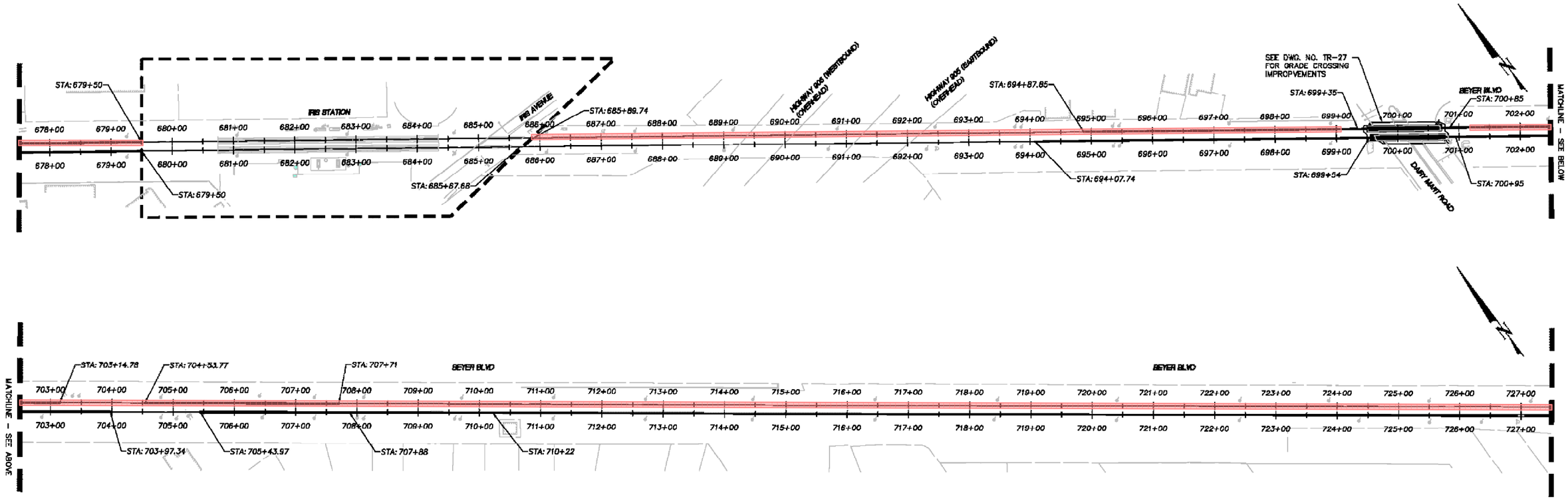
Project: FY 25 TRACK PROJECT	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 18

BI #8 - Surfacing, Top Ballast & Destressing - 4,674 TF



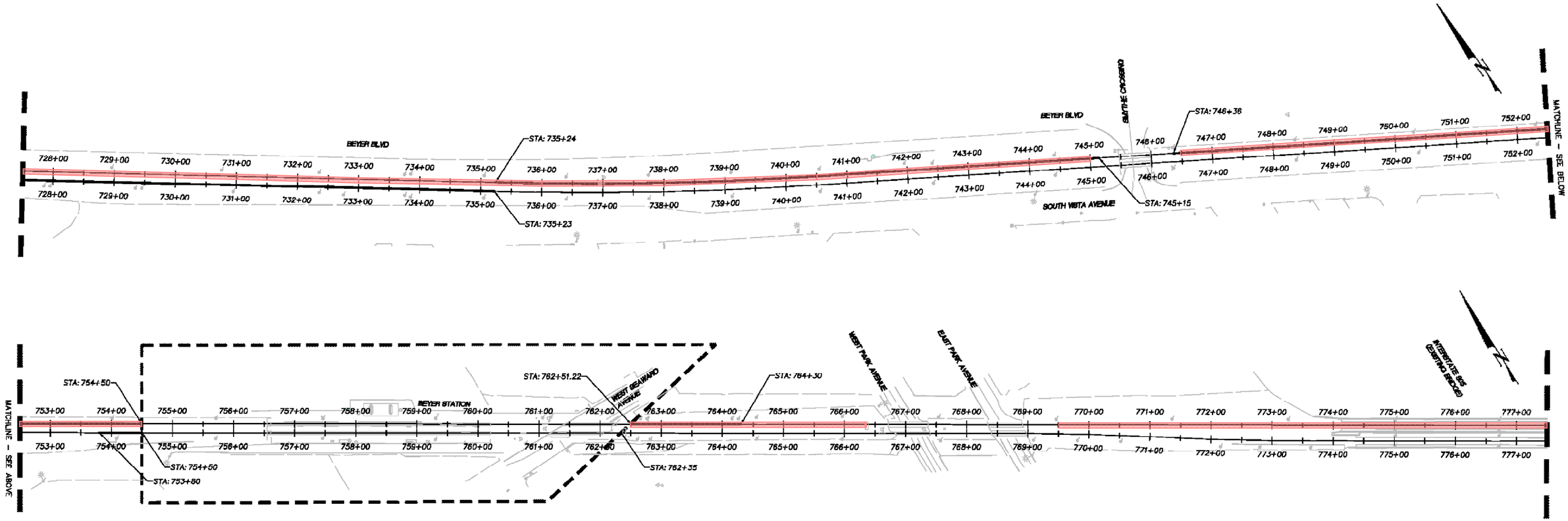
Project: **FY 25 TRACK PROJECT**	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 19

BI #8 - Surfacing, Top Ballast & Destressing - 4,123 TF



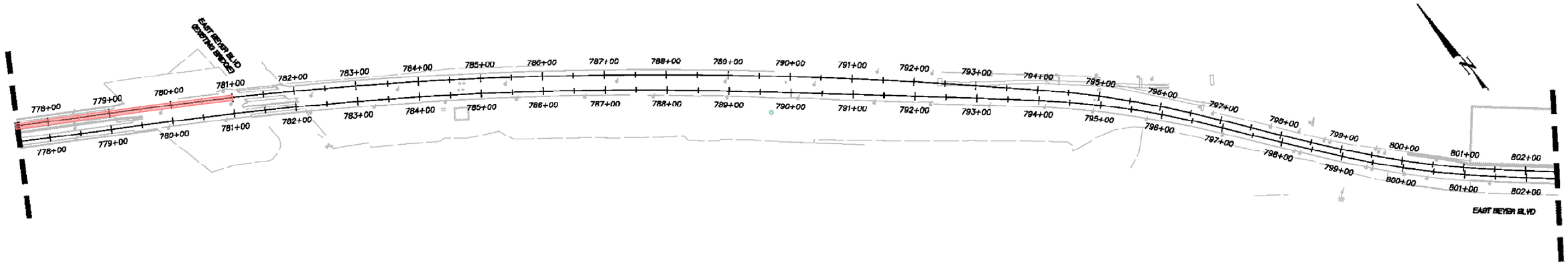
Project: **FY 25 TRACK PROJECT**	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 20

BI #8 - Surfacing, Top Ballast & Destressing - 3,753 TF



Project: **FY 25 TRACK PROJECT**	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 21

BI #8 - Surfacing, Top Ballast & Destressing - 354 TF



811 Know what's below. Call before you dig.

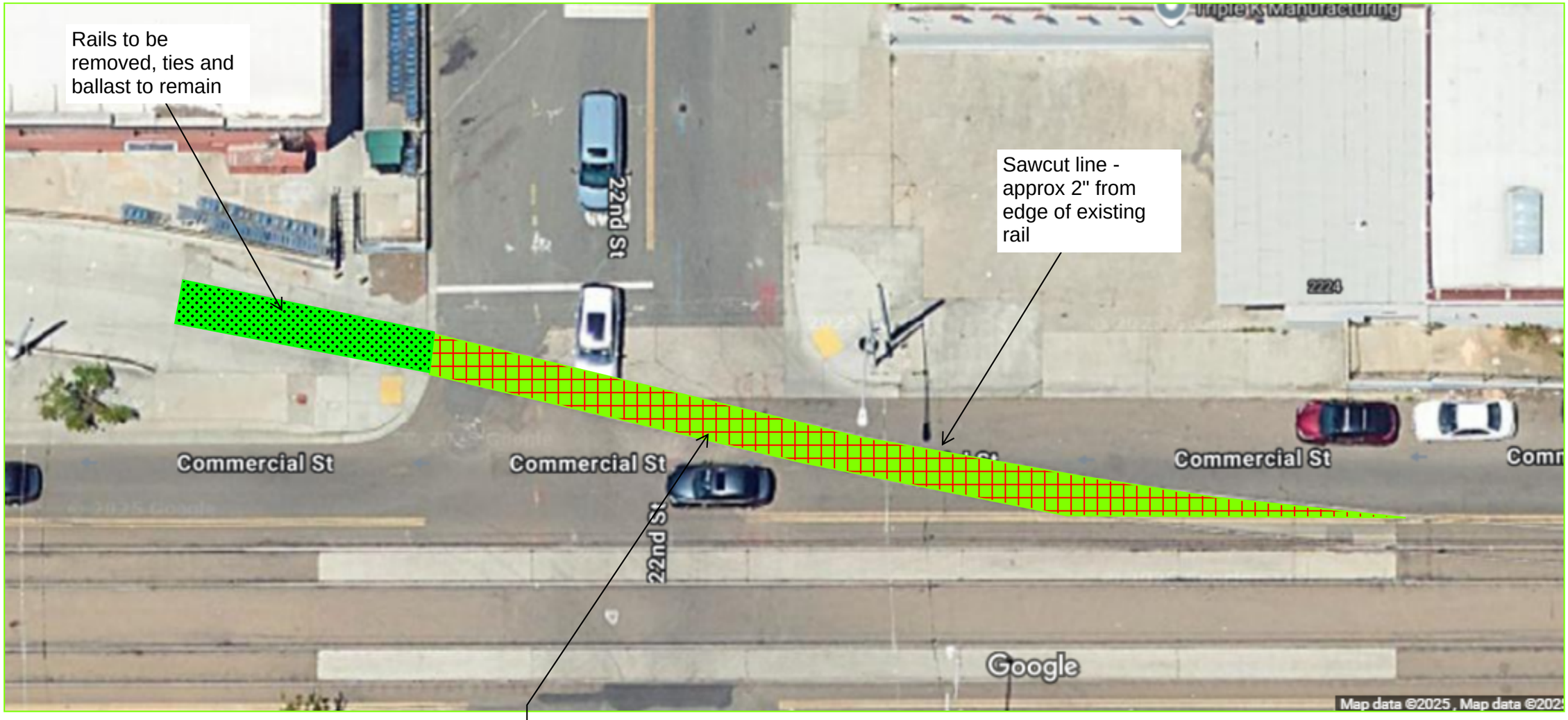
GRAPHIC SCALE IN FEET
0 40 80 180

Project: **FY 25 TRACK PROJECT**	MTS
Location: BLUE LINE - WB TRACK - Barrio Logan to Beyer Bridge	Sheet No. 22

Demo - Concrete (PCCP) - 815 SF

Remove Existing Track - 130 TF

Remove Existing Track, ties/ballast to remain in place - 36 TF



Alternate #1

Addendum 4, 5/15/2025

20'-0"

N

Project: FY 25 TRACK PROJECT	MTS
Location: Orange Line 22nd and Commercial Street	Sheet No. 23

New Sidewalk (4" PCCP) - 190 SF

New Asphalt Concrete 8" HMAC over 8" Class 2 Base - 625 SF

Alternate #1

Addendum 4, 5/15/2025

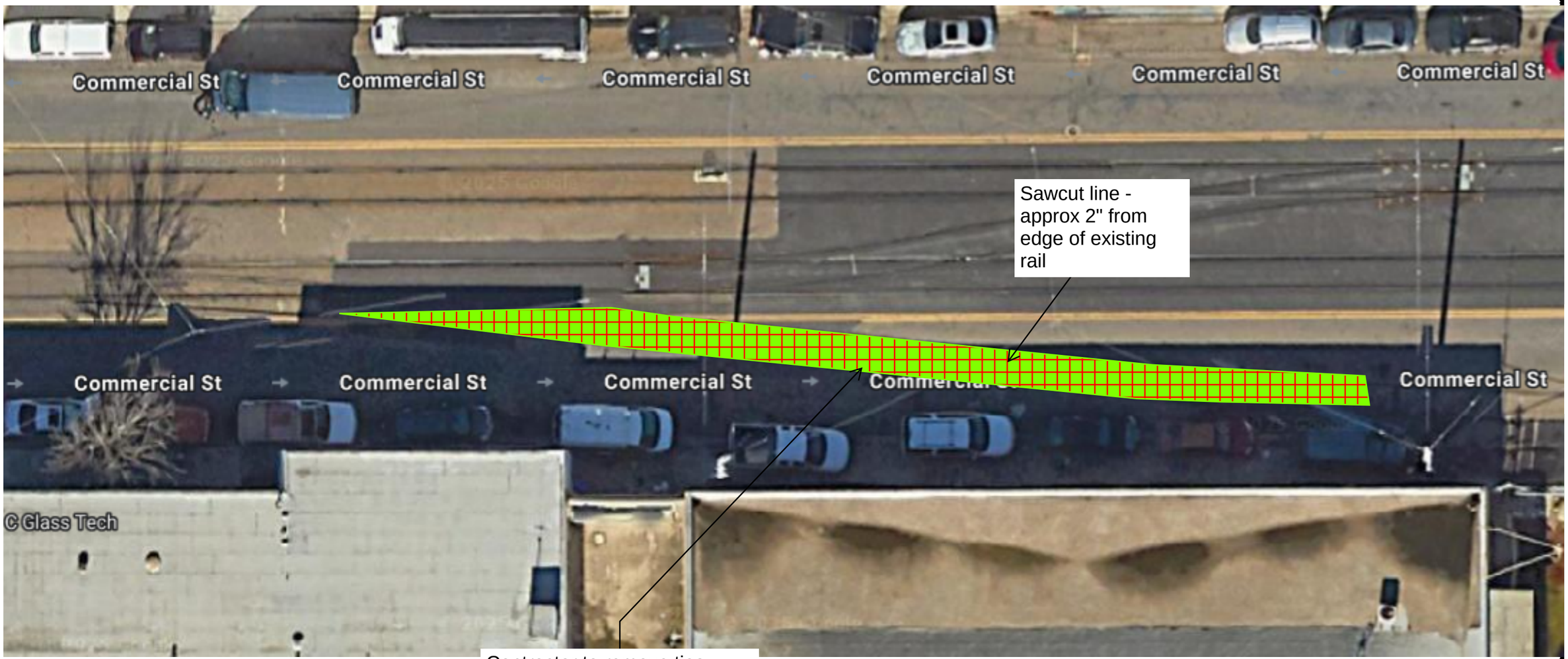
20'-0"

N

Project: **FY 25 TRACK PROJECT**	MTS
Location: Orange Line 22nd and Commercial Street	Sheet No. 24

Demo - Concrete (PCCP) - 780 SF

Remove Existing Track - 125 TF



Alternate #2

Addendum 4, 5/15/2025

20'-0"

N

Project: **FY 25 TRACK PROJECT**	MTS
Location: Orange LIne 29th and Commerical Street	Sheet No. 25

New Asphalt Concrete 8" HMAC over 8" Class 2 Base - 780 SF

Alternate #2

Addendum 4, 5/15/2025

20'-0"

N

Project: FY 25 TRACK PROJECT	MTS
Location: Orange Line 29th and Commercial Street	Sheet No. 26

Demo - Asphalt - 190 SF

Demo - Concrete (PCCP) - 580 SF

Remove Existing Track - 175 TF

Sawcut line - approx 2" from edge of existing rail

Contractor to remove ties, ballast, and all other material a minimum of 9" below tie per drawing T-4

Alternate #3

Addendum 4, 5/15/2025

20'-0"

N

Project: FY 25 TRACK PROJECT	MTS
Location: Orange Line Commercial @ 31st	Sheet No. 27

New Asphalt Concrete 8" HMAC over 8" Class 2 Base - 770 SF

Alternate #3

Addendum 4, 5/15/2025

20'-0"

N

Project: FY 25 TRACK PROJECT	MTS
Location: Orange Line Commercial @ 31st	Sheet No. 28

Demo - Asphalt - 260 SF

Demo - Concrete (PCCP) - 800 SF

Remove Existing Track - 205 TF

Sawcut line - approx 2" from edge of existing rail

Contractor to remove ties, ballast, and all other material a minimum of 9" below tie per drawing T-4

Alternate #4

Addendum 4, 5/15/2025

20'-0"

N

Project: FY 25 TRACK PROJECT	MTS
Location: Orange Line Commercial just east of 31st	Sheet No. 29

New Asphalt Concrete 8" HMAC over 8" Class 2 Base - 1,060 SF

Alternate #4

Addendum 4, 5/15/2025

20'-0"

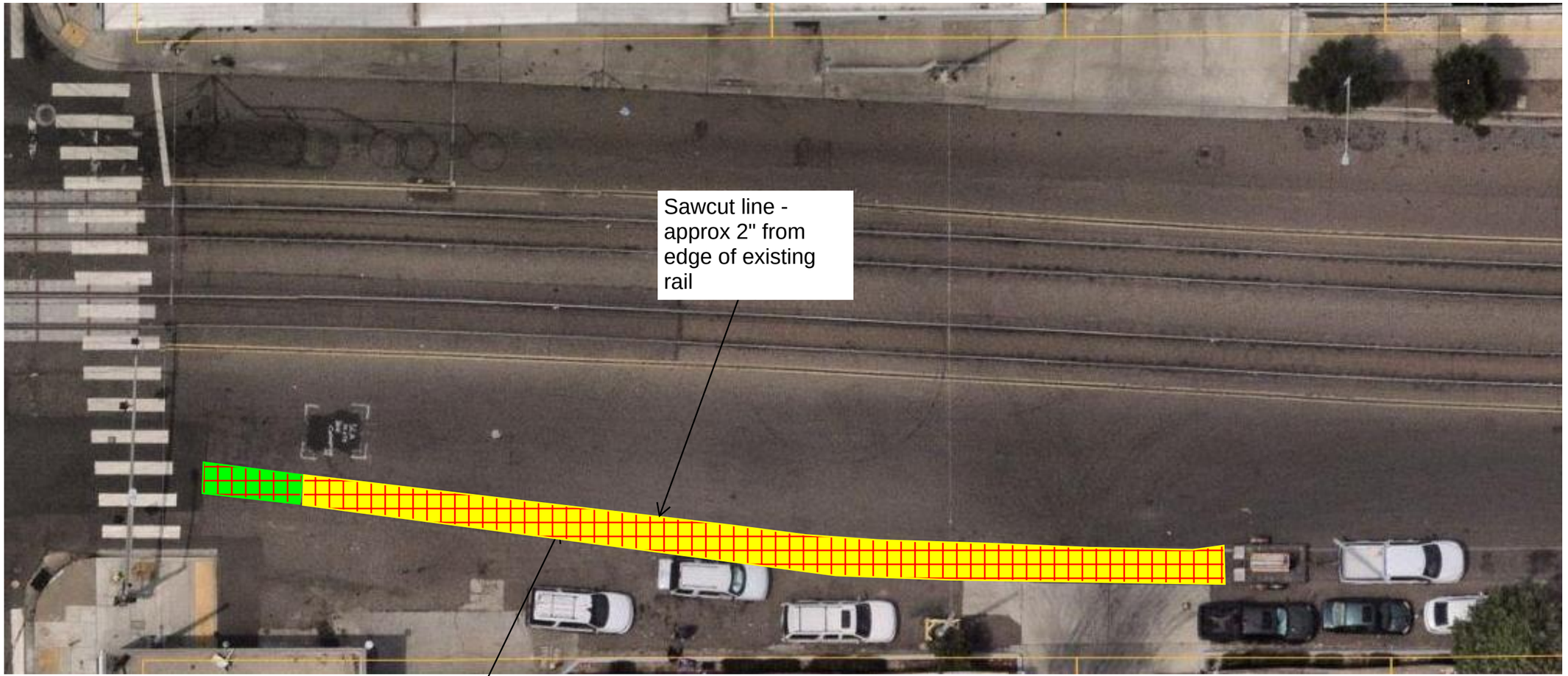
N

Project: FY 25 TRACK PROJECT	MTS
Location: Orange Line Commercial just east of 31st	Sheet No. 30

Demo - Asphalt - 500 SF

Demo - Concrete (PCCP) - 60 SF

Remove Existing Track - 135 TF



Alternate #5

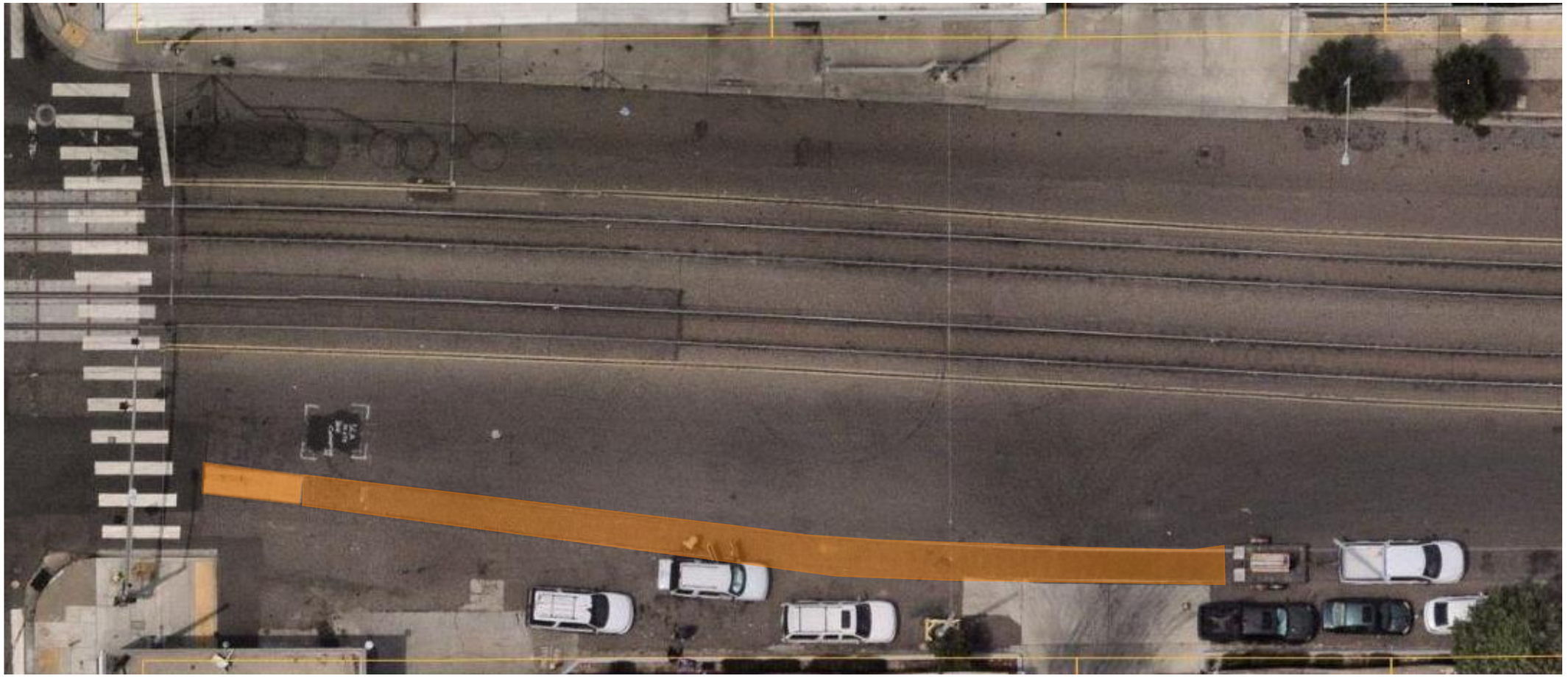
Addendum 4, 5/15/2025

20'-0"

N

Project: FY 25 TRACK PROJECT	MTS
Location: Orange Line Commercial just east of 30th	Sheet No. 31

New Asphalt Concrete 8" HMAC over 8" Class 2 Base - 560 SF



Alternate #5

Addendum 4, 5/15/2025

20'-0"

N

Project: **FY 25 TRACK PROJECT**	MTS
Location: Orange Line Commercial just east of 30th	Sheet No. 32

BID PRICE FORM

TROLLEY TRACK IMPROVEMENTS FY 25 - (PWL433.0-25) REVISED UNDER ADDENDUM NO. 4 - 5/16/25

LINE #	ITEM	QTY	UNIT	UNIT PRICE	TOTAL
BASE					
1.	Remove Existing Track, Vehicular Crossing	898	TF	297.99	$ 267,595.02
2.	Construct New Track, Vehicular Crossing	898	TF	1,163.04	$ 1,044,409.92
3.	Asphalt Concrete, (8" HMAC)	5,625	SF	19.93	$ 112,106.25
4.	Install Sidewalk, w/ Raised Epoxy Pebble, (4" PCCP)	421	SF	87.81	$ 36,968.01
5.	Install insulated Joint Plug	4	EA	10,747.01	$ 42,988.04
6.	Install Duct-bank (4-4" Sch 80)	791	LF	74.34	$ 58,802.94
7.	Crosstie Replacement (Timber Ties)	10,000	EA	250.91	$ 2,509,100.00
8.	Surfacing, Top Ballast & Destressing	54,260	TF	18.30	$ 992,958.00
9.	Mobilization 10%	1	LS	387,022.23	$ 387,022.23
CONTRACT ALTERNATES					
A-1.	Commerical and 22nd - Westbound Siding remove/replace with AC	1	EA	113,310.49	$ 113,310.49
A-2.	Commerical and 29th - Eastbound Siding remove/replace with AC	1	EA	87,156.45	$ 87,156.45
A-3.	Commerical and 31st - Eastbound Siding remove/replace with AC	1	EA	116,753.80	$ 116,753.80
A-4.	Commerical and 31st - Westbound Siding remove/replace with AC	1	EA	103,499.35	$ 103,499.35
A-5.	Commerical and 30th - Eastbound Siding remove/replace with AC	1	EA	102,338.38	$ 102,338.38
Grand Total Basis of Award (Base Plus All Alternates)					$ 5,975,008.88

Subcontractor							Any time there is a change to a Subcontractor resubmit this attachment. Any change to these forms after bid submittal must be made in accordance with Public Contract Code sections 4100 et seq., as applicable, and as permitted by MTS.						
Company Name	**Type of DBE**	**% of Work**	**DIR Number**	**Dollar Value**	**Description of Work**	**Point of Contact First Name**	**Point of Contact Last Name**	**Email**	**Phone Number**	**Street Address**	**City**	**State**	**Zip**
Hudson Safe-T-Libe Rentals		13.389101	1000004051	80000	Traffic Control and Rental of Traffic Control Equipment	Taylor	Eichhorst	taylor@hudsonsafetlite.com	(619) 441-3644	P.O. Box 117	El Cajon	CA	92022-0117
Lazer West Engineering	SB	13.054374	1000052471	78000	Track Surfacing	Rebecca	Tomasello	Rtomasello@lazerwest.com	(978) 407-2128	11324 Hwy 67	Lakeside	CA	92040
Cable Pipe and Leak Detection	SBE	0.0669455	1000010206	4000	Locate utilities	Stormie	Triplett	Striplett@cpldetection.com	(619) 873-1530	1483 n 2nd st suite 201	El cajon	CA	92021
Connor Concrete Cutting & Coring		0.2510457	1000010037	15000	Concrete Cutting	Ryan	Penhall	Ryan@connorconcretecutting.com	(858) 703-7598	6005 Tyler St	Riverside	CA	92503

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 09

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Janitorial Services – Contract Amendments

RECOMMENDATION:

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

1) Ratify MTS Doc. No. G2613.6-22 (Amendment 6) with NMS Management Inc. (NMS), a Disadvantaged Business Enterprise (DBE), in the amount of $51,689.98 (Attachment A);

2) Ratify MTS Doc. No. G2613.7-22 (Amendment 7), in the amount of $69,334.11 (Attachment B);

3) Ratify MTS Doc. No. G2613.8-22 (Amendment 8), in the amount of $26,266.70 (Attachment C); and

4) Authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2613.8-22 (Amendment 9) with NMS, in the amount of $98,393.40 (in substantially the same format as Attachment D), for an updated total contract amount of $13,131,385.92.

Budget Impact

The total cost of the amendments are $245,684.19, and the total contract cost is $13,131,385.92 (inclusive of the total costs for Amendments 6, 7, 8, and 9). The services included in the new Amendment 9 are funded by the Security Department Operating Budget account 420010-536400. The contract costs are summarized below:

Description	Amount
Current Board Approved Amount	$12,885,701.73
Ratify Amendment 6 (Palomar and El Cajon Security Office Trailers)	$51,689.98
Ratify Amendment 7 (El Cajon Trolley Operator Break Room)	$69,334.11
Ratify Amendment 8 (Lemon Grove Security Field Office - 2025)	$26,266.70
Subtotal	**$13,032,992.52**
Today's Board Action – Approve Amendment 9 (Lemon Grove Security Field Office – 2026 to 2028)	$98,393.40
New Board Approved Amount	**$13,131,385.92**

DISCUSSION:

On December 8, 2022 (Agenda Item (AI) 8), the MTS Board of Directors approved a contract with NMS to provide janitorial services for San Diego Transit Corporation (SDTC), San Diego Trolley Inc. (SDTI) buildings, and the Light Rail Vehicles (LRV) fleet (see MTS Doc. No. G2613.0-22). The contract is for a 6-year period, effective from January 1, 2023, through December 31, 2028. In order to accommodate changing or new work locations used by MTS during the contract period or address additional janitorial needs at existing locations, the contract allows MTS to add locations or janitorial tasks to the scope of work.

Background

On April 25, 2024 (AI 4), the MTS Board of Directors approved the purchase of five mobile trailers to be used by the MTS Transit Security & Passenger Safety (Security) department employees and MTS transit or trolley operational employees at specified transit centers, including at Palomar Trolley Station and El Cajon Transit Center. The trailers provide a location for employees to take breaks, write reports, or do other similar tasks without having to travel all the way back to headquarters in downtown San Diego. Once installed, the trailers were added to the existing janitorial services agreement with NMS to ensure they are maintained in a clean condition.

MTS Board Policy No. 41 gives the CEO spending authority up to $150,000.00. Under this authority, the CEO authorized the following amendments since this agreement was last brought to the Board on November 9, 2023 (AI 13):

1. Ratify Amendment 6:
   This amendment expands janitorial services to include the Palomar Trolley Station Office Trailer and the El Cajon Trolley Station Security Office Trailer for the remainder of the contract term.

2. Ratify Amendment 7:
   This amendment adds janitorial services to the El Cajon Station Trolley Operators Trailer Breakroom for the remainder of the contract term.

3. Ratify Amendment 8:
   This amendment was issued to add janitorial services to the newly developed MTS Security Field Office at Lemon Grove Depot for ten (10) months, from March 1, 2025, through December 31, 2025, for a total of $26,266.70.

4. Approve Amendment 9:
   This amendment would continue the added services at Lemon Grove Depot for the remainder of the Agreement term, effective January 1, 2026, through December 31, 2028, for a total amount of $98,393.40.

Therefore, staff recommends that the MTS Board of Directors:

1) Ratify MTS Doc. No. G2613.6-22 (Amendment 6) with NMS, a Disadvantaged Business Enterprise (DBE), in the amount of $51,689.98 (Attachment A);

2) Ratify MTS Doc. No. G2613.7-22 (Amendment 7), in the amount of $69,334.11 (Attachment B);

3) Ratify MTS Doc. No. G2613.8-22 (Amendment 8), in the amount of $26,266.70 (Attachment C); and

4) Authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2613.8-22 (Amendment 9) with NMS, in the amount of $98,393.40 (in substantially the same format as Attachment D), for an updated total contract amount of $13,131,385.92.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachments: A. Amendment 6, MTS Doc. No. G2613.6-22
B. Amendment 7, MTS Doc. No. G2613.7-22
C. Amendment 8, MTS Doc. No. G2613.8-22
D. Draft Amendment 9, MTS Doc. No. G2613.9-22

Metropolitan Transit System

Amendment 6

June 29, 2024 MTS Doc No. G2613.6-22

JANITORIAL SERVICES (SDTI & SDTC)

NMS Management, Inc.
David M. Guaderrama
Director of Business Development
155 West 35th St. Suite A
National City CA, 91950

This shall serve as Amendment No.6 to the original agreement G2613.6-22 as further described below.

SCOPE

Contractor has been providing janitorial services for MTS since 1/1/23. According to the agreement, MTS will inform the Contractor should new locations need to be added to the scope of work, and an amendment to the agreement will be issued under the contracted terms.

This amendment adds janitorial services to the Palomar Trolley Station Office Trailer and the El Cajon Trolley Station Security Office Trailer for the rest of the contract term. The scope of work is shown in Attachment A.

SCHEDULE

There are no changes to the term of the overall agreement which remains valid through December 31, 2028.

PAYMENT

This amendment shall authorize additional costs not-to-exceed $51,689.98. The costs are shown in Attachment B.

The total value of this contract, including this amendment, shall be in the amount of $12,937,391.71 ($12,885,701.73 for the current contract amount + $51,689.98 for this amendment). 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,

for

Sharon Cooney, Chief Executive Officer

Agreed:

David M. Guaderrama, Director of
Business Development
NMS Management, Inc.

Date: 7/3/24

Attachment:

A. Scope of Work
B. Contractor's Proposal

ATTCHMENT A

PALOMAR STATION SECURITY OFFICE TRAILER
AND
EL CAJON SECURITY OFFICE TRAILER

1. Location of work:
   MTS requires the Contractor to provide janitorial services on a regularly scheduled basis for two (2) additional locations at the following locations:
   a. Palomar Trolley Station Trailer
      350 sq ft
      (1 Breakroom, 1 microwave, 1 refrigerator and two tables with chairs)

   b. El Cajon Trolley Station Security Trailer
      350 sq ft
      (1 breakroom, 1 microwave, 1 refrigerator, and two tables with chairs)

2. Time and frequency to conduct work:
   Cleaning will be done after 6:00pm and before 6:00am, two (2) days per week excluding holidays (every Monday and Thursday) at each location.

3. General descriptions:

Tasks	Palomar Station Trailer	El Cajon Station Trailer
Cleaning, 2 days a week (excluding Holidays)	X	X
Trash pick up	X	X
Dusting/wiping down counters and tables	X	X
Vacuum/Sweep/Mop floors	X	X
Clean appliances monthly	X	X
Supplier Included (paper towels).	X	X

   The following tasks are described with a general expectation of how to properly complete the task and the types of items or situations which require notification to the Contractor's Supervisor and/or the MTS PM. These tasks shall be performed independent of MTS' supervision, direction, or control.

4. Flooring:
   a. The Contractor shall vacuum all carpeted floor areas. Carpeted surfaces shall be maintained free of obvious dirt, dust, other debris and residual matter. All tears, burns, and raveling shall be annotated in the daily log and monthly summary report and brought to the attention of the MTS PM.
   b. Floor surfaces shall be swept clean and free of marks, dirt, spills, dust, visible litter, and other foreign matter. Chairs, trash receptacles, and easily moveable items are to be swept underneath and returned to their original positions upon completion. No dirt shall be left in corners, under furniture, or behind doors.
   c. All resilient and hard floor areas shall be damp mopped, and spray buffed so that after mopping they are clean and free of dirt, water streaks, rust stains, mop marks, gum, grease, tar, etc., in order to present an overall appearance of cleanliness. The Contractor shall apply

a uniform coating of nonskid floor finish so that the floors have a glossy appearance and are free of scuff marks, heel marks and other stains and discolorations. There shall be no buildup of wax on the floor, baseboards, or walls. When mopping floors, Contractor must have “Wet Floor” or “Caution” safety signs to alert others and avoid slip and falls.

d. All tile and resilient flooring areas shall be free of old wax when stripped. A new base coat of non-slip floor wax shall be placed on the floor, so that after buffing, the finish is clean, glossy, and uniform in all areas. There shall be no build-up of wax in corners, doorsteps, or next to carpeted areas.

5. Floor Mats:
   Floor mats shall be vacuumed to remove soil and grit and to restore resiliency of the carpet pile. The Contractor shall sweep, vacuum, or hose-down outside rubber or polyester entrance mats to remove soil and grit. The Contractor shall remove soil and moisture from underneath entrance mats and return the mats to their normal location.

6. Trash Removal:
   The Contractor shall empty, and return to their initial location, all wastebaskets and other trash containers within the area. Boxes, cans, and papers placed near a trash receptacle and marked “TRASH” shall be removed by the Contractor. Any obviously soiled or torn plastic trash receptacle liners in such receptacles shall be replaced. The Contractor shall dispose of trash in plastic bags secured with bag ties. The Contractor shall pick up any trash that may fall in or around the facility or grounds during removal of collected trash. All solid waste collected as a requirement of this contract shall be placed in dumpster containers at the site.

7. Low Dusting:
   The Contractor shall thoroughly dust all horizontal surfaces of furniture and cleared desk tops, so that after dusting, all dust, lint, litter, and dry soil shall be removed from surfaces of cleared desks, chairs, file cabinets, and other types of office furniture and equipment and from ledges, window sills, hand rails, etc., to a line up to eighty-four (84”) inches above the floor level. There shall be no dust streaks. Corners, crevices, moldings and ledges shall be free of all dust. There shall be no oils, spots, smudges, or streaks on dusted surfaces caused by dusting tools. Note: In dusting horizontal spaces, working papers shall not be disturbed. However, desk type items shall be lifted, and dust removed from the surrounding areas. The Contractor shall not dust typewriters, computers, business machines, and equipment similar in nature.

8. Glass Cleaning:
   The Contractor shall damp wipe mirrors and both sides of all glass in doors, display cases and adjacent trim, partitions and bookcases and any other glass approximately seventy (70”) inches off the floor so that after cleaning the glass, there shall be no traces of film, dirt, smudges, or water. Glass shall not be cloudy.

9. Drinking Fountains:
   The Contractor shall clean the drinking fountains. The porcelain or stainless-steel surfaces shall be clean and bright, and they shall be free of dust, spots, stains, and streaks. Drinking fountains shall be kept free of trash, ink, coffee grounds, etc., and nozzles free from encrustation.

10. Wood Paneling:
    Wipe down and treat surfaces of wood paneling. Paneling shall be free of dirt, dust, streaks and spots.

11. Spot Cleaning:
    The Contractor shall perform spot cleaning by removing smudges, fingerprints, marks, streaks, etc., from washable surfaces of walls, partitions, baseboards, doors, floors and fixtures. The Contractor shall use germicidal detergent in restrooms, locker rooms, break areas and drinking fountains. Brass hardware, aluminum bars, and other metal on doors shall have a uniform appearance and be free of stains, spots and evidence of soil.

12. Restrooms/Locker Rooms:
    a. The Contractor shall disinfect all surfaces of partitions, stalls, faces of toilet bowls, urinals, lavatories, showers, dispensers, and other such surfaces, using a germicidal detergent followed by a clean water rinse.
    b. The Contractor shall de-scale toilet bowls and urinals, so that after de-scaling, the entire surface shall be free from streaks, stains, scale, scum, urine deposits, and rust stains. Contractor shall hot water power wash restroom floors and shower stalls on a weekly basis.
    c. The Contractor shall keep on hand and resupply as necessary, restrooms/locker rooms with toilet paper, paper towels, and hand soap, so that after resupplying, the rooms are stocked. Contractor shall keep on hand a minimum quantity of supplies.

13. High Cleaning:
    High cleaning shall be provided to maintain a clean dust-free appearance. High dusting involves all areas over eighty-four (84”) inches tall and includes venetian blinds, recessed lighting fixtures, window ledges, flat surfaces, conduit, overhead piping, vertical surfaces, air-conditioning boxes and ceiling fans where installed. Ceilings are to be free of cobwebs and loose dirt.

14. Window Surfaces:
    The Contractor shall clean interior and exterior window surfaces, so that after windows have been cleaned, all traces of film, dirt, smudges, water and other foreign matter shall be removed from frames, casings, sills and glass.

15. Light Fixtures:
    The Contractor shall clean light fixtures so that fixtures shall be free of bugs, dirt, dust, grease, or other foreign matter. The Contractor shall only be responsible for the exterior of the lights.

16. Venetian Blinds:
    Both sides of venetian blind slats shall be dusted with a dry cloth, so that after dusting, no dust or lint remains.

    Wash all venetian blinds in building. Clean cords. Report any defective cords to the MTS PM in accordance with the reporting requirements annotated in the monthly summary report. Both sides of venetian blind slats shall be clean and free of dust and water spots. Cords shall be free of dust, dirt, stains, and shall not be sticky to the touch.

17. Refrigerators:
    All refrigerators located in the common area break rooms shall be cleaned so that there are no drips, spills, or other food or debris on the walls, shelves or floor of the refrigerator. The top of the refrigerator shall be cleaned so that no dust, dirt, or debris remains. The insulating seals on the refrigerator shall be cleaned so that no spills, dirt, dust, other debris remain, and the seal is clean all the way around the door. The air vent on the bottom and/or back of the refrigerator shall be cleaned so that no dust, dirt, or debris remains, and the air is able to circulate freely.

18. Carpets:
    All carpets shall be shampooed, clean, free of spots, spills, and removable stains. If necessary, non-absorbent pads or foil will be placed between the carpet and the furnishings. Any rust or stains resulting from the Contractor's lack of carpet protection shall be removed by the Contractor. Carpet shall be vacuumed prior to the arrival of the occupants. Any furnishings moved during the carpet shampoo process shall be returned to their original positions.

19. Special Procedure to Remove, Clean and Disinfect Areas with Bodily Fluids (To be Inspected and Performed During All Cleaning Times):

    All on-site janitorial employees of the contractor shall be trained to clean up blood borne pathogens and other bodily fluids.

    Contractor shall articulate the procedures that will be followed to clean bodily fluids from LRVs, consistent with current industry standards and meeting all OSHA standards.

    Contractor certifies that is shall train its staff assigned on this contract on these procedures.

NMS MANAGEMENT, INC.

Additonal Areas

Revised Date:07/02/2024

LIGHT RAIL VEHICLES JANITORIAL SERVICES
G2613.0-22

			YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
			06/01/24 to 12/31/24	01/01/25 to 12/31/25	01/01/26 to 12/31/26	01/01/27 to 12/31/27	01/01/28 to 12/31/28
	El Cajon Security Office/Trailer Breakroom (1 Breakroom, 1 Microwave, 1 Refrigerator and 2 Tables with chairs)	**FREQUENCY**	**(7 Months) Monthly Cost**	**(12 Months) Monthly Cost**	**(12 Months) Monthly Cost**	**(12 Months) Monthly Cost**	**(12 Months) Monthly Cost**
1	Trash pick up, Dusting/wiping down, Sweep/ mop floors, Wiping down chairs and tables, collect trash.	Daily, 2 Days a week, Excluding Holidays	$ 463.90	$ 468.54	$ 473.23	$ 477.96	$ 482.74
2	Monthly Periodiclas:Clean appliances	Monthly					
3	One Time: Install one paper towel dispenser	One Time					
4	Monthly Supplies Included (Paper towels)	Monthly					
	Sub-Total Cost Per Month		***$ 463.90***	***$ 468.54***	***$ 473.23***	***$ 477.96***	***$ 482.74***
	Sub-Total Cost Per Year		***$ 3,247.30***	***$ 5,622.48***	***$ 5,678.76***	***$ 5,735.52***	***$ 5,792.88***

NMS MANAGEMENT, INC.

Additonal Areas

Revised Date: 07/02/2024

LIGHT RAIL VEHICLES JANITORIAL SERVICES
G2613.0-22

			YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
			07/01/24 to 12/31/24	01/01/25 to 12/31/25	01/01/26 to 12/31/26	01/01/27 to 12/31/27	01/01/28 to 12/31/28
	La Palomar Station Security Office/Trailer Breakroom (1 Breakroom, 1 Microwave, 1 Refrigerator and 2 Tables with chairs)	**FREQUENCY**	**(6 Months) Monthly Cost**	**(12 Months) Monthly Cost**	**(12 Months) Monthly Cost**	**(12 Months) Monthly Cost**	**(12 Months) Monthly Cost**
1	Trash pick up, Dusting/wiping down, Sweep/ mop floors, Wiping down chairs and tables, collect trash.	Daily, 2 Days a week, Excluding Holidays	$ 463.90	$ 468.54	$ 473.23	$ 477.96	$ 482.74
2	Monthly Periodiclas:Clean appliances	Monthly					
3	One Time: Install one paper towel dispenser	One Time					
4	Monthly Supplies Included (Paper towels)	Monthly					
		Sub-Total Cost Per Month	***$ 463.90***	***$ 468.54***	***$ 473.23***	***$ 477.96***	***$ 482.74***
		Sub-Total Cost Per Year	***$ 2,783.40***	***$ 5,622.48***	***$ 5,678.76***	***$ 5,735.52***	***$ 5,792.88***

Metropolitan Transit System

Amendment 7

September 16, 2024 MTS Doc. No. G2613.7-22

Janitorial Services (SDTI & SDTC)

NMS Management, Inc.
David M. Guaderrama
Director of Business Development
155 West 35th St. Suite A
National City, CA 91950

This shall serve as Amendment No. 7 to the original agreement G2613.0-22 as further described below.

SCOPE

According to the Agreement, MTS will inform the Contractor should new locations need to be added to the scope of work, and an Amendment to the Agreement will be issued under the contracted terms.

In this Amendment, it shall add janitorial services to the El Cajon Station Trolley Operators Trailer Breakroom. The scope of work is shown in Attachment A.

SCHEDULE

There are no changes to the term of the overall agreement, which remains valid through December 31, 2028.

PAYMENT

This contract amendment shall authorize additional costs not-to-exceed $69,334.11. The total value of this contract, including this amendment, shall be in the amount of $13,006,725.82 ($12,937,391.71 for the current contract plus $69,334.11 for this amendment). 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

Sharon Cooney, Chief Executive Officer

Agreed:

David M. Guaderrama, Director of Business Development
NMS Management, Inc.

Date: 09/20/24

Attachments: A. Scope of Work
B. Contractor's Proposal

ATTACHMENT A

EL CAJON STATION TRAIN OPERATORS TRAILER

1 LOCATION OF WORK

MTS requires the Contractor to provide janitorial services on a regularly scheduled basis for one (1) additional location at the following locations:

1. El Cajon Station Train Operator Trailer
   350 sq ft
   (1 Breakroom, 1 microwave, 1 refrigerator and two tables with chairs)

2 TIME AND FREQUENCY TO CONDUCT WORK

Cleaning will be done after 6:00pm and before 6:00am, seven (7) days per week including holidays.

3 GENERAL DESCRIPTIONS

Tasks	El Cajon Station Train Operator Trailer
Cleaning, 7 days a week (including Holidays)	X
Trash pick up	X
Dusting/wiping down counters and tables	X
Vacuum/Sweep/Mop floors	X
Clean appliances monthly	X
Supplier Included (paper towels).	X

The following tasks are described with a general expectation of how to properly complete the task and the types of items or situations which require notification to the Contractor's Supervisor and/or the MTS PM. These tasks shall be performed independent of MTS' supervision, direction, or control:

1. Flooring:
   a. The Contractor shall vacuum all carpeted floor areas. Carpeted surfaces shall be maintained free of obvious dirt, dust, other debris and residual matter. All tears, burns, and raveling shall be annotated in the daily log and monthly summary report and brought to the attention of the MTS PM.
   b. Floor surfaces shall be swept clean and free of marks, dirt, spills, dust, visible litter, and other foreign matter. Chairs, trash receptacles, and easily moveable items are to be swept underneath and returned to their original positions upon completion. No dirt shall be left in corners, under furniture, or behind doors.
   c. All resilient and hard floor areas shall be damp mopped, and spray buffed so that after mopping they are clean and free of dirt, water streaks, rust stains, mop marks, gum, grease, tar, etc., in order to present an overall appearance of cleanliness. The Contractor shall apply a uniform coating of nonskid floor finish so that the floors have a glossy appearance and are free of scuff marks, heel marks and other stains and discolorations. There shall be no buildup of wax on the floor, baseboards, or walls.

When mopping floors, Contractor must have “Wet Floor” or “Caution” safety signs to alert others and avoid slip and falls.

d. All tile and resilient flooring areas shall be free of old wax when stripped. A new base coat of non-slip floor wax shall be placed on the floor, so that after buffing, the finish is clean, glossy, and uniform in all areas. There shall be no build-up of wax in corners, doorsteps, or next to carpeted areas.

2. Floor Mats:
   Floor mats shall be vacuumed to remove soil and grit and to restore resiliency of the carpet pile. The Contractor shall sweep, vacuum, or hose-down outside rubber or polyester entrance mats to remove soil and grit. The Contractor shall remove soil and moisture from underneath entrance mats and return the mats to their normal location.

3. Trash Removal:
   The Contractor shall empty, and return to their initial location, all wastebaskets and other trash containers within the area. Boxes, cans, and papers placed near a trash receptacle and marked “TRASH” shall be removed by the Contractor. Any obviously soiled or torn plastic trash receptacle liners in such receptacles shall be replaced. The Contractor shall dispose of trash in plastic bags secured with bag ties. The Contractor shall pick up any trash that may fall in or around the facility or grounds during removal of collected trash. All solid waste collected as a requirement of this contract shall be placed in dumpster containers at the site.

4. Low Dusting:
   The Contractor shall thoroughly dust all horizontal surfaces of furniture and cleared desktops, so that after dusting, all dust, lint, litter, and dry soil shall be removed from surfaces of cleared desks, chairs, file cabinets, and other types of office furniture and equipment and from ledges, windowsills, handrails, etc., to a line up to eighty-four (84”) inches above the floor level. There shall be no dust streaks. Corners, crevices, moldings and ledges shall be free of all dust. There shall be no oils, spots, smudges, or streaks on dusted surfaces caused by dusting tools. Note: In dusting horizontal spaces, working papers shall not be disturbed. However, desk type items shall be lifted, and dust removed from the surrounding areas. The Contractor shall not dust typewriters, computers, business machines, and equipment similar in nature.

5. Glass Cleaning:
   The Contractor shall damp wipe mirrors and both sides of all glass in doors, display cases and adjacent trim, partitions and bookcases and any other glass approximately seventy (70”) inches off the floor so that after cleaning the glass, there shall be no traces of film, dirt, smudges, or water. Glass shall not be cloudy.

6. Drinking Fountains:
   The Contractor shall clean the drinking fountains. The porcelain or stainless-steel surfaces shall be clean and bright and they shall be free of dust, spots, stains, and streaks. Drinking fountains shall be kept free of trash, ink, coffee grounds, etc., and nozzles free from encrustation.

7. Wood Paneling:
   Wipe down and treat surfaces of wood paneling. Paneling shall be free of dirt, dust, streaks and spots.

8. Spot Cleaning:
   The Contractor shall perform spot cleaning by removing smudges, fingerprints, marks, streaks, etc., from washable surfaces of walls, partitions, baseboards, doors, floors and fixtures. The Contractor shall use germicidal detergent in restrooms, locker rooms, break areas and drinking fountains. Brass hardware, aluminum bars, and other metal on doors shall have a uniform appearance and be free of stains, spots and evidence of soil.

9. Restrooms/Locker Rooms:
   a. The Contractor shall disinfect all surfaces of partitions, stalls, faces of toilet bowls, urinals, lavatories, showers, dispensers, and other such surfaces, using a germicidal detergent followed by a clean water rinse.
   b. The Contractor shall de-scale toilet bowls and urinals, so that after de-scaling, the entire surface shall be free from streaks, stains, scale, scum, urine deposits, and rust stains. Contractor shall hot water power wash restroom floors and shower stalls on a weekly basis.
   c. The Contractor shall keep on hand and resupply as necessary, restrooms/locker rooms with toilet paper, paper towels, and hand soap, so that after resupplying, the rooms are stocked. Contractor shall keep on hand a minimum quantity of supplies.

10. High Cleaning:
    High cleaning shall be provided to maintain a clean dust-free appearance. High dusting involves all areas over eighty-four (84”) inches tall and includes venetian blinds, recessed lighting fixtures, window ledges, flat surfaces, conduit, overhead piping, vertical surfaces, air-conditioning boxes and ceiling fans where installed. Ceilings are to be free of cobwebs and loose dirt.

11. Window Surfaces:
    The Contractor shall clean interior and exterior window surfaces, so that after windows have been cleaned, all traces of film, dirt, smudges, water and other foreign matter shall be removed from frames, casings, sills and glass.

12. Light Fixtures:
    The Contractor shall clean light fixtures so that fixtures shall be free of bugs, dirt, dust, grease, or other foreign matter. The Contractor shall only be responsible for the exterior of the lights.

13. Venetian Blinds:
    Both sides of venetian blind slats shall be dusted with a dry cloth, so that after dusting, no dust or lint remains.

    Wash all venetian blinds in building. Clean cords. Report any defective cords to the MTS PM in accordance to the reporting requirements annotated in the monthly summary

report. Both sides of venetian blind slats shall be clean and free of dust and water spots. Cords shall be free of dust, dirt, stains, and shall not be sticky to the touch.

14. Refrigerators:
    All refrigerators located in the common area break rooms shall be cleaned so that there are no drips, spills, or other food or debris on the walls, shelves or floor of the refrigerator. The top of the refrigerator shall be cleaned so that no dust, dirt, or debris remains. The insulating seals on the refrigerator shall be cleaned so that no spills, dirt, dust, other debris remain, and the seal is clean all the way around the door. The air vent on the bottom and/or back of the refrigerator shall be cleaned so that no dust, dirt, or debris remains and the air is able to circulate freely.

15. Carpets:
    All carpets shall be shampooed, clean, free of spots, spills, and removable stains. If necessary, non-absorbent pads or foil will be placed between the carpet and the furnishings. Any rust or stains resulting from the Contractor's lack of carpet protection shall be removed by the Contractor. Carpet shall be vacuumed prior to the arrival of the occupants. Any furnishings moved during the carpet shampoo process shall be returned to their original positions.

16. Special Procedure to Remove, Clean and Disinfect Areas with Bodily Fluids (To be Inspected and Performed During All Cleaning Times)

    All on-site janitorial employees of the contractor shall be trained to clean up blood borne pathogens and other bodily fluids.

    Contractor shall articulate the procedures that will be followed to clean bodily fluids from trailer, consistent with current industry standards and meeting all OSHA standards.

    Contractor certifies that is shall train its staff assigned on this contract on these procedures.

NMS MANAGEMENT, INC.

Additonal Areas

Date:09/06/2024

LIGHT RAIL VEHICLES JANITORIAL SERVICES
G2613.0-22

Estimated Start Date: 10/01/2024

			YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
			10/01/24 to 12/31/24	01/01/25 to 12/31/25	01/01/26 to 12/31/26	01/01/27 to 12/31/27	01/01/28 to 12/31/28
	El Cajon Station Trolley Operators/Trailer Breakroom (1 Breakroom, 1 Microwave, 1 Refrigerator and 2 Tables with chairs)	**FREQUENCY**	**(3 Months) Monthly Cost**	**(12 Months) Monthly Cost**	**(12 Months) Monthly Cost**	**(12 Months) Monthly Cost**	**(12 Months) Monthly Cost**
1	Trash pick up, Dusting/wiping down, Sweep/ mop floors, Wiping down chairs and tables, collect trash.	Daily, 7 Days a week, Including Holidays	$ 1,297.21	$ 1,323.16	$ 1,349.62	$ 1,376.61	$ 1,404.15
2	Monthly Periodicals: Clean appliances	Monthly					
3	One Time: Install one paper towel dispenser	One Time					
4	Monthly Supplies Included (Paper towels)	Monthly					
		Sub-Total Cost Per Month	***$ 1,297.21***	***$ 1,323.16***	***$ 1,349.62***	***$ 1,376.61***	***$ 1,404.15***
		Sub-Total Cost Per Year	***$ 3,891.64***	***$ 15,877.90***	***$ 16,195.46***	***$ 16,519.37***	***$ 16,849.75***

Metropolitan Transit System

Amendment 8

February 24, 2025 MTS Doc No. G2613.8-22

Janitorial Services (SDTI & SDTC)

NMS Management, Inc.
David M. Guaderrama
Director of Business Development
155 West 35th St. Suite A
National City, CA 91950

This shall serve as Amendment No.8 to the original agreement G2613.0-22 as further described below.

SCOPE

According to the Agreement, MTS will inform the Contractor should new locations need to be added to the scope of work, and an Amendment to the Agreement will be issued under the contracted terms.

In this Amendment, it shall add janitorial services to the Lemon Grove Depot Security Office. The scope of work is shown in Attachment A.

SCHEDULE

There are no changes to the term of the overall agreement, which remains valid through December 31, 2028.

PAYMENT

This contract amendment shall authorize additional costs not-to-exceed $26,266.70. The total value of this contract, including this amendment, shall be in the amount of $13,032,992.53 ($13,006,725.83 for the current contract plus $26,266.70 for this amendment). 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:

David M. Guaderrama, Director of
Business Development
NMS Management, Inc.

Date: 3/5/25

Attachments: A. Scope of Work
B. Contractor's Proposal

ATT A

LEMON GROVE DEPOT SECURITY OFFICE

1 LOCATION OF WORK

MTS requires the Contractor to provide janitorial services on a regularly scheduled basis for one (1) additional location at the following station:

1. Lemon Grove Depot
    A. 900 sq ft. - security office, tiled floor, open space working station
    B. kitchen area with 1 microwave, 1 refrigerator, 1 table and 6 chairs
    C. 1 sergeant area with 2 desks
    D. 1 workstation area with 2 computers
    E. 1 bathroom
    F. 1 changing room

2 TIME AND FREQUENCY TO CONDUCT WORK

Cleaning will be done after 6:00pm and before 6:00am, seven days per week excluding holidays.

3 GENERAL DESRIPTIONS

Tasks
Cleaning, 7 days a week (excluding Holidays)
Trash pick-up
Dusting/wiping down counters and tables
Vacuum/Sweep/Mop floors
Clean appliances monthly
Quarterly Periodical Services – floor care, window wash
Supplies included (paper towels).

The following tasks are described with a general expectation of how to properly complete the task and the types of items or situations which require notification to the Contractor's Supervisor and/or the MTS PM. These tasks shall be performed independent of MTS' supervision, direction, or control:

1. Flooring:
    a. The Contractor shall vacuum all floor areas. Surfaces shall be maintained free of obvious dirt, dust, other debris and residual matter. All damages on floor shall be annotated in the daily log and monthly summary report and brought to the attention of the MTS PM.
    b. Floor surfaces shall be swept clean and free of marks, dirt, spills, dust, visible litter, and other foreign matter. Chairs, trash receptacles, and easily moveable items are to be swept underneath and returned to their original positions upon completion. No dirt shall be left in corners, under furniture, or behind doors.

c. All resilient and hard floor areas shall be mopped and spray buffed so that after mopping they are clean and free of dirt, water streaks, rust stains, mop marks, gum, grease, tar, etc., in order to present an overall appearance of cleanliness. The Contractor shall apply a uniform coating of nonskid floor finish so that the floors have a glossy appearance and are free of scuff marks, heel marks and other stains and discolorations. There shall be no buildup of wax on the floor, baseboards, or walls. When mopping floors, Contractor must have “Wet Floor” or “Caution” safety signs to alert others and avoid slip and falls.
d. All tile and resilient flooring areas shall be free of old wax when stripped. A new base coat of non-slip floor wax shall be placed on the floor, so that after buffing, the finish is clean, glossy, and uniform in all areas. There shall be no build-up of wax in corners, doorsteps, or next to carpeted areas.

2. Floor Mats:
Floor mats shall be vacuumed to remove soil and grit and to restore resiliency of the carpet pile. The Contractor shall sweep, vacuum, or hose-down outside rubber or polyester entrance mats to remove soil and grit. The Contractor shall remove soil and moisture from underneath entrance mats and return the mats to their normal location.

3. Trash Removal:
The Contractor shall empty, and return to their initial location, all wastebaskets and other trash containers within the area. Boxes, cans, and papers placed near a trash receptacle and marked “TRASH” shall be removed by the Contractor. Any obviously soiled or torn plastic trash receptacle liners in such receptacles shall be replaced. The Contractor shall dispose of trash in plastic bags secured with bag ties. The Contractor shall pick up any trash that may fall in or around the facility or grounds during removal of collected trash. All solid waste collected as a requirement of this contract shall be placed in dumpster containers at the site.

4. Low Dusting:
The Contractor shall thoroughly dust all horizontal surfaces of furniture and cleared desk tops, so that after dusting, all dust, lint, litter, and dry soil shall be removed from surfaces of cleared desks, chairs, file cabinets, and other types of office furniture and equipment and from ledges, window sills, hand rails, etc., to a line up to eighty-four (84”) inches above the floor level. There shall be no dust streaks. Corners, crevices, moldings and ledges shall be free of all dust. There shall be no oils, spots, smudges, or streaks on dusted surfaces caused by dusting tools. Note: In dusting horizontal spaces, working papers shall not be disturbed. However, desk type items shall be lifted and dust removed from the surrounding areas. The Contractor shall not dust typewriters, computers, business machines, and equipment similar in nature.

5. Glass Cleaning:
The Contractor shall damp wipe mirrors and both sides of all glass in doors, display cases and adjacent trim, partitions and bookcases and any other glass approximately seventy (70”) inches off the floor so that after cleaning the glass, there shall be no traces of film, dirt, smudges, or water. Glass shall not be cloudy.

6. Wood Paneling:
   Wipe down and treat surfaces of wood paneling. Paneling shall be free of dirt, dust, streaks and spots.

7. Spot Cleaning:
   The Contractor shall perform spot cleaning by removing smudges, fingerprints, marks, streaks, etc., from washable surfaces of walls, partitions, baseboards, doors, floors and fixtures. The Contractor shall use germicidal detergent in restrooms, locker rooms, break areas and drinking fountains. Brass hardware, aluminum bars, and other metal on doors shall have a uniform appearance and be free of stains, spots and evidence of soil.

8. Restrooms/Locker Rooms:
   a. The Contractor shall disinfect all surfaces of partitions, stalls, faces of toilet bowls, urinals, lavatories, showers, dispensers, and other such surfaces, using a germicidal detergent followed by a clean water rinse.
   b. The Contractor shall de-scale toilet bowls and urinals, so that after de-scaling, the entire surface shall be free from streaks, stains, scale, scum, urine deposits, and rust stains. Contractor shall hot water power wash restroom floors and shower stalls on a weekly basis.
   c. The Contractor shall keep on hand and resupply as necessary, restrooms/locker rooms with toilet paper, paper towels, and hand soap, so that after resupplying, the rooms are stocked. Contractor shall keep on hand a minimum quantity of supplies.

9. High Cleaning:
   High cleaning shall be provided to maintain a clean dust-free appearance. High dusting involves all areas over eighty-four (84”) inches tall and includes venetian blinds, recessed lighting fixtures, window ledges, flat surfaces, conduit, overhead piping, vertical surfaces, air-conditioning boxes and ceiling fans where installed. Ceilings are to be free of cobwebs and loose dirt.

10. Window Surfaces:
    The Contractor shall clean interior and exterior window surfaces, so that after windows have been cleaned, all traces of film, dirt, smudges, water and other foreign matter shall be removed from frames, casings, sills and glass.

11. Light Fixtures:
    The Contractor shall clean light fixtures so that fixtures shall be free of bugs, dirt, dust, grease, or other foreign matter. The Contractor shall only be responsible for the exterior of the lights.

12. Refrigerators:
    All refrigerators located in the common area break rooms shall be cleaned so that there are no drips, spills, or other food or debris on the walls, shelves or floor of the refrigerator. The top of the refrigerator shall be cleaned so that no dust, dirt, or debris remains. The insulating seals on the refrigerator shall be cleaned so that no spills, dirt,

dust, other debris remains and the seal is clean all the way around the door. The air vent on the bottom and/or back of the refrigerator shall be cleaned so that no dust, dirt, or debris remains and the air is able to circulate freely.

13. Special Procedure to Remove, Clean and Disinfect Areas with Bodily Fluids (To be Inspected and Performed During All Cleaning Times)

    All on-site janitorial employees of the contractor shall be trained to clean up blood borne pathogens and other bodily fluids.

    Contractor shall articulate the procedures that will be followed to clean bodily fluids from LRVs, consistent with current industry standards and meeting all OSHA standards.

    Contractor certifies that it shall train its staff assigned on this contract on these procedures.

MANAGEMENT, INC.
The Environmental Care Specialist

2/11/25

Andy Goddard
Superintendent of LRV Maintenance
Metropolitan Transit System
1255 Imperial Avenue, Suite 1000
San Diego, CA 92101

SUBJECT: NMS PROPOSAL TO PERFORM JANITORIAL SERVICES AT THE LEMON GROVE DEPOT

Mr. Goddard,

On behalf of NMS Management, I wish to thank you for allowing me to provide you with this proposal to provide janitorial services at the Lemon Grove Depot. We at NMS view such contracts as a partnership between our company and our esteemed government agency clients. We are proud to provide cost-effective, highly responsive and quality services, and we value being a distinguished member of your team.

Should you have any questions regarding the contents of this proposal and the attached price quote, or should you feel the need for clarification, please feel free to call me at (619) 425-0440 or I can be reached by email at nmsmanagement@msn.com.

Respectfully,

David M. Guaderrama
NMS Management, Inc.
Director of Business Development

NMS MANAGEMENT, INC.

Additional Areas

Date: 02/10/2025

LIGHT RAIL VEHICLES JANITORIAL SERVICES
G2613.0-22

Estimated Start Date: 03/01/2025

Security office, tile floor, opens space working station kitchen area with (1) microwave, (1) refrigerator, (1) table and (6) chairs

(1) Sergent area with 2 desks

(1) Workstation arear with 2 computers

(1) Bathroom

(1) Changing area

				YEAR 3
				03/01/25 to 12/31/25
	LEMON GROVE DEPOT	**FREQUENCY**	**SERVICE TIME**	**(10 Months) Monthly Cost**
1	Trash pick up, dusting, wiping down counters and tables, vacuum/sweep/mop floors	Daily, 7 Days a week, excluding holidays	Between 6:00pm to 6:00am	$ 2,626.67
2	Clean Appliances	Monthly	Between 6:00pm to 6:00am	
3	Floorcare and window washing	Quarterly	Between 6:00pm to 6:00am	
4	Supplies Included	Daily, 7 Days a week, excluding holidays	Between 6:00pm to 6:00am	
		Sub-Total Cost Per Month		***$ 2,626.67***
		Sub-Total Cost Per Year		***$ 26,266.70***

Metropolitan Transit System

Amendment 9

September 11, 2025 MTS Doc. No. G2613.9-22

Janitorial Services (SDTI & SDTC)

NMS Management, Inc.
David M. Guaderrama
Director of Business Development
155 West 35th St. Suite A
National City CA, 91950

This shall serve as Amendment No.9 to the original agreement G2613.0-22 as further described below.

SCOPE

Pursuant to the executed Amendment No. 8, additional janitorial services were added to the Lemon Grove Depot Security Office, as shown in Attachment A (Scope of Work), which is effective from March 1, 2025, through December 31, 2025.

Thia Amendment No. 9 shall continue the janitorial services at Lemon Grove Depot Security Office for the remainder of the contract term, effective January 1, 2026, through December 31, 2028.

SCHEDULE

There are no changes to the term of the overall agreement, which remains valid through December 31, 2028.

PAYMENT

This contract amendment shall authorize additional costs not-to-exceed $98,393.40. The total value of this contract, including this amendment, shall be in the amount of $13,131,385.92 ($13,032,992.52 for the current contract plus $98,393.40 for this amendment). 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:

David M. Guaderrama, Director of Business Development
NMS Management, Inc.

Date: _____

Attachment: A. Scope of Work
B. Contractor's Proposal

LEMON GROVE DEPOT SECURITY OFFICE

1 LOCATION OF WORK

MTS requires the Contractor to provide janitorial services on a regularly scheduled basis for one (1) additional location at the following station:

1. Lemon Grove Depot
    A. 900 sq ft. - security office, tiled floor, open space working station
    B. kitchen area with 1 microwave, 1 refrigerator, 1 table and 6 chairs
    C. 1 sergeant area with 2 desks
    D. 1 workstation area with 2 computers
    E. 1 bathroom
    F. 1 changing room

2 TIME AND FREQUENCY TO CONDUCT WORK

Cleaning will be done after 6:00pm and before 6:00am, seven days per week excluding holidays.

3 GENERAL DESRIPTIONS

Tasks
Cleaning, 7 days a week (excluding Holidays)
Trash pick-up
Dusting/wiping down counters and tables
Vacuum/Sweep/Mop floors
Clean appliances monthly
Quarterly Periodical Services – floor care, window wash
Supplies included (paper towels).

The following tasks are described with a general expectation of how to properly complete the task and the types of items or situations which require notification to the Contractor's Supervisor and/or the MTS PM. These tasks shall be performed independent of MTS' supervision, direction, or control:

1. Flooring:
    a. The Contractor shall vacuum all floor areas. Surfaces shall be maintained free of obvious dirt, dust, other debris and residual matter. All damages on floor shall be annotated in the daily log and monthly summary report and brought to the attention of the MTS PM.
    b. Floor surfaces shall be swept clean and free of marks, dirt, spills, dust, visible litter, and other foreign matter. Chairs, trash receptacles, and easily moveable items are to be swept underneath and returned to their original positions upon completion. No dirt shall be left in corners, under furniture, or behind doors.

c. All resilient and hard floor areas shall be mopped and spray buffed so that after mopping they are clean and free of dirt, water streaks, rust stains, mop marks, gum, grease, tar, etc., in order to present an overall appearance of cleanliness. The Contractor shall apply a uniform coating of nonskid floor finish so that the floors have a glossy appearance and are free of scuff marks, heel marks and other stains and discolorations. There shall be no buildup of wax on the floor, baseboards, or walls. When mopping floors, Contractor must have “Wet Floor” or “Caution” safety signs to alert others and avoid slip and falls.
d. All tile and resilient flooring areas shall be free of old wax when stripped. A new base coat of non-slip floor wax shall be placed on the floor, so that after buffing, the finish is clean, glossy, and uniform in all areas. There shall be no build-up of wax in corners, doorsteps, or next to carpeted areas.

2. Floor Mats:
Floor mats shall be vacuumed to remove soil and grit and to restore resiliency of the carpet pile. The Contractor shall sweep, vacuum, or hose-down outside rubber or polyester entrance mats to remove soil and grit. The Contractor shall remove soil and moisture from underneath entrance mats and return the mats to their normal location.

3. Trash Removal:
The Contractor shall empty, and return to their initial location, all wastebaskets and other trash containers within the area. Boxes, cans, and papers placed near a trash receptacle and marked “TRASH” shall be removed by the Contractor. Any obviously soiled or torn plastic trash receptacle liners in such receptacles shall be replaced. The Contractor shall dispose of trash in plastic bags secured with bag ties. The Contractor shall pick up any trash that may fall in or around the facility or grounds during removal of collected trash. All solid waste collected as a requirement of this contract shall be placed in dumpster containers at the site.

4. Low Dusting:
The Contractor shall thoroughly dust all horizontal surfaces of furniture and cleared desk tops, so that after dusting, all dust, lint, litter, and dry soil shall be removed from surfaces of cleared desks, chairs, file cabinets, and other types of office furniture and equipment and from ledges, window sills, hand rails, etc., to a line up to eighty-four (84”) inches above the floor level. There shall be no dust streaks. Corners, crevices, moldings and ledges shall be free of all dust. There shall be no oils, spots, smudges, or streaks on dusted surfaces caused by dusting tools. Note: In dusting horizontal spaces, working papers shall not be disturbed. However, desk type items shall be lifted and dust removed from the surrounding areas. The Contractor shall not dust typewriters, computers, business machines, and equipment similar in nature.

5. Glass Cleaning:
The Contractor shall damp wipe mirrors and both sides of all glass in doors, display cases and adjacent trim, partitions and bookcases and any other glass approximately seventy (70”) inches off the floor so that after cleaning the glass, there shall be no traces of film, dirt, smudges, or water. Glass shall not be cloudy.

6. Wood Paneling:
   Wipe down and treat surfaces of wood paneling. Paneling shall be free of dirt, dust, streaks and spots.

7. Spot Cleaning:
   The Contractor shall perform spot cleaning by removing smudges, fingerprints, marks, streaks, etc., from washable surfaces of walls, partitions, baseboards, doors, floors and fixtures. The Contractor shall use germicidal detergent in restrooms, locker rooms, break areas and drinking fountains. Brass hardware, aluminum bars, and other metal on doors shall have a uniform appearance and be free of stains, spots and evidence of soil.

8. Restrooms/Locker Rooms:
   a. The Contractor shall disinfect all surfaces of partitions, stalls, faces of toilet bowls, urinals, lavatories, showers, dispensers, and other such surfaces, using a germicidal detergent followed by a clean water rinse.
   b. The Contractor shall de-scale toilet bowls and urinals, so that after de-scaling, the entire surface shall be free from streaks, stains, scale, scum, urine deposits, and rust stains. Contractor shall hot water power wash restroom floors and shower stalls on a weekly basis.
   c. The Contractor shall keep on hand and resupply as necessary, restrooms/locker rooms with toilet paper, paper towels, and hand soap, so that after resupplying, the rooms are stocked. Contractor shall keep on hand a minimum quantity of supplies.

9. High Cleaning:
   High cleaning shall be provided to maintain a clean dust-free appearance. High dusting involves all areas over eighty-four (84”) inches tall and includes venetian blinds, recessed lighting fixtures, window ledges, flat surfaces, conduit, overhead piping, vertical surfaces, air-conditioning boxes and ceiling fans where installed. Ceilings are to be free of cobwebs and loose dirt.

10. Window Surfaces:
    The Contractor shall clean interior and exterior window surfaces, so that after windows have been cleaned, all traces of film, dirt, smudges, water and other foreign matter shall be removed from frames, casings, sills and glass.

11. Light Fixtures:
    The Contractor shall clean light fixtures so that fixtures shall be free of bugs, dirt, dust, grease, or other foreign matter. The Contractor shall only be responsible for the exterior of the lights.

12. Refrigerators:
    All refrigerators located in the common area break rooms shall be cleaned so that there are no drips, spills, or other food or debris on the walls, shelves or floor of the refrigerator. The top of the refrigerator shall be cleaned so that no dust, dirt, or debris remains. The insulating seals on the refrigerator shall be cleaned so that no spills, dirt,

dust, other debris remains and the seal is clean all the way around the door. The air vent on the bottom and/or back of the refrigerator shall be cleaned so that no dust, dirt, or debris remains and the air is able to circulate freely.

13. Special Procedure to Remove, Clean and Disinfect Areas with Bodily Fluids (To be Inspected and Performed During All Cleaning Times)

    All on-site janitorial employees of the contractor shall be trained to clean up blood borne pathogens and other bodily fluids.

    Contractor shall articulate the procedures that will be followed to clean bodily fluids from LRVs, consistent with current industry standards and meeting all OSHA standards.

    Contractor certifies that it shall train its staff assigned on this contract on these procedures.

NMS MANAGEMENT, INC.

Additional Areas

LIGHT RAIL VEHICLES JANITORIAL SERVICES
G2613.0-22

Estimated Start Date: 03/01/2025

Security office, tile floor, opens space working station kitchen area with (1) microwave, (1) refrigerator, (1) table and (6) chairs

(1) Sergent area with 2 desks

(1) Workstation arear with 2 computers

(1) Bathroom

(1) Changing area

	LEMON GROVE DEPOT	FREQUENCY	SERVICE TIME	YEAR 4 01/01/26 to 12/31/26 (12 Months) Monthly Cost	YEAR 5 01/01/27 to 12/31/27 (12 Months) Monthly Cost	YEAR 6 01/01/28 to 12/31/28 (12 Months) Monthly Cost
1	Trash pick up, dusting, wiping down counters and tables, vacuum/sweep/mop floors	Daily, 7 Days a week, excluding holidays	Between 6:00pm to 6:00am	$ 2,679.21	$ 2,732.79	$ 2,787.45
2	Clean Appliances	Monthly	Between 6:00pm to 6:00am			
3	Floorcare and window washing	Quarterly	Between 6:00pm to 6:00am			
4	Supplies Included	Daily, 7 Days a week, excluding holidays	Between 6:00pm to 6:00am			
		Sub-Total Cost Per Month		***$ 2,679.21***	***$ 2,732.79***	***$ 2,787.45***
		Sub-Total Cost Per Year		***$ 32,150.52***	***$ 32,793.48***	***$ 33,449.40***

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 10

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Propane Fueling Services – Contract Amendment

RECOMMENDATION:

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

1) Ratify MTS Doc. No. B0760.1-24 (Amendment 1) with Suburban Propane Partner, LP (Suburban), in the amount of $71,672.94 (Attachment A); and

2) Authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. B0760.2-24 (Amendment 2) with Suburban, to add $1,906,186.88 in additional funds for an estimated increase in ridership (in substantially the same format as Attachment B).

Budget Impact

The total cost of these amendments is estimated to be $1,977,859.82 and the total contract cost is estimated to be $16,387,555.26 (inclusive of the total costs for Amendments 1 and 2). The contract will be funded by the Minibus Operating Budget account 835012-541500 and Americans with Disabilities Act (ADA) Paratransit Operations Budget account 850012-541500.

The contract costs are summarized below:

Description	Amount
Original Contract	$14,409,695.44
Amendment 1	$71,672.94
Subtotal	$14,481,368.38
Today's Board Action – Approve Amendment 2	$1,906,186.88
New Board Approved Amount	**$16,387,555.26**

DISCUSSION:

On March 14, 2024 (Agenda Item (AI) 14), the MTS Board approved a contract with Suburban to provide propane fueling services for minibus vehicles and paratransit buses. The contract is for a 5-year base period (May 1, 2024 through April 30, 2029) with two 1-year option periods (May 1, 2029 through April 30, 2031). The current propane-fueled fleet includes approximately 31 minibus vehicles and 104 paratransit vehicles.

MTS's propane costs under the contract depend on demand (e.g., based on bus operation volume/miles, especially paratransit ridership), and the negotiated price for propane. The contract pricing for propane is set by the following formula: estimated quantity x (SPOT price + Bid Price over SPOT + Tax = Total Price per Gallon). SPOT price is the market price of the propane at the time of the purchase. Bid Price over SPOT is the price paid to the Contractor for providing the propane fueling services and equipment – the negotiated rate is $0.37/gallon. Current sales tax is 7.750%.

The original contract value was based on the following assumptions for estimate propane usage and SPOT price:

Contract Term	Est. Qty (gallons)	Est. Avg SPOT Price	Bid Price over SPOT	7.75% Sales Tax	Est. Total Price (per Gallon)	Est. TOTAL
Base Year 1	750,000	$1.55	$0.37	$0.15	$2.07	$1,551,600.00
Base Year 2	787,500	$1.63	$0.37	$0.15	$2.15	$1,694,941.17
Base Year 3	826,875	$1.71	$0.37	$0.16	$2.24	$1,852,189.92
Base Year 4	868,219	$1.79	$0.37	$0.17	$2.33	$2,024,733.12
Base Year 5	911,630	$1.88	$0.37	$0.17	$2.43	$2,214,096.18
					Subtotal (Base)	$9,337,560.39
Option Year I (Year 6)	957,211	$1.98	$0.37	$0.18	$2.53	$2,421,958.96
Option Year II (Year 7)	1,005,072	$2.08	$0.37	$0.19	$2.64	$2,650,176.09
					Subtotal (Options)	$5,072,135.05
					GRAND TOTAL (Base + Options)	**$14,409,695.44**

After the first year of the contract, the actual propane usage was 951,822 gallons, a 27% increase over the Year 1 assumptions. The average SPOT price was $1.21, a 22% decrease over the Year 1 assumptions. Amendment 1 was processed under the CEO's Board Policy 41 authority to true up Year 1 based on actual gallons and price, resulting in a $71,672.94 increase in Year 1 costs. Today's proposed action would ratify Amendment 1.

Forecasting the increased propane usage over the remaining six (6) years of the contract, staff estimates an additional $1,905,767.36 will be needed to fund Years 2 through 7:

Contract Term	Est. Qty (gallons)	Est. Avg SPOT Price	Bid Price over SPOT	7.75% Sales Tax	Est. Total Price (per Gallon)	Est. TOTAL
Base Year 1 (actual – Am 1 true up)	951,822	$1.21	$0.37	$0.123	$1.71	$1,623,272.94
Base Year 2	1,004,842	$1.63	$0.37	$0.155	$2.16	$2,165,434.51
Base Year 3	1,014,842	$1.71	$0.37	$0.161	$2.24	$2,274,463.89
Base Year 4	1,024,842	$1.79	$0.37	$0.167	$2.33	$2,385,217.27
Base Year 5	1,034,842	$1.88	$0.37	$0.174	$2.42	$2,508,845.07
					Subtotal (Base)	$10,957,233.68
Option Year 6	1,044,842	$1.98	$0.37	$0.182	$2.53	$2,645,670.55
Option Year 7	1,054,842	$2.08	$0.37	$0.190	$2.64	$2,784,651.02
					Subtotal (Options)	$5,430,321.57
					GRAND TOTAL (Base + Options)	**$16,387,555.26**

Amendment 2 is intended to provide sufficient funds throughout the remaining term of the contract. Because of the volatility of the propane fuel market, the original SPOT price estimates have not been modified. However, MTS will only pay for the actual SPOT price, so this Amendment 2 will preserve MTS's ability to benefit from decreases in the SPOT price over the course of the contract term. Today's proposed action would approve Amendment 2.

Therefore, staff recommends that the MTS Board of Directors:

1) Ratify Amendment 1 with Suburban, in the amount of $71,672.94 (Attachment A); and

2) Authorize the CEO to execute Amendment 2 with Suburban, to add $1,906,186.88 in additional funds for an estimated increase in ridership (in substantially the same format as Attachment B).

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachments: A. Amendment No. 1, MTS Doc. No. B0760.1-24
B. Draft Amendment No. 2, MTS Doc. No. B0760.2-24

Metropolitan Transit System

Amendment 1

May 20, 2025 MTS Doc No. B0760.1-24

PROPANE FUELING SERVICES – ADD FUNDS

Suburban Propane Partner, LP
Egidio Abreu
Customer Service Center Manager
2260 La Miranda Dr
Vista, CA, 92081

This shall serve as Amendment No.1 to the original agreement B0760.0-24 as further described below.

SCOPE

This amendment shall authorize additional funds to cover the increase in propane fueling services used in Year 1. This is due to an increase in paratransit ridership and total miles traveled.

SCHEDULE

There shall be no changes to the schedule of the contract.

PAYMENT

This contract amendment shall authorize additional costs not to exceed $71,672.94. The total value of this contract including this amendment shall be in the amount of $9,409,233.33. This amount shall not be exceeded without prior written approval from MTS.

Please sign and return a 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

Sharon Cooney, Chief Executive Officer

Agreed:

Egidio Abreu

Egidio Abreu, Customer Service Center Manager
Suburban Propane Partner, LP

Date: 6-3-2025

Metropolitan Transit System

Amendment 2

September 11, 2025 MTS Doc No. B0760.2-24

PROPANE FUELING SERVICES – ADD FUNDS

Suburban Propane Partner, LP
Egidio Abreu
Customer Service Center Manager
2260 La Miranda Dr
Vista, CA, 92081

This shall serve as Amendment 2 to the original agreement B0760.0-24 as further described below.

SCOPE

This amendment shall authorize additional funds to cover the estimated increase in quantity for propane fueling services for Base Years 2-5 and Option Years 6 and 7 as shown below:

Contract Term	Est. Qty (gallons)	Est. Avg SPOT Price	Bid Price over SPOT	7.75% Sales Tax	Est. Total Price (per Gallon)	Est. TOTAL
Base Year 1 (actual – Am 1 true up)	951,822	$1.21	$0.37	$0.123	$1.71	$1,623,272.94
Base Year 2	1,004,842	$1.63	$0.37	$0.155	$2.16	$2,165,434.51
Base Year 3	1,014,842	$1.71	$0.37	$0.161	$2.24	$2,274,463.89
Base Year 4	1,024,842	$1.79	$0.37	$0.167	$2.33	$2,385,217.27
Base Year 5	1,034,842	$1.88	$0.37	$0.174	$2.42	$2,508,845.07
					Subtotal (Base)	$10,957,233.68
Option Year 6	1,044,842	$1.98	$0.37	$0.182	$2.53	$2,645,670.55
Option Year 7	1,054,842	$2.08	$0.37	$0.190	$2.64	$2,784,651.02
					Subtotal (Options)	$5,430,321.57
					GRAND TOTAL (Base + Options)	**$16,387,555.26**

SCHEDULE

There shall be no changes to the schedule of the contract.

PAYMENT

This contract amendment shall authorize additional costs not to exceed $1,906,186.88 ($1,548,000.35 for base year period and $358,186.52 for the option year periods, if exercised). The total value of this contract, including this amendment, shall be in the amount of $10,957,233.68 for the base period. 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:

Egidio Abreu
Customer Service Center Manager
SUBURBAN PROPANE PARTNER, LP

Date: _____

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 11

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Beyer Blvd Slope Improvement – 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. PWL439.0-25 (in substantially the same format as Attachment A), with Hazard Construction Co., in the amount of $4,072,592.00 plus 10% contingency to provide construction services for the Beyer Blvd Slope Improvement Project.

Budget Impact

The total contract cost is estimated to be $4,479,851.20 ($4,072,592.00 plus 10% contingency of $407,259.20). The project will be funded by the Capital Improvement Program (CIP) account 2005109001 – Beyer Blvd Slope Improvement.

DISCUSSION:

This project focuses on providing slope stabilization and drainage improvements along the southern portion of the UC San Diego Blue Line near Beyer Blvd in San Ysidro. The work primarily involves extensive earthmoving operations and the construction of approximately 675 feet of retaining walls. The existing site has a progressively worsening slope condition, which poses a risk to the UC San Diego Blue Line. Addressing the slope stabilization issue is critical to ensuring the safety of the public transportation system and MTS employees maintaining this infrastructure.

On May 29, 2025, MTS issued an Invitation for Bids (IFB) seeking a contractor to provide Beyer Blvd slope improvement services. The scope of work for this project includes significant earth-moving activities, the construction and installation of retaining walls, soil stabilization, and the construction of new drainage systems (Attachment B).

Two (2) bids were received on August 6, 2025, from the following firms:

Company Name	Firm Certifications	Bid Amount
MTS – Independent Cost Estimate (ICE)		*$3,918,908.00*
Hazard Construction CO.	N/A	**$4,072,592.00**
West Coast General	N/A	$6,766,225.00

Based on the bids received, and in comparison to MTS's ICE at $3,918,908.00, staff determined Hazard's bid to be fair and reasonable (Attachment C). Work is expected to be completed within 240 calendar days after the issuance of the notice to proceed.

This award is subject to the Project Labor Agreement (PLA) requirements approved under Board Policy No. 66 because the MTS ICE was over $1 million.

Hazard will be utilizing the following subcontractors to perform a portion of the work, as detailed further in Attachment D.

Subcontractor Name	Firm Certifications
Alcorn Fence	Disadvantaged Business Enterprise (DBE) Small Business (SB)
Keller North America, Inc	N/A
Southwest V-Ditch	N/A

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Contract No. PWL439.0-25 (in substantially the same format as Attachment A), with Hazard Construction Co., in the amount $4,072,592.00 plus 10% contingency to provide construction services for the Beyer Blvd Slope Improvement Project.

/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.PWL439.0-25
B. Technical Specifications and Drawings
C. Costs
D. Subcontractor List

Metropolitan Transit System

STANDARD CONSTRUCTION AGREEMENT

FOR

MTS DOC. NO. PWL439.0-25

BEYER BLVD SLOPE IMPROVEMENT PROJECT

THIS AGREEMENT is entered into this _____ day of _____ 2025, 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: Hazard Construction Engr LLC

Address: 10529 Vine Street
Lakeside, CA 92040

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

Email: jmordhorst@hazardconstruction.com

Telephone: (858) 587-3600 ext. 112

Authorized person to sign contracts: Jason Mordhorst (Name) — President (Title)

The specified Contract Documents are part of this Agreement. The Contractor agrees to furnish to MTS services and materials, as follows:

Contractor shall furnish all necessary management, supervision, labor, materials, tools, supplies, equipment, plant, services, engineering, testing and/or any other act or thing required to diligently and fully perform and complete the Project as specified in accordance with the Standard Agreement and General Conditions (Exhibit A), Scope of Work, Special Conditions and Attachments (Exhibit B), Bid Price Form (Exhibit C) and Forms (Exhibit D).

SCOPE OF WORK.

Contractor, for and in consideration of the payment to be made to Contractor as hereinafter provided, shall furnish all plant, labor, technical and professional services, supervision, materials and equipment, other than such materials and equipment as may be specified to be furnished by MTS, and perform all operations necessary to complete the Work in strict conformance with the Contract Documents (defined below) for the following public work of improvement:

BEYER BLVD SLOPE IMPROVEMENT PROJECT

Contractor is an independent contractor and not an agent of MTS. The Contractor and its surety shall be liable to MTS for any damages arising as a result of the Contractor's failure to comply with this obligation.

CONTRACT TIME.

Time is of the essence in the performance of the Work. The Work shall be commenced by the date stated in MTS's Notice to Proceed. The Contractor shall complete all Work required by the Contract Documents **within 240 calendar days** from the commencement date stated in the Notice to Proceed. By its signature hereunder, Contractor agrees the Contract Time is adequate and reasonable to complete the Work.

CONTRACT PRICE.

MTS shall pay the Contractor as full compensation for the performance of the Contract, subject to any additions or deductions as provided in the Contract Documents, and including all applicable taxes and costs, the sum of four million seventy-two thousand five hundred ninety-two dollars ($4,072,592.00). Payment shall be made as set forth in the General Conditions.

PROVISIONS REQUIRED BY LAW.

Each and every provision of law required to be included in these Contract Documents shall be deemed to be included in these Contract Documents. The Contractor shall comply with all requirements of the California Labor Code applicable to this Project.

INDEMNIFICATION.

Contractor shall provide indemnification as set forth in the General Conditions.

PREVAILING WAGES.

Contractor shall be required to pay the prevailing rate of wages in accordance with the Labor Code which such rates shall be made available at MTS's Administrative Office or may be obtained online at http://www.dir.ca.gov and which must be posted at the job site.

PROJECT LABOR AGREEMENT.

Contractor shall comply with MTS's Project Labor Agreement in the performance of the Work.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	HAZARD CONSTRUCTION ENGR LLC
By: _____	
Sharon Cooney, Chief Executive Officer	**By:** _____
Approved as to form:	
By: _____	**Title:** _____
Karen Landers, General Counsel	

SECTION 10
GENERAL CONSTRUCTION REQUIREMENTS

10-1 GENERAL

Definitions

A. Standard Specifications: refer to State of California, Department of Transportation (Caltrans) Standard Specifications 2018

B. Special Provisions: refer to the contract specifications, sections 1 thru 21 (note: gaps in section numbering are intentional)

10-1.01 ORDER OF WORK AND GENERAL COMPLIANCE

Order of work shall conform to the provisions in Section 3, "Standard Construction Agreement and General Conditions," of these Special Provisions.

A. Within 5 calendar days of Notice to Proceed, the Contractor shall prepare a preliminary construction schedule, for review by the Engineer. Once approved the Contractor shall submit a final baseline progress schedule, in accordance with Section 10-1.06, “Progress Schedule,” of the Special Provisions.

B. Within 10 calendar days of Notice to Proceed, the Contractor shall prepare and submit a proposed construction area work plan, for review by the Engineer. Work plan shall include site ingress and egress, proposed work staging and phasing, and laydown area requirements for equipment, material, company vehicles, and personnel vehicles. The work plan shall indicate potential impacts to trolley operations. By no means shall work stop trolley operations unless previously approved through MTS. Any planned and approved operational stoppage shall be included within the work plan and be accompanied by an approved schedule.

C. All construction shall be performed in the sequence shown in the Contractor’s approved work plan.

D. Non-conflicting work in subsequent stages may proceed concurrently with work in preceding stages, provided satisfactory progress is maintained in the preceding stages of construction.

E. Contractor shall notify Engineer of intent to start work a minimum of five (5) business days prior to scheduled start date. At this time Contractor shall also schedule on-site meeting in accordance with Section 10-2.05, “Site Conditions and Access,” of these Special Provisions.

F. Within 72 hours prior to scheduled start date Contractor shall coordinate site access and laydown area with Engineer during the on-site meeting described under Section 10-2.05, “Site Conditions and Access,” of these Special Provisions.

G. Prior to start of work Contractor and all workers expected to enter the railroad right-of-way shall attend and complete a class conducted by the MTS or the MTS's designee on Roadway Worker Protection Safety rules and regulations and obtain a Roadway Worker Protection Safety sticker indicating successful completion of course.

H. Throughout duration of construction Contractor shall maintain entrances and exits of the Metropolitan Transit System (MTS) right-of-way to prevent unauthorized entry.

I. Procure and submit for approval all equipment and material as indicated in the Special Provisions and on the plans.

J. Demolition and installation of all material and equipment shall comply with these Special Provisions and be as shown on the plans.

K. The Contractor shall provide and install suitable safeguards to protect the underground utility facilities during construction operations. Safeguards shall conform to the Section 10-1.03, "Preservation of Property," of these Special Provisions.

L. Application of Best Management Practices (BMPs) shall be required throughout the duration of this project. Attention is directed to Section 11, "Storm Water Pollution Control During Construction," of these Special Provisions.

M. If, in the opinion of the Engineer, the Contractor's operations are delayed or interfered with, the owner will compensate the Contractor for such delays to the extent provided in Section 3.53, "Liquidated Damages," of these Special Provisions.

N. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for Order of Work shall be considered included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

10-1.02 OBSTRUCTIONS

Attention is directed to Sections 3.6, "Existence of Utility at the Work Site," of these Special Provisions.

The Contractor shall notify the Engineer and the appropriate regional notification center for operators of subsurface installations at least 2 working days, but not more than 14 calendar days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure. Regional notification centers include, but are not limited to, the following:

Notification Center	Telephone Number
Underground Service Alert-Southern California (USA)	811 1-800-227-2600
Cable, Pipe & Leak Detection (CPL) (within MTS right-of-way)	1-619-393-5724

Contractor to verify location and elevation of all exiting utilities by potholing and mark out prior to excavation as necessary. Notifications shall be performed as necessary to complete the improvements without damage to existing facilities. Any work on the underground facilities shall be coordinated with the Engineer. The Contractor shall schedule a utility coordination meeting and contact all attendees a minimum of 48 hours in advance of the meeting date. Meeting attendees shall include the Engineer or Project Manager, the contractor’s representative, and the approved utility locating subcontractor.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for Obstructions shall be considered included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

10-1.03 PRESERVATION OF PROPERTY

Attention is directed to Section 7-1.11, "Protection of Work and Property," of these Special Provisions.

Due care shall be taken to avoid damage or injury to improvements of project facility or adjacent facilities, their utilities, and landscaping features that are not designated for removal as indicated on the plans or in these Special Provisions. Any damage to the property or adjacent properties incurred due to the operations of the Contractor shall be repaired, replaced, or restored at the Contractor's expense. Repair, replacement, or restoration shall be performed such that facilities damaged will be at the same condition as when the Contractor had entered the site, or as good as required by the specifications accompanying the contract.

Contractor shall note multiple residential retaining walls exist along the MTS Right-of-Way near proposed work. Care shall be taken when working in these areas to protect walls in place. These existing walls are considered as Building Category III – Non-engineered Timber and Masonry Structures per FTA Transit Noise and Vibration Impact Assessment (FTA-AV-90-1003-06). Based on equipment Contractor can assess potential impact per Section 12.2 of the FTA Transit Noise and Vibration Impact Assessment. For record purposes Contractor shall photo document all existing residential retaining walls and other structures within 10 feet of MTS ROW prior to start of work to establish pre-construction condition of these structures. Contractor shall prepare and submit a vibration monitoring plan for review and provide vibration monitoring throughout the construction duration based on the approved plan.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for Preservation of Property shall be considered included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

10-1.04 DAMAGE REPAIR

Attention is directed to Section 3.29, "Protection of Work and property," of these Special Provisions.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for Damage Repair shall be considered included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

10-1.05 JOB SITE COOPERATION

It is not anticipated, at this time, work by other contractors will be in progress adjacent to or within the limits of this project during the duration of this contract. However, the Contractor shall be prepared to coordinate and cooperate with other workers, whether private or public, should the need occur.

Where required, Contractor shall coordinate efforts with utility agencies for adjustment or relocation of utilities that will affect Contractor's work.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for Job Site Cooperation shall be considered included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

10-1.06 PROGRESS SCHEDULE

The Contractor shall submit to the Engineer a practicable progress schedule in conformance with Section 3.8, "Schedule," of these Special Provisions. Whenever the term "schedule" is used in this section it shall mean progress schedule.

A. MEASUREMENT AND PAYMENT

Progress Schedule will be paid for as a lump sum price.

The contract lump sum price paid for Progress Schedule shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, including computer software, and for doing all the work involved in preparing, furnishing, and updating schedules, as specified in these Special Provisions and as directed by the Engineer.

10-1.07 DUST CONTROL

Dust control shall conform to the provisions of Section 10-5, "Dust Control," of the Standard Specifications and these Special Provisions.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for Dust Control shall be considered included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

10-1.08 PROJECT APPEARANCE

The Contractor shall maintain a neat appearance to the work. Retaining wall material (rail and wood ties), fencing, vegetation, and other debris developed during construction operations shall be disposed of concurrently with its removal. Materials to be relocated shall be neatly stored in a secure area.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for maintaining Project Appearance shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

10-1.09 ENVIRONMENTAL REQUIREMENTS

Contractor shall perform all applicable work in compliance with the CEQA Addendum, "*Beyer Boulevard Slope and Drainage Improvements Project: Addendum to the Final Mitigated negative Declaration/Initial Study for the San Ysidro Freight Rail Yard Improvement Project (June 2022)*". The CEQA Addendum will be part of the contract documents.

A. BIOLOGICAL RESOURCES

1. Clearing and grubbing, as indicated in Section 13, "Earthwork," of these Special Provisions, shall occur outside the bird breeding season (breeding season is February 15 to August 31) to avoid breeding birds. If vegetation clearing and grubbing occur during the breeding season, pre-construction nesting surveys shall be conducted to determine presence or absence of nesting birds. If nesting birds are discovered within 500 feet of proposed construction activities, such activities shall be halted until the young have fledged.

~~2. Prior to construction, individual sensitive plant species, such as California box-thorn and San Diego bur-sage, that would be impacted by the project shall be salvaged and replanted at off-site mitigation areas, where practicable.~~

3. All sensitive habitats outside the proposed impact area shall be designated as Environmentally Sensitive Areas (ESAs). These ESAs shall be fenced with orange plastic exclusionary fencing and no personnel, debris, or equipment shall be allowed within the ESAs. The ESAs shall be monitored during construction activities and, as needed, shall be maintained/fixed by the Contractor.

B. PALEONTOLOGICAL RESOURCES

1. Prior to and during construction, a paleontological monitoring plan shall be prepared and implemented and shall include the following:

    a. A qualified paleontologist shall attend a pre-construction meeting to consult with the grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology, who is familiar with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of San Diego County, and who has worked as a paleontological mitigation project supervisor in the County for at least one year.

    b. A paleontological monitor shall be on site on a full-time basis during the original cutting of previously undisturbed deposits with high or moderate paleontological resource potential (i.e., the Otay formation and terrace deposits) to inspect

exposures for contained fossils. A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor shall work under the direction of the qualified paleontologist. As grading progresses, the qualified paleontologist and paleontological monitor shall have the authority to reduce the scope of the monitoring program to an appropriate level if it is determined that the potential for impacts to paleontological resources is lower than anticipated.

c. If fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time, although if necessary, the paleontologist (or paleontological monitor) shall be allowed to briefly redirect, divert, or halt grading. Certain fossil specimens, however (e.g., a complete large mammal skeleton), may require an extended salvage period. In these instances, the paleontologist (or paleontological monitor) shall be allowed to redirect, divert, or halt grading to allow recovery of fossil remains in a timely manner.

d. Fossil remains collected during monitoring and salvage shall be cleaned (removal of extraneous enclosing sedimentary rock material), repaired (consolidation of fragile fossils and gluing together of broken pieces), sorted (separating fossils of different species), and cataloged (scientific identification of species, assignment of inventory tracking numbers, and recording of these numbers in a computerized collection database). Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall be deposited (as a donation) in an accredited scientific institution with permanent paleontological collections, such as the San Diego Natural History Museum.

e. A final summary report shall be prepared that outlines the results of the monitoring program.

C. MEASUREMENT AND PAYMENT

Environmental Requirements shall be measured as a lump sum.

The contract lump sum price paid for Environmental Requirements shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, for doing all the work involved in Environmental Requirements, as specified in these Special Provisions, and as directed by the Engineer.

10-1.10 PERMITS

Contractor shall obtain a Right of Entry permit from the Metropolitan Transit System (MTS) prior to any action requiring entry into the MTS Right-of-Way (ROW). MTS will pay Right of Entry permit fee.

10-1.11 RECORD DRAWINGS

A. Record accurately on one complete set of full size black and white prints denoting variation in work from original drawings. All recorded variations shall be done in red.

B. Dimensioning shall be from two permanent points of reference (sidewalks, pavement, curbs, streetlights, buildings, centerline of track, etc.). Markups shall be shown on record drawings daily or as work is performed. All drafting must be clearly legible, and dimensions shall be no smaller the 0.25 inches in size. Delineation between lines (edge of curb, irrigation line, edge of asphalt, etc.) must be clearly made by note or line type.

C. Maintain as-built drawings on site at all times. These drawings are subject to inspection at any time.

D. Upon acceptance of work Contractor must submit the complete and final set of record drawings to the Engineer.

E. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for Record Drawings shall be considered as included in the various items of work and no additional compensation will be allowed therefor.

10-1.12 AIR QUALITY

A. Per Title 13, California Code of Regulations, Amendments to Section 2449, Attachment A-1, Final Regulation Order, all diesel fueled fleet vehicles, as defined in this amendment, used on this project, shall comply with fuel type usage as outlined in the amendment.

B. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for maintaining Air Quality shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

10-2 MOBILIZATION AND SITE MANAGEMENT

10-2.01 MOBILIZATION

Mobilization shall be as defined in Section 1-1.07B, “Glossary,” of the Standard Specifications and conform to Section 10104 of the Public Contract Code.

A. MEASUREMENT AND PAYMENT

Partial Payments shall be made in accordance with Section 10264 of the Public Contract Code.

Mobilization shall be measured as a lump sum.

The contract lump sum price paid for Mobilization shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, for doing all the work involved in Mobilization, as specified in the Standard Specifications, Public Contract Code and these Special Provisions and as directed by the Engineer.

10-2.02 MAINTAINING VEHICULAR TRAFFIC

Attention is directed to Section 3.16, “Traffic Control,” of these Special Provisions.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for Maintaining Vehicular Traffic shall be considered included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

Note, all costs associated with flagging for Maintaining Vehicular Traffic shall be the responsibility of the Contractor.

10-2.03 MAINTAINING PEDESTRIAN TRAFFIC

All sidewalks crossing and adjacent to job site entrances and exits shall remain clean and clear such that sidewalks will function as intended to allow passage of pedestrians throughout the duration of the project.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for Maintaining Pedestrian Traffic shall be considered included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

Note, all costs associated with flagging for Maintaining Vehicular Traffic shall be the responsibility of the Contractor.

10-2.04 CONSTRUCTION AREA LIGHTING

All working areas utilized by the Contractor to perform work during the hours of darkness, shall be lighted to conform to the minimum illumination intensities established by the California Division of Industrial Safety Construction Safety Orders.

All lighting fixtures shall be mounted and directed in a manner precluding glare to approaching traffic, adjacent residences, and businesses.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for Construction Area Lighting shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

10-2.05 SITE CONDITIONS AND ACCESS

Contractor shall arrange a meeting on-site with the Engineer a minimum of 48 hours in advance of the start of construction at the site and examine the job-site area and conditions under which work of these

Special Provisions will be performed. The Contractor shall notify the Engineer in writing, within 24 hours following the on-site meeting, of all discrepancies between the existing site conditions and those shown on the plans. Contractor's failure to provide written notification to the Engineer will indicate that no discrepancies exist.

The project site is accessible through public right of way. The site is within MTS jurisdiction. Contractor shall obtain a Right-of-Entry permit from MTS prior to entering MTS Right-of-Way. Contractor shall include MTS in access notification to the Engineer. Contractor shall comply with Right-of-Entry requirements as indicated in the MTS Standard Construction Notes shown on the plans.

Contractor shall always maintain secure access to MTS Right-of-Way throughout the entire construction duration.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for Site Conditions and Access shall be considered as included in the contract prices paid for the various items of work and no additional compensation will be allowed therefor.

10-2.06 CONSTRUCTION STAGING AREA

No City of San Diego ROW shall be used for staging, storage, or laydown areas during the construction period. Nor shall any area within 15 feet of center line of an active track, within MTS right of way, be used for staging, storage, or laydown areas. The contractor shall be responsible for maintaining onsite and any offsite construction staging and laydown areas, and shall be responsible for any property rental, permits, security, lighting, fencing, utilities, or other temporary measures required to properly utilize either site as a construction staging and laydown area. The contractor shall accept full responsibility and liability for use of the site during the construction period. Neither MTS, nor San Diego Trolley, shall be liable for any claims resulting from contractor's use of an offsite construction staging and laydown areas.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for Construction Staging Area including procuring, developing, and maintaining a construction staging and laydown area shall be considered as included in the contract lump sum price paid for mobilization and no additional compensation will be allowed therefor.

10-2.07 DEVELOP WATER SUPPLY

Develop Water Supply shall conform to Section 10-6, "Watering" of the Standard Specifications.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for Develop Water Supply shall be considered as included in the contract lump sum price paid for mobilization and no additional compensation will be allowed therefor.

10-2.08 TEMPORARY FENCING

Where applicable in accordance with these Special Provisions temporary fencing shall be securely anchored and shall only be placed within MTS ROW. The contractor shall submit a temporary fencing plan a minimum of five (5) working days for review by the Engineer prior to the installation of any temporary fencing.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for ~~construction surveying~~ temporary fencing shall be considered as included in the contract prices paid for the various items of work requiring temporary fencing and no additional compensation will be allowed therefor.

10-2.09 CONSTRUCTION SURVEYING

Construction staking shall be in conformance with Chapter 12 of the Caltrans Surveys Manual, dated November 2012. Legible copies of all construction operations staking sheets shall be provided to Engineer two days before construction work is started.

All field construction surveying required for accurate location and the construction of the various items of work under the contract shall be performed and furnished by the Contractor.

The contractor shall be responsible for performing a site verification survey to confirm the existing grades and conditions at the site prior to any grading or construction operations. The survey data shall be overlaid electronically, in AutoCAD Civil 3D (2013) format, on the original ground as shown on the project plans, and any variations brought to the attention of the Engineer. Any variation in pay quantities due to deviations in the original ground elevation or contour from that shown on the project plans shall be compensated as provided for in the Standard Specifications and these Special Provisions. Failure to perform the site verification survey prior to grading or construction shall constitute acceptance on the contractor’s part of the existing grades and conditions at the site.

The Contractor shall notify the Engineer, in writing, 48 hours in advance of any construction staking.

The Contractor shall replace any disturbed existing property corner markers, monuments, and local agencies' well monuments disturbed during construction operations. These new markers, monuments, and well monuments shall be documented by a record of survey map or corner record prepared in accordance with Section 8771 of the Business and Professions Code and all applicable laws and regulations and filed in the Office of the County Recorder of San Diego County at the Contractor's expense.

A. MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for construction surveying shall be considered as included in the contract prices paid for the various items of work requiring construction surveying and no additional compensation will be allowed therefor.

10-2.10 CONSTRUCTION NOISE

Construction generated noise shall comply with San Diego County Code Section 36.409 which limits construction generated noise to 75 dB(A) L_{eq} or less for an eight-hour period between the hours of 7:00 am to 7:00 pm, when measured on at the boundary line of the property where the noise source is located on any occupied property where the noise is being received. Per City of San Diego Municipal Code Section 59.5.0404 no construction work shall be performed during the hours of 7:00 pm and 7:00 am nor on any Sunday or recognized holiday as listed in the Municipal Code. Where night work may be required to comply with MTS guidelines Contractor shall apply for City permit to allow such work.

10-3 DEMOLITION

10-3.01 GENERAL

Demolition

END OF SECTION 10

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3/28/2022

SECTION 11
STORM WATER POLLUTION CONTROL DURING CONSTRUCTION

11-1 WATER POLLUTION CONTROL

11-1.01 WATER POLLUTION CONTROL – GENERAL

Water pollution control work shall conform to the provisions in Section 13, "Water Pollution Control," of the Standard Specifications, and these Special Provisions.

The Contractor shall comply with the following permits:

1. State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ and National Pollutant Discharge Elimination System (NPDES) Permit No. CAS000002

2. Regional Water Quality Control Board (RWQCB) Order No. R9-2007-0001 and NPDES Permit No. CAS0108758

The Contractor may obtain other National Pollutant Discharge Elimination System (NPDES) permits that apply to activities and mobile operations within or outside of the project limits including material borrow and/or processing areas, concrete plants, staging areas, storage yards, or access roads.

The Contractor shall perform water pollution control work in conformance with the requirements in the "California Stormwater Quality Association Construction Stormwater Best Management Practices Handbook," the "Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual" and addenda in effect on the day the Notice to Contractors is dated. This manual is referred to as the "Preparation Manual." Copies of the Preparation Manual may be obtained from:

State of California
Department of Transportation
Publication Distribution Unit
1900 Royal Oaks Drive
Sacramento, CA 95815
Telephone: (916) 445-3520

The Preparation Manual and other references for performing water pollution control work are available from the Caltrans' Construction Storm Water and Water Pollution Control web site at:

Storm Water and Water Pollution Control | Caltrans

11-1.02 CONTRACTOR SWPPP QUALIFICATIONS

The Contractor shall designate in writing a Qualified SWPPP Developer (QSD) and a Qualified SWPPP Practitioner (QSP). The Contractor shall submit a statement of qualifications describing the training, work history, and expertise of the proposed QSD and QSP along with certifications. Contractor shall comply with the training qualifications and certifications requirements defining the QSD and QSP as outlined in the NPDES permit.

The development of and revisions/amendments to, the SWPPP must be performed by the QSD as defined in the NPDES permit. Installation, monitoring, maintenance, and repair of Best Management Practices (BMPs) shall be performed or supervised by the QSP as defined in the NPDES permit. Stormwater sampling, as required by the NPDES permit and/or the SWPPP shall be performed or supervised by the QSP as defined in the NPDES permit. The QSP may delegate any or all these activities to an employee trained to do the task(s) appropriately but shall ensure adequate deployment.

The Contractor's management and supervisory personnel along with contractor and subcontractor workers involved with the placement and maintenance of non-storm and storm water pollution prevention "Best Management Practices" (BMPs) shall be trained on general non-storm and storm water pollution control requirements consistent with the "Construction Site Best Management Practices" and should be commensurate with the job performed by the employee.

MEASUREMENT AND PAYMENT

No separate measurement shall be made for complying with the requirements of this section.

Full compensation for water pollution control training shall be considered as included in the contract lump sum price paid for Prepare SWPPP, and no additional compensation will be allowed, therefore.

11-1.03 STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PREPARATION AND SUBMITTAL

The Contractor shall prepare and submit a final Storm Water Pollution Prevention Plan (SWPPP) to the Engineer for approval. The SWPPP shall conform to the requirements in the Preparation Manual, the NPDES permits, and these Special Provisions. The SWPPP shall be submitted in place of the water pollution control program required by the provisions in Section 13-2, "Water Pollution Control Program," of the Standard Specifications.

The SWPPP shall include Best Management Practices (BMPs):

A. For storm water and non-storm water from areas outside of the job site related to construction activities for this contract such as:

    1. Staging areas.
    2. Storage yards.
    3. Access roads.

B. Appropriate for each season as described in Section 11-1.07, "Implementation Requirements" of these Special Provisions.

C. For activities or mobile operations related to all NPDES permits.

The SWPPP shall include a schedule that:

    1. Describes when work activities that could cause water pollution will be performed.
    2. Identifies soil stabilization and sediment control practices for disturbed soil area.
    3. Includes dates when these practices will be 25, 50, and 100 percent complete.
    4. Shows 100 percent completion of these practices before the rainy season.

The SWPPP shall include the following temporary BMPs and their associated contract items of work as shown on the plans or specified in these Special Provisions:

1. Temporary Soil Stabilization
2. Temporary Sediment Control
3. Tracking Control
4. Wind Erosion Control
5. Non-Storm Water Management
6. Waste Management and Materials Pollution Control

The SWPPP shall include the following contract items of work for permanent water pollution control as shown on the plans or as specified in these Special Provisions:

1. Slope Planting

Within 30 days after the notice of award, the Contractor shall submit 3 copies of the SWPPP to the Engineer. The Contractor shall allow 20 days for the Engineer's review. If revisions are required, the Engineer will provide comments and specify the date that the review stopped. The Contractor shall revise and resubmit the SWPPP within 15 days of receipt of the Engineer's comments. The Engineer's review will resume when the complete SWPPP is resubmitted. When the Engineer approves the SWPPP, the Contractor shall submit 4 copies of the approved SWPPP to the Engineer. The Contractor may proceed with construction activities if the Engineer conditionally approves the SWPPP while minor revisions are being completed. If the Engineer fails to complete the review within the time allowed and if, in the opinion of the Engineer, completion of the work is delayed or interfered with by reason of the Engineer's delay, the Contractor will be compensated for resulting losses, and an extension of time will be granted, as provided for in Section 3.33, "Time For Completion and Liquidated Damages," of these Special Provisions.

The Contractor shall not perform work that may cause water pollution until the SWPPP has been approved by the Engineer. The Engineer's review and approval shall not waive any contract requirements and shall not relieve the Contractor from complying with Federal, State and local laws, regulations, and requirements.

The Contractor shall amend the SWPPP annually and shall resubmit it to the Engineer 25 days before the defined rainy season.

If there is a change in construction schedule or activities, the Contractor shall prepare an amendment to the SWPPP to identify additional or revised BMPs. In addition, the SWPPP shall be updated for each new phase or stage of the construction project. The Contractor shall submit the amendment to the Engineer for review within a time agreed to by the Engineer not to exceed the number of days specified for the initial submittal of the SWPPP. The Engineer will review the amendment within the same time allotted for the review of the initial submittal of the SWPPP.

If directed by the Engineer or requested in writing by the Contractor and approved by the Engineer, changes to the water pollution control work specified in these Special Provisions would be allowed. Changes may include addition of new BMPs. The Contractor shall incorporate these changes in the SWPPP. Additional water pollution control work will be paid for as extra work in accordance with Section 3.35, "Changes and Extra Work Payment," of these Special Provisions.

The Contractor shall keep a copy of the approved SWPPP at the job site. The SWPPP shall be made available when requested by a representative of the Regional Water Quality Control Board, State Water Resources Control Board, United States Environmental Protection Agency, or the local storm water management agency. Requests from the public shall be directed to the Engineer.

11-1.04 SAMPLING AND ANALYSIS PLAN (SAP)

The Contractor shall include a Sampling and Analysis Plan (SAP) in the SWPPP to monitor the effectiveness of the BMPs. The Contractor shall prepare the SAP in conformance with the Preparation Manual.

The Contractor shall designate trained personnel to collect water quality samples. The personnel and training shall be documented in the SAP. Training shall consist of the following elements:

1. SAP review,
2. Health and safety review, and
3. Sampling simulations.

In the SAP the Contractor shall describe the following water quality sampling procedures:

1. Sampling preparation,
2. Collection,
3. Quality assurance and quality control,
4. Sample labeling,
5. Collection documentation,
6. Sample shipping,
7. Chain of custody,
8. Sample numbering, and
9. Precautions from the construction site health and safety plan.

The Contractor shall document sample collection during precipitation. Samples to be analyzed in the field shall be taken by the Contractor's designated sampling personnel using collection and analysis methods, and equipment calibration specified by the manufacturer of the sampling equipment. Samples to be analyzed by a laboratory, shall be sampled, preserved, and analyzed by a State-certified laboratory in conformance with the requirements in 40 CFR Part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants." The Contractor shall identify the State-certified laboratory, sample containers, preservation requirements, holding times, and analysis method in the SAP. A list of State-certified laboratories that are approved by the Caltrans is available at:

http://www.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml

11-1.05 NON-VISIBLE POLLUTANTS

This project has the potential to discharge non-visible pollutants in storm water from the construction site. The Contractor shall include in the SAP a description of the sampling and analysis strategy to be implemented on the project for monitoring non-visible pollutants.

In the SAP the Contractor shall identify the sources and locations of potential non-visible pollutants that will be present on the construction site associated with the following:

1. Construction materials and wastes.
2. Existing contamination due to historical site usage; or
3. Application of soil amendments, including soil stabilization products, with the potential to alter pH or contribute toxic pollutants to storm water.

The Contractor shall show the locations planned for storage and use of the potential non-visible pollutants on the SWPPP Water Pollution Control Drawings. The Contractor shall include in the SAP the following list of conditions that require sampling when observed during a storm water inspection:

A. Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions.

B. Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but:

1. A breach, leakage, malfunction, or spill is observed.
2. The leak or spill has not been cleaned up before precipitation; and
3. There is the potential for discharge of non-visible pollutants to surface waters or drainage system.

C. Construction activities, such as application of fertilizer, pesticide, herbicide, methyl methacrylate concrete sealant, or non-pigmented curing compound; have occurred during precipitation or within 24 hours preceding precipitation, and have the potential to discharge pollutants to surface waters or drainage system.

D. Soil amendments, including soil stabilization products, with the potential to alter pH levels or contribute toxic pollutants to storm water runoff have been applied, and have the potential to discharge pollutants to surface waters or drainage system (unless independent test data are available that demonstrate acceptable concentrations of non-visible pollutants in the soil amendment).

E. Storm water runoff from an area contaminated by historical usage of the site has the potential to discharge pollutants to surface waters or drainage system.

The Contractor shall describe in the SAP the schedule for collecting a sample downhill from each non-visible pollutant source and an uncontaminated control sample, during the first 2 hours of discharge from precipitation during daylight hours that result in enough discharge for sample collection. If discharge flows to the non-visible pollutant source, a sample shall be collected immediately downhill from where the discharge enters the owner's right of way. If precipitation occurs again after at least 72 hours of dry weather the Contractor shall take new samples.

In the SAP the Contractor shall identify sampling locations for collecting downstream and control samples, and the reason for their selection. The control sampling location shall be selected so the sample does not come into contact with materials, wastes or areas associated with potential non-visible pollutants or disturbed soil areas. The Contractor shall show non-visible pollutant sampling locations on the SWPPP Water Pollution Control Drawings.

The Contractor shall identify in the SAP the analytical method to be used for downhill and control samples for potential non-visible pollutants on the project.

11-1.06 ANALYTICAL RESULTS AND EVALUATION

The Contractor shall submit a hard copy and electronic copy of water quality analytical results, and quality assurance and quality control data to the Engineer within 5 days of sampling for field analyses, and within 30 days for laboratory analyses. The Contractor shall also provide an evaluation of whether the downhill samples show levels of the tested parameter higher than in the control sample. If downhill or downstream samples show increased levels, the Contractor will assess the water pollution control measures, site conditions, and surrounding influences to determine the probable cause for the increase. As determined by the assessment, the Contractor will repair or modify water pollution control measures to address increases and amend the SWPPP as necessary. Electronic results (in one of the following file formats: .xls, .txt, .csv, .dbs, or .mdb) shall have the following information:

1. Sample identification number.
2. Contract number.
3. Constituent.
4. Reported value.
5. Analytical method.
6. Method detection limit.
7. Reported limit.

The Contractor shall maintain the water quality sampling documentation and analytical results with the SWPPP on the project site until a Notice of Completion has been submitted and approved.

If construction activities or knowledge of site conditions change such that discharges or sampling locations change, the Contractor shall amend the SAP in conformance with this section, "Water Pollution Control."

11-1.07 IMPLEMENTATION REQUIREMENTS

The Contractor shall construct, inspect, maintain, remove, and dispose of the BMPs in accordance with the approved SWPPP. The Contractor's responsibility for SWPPP implementation shall continue throughout any temporary suspension of work ordered in conformance with the provisions in Section 8-1.06, "Suspensions," of the Standard Specifications.

If the Contractor or the Engineer identifies a deficiency in the implementation of the approved SWPPP, the deficiency shall be corrected immediately, unless an agreed date for correction is approved in writing by the Engineer. The deficiency shall be corrected before the onset of precipitation. If the Contractor fails to correct the deficiency by the agreed date or before the onset of precipitation, the owner may correct the deficiency and deduct the cost of correcting deficiencies from payments.

If the Contractor fails to conform to the provisions of this section, "Water Pollution Control," the Engineer may order the suspension of work until the project complies with the requirements of this section.

The Contractor shall construct permanent BMPs identified in the SWPPP and as specified in these Special Provisions. The Contractor shall maintain the permanent BMPs in the locations and condition shown on the plans throughout the duration of the project.

11-1.08 YEAR-ROUND

As part of the SWPPP, the Contractor shall have a “weather triggered” action plan and have the ability to deploy BMPs as required to completely protect the exposed portion of the project site within 48 hours of a predicted storm event (50% chance of ½ inch or more rain). The “weather triggered” action plan shall include details for mobilizing sufficient labor and equipment to deploy the BMPs required to protect soil areas prior to the onset of precipitation.

The National Weather Service weather forecast shall be monitored and used by the Contractor on a daily basis. If precipitation is predicted, the necessary BMPs shall be deployed prior to the onset of the precipitation.

A minimum of 125% of the material needed to install “weather triggered” BMPs necessary to completely protect the exposed portions of the site from erosion, and to prevent sediment discharges, must be stored on site. Areas that have already been protected from erosion using physical stabilization or established vegetation stabilization BMPs as determined by the Engineer, are not considered to be “exposed” for purposes of this requirement.

The Contractor may discontinue earthwork operations for a disturbed area for up to 21 days and the disturbed soil area will still be considered active. When earthwork operations in the disturbed area have been completed, the Contractor shall implement appropriate BMPs within 15 days, or before predicted precipitation, whichever occurs first.

11-1.09 RAINY SEASON

The Contractor shall provide soil stabilization and sediment control practices during the rainy season between October 1 and April 30.

The Contractor shall implement soil stabilization and sediment control practices a minimum of 10 days before the start of the rainy season.

The Contractor shall maintain soil stabilization and sediment control materials on site to protect disturbed soil areas.

The Contractor shall provide an updated “weather triggered” action plan on a monthly basis at the beginning of each month during the rainy season (October 1st through April 30th). A detailed plan for the mobilization of sufficient labor and equipment shall be maintained to deploy the BMPs required to protect disturbed soil areas prior to the onset of precipitation.

11-1.10 INSPECTION AND MAINTENANCE

The QSP shall inspect the BMPs identified in the SWPPP as follows:

1. Before a forecasted storm,
2. After precipitation that causes site runoff,
3. At 24-hour intervals during extended precipitation,
4. On a predetermined schedule, a minimum of once every month outside of the defined rainy season, and

5. On a predetermined schedule, a minimum of once every two weeks during the defined rainy season.
6. On a predetermined schedule, a minimum of once per week during the defined rainy season if a project is located over or within 150 feet of a 303d listed waterbody.

Forecasted storm is defined as a 50% chance of ½" or more of rain within 48 hours, as identified by the National Weather Service.

The QSP shall oversee the maintenance of the BMPs. The QSP shall use the Storm Water Quality Construction Site Inspection Checklist provided in the Preparation Manual or an alternative inspection checklist provided by the Engineer. A copy of the completed site inspection checklist shall be submitted to the Engineer within 24 hours of finishing the inspection. The Engineer shall ensure the site inspections are accurate and complete.

11-1.11 UNAUTHORIZED DISCHARGES

No unauthorized discharges of any material, debris, or pollutant may leave the project site and/or enter the storm water conveyance system including process and wash waters, dust, petroleum products, soil, or debris. The Contractor shall be responsible for clean-up, mitigation, and penalties resulting from failure to implement and maintain appropriate BMPs for pollution prevention. Any penalties assessed to the Owner as a result of unauthorized discharges will be withheld from the Contractor's progress payments.

11-1.12 CLEAN UP

All unsalvageable materials used in the storm water pollution prevention program shall be properly disposed of outside of the Owner's property at the completion of work.

11-1.13 REPORTING REQUIREMENTS

If the Contractor identifies discharges into surface waters or drainage systems causing or potentially causing pollution, or if the project receives a written notice or order from a regulatory agency, the Contractor shall immediately inform the Engineer. The Contractor shall submit a written report to the Engineer within 7 days of the discharge, notice or order. The report shall include the following information:

1. The date, time, location, nature of the operation, type of discharge; and the cause of the notice or order.
2. The BMPs used before the discharge, or before receiving the notice or order.
3. The date of placement and type of additional or altered BMPs placed after the discharge, or after receiving the notice or order.
4. A maintenance schedule for affected BMPs.

11-1.14 ANNUAL CERTIFICATIONS

By July 15 of each year, the Contractor shall complete and submit to the Engineer an Annual Certification of Compliance, as contained in the Preparation Manual.

11-1.15 MEASUREMENT AND PAYMENT

During each estimate period the Contractor fails to conform to the provisions in this section, "Water Pollution Control," or fails to implement the BMPs shown on the plans or specified elsewhere in these Special Provisions as items of work, the owner may withhold 25 percent of the progress payment.

Failure to implement practices may include, but are not limited to, the following:

- Observation of non-storm water discharges without proper BMP implementation
- Observation of erosion due to missing or improperly implemented soil stabilization and sediment control BMPs
- Failure to submit an updated SWPP for a new phase or stage
- Failure to amend the SWPPP when a change in project conditions occurs or when BMP deficiencies are identified
- Failure to implement required erosion and sediment control BMPs on active and/or inactive disturbed soil areas.
- Failure to maintain a stockpile of BMPs for installation prior to a rain event.
- Failure to maintain BMPs in the field
- Failure to perform appropriate site inspections
- Failure to implement the project's Sampling and Analysis Plan
- Failure to install or maintain BMPs as described in the SWPPP and in the Construction Site Maintenance section of these Special Provisions

Withholds for failure to perform water pollution control work will be in addition to all other withholds provided for in the contract. The owner will return performance-failure withholds in the progress payment following the correction of noncompliance.

Prepare Storm Water Pollution Prevention Plan (SWPPP) shall be measured as a lump sum.

The contract lump sum price paid for prepare Storm Water Pollution Prevention Plan shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in preparing, obtaining approval of, and amending the SWPPP, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

Payments for prepare SWPPP will be made as follows:

A. After the SWPPP has been approved by the Engineer, 75 percent of the contract item price for Storm Water Pollution Prevention Plan will be included in the monthly progress estimate.

B. After acceptance of the contract in conformance with the provisions in Section 5-1.46, "Final Inspection and Contract Acceptance," of the Standard Specifications, payment for the remaining percentage of the contract item price for prepare Storm Water Pollution Prevention Plan will be made in conformance with the provisions in Section 3.4, "Payment," of these Special Provisions.

Storm water sampling and analysis will be paid for as extra work as provided in Section 3.35, "Changes and Extra Work," of these Special Provisions. No payment will be made for the preparation, collection, analysis, and reporting of storm water samples where appropriate BMPs are not implemented before precipitation or if a failure of a BMP is not corrected before precipitation.

Water Pollution Control shall be measured as a lump sum.

The contract lump sum price paid for water pollution control shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing, constructing, removing, and disposing of BMPs, including non-storm water management, and waste management and materials pollution BMPs, except those for which there is a contract item of work as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

Storm water sampling and analysis will be paid for as extra work as provided in Section 3.35, "Changes and Extra Work," of these Special Provisions. No payment will be made for the preparation, collection, analysis, and reporting of storm water samples required where appropriate BMPs are not implemented prior to a rain event, or if a failure of a BMP is not corrected prior to a rain event.

For items identified on the approved Water Pollution Control Cost Break-Down, the cost of maintaining temporary BMPs shall be divided equally by MTS and the Contractor as follows:

Soil Stabilization

Temporary BMPs except:

SS-1 Scheduling

SS-2 Preservation of Existing Vegetation

Sediment Control

Temporary water pollution control

Wind Erosion Control

No sharing of maintenance costs will be allowed.

Non-Storm Water Management

No sharing of maintenance costs will be allowed.

Waste Management & Materials Pollution Control

No sharing of maintenance costs will be allowed.

The division of cost will be made by determining the cost of maintaining BMPs in conformance with the provisions in Section 9-1.04, "Force Account," of the Standard Specifications and paying to the Contractor one-half of that cost. Cleanup, repair, removal, disposal, improper installation, and replacement of BMPs damaged by the Contractor's negligence, shall not be considered as included in the cost for performing maintenance.

The provisions for sharing maintenance costs shall not relieve the Contractor from the responsibility for providing appropriate maintenance on items with no shared maintenance costs.

Full compensation for non-shared maintenance costs of BMPs, as specified in this section, "Water Pollution Control," shall be considered as included in the contract lump sum price paid for water pollution control and no additional compensation will be allowed therefor.
Implementation of BMPs in areas outside the MTS right of way not specifically provided for in the SWPPP or in these Special Provisions will not be paid for.

BMPs for which there are separate contract items of work will be measured and paid for as those contract items of work.

11-1.16 COST BREAK-DOWN

The Contractor shall include a Water Pollution Control Cost Break-Down in the SWPPP which itemizes the contract lump sum for water pollution control work. The Contractor shall use the Water Pollution Control Cost Break-Down sample provided in this section as a template for the cost break-down submitted with the SWPPP. The Contractor shall use the Water Pollution Control Cost Break-Down to identify items, quantities, and values for water pollution control work, excluding Temporary BMPs for which there are separate bid items. The Contractor shall be responsible for the accuracy of the quantities and values used in the cost break-down submitted with the SWPPP. Partial payment for the item of water pollution control will not be made until the Water Pollution Control Cost Break-Down is approved by the Engineer.

Line items indicated in the Water Pollution Control Cost Break-Down in this section with a specified Estimated Quantity shall be considered "Project-Specific Minimum Requirements." The Contractor shall incorporate Project-Specific Minimum Requirements with Contractor-designated quantities and values into the Water Pollution Control Cost Break-Down submitted with the SWPPP.

Line items indicated in the Water Pollution Control Cost Break-Down in this section without a specified Estimated Quantity shall be considered by the Contractor for selection to meet the applicable "Minimum Requirements" as defined in the Manuals, or for other water pollution control work as identified in the "Construction Site BMPs Consideration Checklist" presented in the Preparation Manual. In the Water Pollution Control Cost Break-Down submitted with the SWPPP, the Contractor shall list only those water pollution control practices selected for the project, including quantities and values required to complete the work for those items.

The sum of the amounts for the items of work listed in the Water Pollution Control Cost Break-Down shall be equal to the contract lump sum price bid for water pollution control. Overhead and profit, except for time-related overhead, shall be included in the individual items listed in the cost break-down.

SAMPLE WATER POLLUTION CONTROL COST BREAK-DOWN

Contract No. 1147000

ITEM	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	VALUE	AMOUNT
SS-5	Soil Binders	YD2			
SS-6	Straw Mulch	YD 2			
SS-7	Geotextiles, Plastic Covers & Erosion Control Blankets/Mats	YD 2			
SS-9	Earth Dikes/Drainage Swales & Lined Ditches	FT			

ITEM	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	VALUE	AMOUNT
SS-10	Outlet Protection/Velocity Dissipation Devices	EA			
SS-11	Slope Drains	EA			
SC-1	Silt Fence	FT			
SC-6	Gravel Bag Berm	FT			
SC-8	Sandbag Barrier	FT			
SC-10	Temporary Drainage Inlet Protection	FT			
WE-1	Wind Erosion Control	LS			
TC-2	Stabilized Construction Roadway	EA			
NS-1	Water Conservation Practices	LS			
NS-3	Paving and Grinding Operations	LS			
NS-6	Illicit Connection/Illegal Discharge Detection and Reporting	LS			
NS-7	Potable Water/Irrigation	LS			
NS-9	Vehicle and Equipment Fueling	LS			
NS-10	Vehicle and Equipment Maintenance	LS			
NS-12	Concrete Curing	LS			
NS-14	Concrete Finishing	LS			
WM-1	Material Delivery and Storage	LS			
WM-2	Material Use	LS			
WM-3	Stockpile Management	LS			
WM-4	Spill Prevention and Control	LS			
WM-5	Solid Waste Management	LS			
WM-6	Hazardous Waste Management	LS			
WM-7	Contaminated Soil Management	LS			
WM-8	Concrete Waste Management	LS			
WM-9	Sanitary/Septic Waste Management	LS			
WM-10	Liquid Waste Management	LS			

TOTAL _____

Adjustments in the items of work and quantities listed in the approved cost break-down shall be made when required to address amendments to the SWPPP, except when the adjusted items are paid for as extra work. No adjustment in compensation will be made to the contract lump sum price paid for water pollution control due to differences between the quantities shown in the approved cost break-down and the quantities required to complete the work as shown on the approved SWPPP. No adjustment in compensation will be made for ordered changes to correct SWPPP work resulting from the Contractor's own operations or from the Contractor's negligence.

The approved cost break-down will be used to determine partial payments during the progress of the work and as the basis for calculating the adjustment in compensation for the item of water pollution control due to increases or decreases of quantities ordered by the Engineer. When an ordered change increases or decreases the quantities of an approved cost break-down item, the adjustment in compensation will be determined in the same manner specified for increases and decreases in the quantity of a contract item of work in conformance with the provisions in Section 3.35, “Changes and Extra Work Payment,” of these Special Provisions. If an ordered change requires a new item which is not on the approved cost break-down, the adjustment in compensation will be determined in the same manner specified for extra work in conformance with Section 3.35, “Changes and Extra Work Payment,” of the Special Provisions.

If requested by the Contractor and approved by the Engineer, changes to the BMPs listed in the approved cost break-down, including addition of new BMPs, will be allowed. Changes shall be included in the approved amendment of the SWPPP. If the requested changes result in a net cost increase to the lump sum price for water pollution control, an adjustment in compensation will be made without change to the water pollution control item. The net cost increase to the water pollution control item will be paid for as extra work as provided in Section 3.35, “Changes and Extra Work Payment,” of the Special Provisions.

11-1.17 RELATIONS WITH CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

This project lies within the boundaries of the San Diego Regional Water Quality Control Board (RWQCB).

This project is subject to the requirements of the current Statewide General Permit issued by the SWRCB entitled "Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity," which regulates discharges of storm water and non-storm water from construction activities disturbing 0.4-hectare {one acre} or more of soil in a common plan of development. Sampling and analysis requirements as specified in SWRCB Resolution No. 2001-46 are added to the Statewide General Permit. Copies of the Statewide General Permit and modifications thereto are available for review from the SWRCB, Storm Water Permit Unit, 1001 "I" Street, P.O. Box 1977, Sacramento, California 95812-1977, Telephone: (916) 341-5254 and may also be obtained from the SWRCB internet website at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/index.shtml

The Notice of Intent (NOI) and applicable fee will be filed by the Owner of this project. Copies of the NOI and Waste Discharge Identification Number can be obtained from the Engineer.

11-1.18 WORK WITHIN THE CITY OF SAN DIEGO RIGHT OF WAY

The State Water Resources Control Board (SWRCB) has issued a permit to the County of San Diego, the Incorporated Cities of San Diego, The San Diego Unified Port District, and the San Diego County Regional Airport Authority which governs storm water and non-storm water discharges from its properties, facilities, and activities. The Municipal Permit is entitled: California Regional Water Quality Control Board, San Diego Region, Order No. R9-2007-0001, NPDES No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, The Incorporated Cities of San Diego County, The San Diego Unified Port District, and the San Diego County Regional Airport Authority. Copies of the Permit are available for review from SWRCB, Region 9, 9174 Sky Park Court, Suite 100, San Diego, CA 92123-4340, and may also be obtained from the SWRCB internet website at: http://www.swrcb.ca.gov/rwqcb9. This project may be subject to local ordinances issued by permittees and co-permittees to comply with Order No. R9-2007-0001.

This project shall conform to the permits and modifications thereto. The Contractor shall maintain copies of the permits at the project site and shall make them available during construction.

The Contractor shall know and comply with provisions of Federal, State, and local regulations and requirements that govern the Contractor's operations and storm water and non-storm water discharges from the project site and areas of disturbance outside the project limits during construction. Attention is directed to Sections 3.29, "Protection of Work and Property," and 3.20, "Indemnification," of these Special Provisions.

The Contractor shall be responsible for penalties assessed on the Contractor or the owner as a result of the Contractor's failure to comply with the provisions in "Water Pollution Control" of these Special Provisions or with the applicable provisions of the Federal, State, and local regulations and requirements. If project documentation, including but not limited to site inspection checklists and correspondence to the contractor, shows that the contractor is in compliance with the project SWPPP, the Engineer may waive contractor responsibility for penalties.

Penalties as used in this section shall include fines, penalties, and damages, whether proposed, assessed, or levied against the owner or the Contractor, including those levied under the Federal Clean Water Act and the State Porter-Cologne Water Quality Control Act, by governmental agencies or as a result of citizen suits. Penalties shall also include payments made or costs incurred in settlement for alleged violations of applicable laws, regulations, or requirements. Costs incurred could include sums spent instead of penalties, in mitigation or to remediate or correct violations.

11-1.19 WITHHOLDS

The Engineer will withhold money due the Contractor, in an amount determined by the Engineer, up to and including the entire amount of penalties proposed, assessed, or levied as a result of the Contractor's violation of the permits, or Federal or State law, regulations, or requirements. Funds will be withheld by the Engineer until final disposition of penalties has been made. The Contractor shall remain liable for the full amount of penalties until they are finally resolved with the entity seeking the penalties.

If a regulatory agency identifies a failure to comply with the permits and modifications thereto, or other Federal, State, or local requirements, the owner will withhold money due the Contractor, subject to the following:

A. The Engineer will give the Contractor 30 days notice of the owner's intention to withhold funds from payments, which may become due to the Contractor before acceptance of the contract. Funds withheld after acceptance of the contract will be made without prior notice to the Contractor.

B. No withholds of additional amounts out of payments will be made if the amount to be withheld does not exceed the amount being withheld from partial payments in accordance with Section 3.34, "Payment," of these Special Provisions.

C. If the Engineer has withheld funds, and it is subsequently determined that the State is not subject to the entire amount of the costs and liabilities assessed or proposed in connection with the matter for which the withhold was made, the Engineer will be liable for interest on the amount withheld for the period of the withhold. The interest rate payable shall be 6 percent per annum.

The Contractor shall notify the Engineer immediately upon request from the regulatory agencies to enter, inspect, sample, monitor, or otherwise access the project site or the Contractor's records pertaining to water pollution control work. The Contractor and the owner shall provide copies of correspondence, notices of violation, enforcement actions, or proposed fines by regulatory agencies to the requesting regulatory agency.

11-2 BEST MANAGEMENT PRACTICE (BMP) ITEMIZED ELEMENTS

11-2.01 TEMPORARY CONCRETE WASHOUT FACILITY

Temporary concrete washout facilities shall be constructed, maintained, and later removed at the locations shown on the approved Storm Water Pollution Prevention Plan in conformance with "Water Pollution Control" of these Special Provisions, and in conformance with details shown on the plans and these Special Provisions.

Temporary concrete washout facilities shall be one of the BMPs for waste management and materials pollution control. The Storm Water Pollution Prevention Plan shall include the use of temporary concrete washout facilities.

Temporary concrete washout facilities shall be above ground only and comply with Section 13-9, “Temporary Concrete Washouts,” of the Standard Specifications and these Special Provisions.

A. MAINTENANCE

Temporary concrete washout facilities shall be maintained to provide adequate holding capacity with a minimum freeboard of 1 ft. Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and returning the facilities to a functional condition. Hardened concrete materials shall be removed and disposed of in conformance with authorized removal methods submitted to the Engineer by the Contractor. Holes, rips, and voids in the plastic liner shall be patched and repaired by taping or the plastic liner shall be replaced. Plastic liner shall be replaced when patches or repairs compromise the impermeability of the material as determined by the Engineer.

Gravel bags shall be replaced when the bag material is ruptured or when the geotextile has failed, allowing the bag contents to spill out.

Temporary concrete washout facility shall be repaired or replaced on the same day when the damage occurs. Damage to the temporary concrete washout facility resulting from the Contractor's vehicles, equipment, or operations shall be repaired at the Contractor's expense.

B. MEASUREMENT AND PAYMENT

Temporary Concrete Washout shall be measured per each.

The contract unit price paid for Temporary Concrete Washout facility shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing temporary concrete washout facility, complete in place, including, maintenance, and removal of temporary concrete washout facility, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

No adjustment of compensation will be made for any increase or decrease in the quantities of temporary concrete washout facility required, regardless of the reason for the increase or decrease. The provisions in Section 3.35, "Changes and Extra Work Payment," of the Special Provisions shall not apply to temporary concrete washout facility.

11-2.02 TEMPORARY CHECK DAM

Temporary check dam shall be constructed, maintained, and later removed at the locations shown on the approved Storm Water Pollution Prevention Plan in conformance with "Water Pollution Control" of these Special Provisions, and in conformance with details shown on the plans and these Special Provisions. Attention is directed to "Water Pollution Control" of these Special Provisions.

Temporary check dam shall be one of the BMPs for sediment control. The Storm Water Pollution Prevention Plan shall include the use of temporary check dam.
Temporary check dam shall be Type 1 (fiber roll) and Type 2 (gravel bag) as shown on the plans.

A. MATERIALS

Fiber Roll

Fiber roll materials shall conform to the provisions specified for fiber roll materials in "Temporary Fiber Roll" of these Special Provisions.

Gravel-filled Bag

Gravel-filled bag shall conform to the provisions specified for gravel bag in "Temporary Drainage Inlet Protection" of these Special Provisions.

B. INSTALLATION

Temporary check dam shall be installed as follows:

1. Temporary check dam (Type 1): Rope and notched stakes shall be used to restrain the fiber rolls against the surface of the unlined ditch or swale. Stakes shall be driven into the slope until the notch is even with the top of the fiber roll. Rope shall be knotted at each stake and laced between stakes. After installation of the rope, stakes shall be

driven into the slope such that the rope will hold the fiber roll tightly to the slope. Furrows will not be required. If metal stakes are used, the rope may be laced and knotted on the bend at the top of the metal stakes.

2. Temporary check dam (Type 2): A single layer of gravel bags shall be placed in lined or unlined ditches with ends abutted tightly and not overlapped.

3. The bedding area for the temporary check dam shall be cleared of obstructions including, but not limited to, rocks, clods, and debris greater than 1 inch in diameter prior to installation.

4. Temporary check dam shall be installed across and approximately perpendicular to the centerline of ditch or drainage line.

5. Temporary check dam shall be installed with sufficient spillway depth to prevent flanking of concentrated flow around the ends of the check dams.

6. Temporary check dam shall be installed in an unlined ditch or swale prior to the application of other temporary erosion control or soil stabilization materials in the same unlined ditch or swale.

Details for an alternative temporary check dam shall be submitted to the Engineer for approval at least 7 days prior to installation.

When the temporary check dam is no longer required, as determined by the Engineer, temporary check dam shall become the property of the Contractor and be removed and disposed of in conformance with the provisions in Section 13, "Water Pollution Control," of the Standard Specifications.

Ground disturbances, including holes and depressions caused by the installation and removal of the temporary check dam shall be backfilled and repaired in conformance with the provisions in Section 3.29, "Protection of Work and Property," of these Special Provisions.

C. MAINTENANCE

Temporary check dam shall be maintained to provide sediment holding capacity and to reduce runoff velocities. Split, torn, or unraveling rolls shall be repaired or replaced. Broken or split stakes shall be replaced. Sagging or slumping fiber rolls shall be repaired with additional stakes or replaced. Gravel bags shall be replaced when the bag material is ruptured or when the yarn has failed, allowing the bag contents to spill out. Locations where rills and other evidence of concentrated runoff have occurred beneath the check dams shall be corrected.

When sediment exceeds one-third the height of the check dam above ground, or when directed by the Engineer, sediment shall be removed. The removed sediment shall be deposited within the project limits in such a way that the sediment is not subject to erosion by wind or by water.

Temporary check dam shall be repaired or replaced on the same day the damage occurs. Washouts or scour beneath the temporary check dam shall be repaired. Temporary check dam damaged during the progress of work or resulting from the Contractor's vehicles, equipment, or operations shall be repaired or replaced at the Contractor's expense.

D. MEASUREMENT AND PAYMENT

The quantity of temporary check dam (Type 1) and temporary check dam (Type 2) to be paid for shall be measured by the linear foot along the centerline of the installed check dam.

The contract price paid per linear foot for temporary check dam (Type 1) and temporary check dam (Type 2) shall include full compensation for furnishing all labor (except maintenance), materials, tools, equipment, and incidentals, and for doing all the work involved in installing temporary check dam (Type 1) and temporary check dam (Type 2), complete in place, including removal of temporary check dam (Type 1) and temporary check dam (Type 2), as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

No adjustment of compensation will be made for any increases or decreases in the quantities of temporary check dam (Type 1) or temporary check dam (Type 2), regardless of the reason for the increase or decrease. The provisions in Section 4-1.03, “Changes,” of these Special Provisions shall not apply to the item of temporary check dam (Type 1) or temporary check dam (Type 2).

The cost of maintaining the temporary check dam (Type 1) and temporary check dam (Type 2) will be borne equally by the State and the Contractor.

The division of cost will be made by determining the cost of maintaining temporary check dam (Type 1) and temporary check dam (Type 2) in conformance with the provisions in Section 9-1.04, "Force Account Payment," of the Standard Specifications and paying to the Contractor one-half of that cost. Clean-up, repair, removal, disposal, replacement because of improper installation, and replacement of temporary construction check dam (Type 1) and temporary check dam (Type 2) damaged as a result of the Contractor's negligence will not be considered as included in the cost for performing maintenance.

11-2.03 TEMPORARY FIBER ROLL

Temporary fiber roll shall be furnished, installed, maintained, and later removed at the locations shown on the approved Storm Water Pollution Prevention Plan in conformance with "Water Pollution Control" of these Special Provisions, and in conformance with details shown on the plans and these Special Provisions. Attention is directed to "Water Pollution Control" of these Special Provisions.

Temporary fiber roll shall be one of the BMPs for sediment control. The Storm Water Pollution Prevention Plan shall include the use of temporary fiber roll. At the option of the Contractor, temporary fiber roll shall be Type 1 or Type 2.

A. MATERIALS

Fiber Roll

Fiber roll shall be one of the following:

1. Fiber roll shall be constructed with a pre-manufactured blanket consisting of one material or a combination of materials consisting of wood excelsior, rice or wheat straw, or coconut fibers. The blanket shall be between 6.5 ft and 8 ft in width and between 65 ft and 95 ft in length. Wood excelsior shall be individual fibers, of which 80 percent shall

be 6 inches or longer in length. The blanket shall have a photodegradable plastic netting or biodegradable jute, sisal or coir fiber netting on at least one side. The blanket shall be rolled along the width and secured with jute twine spaced 6.5 ft apart along the full length of the roll and placed 6 inches from the ends of each roll. The finished roll shall be between 8 inches and 10 inches in diameter, between 10 ft and 20 ft in length and shall weigh at least 2 lbs/ft. More than one blanket may be required to achieve the finished roll diameter. When more than one blanket is required, blankets shall be jointed longitudinally with an overlap of 6 inches along the length of the blanket.

2. Fiber roll shall be a pre-manufactured roll of rice or wheat straw, wood excelsior or coconut fiber encapsulated within a photodegradable plastic or biodegradable jute, sisal, or coir fiber netting. Rolls shall be between 8 inches and 10 inches in diameter, between 10 ft and 20 ft in length and shall weigh at least 3.5 lbs/ft. The netting shall have a minimum durability of one year after installation. The netting shall be secured tightly at each end of the rolls.

Stakes

Wood stakes shall be a minimum of ¾ inch x ¾ inch in size for Type 1 installation or shall be a minimum of ¾ inch x 1.5 inch in size for Type 2 installation, and sufficient length as shown on detail. Stakes shall be driven to a maximum of 2 inches above, or flush with the top of the roll. Wood stakes shall be untreated fir, redwood, cedar, or pine, shall be cut from sound timber, and shall be straight and free of loose or unsound knots and other defects which would render them unfit for the purpose intended. Metal stakes may be used as an alternative. The Contractor shall submit a sample of the metal stake for Engineer's approval prior to installation. The tops of the metal stakes shall be bent at a 90-degree angle.

Rope

Rope shall be biodegradable, such as sisal or manila, with a minimum diameter of 6.35 mm.

B. INSTALLATION

Temporary fiber roll shall be installed as follows:

1. Temporary fiber roll (Type 1): Furrows shall be constructed to a depth between 2 inches and 4 inches, and to a sufficient width to hold the fiber rolls. Stakes shall be installed 2 ft apart along the length of the fiber rolls and stopped at 1 ft from each end of the rolls. Stakes shall be driven to a maximum of 2 inches above, or flush with, the top of the roll.
2. Temporary fiber roll (Type 2): Rope and notched stakes shall be used to restrain the fiber rolls against the slope. Stakes shall be driven into the slope until the notch is even with the top of the fiber roll. Rope shall be knotted at each stake and laced between stakes. After installation of the rope, stakes shall be driven into the slope such that the rope will hold the fiber roll tightly to the slope. Furrows will not be required. If metal stakes are used, the rope may be laced and knotted on the bend at the top of the metal stakes.
3. Temporary fiber roll shall be installed as shown on the plans.
4. The bedding area for the fiber roll shall be cleared of obstructions including, but not limited to, rocks, clods, and debris greater than 1 inch in diameter prior to installation.

5. Temporary fiber roll shall be installed approximately parallel to the slope contour.

6. Temporary fiber roll shall be installed prior to the application of other temporary erosion control or soil stabilization materials in the same area.

When no longer required, as determined by the Engineer, temporary fiber roll shall become the property of the Contractor and shall be removed and disposed of in conformance with the provisions in Section 13, "Water Pollution Control," of the Standard Specifications.

Ground disturbances, including holes and depressions, caused by the installation and removal of the temporary fiber roll shall be backfilled and repaired in conformance with the provisions in Section 3.29, "Protection of Work and Property," of these Special Provisions.

C. MAINTENANCE

Temporary fiber roll shall be maintained to disperse concentrated water runoff and to reduce runoff velocities. Split, torn, or unraveling rolls shall be repaired or replaced. Broken or split stakes shall be replaced. Sagging or slumping fiber rolls shall be repaired with additional stakes or replaced. Locations where rills and other evidence of concentrated runoff have occurred beneath the rolls shall be corrected.

Temporary fiber roll shall be repaired or replaced on the same day when the damage occurs. Damage to the temporary fiber rolls resulting from the Contractor's vehicles, equipment, or operations shall be repaired at the Contractor's expense.

D. MEASUREMENT AND PAYMENT

The quantity of temporary fiber roll to be paid for will be measured by the linear foot, along the centerline of the installed roll. Where temporary fiber rolls are joined and overlapped, the joint will be measured as a single installed roll.

The contract price paid per meter for temporary fiber roll shall include full compensation for furnishing all labor, (except maintenance), materials, tools, equipment, and incidentals, and for doing all the work involved in installing temporary fiber roll, complete in place, including furrow excavation and backfill, and removal of temporary fiber roll, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

No adjustment of compensation will be made for any increase or decrease in the quantities of temporary fiber roll required, regardless of the reason for the increase or decrease. The provisions in Section 3.35, “Changes and Extra Work Payment,” of these Special Provisions shall not apply to temporary fiber roll.

The cost of maintaining the temporary fiber roll will be borne equally by the State and the Contractor.
The division of cost will be made by determining the cost of maintaining temporary fiber roll in conformance with the provisions in Section 9-1.04, “Force Account,” of the Standard Specifications and paying to the Contractor one-half of that cost. Clean-up, repair, removal, disposal, replacement because of improper installation, and replacement of temporary fiber roll damaged as a result of the Contractor's negligence will not be considered as included in the cost for performing maintenance.

11-2.04 TEMPORARY CONSTRUCTION ENTRANCE (TYPE 2)

Temporary construction entrance (Type 2) shall be constructed, maintained, and later removed at the locations shown on the approved Storm Water Pollution Prevention Plan in conformance with "Water Pollution Control" of these Special Provisions, and in conformance with details shown on the plans and these Special Provisions. Attention is directed to "Water Pollution Control" of these Special Provisions.

Temporary construction entrance (Type 2) shall be one of the BMPs for tracking control. The Storm Water Pollution Prevention Plan shall include the use of temporary construction entrance (Type 2).

A. MATERIALS

Temporary Entrance Fabric

Temporary entrance fabric shall be manufactured from polyester, nylon or polypropylene material or any combination thereof. Temporary entrance fabric shall be a nonwoven, needle-punched fabric, free of any needles which may have broken off during the manufacturing process. Temporary entrance fabric shall be permeable and shall not act as a wicking agent.

Temporary entrance fabric shall be manufactured from virgin or recycled, or a combination of virgin and recycled, polymer materials. No virgin or recycled materials shall contain biodegradable filler materials that can degrade the physical or chemical characteristics of the finished fabric. The Engineer may order tests to confirm the absence of biodegradable filler materials in conformance to the requirements in ASTM Designation: E 204 (Fourier Transformed Infrared Spectroscopy-FTIR).
Temporary entrance fabric shall conform to the following requirements:

Specification	Requirements
Mass per unit area, oz per square yard, min. ASTM Designation: D 5261	8
Grab tensile strength (1 inch grip), lbf, min. ASTM Designation: D4632*	200
Elongation at break, percent min. ASTM Designation: D4632*	50
Toughness, lbf, min. (percent elongation x grab tensile strength)	12,000

* or appropriate test method for specific polymer

Rocks

Rocks shall be angular to subangular in shape and shall conform to the material quality requirements in Section 72-2.02, "Materials," of the Standard Specifications for apparent specific gravity, absorption, and durability index. Rocks used for the temporary entrance (Type 2) shall conform to the following sizes:

Square Screen Size (in)	Percentage Passing
6	100
3	0-20

Corrugated Steel Panels

Corrugated steel panels shall be prefabricated and shall be pressed, or shop welded, with a slot or hooked section to facilitate coupling at the ends of the panels.

B. INSTALLATION

Temporary construction entrance (Type 2) shall be installed as follows:

1. Prior to placing the temporary entrance fabric, the areas shall be cleared of all trash and debris. Vegetation shall be removed to the ground level. Trash, debris, and removed vegetation shall be disposed of in conformance with the provisions in Section 13, "Water Pollution Control," of the Standard Specifications. of these Special Provisions.
2. A sump shall be constructed within 6 m of each temporary construction entrance (Type 2) as shown on the plans. The exact location of the sump will be determined by the Engineer.
3. Before placing the temporary entrance fabric, the ground shall be graded to a uniform plane. The relative compaction of the top 20 inches shall be not less than 90 percent. The ground surface shall be free of sharp objects that may damage the temporary entrance fabric, and shall be graded to drain to the sump as shown on the plans.
4. Temporary entrance fabric shall be positioned longitudinally along the alignment of the entrance, as directed by the Engineer.
5. The adjacent ends of the fabric shall be overlapped a minimum length of 1 ft.
6. Rocks to be placed directly over the fabric shall be spread in the direction of traffic, longitudinally and along the alignment of the temporary construction entrance (Type 2).
7. During spreading of the rocks, vehicles or equipment shall not be driven directly on the fabric. A layer of rocks of minimum 6 inches thick shall be placed between the fabric and the spreading equipment to prevent damage to the fabric.
8. For temporary construction entrance (Type 2), a minimum of 6 coupled panel sections shall be installed for each temporary construction entrance (Type 2). Prior to installing the panels, the ground surface shall be cleared of all debris to ensure uniform contact with the ground surface.

Fabric damaged during rock placement shall be repaired by placing a new piece of fabric over the damaged area. The piece of fabric shall be large enough to cover the damaged area and provide a minimum 1.5 ft overlap on all edges.

Details for alternative temporary construction entrance (Type 2) shall be submitted to the Engineer for approval at least 7 days prior to installation.
The Contractor may use an alternative sump or eliminate the sump if approved by the Engineer in writing. The Contractor shall submit details for an alternative sump to the Engineer at least

7 days prior to installation. The alternative temporary construction entrance shall be installed and maintained in conformance with these Special Provisions.

If buildup of soil and sediment deter the function of the temporary construction entrance (Type 2), the Contractor shall immediately remove and dispose of the soil and sediment and install additional corrugated steel panels and spread additional rocks to increase the capacity of the temporary construction entrance (Type 2) at the Contractor's expenses.

When no longer required as determined by the Engineer, temporary construction entrances (Type 2) shall become the property of the Contractor and be removed and disposed of in conformance with the provisions in Section 13, "Water Pollution Control," of the Standard Specifications. of these Special Provisions.

Ground disturbance, including holes and depressions, caused by the installation and removal of the temporary construction entrance (Type 2), including the sumps, shall be backfilled and repaired in conformance with the provisions in Section 3.29, "Protection of Work and Property," of these Special Provisions.

While the temporary construction entrance (Type 2) is in use, pavement shall be cleaned and sediment removed at least once a day, and as often as necessary when directed by the Engineer. Soil and sediment or other extraneous material tracked onto existing pavement shall not be allowed to enter drainage facilities.

C. MAINTENANCE

The Contractor shall maintain temporary construction entrance (Type 2) throughout the contract or until removed. The Contractor shall prevent displacement or migration of the rock surfacing or corrugated steel panels. Any significant depressions resulted from settlement or heavy equipment shall be repaired by the Contractor, as directed by the Engineer.

Temporary construction entrance (Type 2) shall be maintained to minimize tracking of soil and sediment onto existing public roads.

Temporary construction entrance (Type 2) shall be repaired or replaced on the same day when the damage occurs. Damage to the temporary construction entrance (Type 2) resulting from the Contractor's vehicles, equipment, or operations shall be repaired at the Contractor’s expense.

D. MEASUREMENT AND PAYMENT

Temporary Construction Entrance (Type 2) shall be measured per each.

The contract unit price paid for Temporary Construction Entrance (Type 2) shall include full compensation for furnishing all labor, (except maintenance), materials, tools, equipment, and incidentals, and for doing all the work involved in constructing temporary construction entrance (Type 2), complete in place, including excavation and backfill, and removal of temporary construction entrance (Type 2), as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

No adjustment of compensation will be made for any increase or decrease in the quantities of temporary construction entrance (Type 2) required, regardless of the reason for the increase or

decrease. The provisions in Section 3.35, “Changes and Extra Work Payment,” of these Special Provisions shall not apply to temporary construction entrance (Type 2).

The cost of maintaining the temporary construction entrance (Type 2) will be borne equally by the State and the Contractor.
The division of cost will be made by determining the cost of maintaining temporary construction entrance (Type 2) in conformance with the provisions in Section 9-1.04, “Force Account Payment,” of the Standard Specifications and paying to the Contractor one-half of that cost. Clean-up, repair, removal, disposal, replacement because of improper installation, and replacement of temporary construction entrance (Type 2) damaged as a result of the Contractor's negligence will not be considered as included in the cost for performing maintenance.

11-2.05 TEMPORARY DRAINAGE INLET PROTECTION

Temporary drainage inlet protection shall be constructed, maintained, and later removed at the locations shown on the approved Storm Water Pollution Prevention Plan in conformance with "Water Pollution Control" of these Special Provisions, and in conformance with details shown on the plans and these Special Provisions. Attention is directed to "Water Pollution Control" of these Special Provisions.

Temporary drainage inlet protection shall be one of the BMPs for sediment control. The Storm Water Pollution Prevention Plan shall include the use of temporary drainage inlet protection.

Temporary drainage inlet protection shall be Type 3.

A. MATERIALS

Erosion Control Blanket

Erosion control blanket for temporary drainage inlet protection (Type 3) shall be one of the following:

1. Machine produced mats consisting of curled wood excelsior with 80 percent of the fiber 150 mm or longer. The excelsior blanket shall be of consistent thickness with wood fiber evenly distributed over the entire area of the blanket. The top surface of the blanket shall be covered with an extruded photodegradable plastic netting or lightweight non-synthetic netting. The blanket shall be smolder resistant without the use of chemical additives and shall be non-toxic and non-injurious to plant and animal life. Excelsior blanket shall be furnished in rolled strips with a minimum mass per unit area of 14 oz/yd^2.
2. Machine produced mats consisting of 70 percent straw and 30 percent coconut fiber with an extruded photodegradable plastic netting or lightweight non-synthetic netting on the top and bottom surfaces of the blanket. The straw and coconut shall adhere to the netting using thread or glue strip. The straw and coconut blanket shall be of consistent thickness, with straw and coconut fiber shall be evenly distributed over the entire area of the blanket. Straw and coconut fiber blanket shall be furnished in rolled strips with a minimum mass per unit area of 9.5 oz/yd^2.
3. Machine produced mats consisting of 100 percent coir consisting of coconut fiber with an extruded photodegradable plastic netting or lightweight non-synthetic netting on the top and bottom surfaces of the blanket. The coconut fiber shall adhere to the netting using

thread or glue strip. The coconut blanket shall be of consistent thickness, with coconut fiber evenly distributed over the entire area of the blanket. Coconut fiber blanket shall be furnished in rolled strips with a minimum mass per unit area of 9.5 oz/yd^2.

4. Machine woven netting consisting of 100 percent spun coir consisting of coconut fiber with an average open area of 63 to 70 percent. Coconut coir netting shall be furnished in rolled strips with a minimum mass per unit area of 14 oz/yd^2.

Geotextile

Geotextile blanket for temporary drainage inlet protection (3) shall conform to the provisions in Section 96-1.02I, "Rock Slope Protection Fabric," of the Standard Specifications for rock slope protection fabric.

Staples

Staples for temporary drainage inlet protection (3) shall be as shown on the plans. An alternative attachment device such as geotextile pins or plastic pegs may be used instead of staples. The Contractor shall submit a sample of the alternative attachment device for Engineer's approval prior to installation.

Gravel Bag

Gravel bag fabric for temporary drainage inlet protection (Types 3 or 4) shall be non-woven polypropylene geotextile (or comparable polymer) and shall conform to the following requirements:

Specification	Requirements
Mass per unit area, oz per square yd, min. ASTM Designation: D 5261	10
Grab tensile strength (1 inch grip), lbf, min. ASTM Designation: D4632*	200
Ultraviolet stability, percent tensile strength retained after 500 hours, ASTM Designation: D4355, xenon arc lamp method	70

* or appropriate test method for specific polymer

Gravel bags shall be between 2 ft and 2.5 ft in length, and between 1.5 ft and 1.6 ft in width.

Yarn used for binding gravel bags shall be as recommended by the manufacturer or bag supplier and shall be of a contrasting color.

Gravel shall be between 3/8 inch and ¾ inch in diameter, and shall be clean and free from clay balls, organic matter, and other deleterious materials. The opening of gravel-filled bags shall be secured to prevent gravel from escaping. Gravel-filled bags shall be between 30 lbs and 50 lbs in weight.

B. INSTALLATION

Temporary drainage inlet protection shall be installed at drain inlets in paved and unpaved areas as follows:

1. Temporary drainage inlet protection shall be installed such that ponded runoff does not encroach into the traveled way or overtop the curb or dike. Gravel-filled bags shall be placed to control ponding and prevent runoff from overtopping the curb or dike.
2. The bedding area for the temporary drainage inlet protection shall be cleared of obstructions including, but not limited to, rocks, clods, and debris greater than 1 inch in diameter prior to installation.
3. Erosion control blanket or geotextile fabric shall be secured with staples and embedded into a trench adjacent to the drainage inlet. Gravel-filled bags shall be staked in rows two layers high in a pyramid configuration to form a gravel bag barrier centered over the perimeter of the erosion control blanket or geotextile fabric. The gravel-filled bags shall be placed so that the bags are tightly abutted and overlap the joints in adjacent rows. A spillway shall be created by removing one or more gravel-filled bags from the upper layer of the gravel bag barrier.

The Contractor shall select the appropriate drainage inlet protection in conformance with the details to meet the field condition around the drainage inlet. For all other drainage inlets within the project limits that do not conform to the details shown on the plans, the Contractor shall submit to the Engineer for approval, provisions for providing temporary drainage inlet protection.

Details for an alternative temporary drainage inlet protection shall be submitted to the Engineer for approval at least 7 days prior to installation.

Throughout the duration of the Contract, the Contractor shall be required to provide protection to meet the changing condition of the drainage inlet.

In areas adjacent to traffic where temporary railing (Type K) is not present temporary drainage protection (Type 3A) and (Type 3B) shall not be used.
When the temporary drainage inlet protections are no longer required, temporary drainage inlet protection materials shall be removed and disposed of in conformance with the provisions in Section 13, "Water Pollution Control," of the Standard Specifications.

Holes, depressions, or other ground disturbance caused by the removal of the temporary drainage inlet protection shall be backfilled and repaired in conformance with the provisions in Section 3.29, "Protection of Work and Property," of these Special Provisions.

C. MAINTENANCE

Temporary drainage inlet protection shall be maintained to provide sediment holding capacity and to reduce runoff velocities and as follows:

1. Gravel-filled bags shall be replaced when the bag material ruptures and allows the contents to spill out, or when the geotextile fails and allows the bag contents to spill out.
2. Locations where rills and other evidence of concentrated runoff have occurred beneath the gravel bag barriers shall be corrected.
3. Sediment deposits, trash and debris shall be removed from temporary drainage inlet as described in this special provision or as directed by the Engineer. Removed sediment shall be deposited within the project limits in such a way that the sediment is not subject to erosion by wind or by water. Trash and debris shall be removed and disposed of in

conformance with the provisions in Section 13, "Water Pollution Control," of the Standard Specifications.

4. Temporary drainage inlet protection (Type 3): Sediment deposits shall be removed when the deposit reaches one-third the height of the gravel bag barrier or one-half the height of the spillway; whichever is less.

Temporary Drainage Inlet Protection shall be repaired or replaced on the same day when the damage occurs. Damage to the temporary drainage inlet protection resulting from the Contractor's vehicles, equipment, or operations shall be repaired at the Contractor's expense.

D. MEASUREMENT AND PAYMENT

Temporary Drainage Inlet Protection shall be measured per each. The Temporary Drainage Inlet Protection is measured one time only and no additional measurement is recognized, and no additional compensation made if the Temporary Drainage Inlet Protection changes during the course of construction.

The contract unit price paid for Temporary Drainage Inlet Protection shall include full compensation for furnishing all labor, (except maintenance), materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the temporary drainage inlet protection, complete in place, including removal of materials, and backfilling and repairing holes, depressions and other ground disturbance, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

No adjustment of compensation will be made for any increase or decrease in the quantities of temporary drainage inlet protection required, regardless of the reason for the increase or decrease. The provisions in Section 3.35, "Changes and Extra Work Payment," of these Special Provisions shall not apply to Temporary Drainage Inlet Protection.
The cost of maintaining the Temporary Drainage Inlet Protection will be borne equally by MTS and the Contractor.

The division of cost will be made by determining the cost of maintaining Temporary Drainage Inlet Protection in conformance with the provisions in Section 9-1.04, "Force Account Payment," of the Standard Specifications and paying to the Contractor one-half of that cost. Clean-up, repair, removal, disposal, replacement because of improper installation, and replacement of temporary drainage inlet protection damaged as a result of the Contractor's negligence will not be considered as included in the cost for performing maintenance.

11-2.06 MOVE-IN/MOVE-OUT (TEMPORARY EROSION CONTROL)

Move-in/move-out (temporary erosion control) shall include moving onto the project when an area is ready to receive temporary erosion control as determined by the Engineer, setting up required personnel and equipment for the application of erosion control materials and moving out all personnel and equipment when temporary erosion control in that area is completed.

When areas are ready to receive applications of temporary erosion control as determined by the Engineer, the Contractor shall begin erosion control work in that area within 5 working days of the Engineer's notification to perform the temporary erosion control work.

Move-in/Move-out (temporary erosion control) shall be measured per each.

The contract unit price paid per each for Move-in/Move-out (temporary erosion control) shall include full compensation for furnishing all labor, materials (excluding temporary erosion control materials), tools, equipment, and incidentals and for doing all the work involved in moving in and removing from the project all personnel and equipment necessary for application of temporary erosion control, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

No adjustment of compensation will be made for increases or decreases in the quantities of move-in/move-out (temporary erosion control) required, regardless of the reason for the increase or decrease. The provisions in Section 3.35, “Changes and Extra Work Payment,” of these Special Provisions shall not apply to Move-in/Move-out (temporary erosion control).

11-2.07 TEMPORARY EROSION CONTROL

A. GENERAL

Temporary erosion control shall conform to the provisions for erosion control in Section 21, "Erosion Control," of the Standard Specifications and these Special Provisions. Attention is directed to "Water Pollution Control" of these Special Provisions.

Temporary erosion control work shall consist of applying erosion control materials to embankment slopes, excavation slopes and other areas designated on the plans. Temporary erosion control work shall be completed in the designated areas during the period starting October 1 and ending May 1, or within 14 days after an area becomes inactive during this period.

Temporary erosion control shall be applied when an area is ready to receive temporary erosion control as determined by the Engineer and in conformance with the provisions in "Move-in/Move-out (Temporary Erosion Control)" of these Special Provisions.

Subsequent yearly installations of temporary erosion control shall be applied to all areas previously treated with temporary erosion control as shown on the plans, and that are not currently involved with active disturbed soil at the start of each rainy season.

Materials shall conform to the provisions in Section 21-2.02, "Materials," of the Standard Specifications.

B. MAINTENANCE

Temporary erosion control shall be reapplied, repaired, or replaced when the area treated with temporary erosion control becomes exposed or exhibits visible erosion. Temporary erosion control shall be reapplied, repaired, or replaced as determined by the Engineer as the damage occurs.

Temporary erosion control disturbed or displaced during the progress of work or resulting from the Contractor’s vehicles, equipment, or operations shall be reapplied, repaired, or replaced at the expense of the Contractor.

Subsequent yearly installations of temporary erosion control shall not be considered part of maintenance.

C. MEASUREMENT AND PAYMENT

Temporary Erosion Control shall be measured per square yard. The quantity of Temporary Erosion Control to be paid for by the square yard will be calculated based on actual or computed slope measurements.

The contract unit price paid per square yard for Temporary Erosion Control shall include full compensation for furnishing all labor, (except maintenance), materials, tools, equipment, and incidentals, and for doing all the work involved in temporary erosion control, complete in place, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

No adjustment of compensation will be made for any increase or decrease in the quantities of temporary erosion control required, regardless of the reason for the increase or decrease. The provisions in Section 3.35, “Changes and Extra Work Payment,” of these Special Provisions shall not apply to temporary erosion control.

The cost of maintaining the temporary erosion control will be borne equally by MTS and the Contractor.

The division of cost will be made by determining the cost of maintaining Temporary Erosion Control in conformance with the provisions in Section 9-1.04, “Force Account,” of the Standard Specifications and paying to the Contractor one-half of that cost. Clean-up, repair, removal, disposal, replacement because of improper installation, and replacement of temporary erosion control damaged as a result of the Contractor's negligence will not be considered as included in the cost for performing maintenance.

11-2.08 STREET SWEEPING

Street sweeping shall be conducted where sediment is tracked from the project site onto paved roads, as described in the approved Storm Water Pollution Prevention Plan in conformance with "Water Pollution Control" of these Special Provisions.

Street sweeping shall be one of the BMPs for sediment control. The Storm Water Pollution Prevention Plan shall include the use of street sweeping. Street sweeping shall be performed in conformance with Section 4, SC-7 in the Construction Site Best Management Practices (BMP) Manual of the Caltrans Storm Water Quality Handbooks.

The Contractor shall have at least one sweeper in good working condition, on the project site at all times during the period that sweeping work is required. Sweepers shall be self-loading, motorized, sweepers with spray nozzles.

Street sweeping shall commence at the beginning of clearing and grubbing and shall continue until completion of the project, or as directed by the Engineer. Street sweeping shall be performed a minimum of once each day that work is in progress.

The cost of additional street sweeping, when directed by the Engineer, will be paid for in the same manner specified for flagging, in Section 12-1.03, "Construction," of the Standard Specifications, except sweeping ordered by the Engineer due to the Contractor's negligence.
At the option of the Contractor, collected material may be temporarily stockpiled in accordance with the approved Storm Water Pollution Prevention Plan. Collected material shall be disposed of a minimum of once per week.

Material collected during street sweeping operations shall be disposed of in conformance with Section 13, "Water Pollution Control," of the Standard Specifications. If the collected material is determined by the Engineer to be free of trash and debris the material shall be disposed of along the roadway or in other locations as directed by the Engineer, provided that there is sufficient area available for the disposal of the material on site.

MEASUREMENT AND PAYMENT

Street Sweeping shall be measured per lump sum

The contract unit price paid per lump sum for Street Sweeping shall include full compensation for furnishing all labor, materials, tools, equipment, including street sweeper and its maintenance, and incidentals, and for doing all the work involved in Street Sweeping, including disposal of collected material, as shown on the plans, as specified in the Standard Specifications, these Special Provisions, and as directed by the Engineer.

No adjustment of compensation will be made for any increase or decrease in the quantities of sweepers for the street sweeping work required, regardless of the reason for the increase or decrease. The provisions in Section 3.35, “Changes and Extra Work Payment,” of these Special Provisions shall not apply to Street Sweeping.

END OF SECTION 11

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SECTION 13
EARTHWORK

13-1 DESCRIPTION OF WORK

The work under this section shall consist of all the work involved in clearing and grubbing, disposition of items, structural excavation, and earthwork as described in the Standard Specifications and these Special Provisions.

13-2 CLEARING AND GRUBBING

Clearing and grubbing shall conform to the provisions in Section 10-1.03, “Preservation of Property,” of these Special Provisions and Section 17-2, "Clearing and Grubbing," of the Standard Specifications and these Special Provisions.

Prior to start of clearing and grubbing operations Contractor shall review the Contract Drawings and these Special Provisions and identify limits of selective clearing and grubbing and mark interface surfaces as required to enable workers to identify items to be removed and items to be left in place intact.

All materials, equipment and fixtures that are not indicated by MTS to be salvaged or remain on the premises shall become the property of the Contractor and shall be disposed of in accordance with Section 20-1.03C “Roadside Clearing,” of the Standard Specifications.

Clearing and Grubbing shall consist of all the work involved in removing, relocating, salvaging, or protecting in place those items shown on the plans and described in these Special Provisions including, but not limited to, MTS fencing, shrubbery, trees, drainage facilities, miscellaneous debris such as bricks, metal siding, plywood, other fencing, wood pieces, bicycles, and clothing; and other items indicated on the plans to be removed, relocated, adjusted, or protected in place. Limits of clearing and grubbing are delineated on the plans and labeled “limit of work.”

On-site storage of salvageable materials will be permitted for brief accumulation in the designated Contractor laydown area only as shown on plans while awaiting removal and disposal.

Nothing herein shall be construed as relieving the Contractor of the Contractor's responsibility for final cleanup of the project area.

13-2.01 REMOVE VEGETATION

Vegetation, both living and dead, shall be cleared and grubbed only within the limits of work as indicated on the plans and in compliance with Section 10-1.09, Environmental Requirements, of these Special Provisions.

13-2.02 REMOVE WOOD TIE RETAINING WALL

Contractor shall remove and dispose the wood tie retaining wall along the west perimeter of MT2 track to limits shown on the plans. Removal shall include all retaining wall supporting members and ancillary attachments. Removal of wood tie retaining wall shall not be performed during active MT2 track operations. Contractor shall not allow undermining of MT2 trackbed at any time during the removal of the wood tie retaining wall. All voids created from removal of wood tie retaining wall and supportive posts

that are greater than one foot below finished grades shall be backfilled with 1 sack slurry to an elevation no less than one foot below finished grade. Contractor shall comply with all local, State, and Federal requirements for transport and disposal of wood ties.

13-2.03 REMOVE MTS FENCING

Contractor shall remove and dispose MTS fencing to the limits shown on the plans. Contractor shall take care not to cause damage to or change condition of adjacent property in accordance with Section 10-1.03, “Preservation of Property,” of these Special Provisions.

Where removal of fencing allows accessibility into the MTS ROW by the general public the Contractor shall provide, at a minimum, temporary fencing in accordance with Section 10-2.08, “Temporary Fencing,” of these Special Provisions. At no time shall MTS ROW be left accessible to the general public.

13-2.04 MISCELLANEOUS DEMOLITION

All other items required to be removed, relocated, adjusted, salvaged, or protected in place within the limits of work, that are not listed or shown, shall be considered as incidental and included in the contract unit price paid for clearing and grubbing and no additional compensation will be allowed therefor.

13-2.05 MEASUREMENT AND PAYMENT

Clearing and grubbing shall be measured for as a lump sum.

The contract lump sum price paid for Clearing and Grubbing shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in Clearing and Grubbing, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, including the removal and disposal of the resulting material.

13-3 EARTHWORK

Earthwork shall conform to the provisions in Section 19, "Earthwork," of the Standard Specifications and these Special Provisions.

13-3.01 GENERAL

Contractor shall review and comply with requirements in the Beyer Boulevard Slope and Drainage Improvements, Geotechnical Investigation Report, San Diego, California, dated March 11, 2024

13-3.02 SLOPE EXCAVATION

A. General

Any excavation, including temporary excavation, performed on existing slopes within the work limits shall not exceed the limits indicated in the geotechnical report unless otherwise noted on the plans or as directed by the Engineer.

B. Fill Placement and Compaction

After Clearing and Grubbing and prior to placement of any compacted slope or non-slope fills, the subgrade shall be processed in accordance with the geotechnical report. All non-structural fill and compaction work shall be performed in accordance with the geotechnical report.

All finished slopes shall be track walked after finish grade is accomplished and prior to hydroseeding.

13-3.03 IMPORTED SOIL

Any required Import materials to be used as engineered fill shall comply with the geotechnical report.

13-3.04 EXCAVATED MATERIAL

All excavated soil shall be tested for use as fill material in compliance with Section 13-3.02, “Imported Soil,” of these Special Provisions. Contractor shall submit test results prior to placement. Where excavated soil is compliant Contractor shall stockpile or place excavated soil as required. Stockpiling of compliant excavated soil shall remain within limits of work.

Non-compliant excavated soil shall become the property of the Contractor and shall be disposed of outside MTS right of way.

13-3.05 MEASUREMENT AND PAYMENT

All components of Earthwork including slope, imported soil, testing, and stockpiling, shall be measured and paid for at the contract unit price per cubic yard in the same manner specified for roadway excavation in Section 19-2, "Roadway Excavation," of the Standard Specifications unless otherwise indicated. Compaction of fill material shall be considered included in applicable items of work.

13-4 STRUCTURAL EXCAVATION AND BACKFILL

All structural excavation and backfill shall be to the lines and of the type indicated and placed to the limits shown on the plans. All subgrade for structures shall be prepared in accordance with the plans. Construction of structures shall comply with Section 19-3, “Structure Excavation and Backfill,” of the Standard Specifications, and these Special Provisions, except that compaction shall not be performed by ponding or jetting.

Any required shoring shall also be in compliance with Metropolitan Transit System (MTS) shoring specifications which can be obtained from the MTS website.

13-4.01 MEASUREMENT AND PAYMENT

Structural Excavation and Backfill shall be measured and paid for at the contract unit price per cubic yard in the same manner specified in Section 19-3, "Structure Excavation and Backfill," of the Standard Specifications. Contract unit price paid per cubic yard for Structural Excavation and Backfill shall also include furnishing all labor, materials, equipment, tools and incidentals and for doing all the work of Structural Backfill, including testing of soil and transportation of imported soil.

END OF SECTION 13

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SECTION 14
AGGREGATE BASE

14-1 DESCRIPTION OF WORK

The work under this section shall consist of furnishing and placing aggregate bases, as shown on the plans and as directed by the Engineer.

14-2 AGGREGATE BASE

Aggregate base shall be ¾" Class 2, shall be placed to the thicknesses shown on the plans and shall conform to the provisions in Section 26, "Aggregate Bases," of the Standard Specifications and these Special Provisions.

The use of reclaimed and recycled material is permitted on this project in accordance with the Standard Specifications.

14-3 MEASUREMENT AND PAYMENT

Measurement and payment for Aggregate Base shall be by the cubic yard and shall conform to the provisions in Section 26, "Aggregate Bases," of the Standard Specifications. Quantities measured for payment will be calculated on the basis of the dimensions shown on the plans not by quantity placed.

The contract unit price paid per cubic yard for aggregate base shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in aggregate base, complete in place, including Class 2 Base, as shown on the plans, as specified in these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefor.

END OF SECTION 14

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SECTION 15
CONCRETE

15-1 MINOR CONCRETE

15-1.01 MATERIAL

Concrete curbs, drainage swales and ditches, and miscellaneous drainage surfaces, shall conform to the provisions in Section 90.2, "Minor Concrete," of the Standard Specifications and these Special Provisions.

15-1.02 GENERAL

The minimum compressive strength of cast-in-place minor concrete shall be 2,500 psi at 28 days. Placement of minor concrete shall be as indicated on the plans.

15-1.03 MEASUREMENT AND PAYMENT

Minor concrete shall be measured and paid for in conformance with the provisions specified in the various sections of these specifications covering concrete construction when minor concrete is specified in the specifications, shown on the plans, or indicated by contract item in the Engineer's Estimate.

15-2 STRUCTURAL CONCRETE

Structural concrete shall be in accordance with that specified on the Plans

15-2.02 MEASUREMENT AND PAYMENT

A. Gravity Retaining Wall

Structural cast-in-place concrete for Gravity Retaining Wall shall be measured for by the cubic yard.

The contract unit price paid per cubic yard for structural cast-in-place concrete for Gravity Retaining Wall shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the Gravity Retaining Wall, complete in place, including forming, reinforcing steel, and finishing, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

B. Cast-In-Drilled-Hole Concrete Piling

Cast-In-Drilled-Hole Concrete Piling shall be measured and paid for by the cubic yard.

The contract unit price paid per cubic yard for Cast-In-Drilled-Hole Concrete Piling shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for

doing all the work involved in constructing Cast-In-Drilled-Hole Concrete Piling, complete in place, including drilling, reinforcing steel, and installing pile, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

END OF SECTION 15

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SECTION 15
CONCRETE

15-1 MINOR CONCRETE

15-1.01 MATERIAL

Concrete curbs, drainage swales and ditches, and miscellaneous drainage surfaces, shall conform to the provisions in Section 90.2, "Minor Concrete," of the Standard Specifications and these Special Provisions.

15-1.02 GENERAL

The minimum compressive strength of cast-in-place minor concrete shall be 2,500 psi at 28 days. Placement of minor concrete shall be as indicated on the plans.

15-1.03 MEASUREMENT AND PAYMENT

Minor concrete shall be measured and paid for in conformance with the provisions specified in the various sections of these specifications covering concrete construction when minor concrete is specified in the specifications, shown on the plans, or indicated by contract item in the Engineer's Estimate.

15-2 STRUCTURAL CONCRETE

Structural concrete shall be in accordance with that specified on the Plans

15-2.02 MEASUREMENT AND PAYMENT

A. Gravity Retaining Wall

Structural cast-in-place concrete for Gravity Retaining Wall shall be measured for by the cubic yard.

The contract unit price paid per cubic yard for structural cast-in-place concrete for Gravity Retaining Wall shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the Gravity Retaining Wall, complete in place, including forming, reinforcing steel, and finishing, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

B. Cast-In-Drilled-Hole Concrete Piling

Cast-In-Drilled-Hole Concrete Piling shall be measured and paid for by the cubic yard.

The contract unit price paid per cubic yard for Cast-In-Drilled-Hole Concrete Piling shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for

doing all the work involved in constructing Cast-In-Drilled-Hole Concrete Piling, complete in place, including drilling, reinforcing steel, and installing pile, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

END OF SECTION 15

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SECTION 17
DRAINAGE FACILITIES

17-1 DESCRIPTION OF WORK

The work under this section shall consist of all the work involved in constructing drainage structures in accordance with details shown on the plans and as specified in these Special Provisions.

17-2 DRAINAGE STRUCTURES

Drainage structures shall include the following:

- Concrete slope protection (minor concrete)
- Concrete curb (minor concrete)
- Concrete drainage ditch (minor concrete)
- Atrium grate

Drainage structures shall be constructed in accordance with the plans, the City of San Diego Standard Drawings, and as specified in Section 51, "Concrete Structures," of the Standard Specifications, and these Special Provisions.

Excavation and backfill for drainage structures shall conform to Section 13, “Earthwork,” of these Special Provisions.

17-2.01 MINOR CONCRETE

A. GENERAL

Minor concrete shall be constructed to the limits shown on the plans.

Where minor concrete structures have continuous runs between 5 feet and 30 feet, a control joint shall be placed at the mid-point of the total run length. For continuous runs greater than 30 feet control joints shall be placed at 15 foot spacing. Control joints shall be a scoreline tooled or sawcut having a width no greater than ¼” and a depth no greater than 1”.

B. MEASUREMENT AND PAYMENT

Concrete Drainage Structures (Minor Concrete)

Concrete Drainage Structures (Minor Concrete) shall be measured per cubic yard, according to the plans and as directed by the Engineer.

The contract unit price paid per cubic yard for Concrete Drainage Structures (Minor Concrete), including concrete slope protection, curb, and drainage ditch, shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in furnishing materials and installing Concrete Drainage Structures (Minor Concrete), complete in place, including excavation and backfill, welded wire mesh, doweling, and finishing, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

17-2.02 ATRIUM GRATE

A. GENERAL

Atrium grate (or equivalent) shall be galvanized metal or brass, round, with diameter large enough to fully encompass the 8” diameter downdrains (see Section 17-4) without impeding the downdrain opening and have a dome height of 4” or greater. Grate shall be anchored to concrete ditch with metal mechanical anchor at minimum of three equally spaced locations around the grate. Anchors shall be of the same metal type as the grate. Anchor shall have embedment of ½” minimum but no greater than 1”.

B. MEASUREMENT AND PAYMENT

Atrium Grate shall be measured for by each, according to the plans and as directed by the Engineer.

The contract unit price paid for Atrium Grate shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in furnishing materials, fabricating, and installing Atrium Grate, complete in place, including galvanizing, as shown on the plans, as specified in these Special Provisions, and as directed by the Engineer.

17-3 DRAINAGE PIPES AND DOWNDRAINS

17-3.01 GENERAL

This section shall apply to solid drain pipes and downdrains only, where indicated on the plans.

Drainage pipes and downdrains, products and installation, shall conform to the details shown on the plans, and all applicable codes and regulations including, but not limited to, all County, State, and Federal regulations, and conform to all applicable industry standards.

Drainage pipes and downdrains shall be sized as indicated on plans.

17-3.02 MATERIALS

A. SOLID PIPE

1. Solid drainage pipes shall be schedule 40 PVC pipe in compliance with ASTM D1785.
2. Downdrains shall be schedule 40 PVC pipe in compliance with ASTM D1785.

B. PERFORATED PIPE

1. Perforated pipe shall be schedule 40 PVC pipe in compliance with ASTM D2729

17-3.03 INSTALLATION

Drainage pipes and downdrains shall be installed to the lines and grades as indicated on the plans.

17-3.04 MEASUREMENT AND PAYMENT

Drainage Pipes and Downdrains shall be measured per linear foot.

The contract unit price paid per linear foot for Drainage Pipes and Downdrains shall include full compensation for furnishing all labor, materials, equipment, tools and incidentals including fittings, connections, cements, glues, and for doing all the work of Drainage Pipes and Downdrains, complete in place, as shown on the plans and as specified in these Special Provisions.

17-4 GEOCOMPOSITE DRAIN

17-4.01 GENERAL

This section shall apply to solid Geocomposite Drain and Filter Fabric and downdrains only, where indicated on the plans.

17-4.02 MATERIALS

A. GEOCOMPOSITE DRAIN

1. Geocomposite Drain shall conform to the provisions in Section 96, “Geosynthetics,” of the Standard Specifications.

B. FILTER FABRIC

1. Filter Fabric shall conform to the provisions in Section 96, “Geosynthetics,” of the Standard Specifications.

C. SOLID AND PERFERATED PIPE

1. Piping for geocomposite drain shall comply with Section 17-3 above.

17-4.03 INSTALLATION

A. GEOCOMPOSITE DRAIN

All elements of Geocomposite Drain including geocomposite, filter fabric, and piping shall be installed as indicated on the plans.

17-4.04 MEASUREMENT AND PAYMENT

Geocomposite Drain shall be measured per lump sum.

The contract unit price paid per lump sum for Geocomposite Drain shall include full compensation for furnishing all labor, materials, equipment, tools and incidentals including filter fabric, piping, fittings, connections, glues, treated permeable base, and for doing all the work of Geocomposite Drain, complete in place, as shown on the plans and as specified in these Special Provisions.

END OF SECTION 17

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SECTION 18
GRAVITY BLOCK RETAINING WALL

18-1 DESCRIPTION

A. Work involves furnishing all labor, materials, and equipment necessary and incidental to constructing gravity block retaining walls to the limits and at the locations shown on the plans and as modified by the Engineer. This work consists of furnishing and constructing gravity block wall. The construction of the Gravity Block walls shall be in accordance with the California Department of Transportation Standard Specifications 2018 referred to as "The Standard Specifications" unless otherwise noted below.

18-2 MATERIALS

A. Gravity block retaining walls shall be prefabricated modular units.

1. Dimensions: 29.5" x 29.5" x 59"

2. Weight: 4,350 lbs

B. Tolerance

1. Dimensions: Length and width shall not differ more than 1/2 inch. Height shall not differ more than 1/8 inch.

2. Weight shall not differ by more than 300 lbs

C. Approved proprietary retaining wall systems, meeting these specifications are:

1. Enviro-Block by inter-Block Retaining Lock-Block Retaining Systems, San Marcos, CA. Telephone: 800-406-2066

2. Engineer approved equal gravity retaining wall systems providing a pinned or interlocked type construction. Concrete material shall have a minimum compressive strength of 4000psi at 28 days and comply with Section 90, "Concrete," of the Standard Specifications. The maximum water to cementitious materials shall not exceed 0.4.

- The process for submitting approved equal gravity retaining wall systems shall comply with Sections 3.12, "Requests for Substitution," of these Special Provisions.

D. Blocks are to be standard grade, gray color with smooth face finish.

E. Blocks shall be sound and free of cracks or other defects that would interfere with the proper placement of the block or significantly impair construction of the wall.

F. Block face exposed to view shall be free of chips, cracks or other imperfections when viewed from a distance of 10 feet under diffused light.

18-2.1 ACCEPTANCE OF BLOCKS

A. Acceptability will be determined based on tolerances specified in Section18-3.2D of this section and visual inspection. Any one of the following defects will be cause for rejection:

1. Concrete not suitable for common structural applications

2. Imperfect molding

3. Honeycombed or open texture concrete

4. Broken, cracked or chipped blocks

5. Extreme color variation on visible face of block

18-3 INSTALLATION

18-3.1 PREPARATION

A. Excavate existing material to lines and grades as shown on the plans and in accordance with Section 13, “Earthwork,” of these Special Provisions.

B. Prepare the subgrade to the lines and grades as shown on the plans and in accordance with Section 13, “Earthwork,” of these Special Provisions.

18-3.2 INSTALLATION

A. Block Installation and Backfill Placement - Blocks shall typically be placed in a running bond pattern unless placed perpendicular to the face of the wall. Blocks shall be placed with final face of wall vertical unless a batter is indicated on the plans. Place the first course of blocks on top of and in full contact with the prepared subgrade.

B. Install underdrains, where indicated, in accordance with Division VII Drainage Facilities,” of the Standard Specifications and as shown on the plans.

C. Structural backfill shall occur after each single course of block placed. Structural backfill shall be finished to a level no lower than 1 inch below and have a slope equal to the top of placed blocks. Structural backfill shall be completed for each block course prior to placing next successive course of block. Remove excess backfill material from the top of installed blocks prior to installing the next course of blocks.

D. Vertical and tangent horizontal alignment tolerance shall not exceed 1-1/8 inch when measured with a 10-foot straightedge. For vertical alignment tolerance shall only apply when resulting in a positive wall batter (wall face leaning back), at no time shall vertical alignment result with a negative wall batter (wall face leaning forward). Alignments shall be checked after each course of block is installed. Where tolerances are exceeded, Contractor shall take measures to correct and re-measure prior to installing next successive course of block.

E. Grade embankment at top of wall in accordance with the plans.

F. Install Class 2 permeable material, where indicated on the plans, in accordance with Section 68, “Subsurface Drains,” of the Standard Specifications.

G. Install cable railing, where indicated on the plans, in accordance with Section 83 “Railings and Barriers” of the Standard Specifications.

H. Field forming of some blocks will required where indicated on the plans to allow for subdrain pipe penetration. Field forming of blocks shall be to the same dimensions and tolerances as indicated above in Section 18-2.

18-4 MEASUREMENT AND PAYMENT

A. GRAVITY BLOCK RETAIING WALL

Gravity Block Retaining Wall shall be measured for by each. Measurement shall be based on each accepted block placed and remaining. Any rejected block prior to placement or block rejected after placement shall not be paid for.

The contract unit price paid for Gravity Block Retaining Wall shall include full compensation for furnishing all labor, materials, equipment, tools, and incidentals and for doing all the work of Gravity Block Retaining Wall, including shop drawings, furnishing and installation, and all ancillary items necessary to furnish and install Gravity Block Retaining Wall, complete in place, as shown on the plans, and as specified in the Standard Specifications and these Special Provisions.

B. FIELD FORMED GRAVITY BLOCKS

Field Formed Gravity Blocks shall be measured for by each. Measurement shall be based on each accepted block formed and remaining. Any block rejected after forming is completed shall not be paid for.

The contract unit price paid for Field Formed Gravity Blocks shall include full compensation for furnishing all labor, materials, equipment, tools, and incidentals and for doing all the work of Field Formed Gravity Blocks, including shop drawings, forming, piping, and installation, and all ancillary items necessary to form and install Field Formed Gravity Blocks, complete in place, as shown on the plans, and as specified in the Standard Specifications and these Special Provisions.

C. CLASS 2 PERMEABLE MATERIAL AND UNDERDRAINS

Class 2 permeable material and underdrains shall be measured and paid for in conformance with the provisions specified in Section 68, “Subsurface Drains,” of the Standard Specifications and no additional compensation will be allowed therefor.

D. CABLE RAILING

Cable Railing shall be measured and paid for in conformance with the provisions specified in

Section 83 “railings and Barriers” of the Standard Specifications. and no additional compensation will be allowed therefor.

END OF SECTION 18

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SECTION 20
FENCING

20-1 CHAIN LINK FENCE AND GATES

Chain link fence and gate shall be as indicated on plans.

A. MEASUREMENT AND PAYMENT

Chain Link Fence shall be measured per linear foot:

1. Parallel to the ground slope
2. Along the fence

The contract unit price paid for Chain Link Fence shall include full compensation for furnishing all labor, materials, equipment, tools, and incidentals and for doing all the work of Chain Link Fence, including post foundations, posts, concrete, fabric, connection to existing fences, and all ancillary items, complete in place, as shown on the plans, and as specified in these Special Provisions.

Chain Link Gates shall be measured per each.

The contract unit price paid for Chain Link Gates shall include full compensation for furnishing all labor, materials, equipment, tools, and incidentals and for doing all the work of Chain Link Gates, including post foundations, posts, concrete, center post hole, fabric, and all ancillary items, complete in place, as shown on the plans, and as specified in the Standard Specifications and these Special Provisions.

END OF SECTION 20

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3/28/2022

SECTION 21
HYDROSEED

21-1 GENERAL

21-1.01 SUBMITTALS

Submit a certificate of compliance for tackifier, bonded fiber matrix, and polymer-stabilized fiber matrix at least 5 business days before application. Certificates of compliance must include:

1. Material Safety Data Sheet
2. Product label
3. List of ingredients, including chemical formulation
4. Properties of polyacrylamide in tackifier including (1) percent purity by weight, (2) percent active content, (3) average molecular weight, and (4) charge density

At least 30 days before Hydroseed application, submit seed order information including the seed's botanical names, quantity ordered, and the anticipated date of delivery.

21-1.02 MATERIALS

A. FIBER

Fiber must be wood fiber, cellulose fiber, alternate fiber, or a combination of these fibers.
Wood fiber must be a long strand, whole wood fiber thermomechanically processed from clean whole wood chips.

Celullose fiber must be made from natural or recycled pulp fiber, such as wood chips, sawdust, newsprint, chipboard, corrugated cardboard, or a combination of these materials.

Alternate fiber must be a long strand, whole natural fiber made from clean straw, cotton, corn, or other natural feed stock.

Fiber must:

1. Disperse into a uniform slurry when mixed with water.
2. Contain 3/4-inch fiber strands for at least 25 percent by total volume.
3. Have at least 40 percent retained when passed through a no. 25 sieve.
4. Have an initial moisture content of no more than 15 percent of its dry weight when tested under CA Test 226. The moisture content must be marked on the packaging.
5. Have a water holding capacity, by weight, of at least 1,200 percent.
6. Be nontoxic to plants and animal life.
7. Be free of synthetic or plastic materials, lead paint, printing ink, varnish, petroleum products, seed germination inhibitors, and chlorine bleach.
8. Contain less than 250 ppm of boron.
9. Contain less than 7 percent ash when tested under Technical Association of the Pulp and Paper Industry, TAPPI Standard T 413.
10. Be colored to contrast with the area on which the fiber is to be applied. The coloring agent must be biodegradable, nontoxic, and free from copper, mercury and arsenic and must not stain concrete or painted surfaces.

Fiber for polymer stabilized fiber matrix must be at least 50 percent wood fiber. The remaining percentage must be cellulose fiber, alternate fiber, or a combination.

B. TACKIFIER

General

Tackifier must be (1) free from growth or germination inhibiting factors, (2) nonflammable, and (3) functional for a minimum of 180 days.

General purpose tackifier may be either a plant-based product or a polymeric emulsion blend as follows:

1. Plant based tackifier must be a natural high molecular weight polysaccharide, a high viscosity hydrocolloid that is miscible in water, and labeled as either guar, psyllium, or starch, as follows:
    a. Guar gum-based product must be derived from the ground endosperm of the guar plant, Cyanmopsis tetragonolobus. It must be treated with dispersing agents for easy mixing. It must be able to be diluted at the rate of 1 to 5 pounds per 100 gallons of water.
    b. Psyllium based product must be manufactured from the finely ground, mucilloid coating of Plantago ovata or Plantago ispaghula seeds and able to dry and form a firm but rewettable membrane.
    c. Starch based product must be a nonionic, water-soluble, granular material derived from corn, potato, or other plant-based source.
2. Polymeric emulsion blend tackifier must be a prepackaged liquid or dry powder, anionic formulation with a residual monomer content not exceeding 0.05 percent by weight. The tackifier must contain and be labeled with one of the following as the primary active ingredients:
    a. Acrylic copolymers and polymers.
    b. Polymers of methacrylates and acrylates.
    c. Copolymers of sodium acrylates and acrylamides.
    d. Polyacrylamide and copolymer of acrylamide.
    e. Hydrocolloid polymers.

Polymer Stabilized Fiber Matrix Tackifier

Tackifier for polymer stabilized fiber matrix must be:

1. A liquid formulation with polyacrylamide as the primary active ingredient with the following requirements:
    a. Linear, anionic copolymer of acrylamide and sodium acrylate.
    b. Anionic with a residual monomer content that is at most 0.05 percent by weight.
2. Formulated and labeled as one of the following:
    a. Water-in-oil emulsion containing at least 2.6 pounds of pure polyacrylamide per gallon. Pure polyacrylamide must be at least 30 percent active.

b. Liquid dispersed polyacrylamide containing at least 4.4 pounds pure polyacrylamide per gallon. Pure polyacrylamide must be at least 35 percent active.

Bonded Fiber Matrix Tackifier

Tackifier for bonded fiber matrix must:

1. Be bonded to the fiber or prepackaged with the fiber by the manufacturer
2. Contain a minimum of 10 percent of the combined weight of the dry fiber, activating agents, and additives
3. Be an organic, high viscosity colloidal polysaccharide with activating agents or a blended hydrocolloid-based binder

C. SEED

Seed mixture shall comply with those listed in the following table:

Scientific Name	Common Name	Pounds Per Acre
Cryptantha intermedia	Nievitas Cryptantha	1
Collinsia concolor	Southern Chinese Houses	2
Deinandra fasciculata	Fascicled Tarweed	2
Eschscholzia californica	California Poppy	2
Lasthenia californica	California Goldfields	3
Layia platyglossa	Tidy Tips	2
Lupinus bicolor	Miniature Lupine	2
Lupinus succulentus	Arroyo Lupine	2
Sisyrinchium bellum	Blue-eyed Grass	2
Festuca microstachys	Fescue	2
Shrubs		
Artemisia californica	California Sagebrush	2
Encelia californica	California Encelia	2
Eriogonum fasciculatum ssp. fasciculatum	California Buckwheat	2
Isocoma menziesii var. menziesii	Coastal Goldenbush	2
Louts scoparius var. scoparius	Deer weed	2
Total		**Approx 30**

21-2 CONSTRUCTION

Before applying hydroseed, verify that surfaces receiving hydroseed are finished to grades, compacted, and track walked in accordance with the plans and these Special Provisions.

Do not apply hydraulically applied materials under the following conditions:

1. Precipitation
2. High wind
3. Water is standing on or moving across the soil surface
4. Soil is frozen
5. Air temperature is below 40 degrees F during the tackifier curing period unless allowed by the tackifier manufacturer and authorized

Apply hydroseed with hydraulic spray equipment that mixes fiber, tackifier, fertilizer, and other erosion control materials specified. Add water to hydroseed materials as recommended by the manufacturer and mix sufficiently to ensure an even application. A dispersing agent may be added to the mixture if authorized.

Equipment must utilize a built-in continuous agitation and discharge system capable of producing a homogeneous mixture and a uniform application rate. The tank must have a minimum capacity of 1,000 gallons. A smaller tank may be used if authorized by the Engineer.

Apply materials in locations, rates, and number of applications as shown and as follows:

1. Application rate for seeds as shown in the table above.
2. Begin application within 60 minutes after adding seed to the tank.
3. Apply in successive passes as necessary to achieve the required application rate.
4. Apply all hydroseed materials indicated for a single area within 72 hours.

After the final application, do not allow pedestrians or equipment onto the treated areas.

21-3 MEASUREMENT AND PAYMENT

Hydroseed shall be measured per square yard, according to the plans and as directed by the Engineer.

The contract unit price paid per square yard for Hydroseeding shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in Hydroseeding, as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, including clean up.

END OF SECTION 21

LTorio
1147000_Beyer_SCT_21_Hydroseed.OATAYEE
3/28/2022

SAN DIEGO

ASSOCIATION OF GOVERNMENTS

CONTRACT DRAWINGS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

CONTRACT CIP SANDAG-1147000/MTS-2005109001

SANDAG

MTS

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401 B STREET, SUITE 2360
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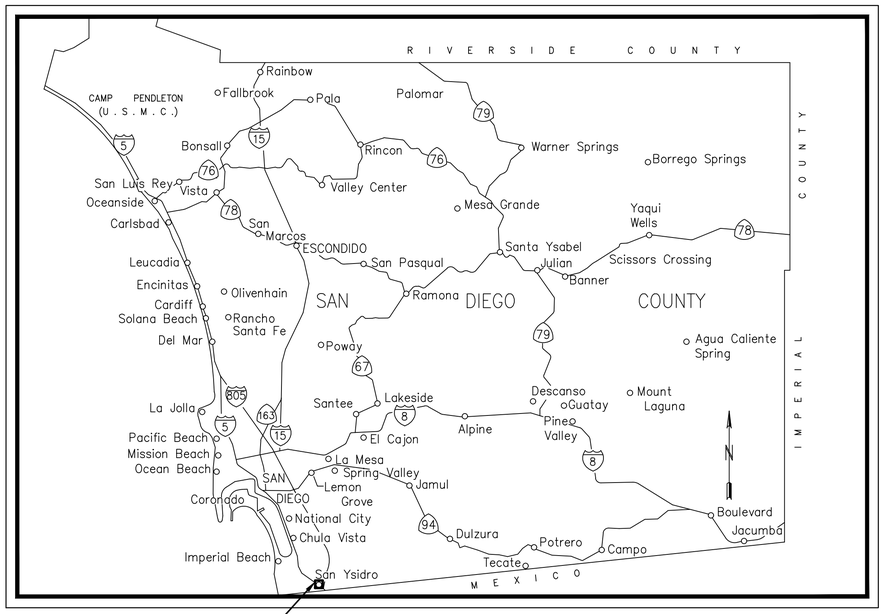
FAX: (714) 734 - 8755

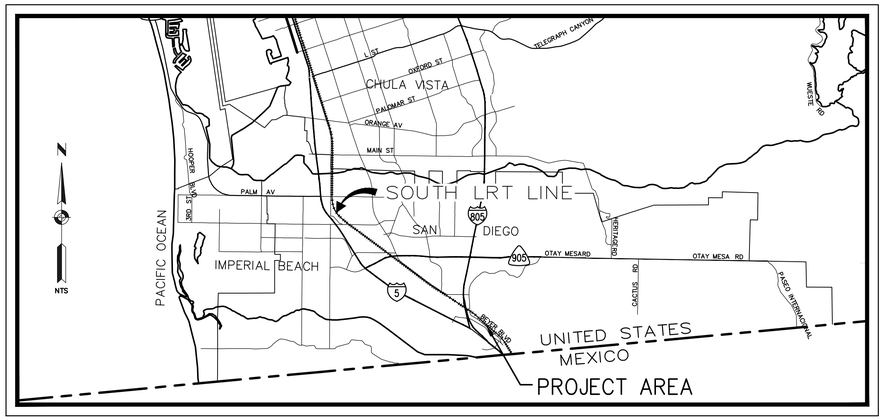
SEPTEMBER 2024

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3



PROJECT AREA

COUNTY MAP
NTS



VICINITY MAP
NTS

LEGEND

SYMBOL	DESCRIPTION
A / C-1	SECTION # / SHEET REFERENCE
A / C-1	DETAIL # / SHEET REFERENCE
A — A	SECTION CALL-OUT
	CONCRETE
	BALLAST
	ROCK/COBBLE
	EARTH
	DRAINAGE ROCK
	COMPACTED SOIL BACKFILL
	TYPE 1 STRUCTURAL BACKFILL
	TYPE 2 STRUCTURAL BACKFILL
	CLASS 2 BASE
	NEW FENCE LINE
	CENTER LINE
	RIGHT OF WAY LINE
	FLOW LINE
	CONCRETE SWALE/DITCH
	RETAINING WALL – GRAVITY CIP
	RETAINING WALL – SOLDIER PILE
	RETAINING WALL – GRAVITY BLOCK
	RETAINING WALL – MASONRY
TOP / TOE	CUT SLOPE
TOP / TOE	FILL SLOPE
	EXIST CATENARY POLE

SHEET INDEX

ABBREVIATIONS

AC	ASPHALT CONCRETE
Ac.	ACRES
ANG	ANGLE
AWPA	AMERICAN WOOD PROTECTION ASSOCIATION
BC	BEGIN CURVE
BMP	BEST MANAGEMENT PRACTICES
CASQA	CALIFORNIA STORMWATER QUALITY ASSOCIATION
CAT	CATENARY
CF	CURB FACE
CIDH	CAST IN DRILLED HOLE
CIP	CAST IN PLACE
C/L	CENTERLINE
CLR	CLEAR
COM	COMMUNICATION
CONC	CONCRETE
CTR	CENTER
CWR	CONTINUOUSLY WELDED RAIL
ø	DIAMETER
DWG	DRAWING
EC	END CURVE
EG	EXISTING GRADE
ELB	ELBOW
ELEV	ELEVATION
ESMNT	EASEMENT
EXIST	EXISTING
FG	FINISH GRADE
F/L	FLOW LINE
FO	FIBER OPTIC
FS	FINISHED SURFACE
FT	FEET
GALV	GALVANIZED
GB	GRADE BREAK
GRAV.	GRAVITY
HDWL	HEADWALL
H	HORIZONTAL HEIGHT
IMPED	IMPEDENCE
LB	LOCAL BENCHMARK
LOL	LAYOUT LINE
LT	LEFT
MAINT.	MAINTENANCE
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
NTS	NOT TO SCALE
O.C.	ON CENTER
O.C.E.W.	ON CENTER EACH WAY
OD	OUTER DIAMETER
PERF	PERFORATED
PRE-FAB	PRE-FABRICATED
PROF.	PROFILE
PROP	PROPOSED
PT	POINT
PVC	POLYVINYL CHLORIDE
#	POUNDS
RCP	REINFORCED CONCRETE PIPE
RES	REINFORCED EARTHEN SWALE
RP	RADIUS POINT
RT	RIGHT
R/W	RIGHT OF WAY
SCH	SCHEDULE
SD	STORM DRAIN
SDRSD	SAN DIEGO REGIONAL STANDARD DRAWINGS
SDTI	SAN DIEGO TROLLEY INCORPORATED
SF	SQUARE FEET
SHLDR	SHOULDER
SHT	SHEET
SHTS	SHEETS
SSPWC	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
STA	STATION
STD	STANDARD
SUSMP	STANDARD URBAN STORMWATER MITIGATION PLAN
SWMP	STORM WATER MANAGEMENT PLAN
TC	TOP OF CURB
T/R	TRACK
TRANS	TRANSITION
TPSS	TRACTION POWER SUBSTATION
TYP	TYPICAL
UG	UNDERGROUND
WB	WALL BACK
WF	WALL FRONT
WWF	WELDED WIRE FABRIC

NO.	DATE	REVISIONS	BY	CHK	APRV

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REGISTERED PROFESSIONAL ENGINEER — MATTHEW J. BRITTEN — C61869 — CIVIL — STATE OF CALIFORNIA

DESIGNED BY MB	DATE 09/24
DRAWN BY KA	09/24
CHECKED BY MT	09/24
SANDAG PRJ. MGR. DU	

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

INDEX, LEGEND, ABBREVIATIONS, & MAPS

SCALE

PROJECT NO. CIP: SANDAG-1147000/ MTS-2005109001

DRAWING NO. G-1

SHEET NO. 2

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

MTS STANDARD CONSTRUCTION NOTES:

1. A RIGHT OF ENTRY (ROE) PERMIT IS NECESSARY WHEN ENTERING MTS/SAN DIEGO AND ARIZONA EASTERN (SD&AE) RIGHT-OF-WAY (MTS R/W), INCLUDING AIRSPACE, FOR ANY PURPOSE. A ROE PERMIT IS ALSO REQUIRED WHEN WORKING IN PUBLIC RIGHT-OF-WAY OCCUPIED BY MTS/SD&AE FACILITIES. INFORMATION TO APPLY FOR ROE CAN BE OBTAINED FROM MTS'S WEBSITE AT: HTTP: //WWW.SDMTS.COM/BUSINESS/PERMITS.ASP OR CONTACT MTS PERMITS AT MTSROW@SDMTS.COM. APPLICANT/CONTRACTOR IS REFERRED TO AS THE "PERMITTEE".
2. CERTIFICATE OF INSURANCE FROM YOUR INSURANCE COMPANY FOR GENERAL LIABILITY, AUTOMOBILE LIABILITY, POLLUTION LIABILITY (IF APPLICABLE), PROFESSIONAL LIABILITY (IF APPLICABLE), AND WORKMAN'S COMPENSATION MUST BE SUBMITTED AND APPROVED BY MTS BEFORE THE PERMIT WILL BE PROCESSED. FULL INSURANCE REQUIREMENT GUIDELINES CAN BE ACCESSED FROM THE MTS WEBSITE NOTED ABOVE.
3. MOST GENERAL LIABILITY INSURANCE POLICIES DO NOT COVER RAILROADS. ANY EXCLUSIONS RELATING TO PERFORMANCE OF OPERATIONS WITHIN THE VICINITY OF ANY RAILROAD, BRIDGE, TRESTLE, TRACK, ROADBED, TUNNEL, UNDERPASS, OR CROSSING MUST BE DELETED FROM ALL POLICIES BY ENDORSEMENT. ADDITIONALLY, A SEPARATE RAILROAD PROTECTIVE LIABILITY POLICY WILL MOST LIKELY BE REQUIRED AFTER PROJECT REVIEW AS DEEMED NECESSARY BY MTS.
4. ALL PERSONNEL PERFORMING WORK ON MTS R/W, OR ENTERING MTS R/W SHALL REQUIRE PROPER MTS RAIL SAFETY TRAINING CERTIFICATION PRIOR TO ENTERING MTS R/W. ANY CONTRACTORS OR SUBCONTRACTORS PERFORMING WORK ON BEHALF OF PERMITTEE, SHALL BE DEEMED AS AGENTS OF PERMITTEE AND SHALL REQUIRE SAID TRAINING AS WELL. FOR TRAINING INFORMATION, EMAIL MTSROW@SDMTS.COM. TRAINING CERTIFICATION IS VALID FOR ONE YEAR AND IS CONFINED TO MTS/SD&AE FACILITIES ONLY.
5. PERMITTEE SHALL PROVIDE MTS WITH AN APPROVED SET OF TRAFFIC CONTROL PLANS THAT CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND COMPLY IN PARTICULAR WITH PART 8 "TRAFFIC CONTROL FOR RAILROAD AND LIGHT RAIL TRANSIT GRADE CROSSINGS".
6. IF PROJECT INVOLVES CASING SLEEVES UNDER RAILROAD TRACKS AND ACROSS MTS R/W, PERMITTEE SHALL ADHERE TO MTS JACK AND BORE DESIGN CRITERIA AND CONSTRUCTION NOTES.
7. A PRE-CONSTRUCTION MEETING WILL BE REQUIRED WITH MTS/SDTI PRIOR TO WORK COMMENCING WITHIN MTS R/W. A WRITTEN NOTICE OF PLANNED START OF WORK MUST BE SUBMITTED TO MTS A MINIMUM OF FIVE (5) BUSINESS DAYS PRIOR TO WORK STARTING IN MTS R/W. ALL WORK WILL BE STOPPED AND PERMITTEE WILL NOT BE ALLOWED IN MTS R/W WITHOUT PROPER NOTIFICATION.
8. PERMITTEE'S ON-SITE SUPERVISION SHALL RETAIN/MAINTAIN A FULLY EXECUTED COPY OF THE RIGHT OF ENTRY PERMIT AT ALL TIMES WHILE ON MTS R/W.
9. SDTI RAIL FLAGGING WILL BE REQUIRED ANYTIME WORK IS WITHIN FIFTEEN (15) FEET OF ANY OPERABLE TRACK INCLUDING AIRSPACE OR AS DEEMED NECESSARY BY MTS. A SDTI FLAGPERSON/RIGHT-OF-WAY WORK REQUEST FORM MUST BE SUBMITTED TO SDTI A MINIMUM OF THREE (3) BUSINESS DAYS PRIOR TO ANTICIPATED WORK. FORMS ARE ATTACHED TO THE ROE PERMIT OR CAN BE REQUESTED THROUGH MTS RIGHT OF WAY SERVICES.
10. A SDTI TRACTION POWER SHUTDOWN MAY BE NECESSARY FOR THE WORK ZONE TO PROTECT AND MAINTAIN THE REQUIRED TEN (10) FOOT CLEARANCE FROM TROLLEY OVERHEAD HIGH VOLTAGE CATENARY SYSTEM (OCS). PERMITTEE SHALL SUBMIT A SDTI RED TAG/TRACTION POWER REMOVAL REQUEST FORM TO SDTI AT LEAST THREE (3) BUSINESS DAYS PRIOR TO THE START OF WORK. POWER SHUTDOWNS SHALL ONLY BE ALLOWED DURING NON-OPERATING TROLLEY HOURS. FORMS ARE ATTACHED TO THE ROE PERMIT OR CAN BE REQUIESTED THROUGH MTS RIGHT OF WAY SERVICES.
11. PERMITTEE SHALL CONTACT AND SCHEDULE DIG-ALERT AND CABLE PIPE AND LEAK ("CPL") PRIOR TO ANY EXCAVATION IN MTS R/W. PERMITTEE SHALL NOTIFY MTS A MINIMUM OF THREE (3) BUSINESS DAYS PRIOR TO THE SCHEDULED UTILITY MARKOUT REQUEST AND SHALL SUBMIT A SDTI FLAGPERSON/RIGHT-OF-WAY WORK REQUEST FORM. SDTI PERSONNEL SHALL ACCOMPANY CPL FOR ANY MARKOUT OF TROLLEY FACILITIES.
12. PERMITTEE SHALL ADHERE TO CONSTRUCTION AND SAFETY STANDARDS REQUIRED BY MTS OF THEIR CONTRACTORS WHEN WORKING WITHIN MTS R/W.
13. PERMITTEE SHALL PERFORM ALL WORK IN ACCORDANCE WITH APPLICABLE CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC) AND CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (CAL-OSHA) REGULATIONS. MTS LRT DESIGN CRITERIA, AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION (AREMA) STANDARD SPECIFICATIONS, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) GUIDELINES AND MTS, SDTI AND SD&IV OPERATIONS AND SAFETY POLICIES.

MTS STANDARD CONSTRUCTION NOTES (CONT.):

14. PERMITTEE AGREES THAT NO WORK BY HIMSELF OR HIS AUTHORIZED AGENT WILL INTERFERE WITH RAILROAD/TROLLEY OPERATIONS.
15. PERMITTEE AGREES TO COORDINATE ON A DAILY BASIS A REASONABLE ACCESS TO ALL MTS/SD&AE FACILITIES WITH CONTRACT OPERATORS, SDTI, AND SD&IV. SDTI TROLLEY OPERATIONS ARE GENERALLY FROM THE HOURS OF 4:00 A.M. TO 2:00 A.M. THE FOLLOWING DAY. SD&IV FREIGHT TRAINS NORMAL OPERATIONS ARE DURING NON-TROLLEY HOURS.
16. PERMITTEE SHALL MAINTAIN SAFE PEDESTRIAN ACCESS TO ALL TROLLEY PLATFORMS AND BUS STOPS AT ALL TIMES. A MINIMUM FIVE (5) FOOT WIDE ACCESSIBLE PEDESTRIAN PATH THROUGH THE CONSTRUCTION SITE SHALL BE MAINTAINED AT ALL TIMES. THE CONSTRUCTION BOUNDARY SHALL CONSIST OF A TOP AND BOTTOM RAIL CONSTRUCTED OF PLASTIC PIPE, OSHA PLASTIC MESH, OR APPROVED EQUAL. YELLOW CAUTION TAPE IS NOT ACCEPTABLE.
17. PERMITTEE SHALL NOT STORE EQUIPMENT, TOOLS, AND MATERIALS WITHIN FIFTEEN (15) FEET FROM TROLLEY OPERABLE TRACK AND WITHIN TWENTY-FIVE (25) FEET FROM FREIGHT TRACK OPERATIONS.
18. PERMITTEE SHALL NOT USE OR STORE HAZARDOUS SUBSTANCES, AS DEFINED BY THE THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, AS AMENDED ("CERCLA") OR PETROLEUM OR OIL AS DEFINED BY APPLICABLE ENVIRONMENTAL LAWS ON MTS R/W.
19. NO VEHICULAR CROSSING OVER TRACKS SHALL BE INSTALLED OR USED BY PERMITTEE WITHOUT PRIOR WRITTEN PERMISSION OF RAILROAD.
20. A WRITTEN NOTICE SHALL BE SUBMITTED TO MTS ONE (1) BUSINESS DAY AFTER WORK IS COMPLETED WITHIN MTS R/W. ANY ADDITIONAL WORK REQUIRED TO REPLACE OR REPAIR THE RAILROAD FACILITIES IN GOOD WORKING ORDER WILL BE THE PERMITTEE'S RESPONSIBILITY PRIOR TO RELIEF FROM MAINTENANCE WITHIN THE PERMIT AREA.
21. PERMITTEE SHALL REMOVE ALL OF PERMITTEE'S TOOLS, EQUIPMENT, AND MATERIALS FROM RAILROAD PREMISES PROMPTLY UPON COMPLETION OF WORK AND SHALL RESTORE ALL FACILITIES, IMPROVEMENTS, LANDSCAPING, ETC., TO THEIR ORIGINAL CONDITION OR AS SHOWN ON PROJECT WORK SITE PLANS.

GRADING AND GEOTECHNICAL SPECIFICATIONS

1. A GEOTECHNICAL REPORT HAS BEEN PREPARED FOR THIS PROJECT AREA. THE MOST RECENT, PREPARED BY WSP. DATED MARCH 11, 2024 AND TITLED: "BEYER BOULEVARD SLOPE AND DRAINAGE IMPROVEMENTS, GEOTECHNICAL INVESTIGATION REPORT, SAN DIEGO, CALIFORNIA" WHICH WILL BE AVAILABLE TO DOWNLOAD.
2. FOR ALL EXCAVATION ACTIVITY, INCLUDING TEMPORARY EXCAVATION, CONTRACTOR SHALL COMPLY WITH THE GEOTECHNICAL REPORT REFERENCED IN NOTE (1) ABOVE. AT NO TIME SHALL CONTRACTOR EXCAVATE 2.5' OR GREATER IN DEPTH UNLESS OTHERWISE INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT. THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS' CODE AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE REVIEWING AGENCY IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR THIS PROJECT.

MATTHEW J. BRITTEN — P.E. 61869 — DATE
RAILPROS INC. — EXP: 9/30/2025
401 B STREET, SUITE 2360
SAN DIEGO, CA 92101

WORK TO BE DONE

CONTRACTED IMPROVEMENTS SHALL BE COMPLETED IN ACCORDANCE WITH THESE PLANS, THE STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, STANDARD SPECIFICATIONS AND DRAWINGS LISTED HEREON.

ENVIRONMENTAL SPECIFICATIONS

1. A CEQA ADDENDUM HAS BEEN PREPARED FOR THIS PROJECT AREA. THE ADDENDUM, PREPARED BY HELIX ENVIRONMENTAL PLANNING, INC., DATED JUNE 2022, TITLED: "BEYER BLVD SLOPE AND DRAINAGE IMPROVEMENTS PROJECT, ADDENDUM TO THE FINAL MITIGATED NEGATIVE DECLARATION/INITIAL STUDY FOR THE SAN YSIDRO FREIGHT RAIL YARD IMPROVEMENTS PROJECT", (STATE CLEARING HOUSE NO. 2010071032), WHICH WILL BE AVAILABLE TO DOWNLOAD.

STANDARD SPECIFICATIONS

1. STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS, 2023.

STANDARD PLANS

1. SAN DIEGO REGIONAL STANDARD DRAWINGS, 2022.
2. STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD PLANS, 2023.

BENCHMARK (NAVD88)

"ELEVATIONS SHOWN HEREON ARE IN TERM OF THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) BASED LOCALLY UPON THE FOLLOWING BENCHMARK PER NGS DATA SHEET.

NAME: NGS BM Z1411
ELEVATION: 80.18
AGENCY: NATIONAL GEODETIC SURVEY
DESCRIPTION: DISC IN WELL STAMPED"Z 1411 1987"

0.10 MI SOUTHEAST ALONG SAN YSIDRO BOULEVARD FROM THE INTERSTATE HIGHWAY 805 SOUTHBOUND OVERPASS IN SAN YSIDRO, THENCE 0.15 MI NORTHEAST ALONG CENTER STREET, THENCE 0.55 MI SOUTHEAST ALONG EAST BEYER BOULDEVARD.

IN THE NORTH CORNER OF THE T-JUNCTION OF A PAVED ROAD LEADING NORTHEAST AND ACROSS THE SAN DIEGO TROLLEY TRACKS, 78.4 FT NORTHEAST OF THE BEYER BOULEVARD CENTERLINE, 30.8 FT NORTHWEST OF THE ROAD CENTERLINE, 21.3 FT NORTHEAST OF THE NORTHEAST RAIL OF THE NORTHEASTMOST SET OF TRACKS, 3.3 FT NORTHWEST OF THE SOUTHEAST END OF A CHAIN-LINK FENCE.

THE MARK IS 1.3 FT SE FROM A WITNESS POST

BASIS OF COORDINATES: (NAD83)

"THE BASIS OF COORDINATES FOR THIS SURVEY IS THE NRTH AMERICAN DATUM OF 1983 (NAD83) CALIFORNIA STATE PLANE COORDINATE SYSTEM OF 1983 (CCS83) ZONE 6 (EPOCH 1991.35) BASED LOCALLY UPON THE FOLLOWING CONTROL POINTS PER RECORD OF SURVEY 14492 AND RECORD OF SURVEY 15487"

STATION	NORTHING	EASTING	SOURCE
1A	1778149.429	6322084.508	ROS 15487
190	1783831.44	6317394.05	ROS 14492

GRID BEARING BETWEEN #1A AND #190 = N 39°32'22" W.

NO.	DATE	REVISIONS	BY	CHK	APRV

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FAX: (714) 734 - 8755

REGISTERED PROFESSIONAL ENGINEER — MATTHEW J. BRITTEN — C61869 — CIVIL — STATE OF CALIFORNIA

DESIGNED BY MB	DATE 09/24
DRAWN BY KA	09/24
CHECKED BY MT	09/24
SANDAG PRJ. MGR. DU	

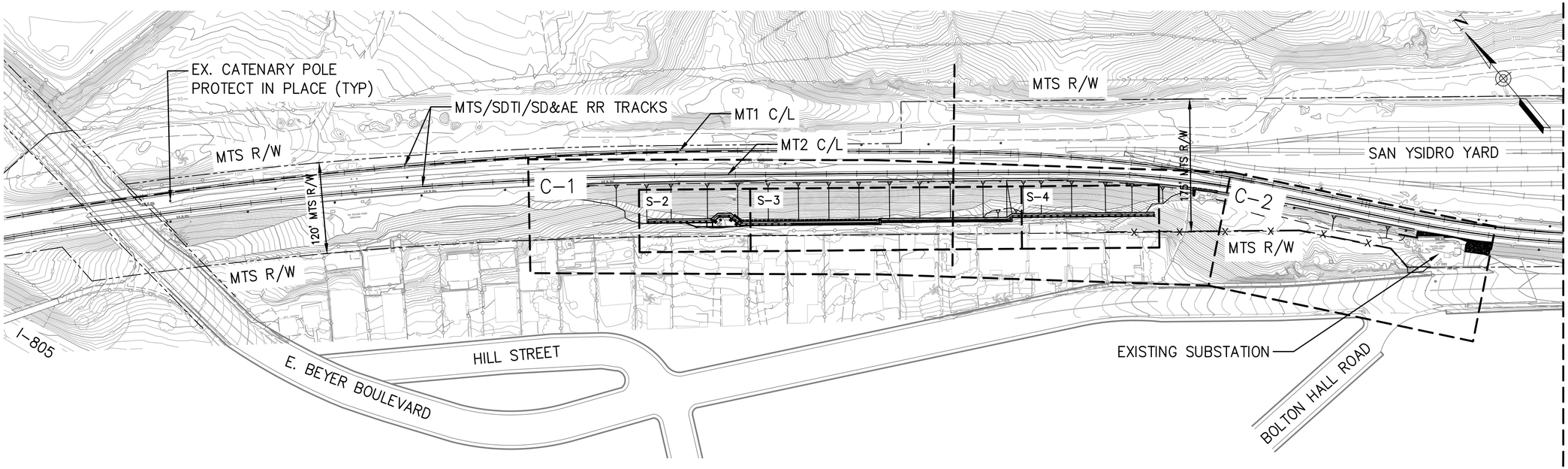
SANDAG MTS

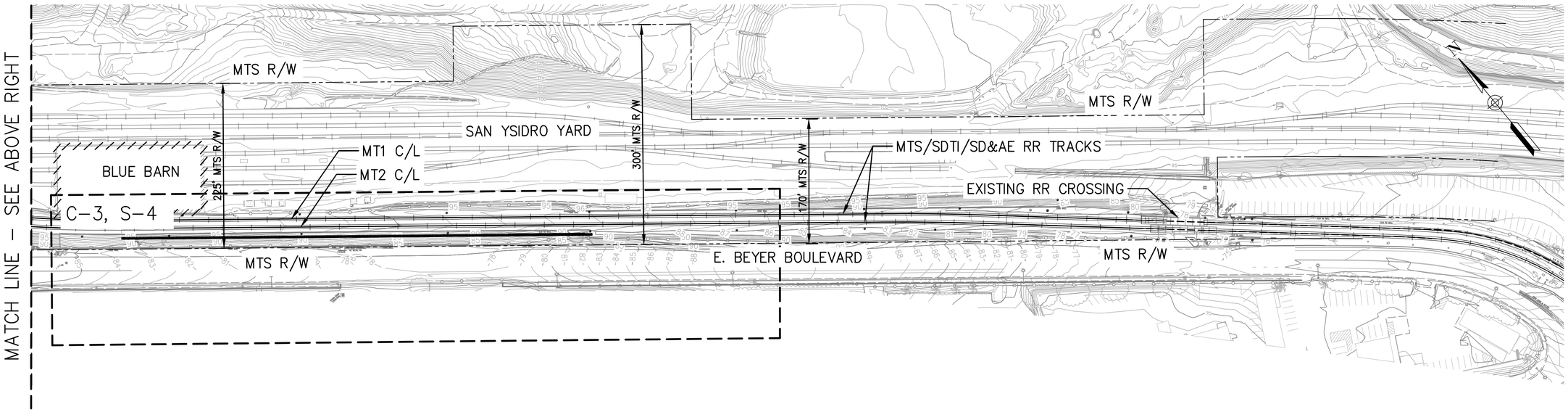
SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

GENERAL NOTES

SCALE: NONE
PROJECT NO.: CIP: SANDAG-1147000/ MTS-2005109001
DRAWING NO.: G-2
SHEET NO.: 3

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3





KEY MAP
NTS

NO.	DATE	REVISIONS	BY	CHK	APRV

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REGISTERED PROFESSIONAL ENGINEER — MATTHEW J. BRITTEN — C61869 — CIVIL — STATE OF CALIFORNIA

DESIGNED BY	DATE
MB	09/24
DRAWN BY	
KA	09/24
CHECKED BY	
MT	09/24
SANDAG PRJ. MGR.	
DU	

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

KEY MAP

SCALE: NONE

PROJECT NO.: CIP: SANDAG-1147000/ MTS-2005109001

DRAWING NO.: G-3

SHEET NO.: 4

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

LOADING CRITERIA

TRAIN LOAD AND SURCHARGE = LRV S70 ULTRA SHORT (SD8) PER SANDAG CRITERIA

	TOE OF SLOPE	TOP OF SLOPE
SOIL DENSITY, γ	125 PCF	125 PCF
FRICTION ANGLE, φ	32	32
FRICTION FACTOR, μ	0.60	0.60
ACTIVE COEFFICIENT, Ka	0.43 (2H:1V) 0.28 (LEVEL)	0.28
PASSIVE COEFFICIENT, Kp	3.50	3.50
SEISMIC:		
PGA	0.27g	0.27g
Kh	0.17	0.17
ACTIVE + SEISMIC (K_{AE})	0.68 (2H:1V) 0.40 (LEVEL)	0.4
PASSIVE + SEISMIC (K_{PE})	3.1	3.1

K_{AE} COEFFICIENT ALSO INCLUDES Ka

TABLE 3: NOMINAL AND FACTORED BEARING RESISTANCE VALUES FOR TOE–OF–SLOPE FOOTINGS

FOOTING WIDTH (FT)	NOMINAL BEARING RESISTANCE (KSF)	FACTORED STRENGTH LIMIT (KSF)	FACTORED EXTREME LIMIT (KSF)	FACTORED SERVICE LIMIT (KSF)
2	7.0	4.0	6.0	7.0
4	9.5	5.0	8.5	9.5
6	11.0	6.0	10.0	9.5

TABLE 4: NOMINAL AND FACTORED BEARING RESISTANCE VALUES FOR TOP–OF–SLOPE FOOTINGS

FOOTING WIDTH (FT)	NOMINAL BEARING RESISTANCE (KSF)	FACTORED STRENGTH LIMIT (KSF)	FACTORED EXTREME LIMIT (KSF)	FACTORED SERVICE LIMIT (KSF)
2	4.0	2.0	4.0	4.0
4	5.5	2.5	5.0	5.5
6	6.5	3.5	6.0	6.5

GEOTECHNICAL DATA IS BASED ON THE 'BEYER BLVD SLOPE AND DRAINAGE IMPROVEMENTS, GEOTECHNICAL INVESTIGATION REPORT SAN DIEGO, CALIFORNIA' DATED MARCH 11, 2024 PREPARED BY WSP, 401 B ST, SUITE 1650, SAN DIEGO, CA 92101

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LAYOUT LOCATIONS, AND ELEVATIONS PRIOR TO THE INSTALLATION OF THE WALLS.
2. WRITTEN DIMENSIONS SHALL SUPERCEDE ALL SCALED DIMENSIONS.
3. SEE THE CIVIL PLANS, G–SHEETS FOR THE ELEVATION DATUM.
4. THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION PHASING AND STAGING PLAN TO THE ENGINEER DETAILING THE CONSTRUCTION PROCEDURE FOR EACH PHASE. CONTRACTOR SHALL NOT PERFORM ANY STRUCTURAL WORK UNTIL THE PLAN HAS BEEN REVIEWED AND APPROVED BY THE ENGINEER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ANY TEMPORARY SHORING AND/OR BRACING REQUIRED TO COMPLETE THE WORK SHOWN ON THESE PLANS AND SUBMIT ALL PLANS AND CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK.
7. THE CONTRACTOR SHALL PROVIDE A 6'X 8'MOCKUP OF CONCRETE LAGGING PANEL FOR INSPECTION BY MTS PRIOR TO START OF FULL FABRICATION PRODUCTION.

STEEL

1. ALL WIDE–FLANGE STEEL SHALL BE ASTM A992 WITH Fy = 50ksi AND Fu = 65ksi
2. ALL MISCELLANEOUS STEEL SHALL BE ASTM A36
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STEEL ITEMS TO THE ENGINEER FOR APPROVAL PRIOR TO ANY FABRICATION.
4. ALL STEEL SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123
5. ALL FIELDS CUTS, WELDS, OR OTHER PROCEDURES THAT COMPROMISES THE HOT DIPPED GALVANIZED COATING SHALL BE SPRAYED WITH A ZINC METAL COATING.

CONCRETE

1. CONCRETE SHALL HAVE A MINIMUM 28–DAY COMPRESSIVE STRENGTH AS FOLLOWS:
   - CIDH PILE – F'c = 4,000 psi
   - CAST–IN–PLACE – F'c = 4,000 psi
   - PRECAST PANELS AND GRAVITY BLOCKS – F'c = 4,000 psi
2. THE MAXIMUM WATER TO CEMENTITIOUS MATERIAL RATIO SHALL NOT EXCEED 0.40.
3. ALL REBAR SHALL CONFORM TO ASTM A615 GRADE 60
4. ALL REBAR SHALL HAVE A MINIMUM CLEAR COVER OF 3 INCHES UNLESS NOTED OTHERWISE.
5. ALL STEEL SHALL BE FULLY SECURED AND/OR BRACED IN ITS FINAL LOCATION AND INSPECTED PRIOR TO PLACEMENT OF CONCRETE.
6. SOLDIER PILE CONCRETE SHALL BE PLACED CONTINUOUSLY; NO COLD/CONSTRUCTION JOINTS WILL BE ALLOWED.
7. SOLDIER PILE CONCRETE SHALL BE PLACED BY TREMIE METHOD. FREE FALL HEIGHT SHALL NOT EXCEED 10FT.
8. CONCRETE SHALL OBTAIN THE MINIMUM 28–DAY COMPRESSIVE STRENGTH PRIOR TO BACKFILLING BEHIND LAGGING.
9. CONCRETE SHALL HAVE A 10–20% FLY ASH ADDMIX FOR DURABILITY AND REDUCE EMISSIONS.

PROJECT SPECIFICATIONS

RETAINING WALL AND OTHER IMPROVEMENTS: CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (CALTRANS) 2018.

DRILLING NOTES

1. THE CONTRACTOR SHALL EXPECT TO ENCOUNTER LAYERS OF GRAVEL, COBBLES, AND AN OCCASSIONAL BOULDER, AS DEFINED IN THE GEOTECHNICAL REPORT. DURING THE DRILLING PROCESS, CONTRACTOR SHALL HAVE APPROPRIATE DRILLING EQUIPMENT AVAILABLE FOR VARYING SOIL CONDITIONS.
2. THE CONTRACTOR SHALL PREVENT SLOUGHING AND CAVING OF THE DRILLED HOLES BY CASING OR EQUIVALENT METHOD AS APPROVED BY ENGINEER.
3. UNCASED DRILLED HOLES SHALL NOT BE LEFT OPEN OVERNIGHT.

PROPOSED CIDH CONSTRUCTION SEQUENCE

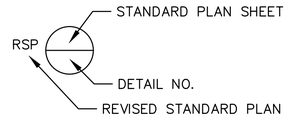
1. DRILL HOLES FOR CIDH PILES
2. PLACE STEEL PILING IN HOLES AND SECURE IN POSITION
3. PLACE CONCRETE IN HOLES TO TOP OF CIDH ELEVATION
4. INSTALL PRECAST PANELS BETWEEN CIDH PILES AFTER CIDH CONCRETE HAS REACHED 75% STRENGTH
5. BACKFILL BEHIND WALL
6. INSTALL SAFETY HANDRAIL ALONG TOP OF WALL
7. INSTALL CONCRETE DRAINAGE DITCH BEHIND WALL

GRADING NOTES

1. FOR SHADED BLOCKS, CONTRACTOR SHALL ONLY EXCAVATE FOR, INSTALL, AND BACKFILL (AT A MIN.) TO EXISTING GROUND, A MAXIMUM OF TWO (2) BLOCKS AT ANY ONE TIME.
   EXCEPTION: IF CONTRACTOR CAN SLOPE BACK EXCAVATION IN COMPLIANCE WITH THE GEOTECHNICAL REPORT FOR TEMPORARY SLOPES, EXCAVATION MAY BE LONGER IN ACCORDANCE WITH THE LIMITS INDICATED IN THE GEOTECHNICAL REPORT.
2. INSTALLATION FOR ANY PORTION OF SHADED BLOCK AREAS SHALL BE COMPLETED ONCE STARTED. AT NO TIME SHALL EXCAVATION BE LEFT OPEN, EXCEPT FOR IMMEDIATE PLACEMENT OF BLOCKS AND BACKFILLING.
3. CONTRACTOR SHALL NOT EXCAVATE FOR NON–SHADED GRAVITY BLOCKS MORE THAN THE LENGTH INDICATED IN THE GEOTECHNICAL REPORT.
4. EXCAVATION FOR GRAVITY BLOCKS SHALL NOT BE LEFT OPEN OVERNIGHT. BLOCKS SHALL BE INSTALLED FOR EXCAVATIONS MADE AND BACKFILLED (AT A MIN.) TO EXISTING GROUND.

CALTRANS STANDARD PLANS DATED OCTOBER 2018 (WITH REVISIONS)

	A3A	ABBREVIATIONS (SHEET 1 OF 3)
	A3B	ABBREVIATIONS (SHEET 2 OF 3)
	A3C	ABBREVIATIONS (SHEET 3 OF 3)
	A10A	LEGEND LINES AND SYMBOLS (SHEET 1 OF 5)
	A10B	LEGEND LINES AND SYMBOLS (SHEET 2 OF 5)
	A10C	LEGEND LINES AND SYMBOLS (SHEET 3 OF 5)
	A10D	LEGEND LINES AND SYMBOLS (SHEET 4 OF 5)
	A10E	LEGEND LINES AND SYMBOLS (SHEET 5 OF 5)
	A10F	LEGEND – SOILS (SHEET 1 OF 2)
	A10G	LEGEND – SOILS (SHEET 2 OF 2)
	A10H	LEGEND – ROCK
RSP	A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE SURCHARGE AND WALL
	A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
RSP	B0–3	BRIDGE DETAILS
RSP	B11–47	CABLE RAILING



INDEX TO PLANS

NO.	DATE	REVISIONS	BY	CHK	APRV
1	6/20/25	ADDED CONCRETE NOTE 9.			

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DESIGNED BY DY	DATE 9/24
DRAWN BY GE	9/24
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SANDAG PRJ. MGR. DU	9/24

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

STRUCTURAL NOTES AND INDEX TO PLANS

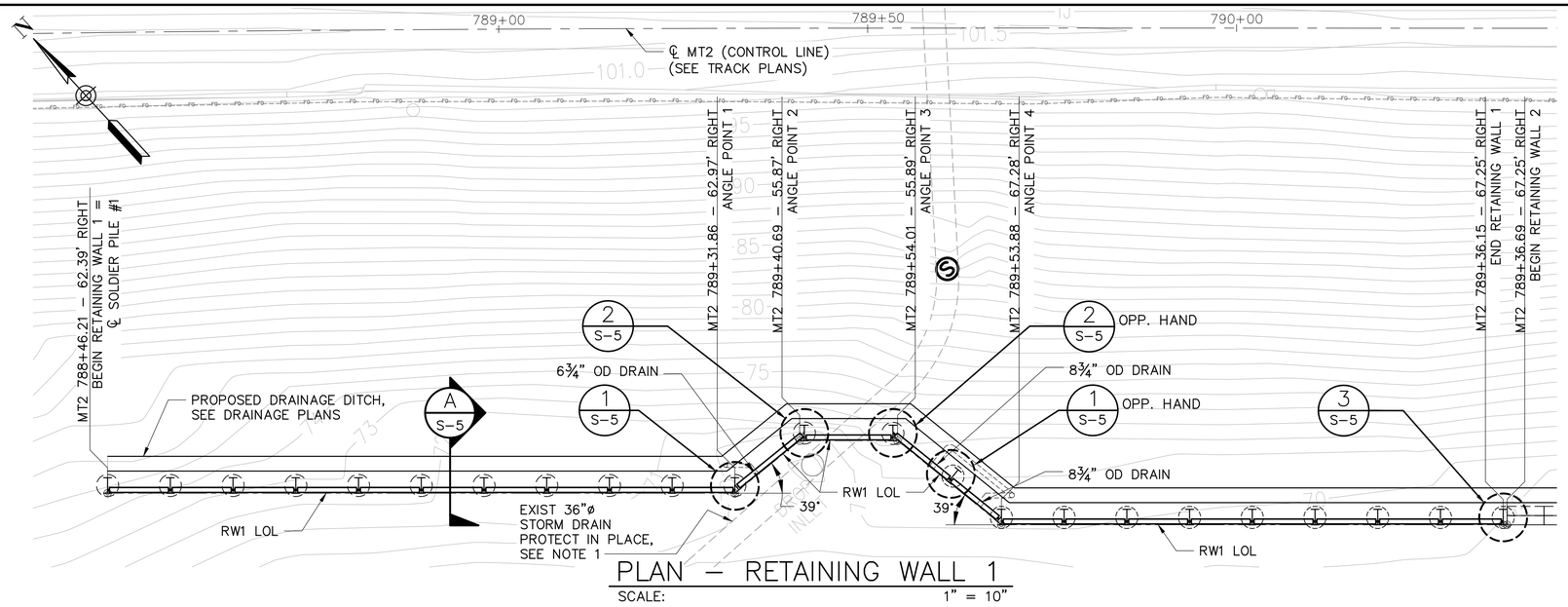
SCALE: NONE

PROJECT NO.: CIP: SANDAG-1147000/ MTS-2005109001

DRAWING NO.: S-1

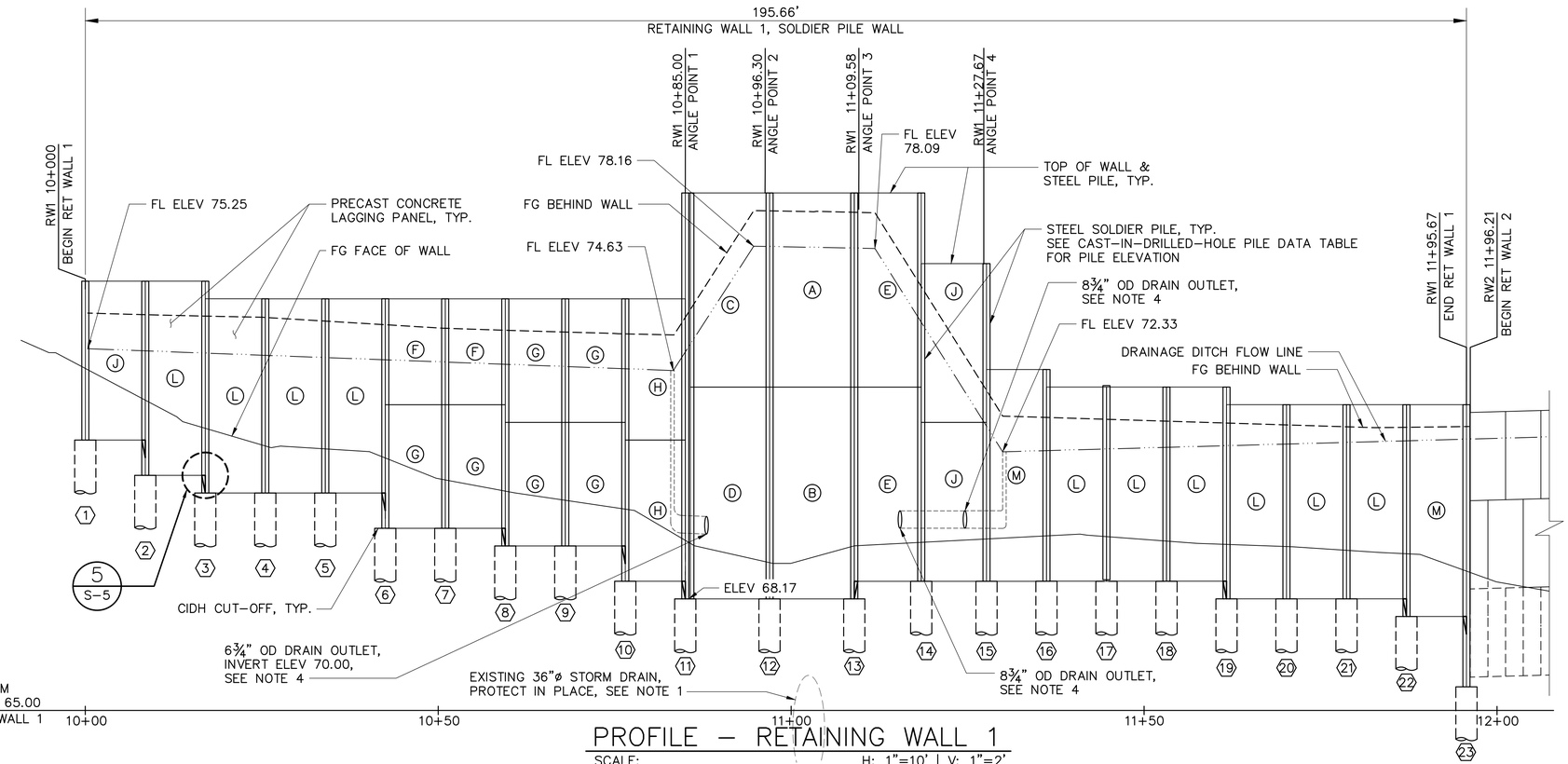
SHEET NO.: 5

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3



PLAN – RETAINING WALL 1

SCALE: 1" = 10"



PROFILE – RETAINING WALL 1

SCALE: H: 1"=10' | V: 1"=2'

NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING 36"ø STORM DRAIN PRIOR TO CONSTRUCTION.
2. FOR CONCRETE LAGGING PANEL DETAILS, SEE "RETAINING WALLS 1 AND 3, CONCRETE PANEL DETAILS" SHEET.
3. FOR DRAIN HOLE DETAIL ON CONCRETE LAGGING PANEL, SEE "RETAINING WALLS 1 AND 3, CONCRETE PANEL DETAILS" SHEET.
4. SEE CIVIL PLANS FOR GRADING IMPROVEMENTS.

LEGEND:

Ⓐ DENOTES PRECAST CONCRETE LAGGING PANEL. FOR DIMENSIONS, SEE "PRECAST CONCRETE LAGGING PANEL TABLE"

⟨1⟩ DENOTES SOLDIER PILE NUMBER, SEE "CAST–IN–DRILLED–HOLE PILE DATA TABLE"

CAST–IN–DRILLED–HOLE PILE DATA TABLE

SOLDIER PILE NUMBER ⟨⟩	℄ PILE STATION ALONG LOL	DRILLED HOLE DIAMETER (IN)	CIDH CUT–OFF ELEVATION (FT)	CIDH TIP ELEVATION (FT)	TOP OF STEEL PILE/PANEL ELEVATION	STEEL PILE SECTION	STEEL PILE LENGTH (FT)
1	10+00.00	36	72.67	61.42	77.17	W24x176	15.50
2	10+08.50	36	71.67	60.42	77.17	W24x176	16.50
3	10+17.00	36	71.17	56.92	77.17	W24x176	20.00
4	10+25.50	36	71.17	56.92	76.67	W24x176	19.50
5	10+34.00	36	71.17	56.92	76.67	W24x176	19.50
6	10+42.50	36	70.17	55.92	76.67	W24x176	20.50
7	10+51.00	36	70.17	55.92	76.67	W24x176	20.50
8	10+59.50	36	69.67	54.92	76.67	W24x176	21.50
9	10+68.00	36	69.67	54.92	76.67	W24x176	21.50
10	10+76.50	36	68.67	49.92	76.67	W24x176	26.50
11	10+85.00	36	68.17	43.42	79.67	W24x176	36.00
12	10+96.94	36	68.17	45.42	79.67	W24x176	34.00
13	11+08.94	36	68.17	45.42	79.67	W24x176	34.00
14	11+18.42	36	68.67	45.92	79.67	W24x176	33.50
15	11+27.67	36	68.67	50.42	78.17	W24x176	27.50
16	11+36.17	36	68.67	54.42	74.67	W24x176	20.00
17	11+44.67	36	68.67	53.92	74.17	W24x176	20.00
18	11+53.17	36	68.67	53.92	74.17	W24x176	20.00
19	11+61.67	36	68.17	53.92	74.17	W24x176	20.00
20	11+70.17	36	68.17	53.42	73.67	W24x176	20.00
21	11+78.67	36	68.17	53.42	73.67	W24x176	20.00
22	11+87.17	36	67.67	53.42	73.67	W24x176	20.00
23	11+95.67	36	65.67	46.92	73.67	W24x176	26.50

NOTE: MINIMUM TIP ELEVATIONS ARE CONTROLLED BY LATERAL LOADING AND SHALL NOT BE RAISED.

NO.	DATE	REVISIONS	BY	CHK	APRV

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DESIGNED BY DY	DATE 9/24
DRAWN BY GE	9/24
CHECKED BY SG	9/24
SANDAG PRJ. MGR. DU	9/24

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS
ALONG SAN YSIDRO YARD

RETAINING WALL 1
PLAN AND PROFILE

SCALE: AS SHOWN

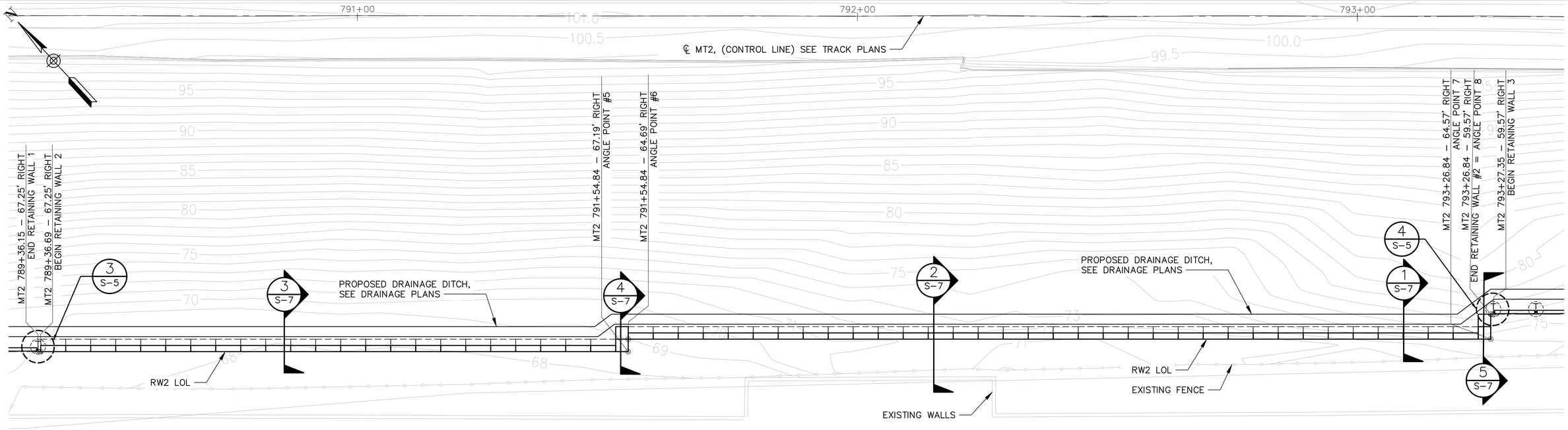
PROJECT NO. CIP: SANDAG-1147000/ MTS-2005109001

DRAWING NO. S-2

SHEET NO. 6

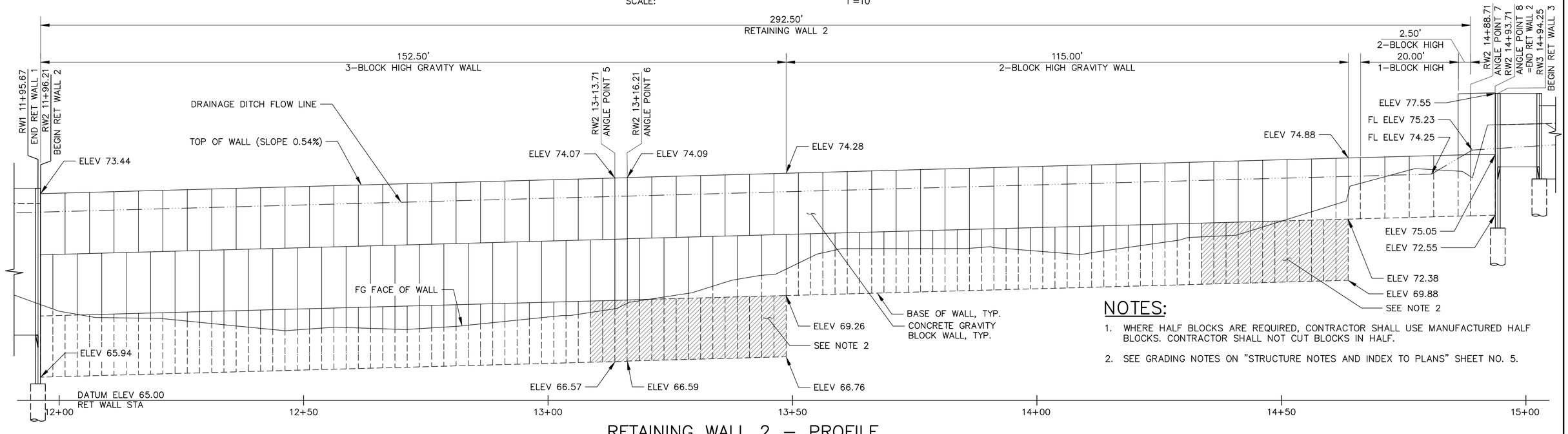
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

0 1 2 3



RETAINING WALL 2 – PLAN

SCALE: 1'=10'



RETAINING WALL 2 – PROFILE

SCALE: H: 1'=10' / V: 1'=2'

NOTES:

1. WHERE HALF BLOCKS ARE REQUIRED, CONTRACTOR SHALL USE MANUFACTURED HALF BLOCKS. CONTRACTOR SHALL NOT CUT BLOCKS IN HALF.
2. SEE GRADING NOTES ON "STRUCTURE NOTES AND INDEX TO PLANS" SHEET NO. 5.

NO.	DATE	REVISIONS	BY	CHK	APRV
1	10/7/24	ADDED SHEET NO. TO NOTE 2.			

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DESIGNED BY DY	DATE 9/24
DRAWN BY GE	9/24
CHECKED BY SG	9/24
SANDAG PRJ. MGR. DU	9/24

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SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

RETAINING WALL 2
PLAN AND PROFILE

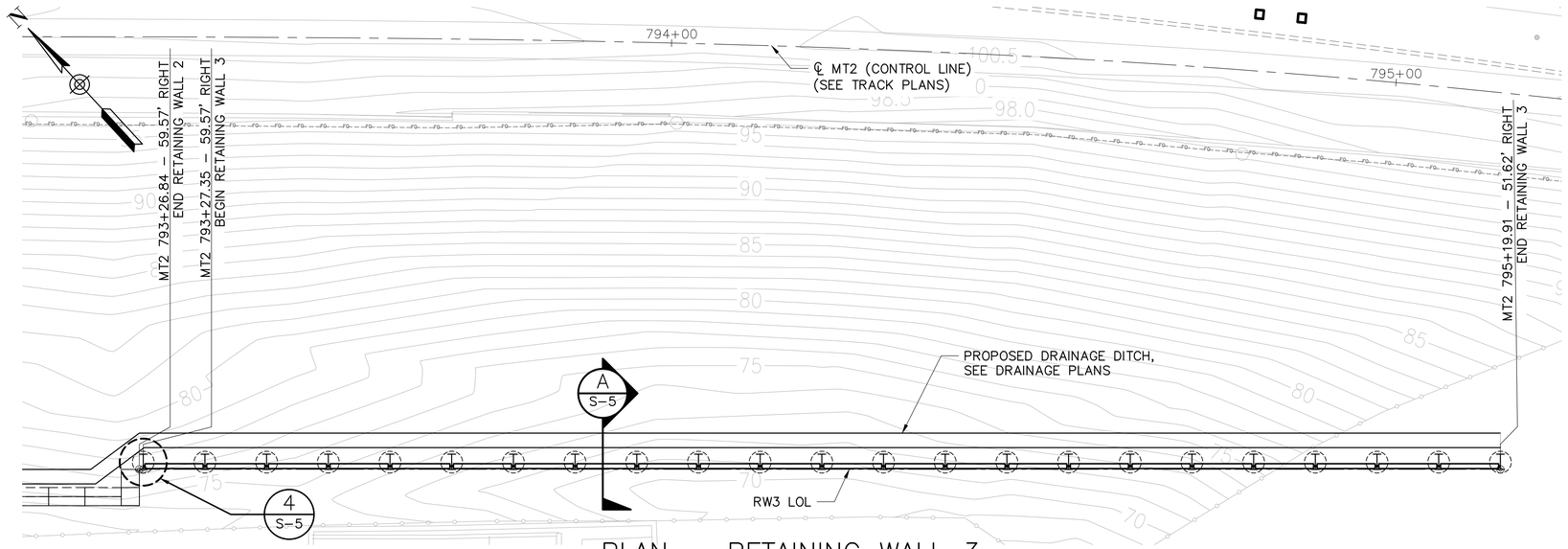
SCALE: AS SHOWN

PROJECT NO. CIP: SANDAG-1147000/ MTS-2005109001

DRAWING NO. S-3

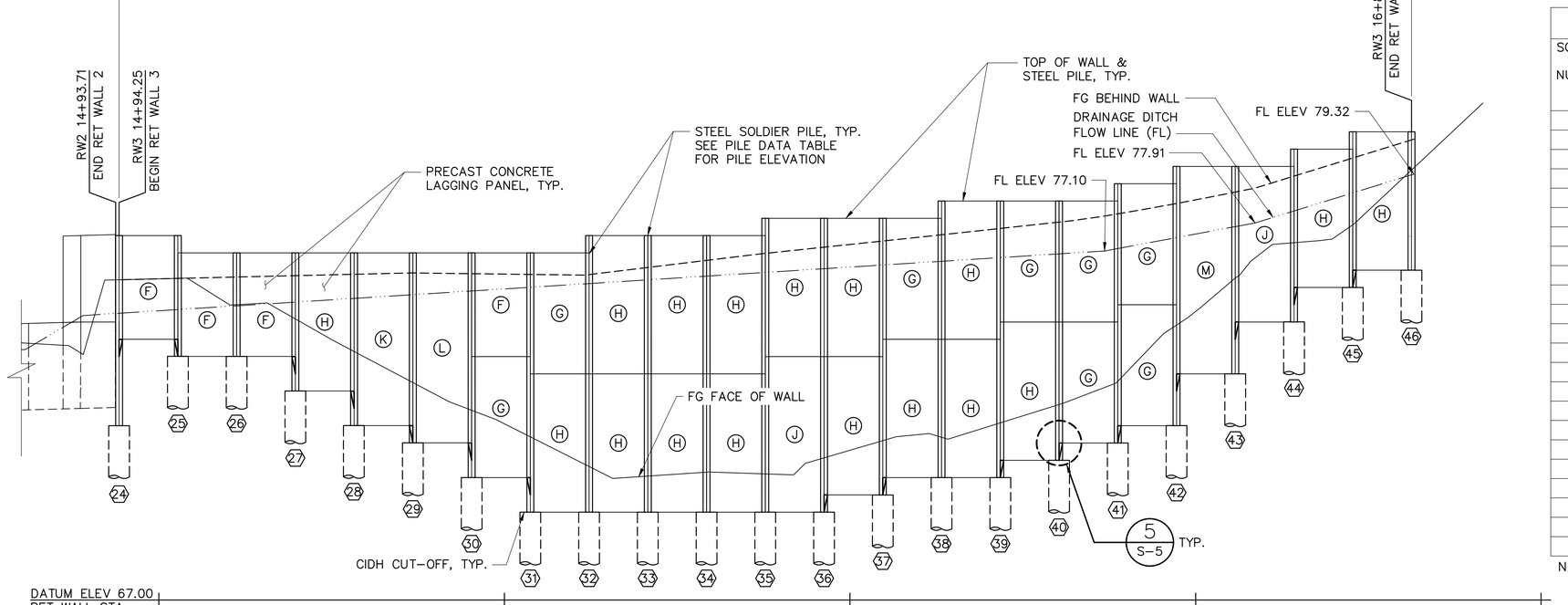
SHEET NO. 7

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3



PLAN – RETAINING WALL 3

SCALE: 1" = 10"



PROFILE – RETAINING WALL 3

SCALE: H: 1"=10' | V: 1"=2'

NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING 36"ø STORM DRAIN PRIOR TO CONSTRUCTION.
2. FOR CONCRETE LAGGING PANEL DETAILS, SEE "RETAINING WALLS 1 AND 3, CONCRETE PANEL DETAILS" SHEET.
3. FOR DRAIN HOLE DETAIL ON CONCRETE LAGGING PANEL, SEE "RETAINING WALLS 1 AND 3, CONCRETE PANEL DETAILS" SHEET.
4. SEE CIVIL PLANS FOR GRADING IMPROVEMENTS.

LEGEND:

Ⓐ DENOTES PRECAST CONCRETE LAGGING PANEL. FOR DIMENSIONS, SEE "PRECAST CONCRETE LAGGING PANEL TABLE"

⟨1⟩ DENOTES SOLDIER PILE NUMBER, SEE "CAST–IN–DRILLED–HOLE PILE DATA TABLE"

CAST–IN–DRILLED–HOLE PILE DATA TABLE

SOLDIER PILE NUMBER ⬡	℄ PILE STATION ALONG LOL	DRILLED HOLE DIAMETER (IN)	CIDH CUT–OFF ELEVATION (FT)	CIDH TIP ELEVATION (FT)	TOP OF STEEL PILE/PANEL ELEVATION	STEEL PILE SECTION	STEEL PILE LENGTH (FT)
24	14+94.25	36	72.04	57.79	77.54	W24x176	19.50
25	15+02.75	36	74.04	62.79	77.54	W24x176	14.50
26	15+11.25	36	74.04	63.04	77.04	W24x176	13.75
27	15+19.75	36	73.04	62.04	77.04	W24x176	14.75
28	15+28.25	36	72.04	57.79	77.04	W24x176	19.00
29	15+36.75	36	71.54	57.29	77.04	W24x176	19.50
30	15+45.25	36	70.54	56.29	77.04	W24x176	20.50
31	15+53.75	36	69.54	55.29	77.04	W24x176	21.50
32	15+62.25	36	69.54	51.54	77.04	W24x176	25.25
33	15+70.75	36	69.54	51.29	77.54	W24x176	26.00
34	15+79.25	36	69.54	51.29	77.54	W24x176	26.00
35	15+87.75	36	69.54	51.54	78.04	W24x176	26.25
36	15+96.25	36	69.54	51.29	78.04	W24x176	26.50
37	16+04.75	36	70.04	51.79	78.04	W24x176	26.00
38	16+13.25	36	70.54	52.54	78.04	W24x176	25.25
39	16+21.75	36	70.54	52.29	78.54	W24x176	26.00
40	16+30.25	36	71.04	53.04	78.54	W24x176	25.25
41	16+38.75	36	71.54	57.29	78.54	W24x176	21.00
42	16+47.25	36	72.04	57.79	79.04	W24x176	21.00
43	16+55.75	36	73.54	62.29	79.54	W24x176	17.00
44	16+64.25	36	75.04	63.79	80.04	W24x176	16.00
45	16+72.75	36	76.04	64.79	80.54	W24x176	15.50
46	16+81.25	36	76.54	65.54	80.54	W24x176	14.75

NOTE: MINIMUM TIP ELEVATIONS ARE CONTROLLED BY LATERAL LOADING AND SHALL NOT BE RAISED.

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SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

RETAINING WALL 3
PLAN AND PROFILE

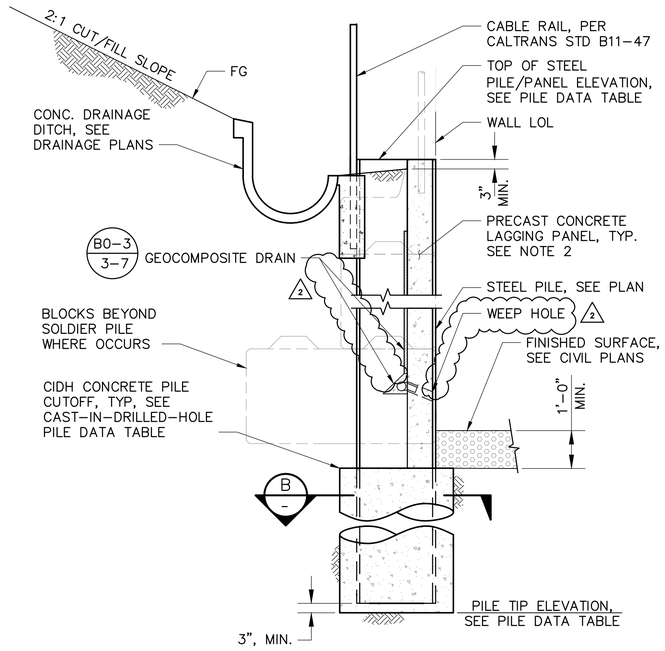
SCALE: AS SHOWN

PROJECT NO.: CIP: SANDAG-1147000/ MTS-2005109001

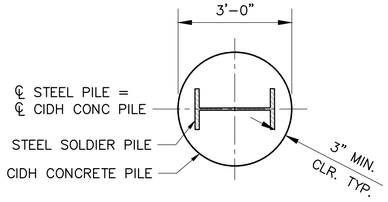
DRAWING NO.: S-4

SHEET NO.: 8

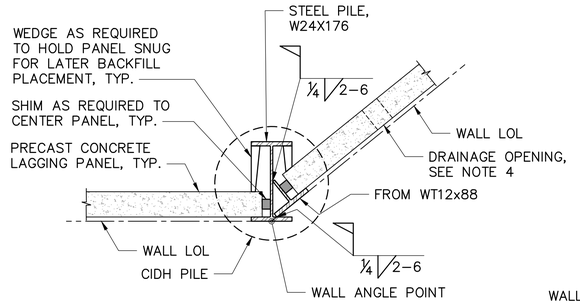
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3



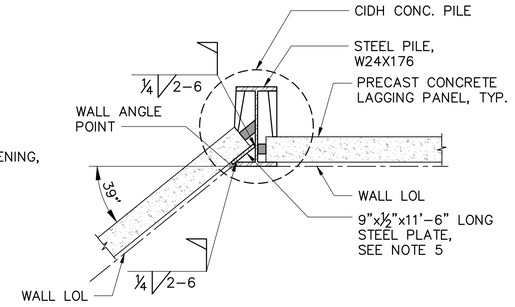
A / S-2 TYPICAL SOLDIER PILE
SCALE: 1/2" = 1'-0"
S-4



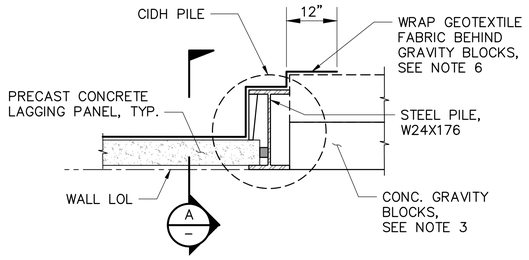
B / – TYPICAL PILE SECTION
SCALE: 1/2" = 1'-0"



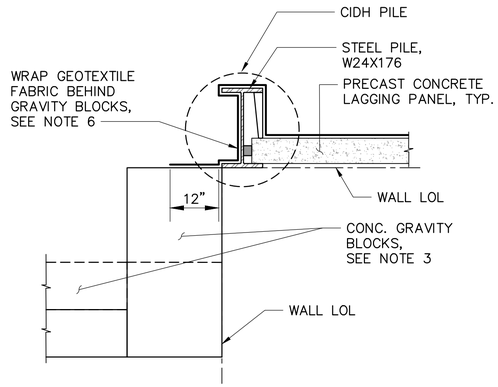
1 / S-2 CORNER BEND DETAIL
SCALE: 1/2" = 1'-0"



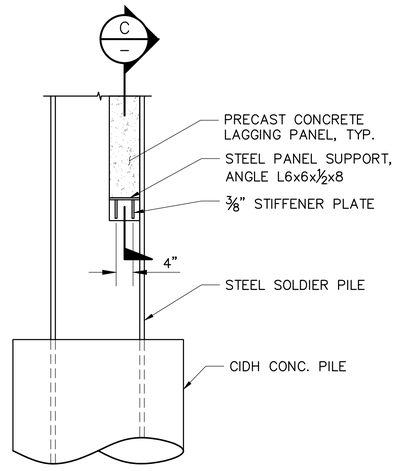
2 / S-2 CORNER BEND DETAIL
SCALE: 1/2" = 1'-0"



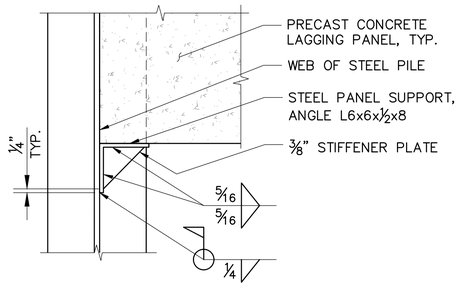
3 / S-2 CONC BLOCK STEEL PILE INTERFACE
SCALE: 1/2" = 1'-0"



4 / S-3 CONC BLOCK STEEL PILE INTERFACE
SCALE: 1/2" = 1'-0"



5 / S-2 SUPPORT ANGLE DETAIL
SCALE: 3/4" = 1'-0"
S-4



C / – SECTION
SCALE: 1-1/2" = 1'-0"

NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING 36"ø STORM DRAIN PRIOR TO CONSTRUCTION.
2. FOR CONCRETE LAGGING PANEL DETAILS, SEE "RETAINING WALL 1 AND 3 CONCRETE PANEL DETAILS" SHEET.
3. WHERE HALF BLOCKS ARE REQUIRED, CONTRACTOR SHALL USE MANUFACTURED HALF BLOCKS. CONTRACTOR SHALL NOT CUT BLOCKS IN HALF.
4. FOR DRAIN HOLE DETAIL ON CONCRETE LAGGING PANEL, SEE "RETAINING WALL 1 AND 3 CONCRETE PANEL DETAILS" SHEET.
5. OVERLAP FOR GEOTEXTILE WRAP SHALL BE 1'-0" MIN.
6. SEE CIVIL PLANS FOR GRADING IMPROVEMENTS.
7. GEOCOMPOSITE DRAIN AND FILTER FABRIC PER CALTRANS STANDARD SPECIFICATION SECTION 96, GEOSYNTHETICS. INSTALL PER CALTRANS STANDARD INDICATED ON PLAN AND MANUFACTURER GUIDELINES.

NO.	DATE	REVISIONS	BY	CHK	APRV
2	6/20/25	ADDED NOTE 7 FOR GEOCOMPOSITE.			
2	6/20/25	ADDED LEADER FOR CLARITY.			
2	6/20/25	ADDED WEEP HOLE CALL-OUT.			

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REGISTERED PROFESSIONAL ENGINEER MATTHEW J. BRITTEN C61869 CIVIL STATE OF CALIFORNIA

DESIGNED BY DY	DATE 9/24
DRAWN BY GE	9/24
CHECKED BY SG	9/24
SANDAG PRJ. MGR. DU	9/24

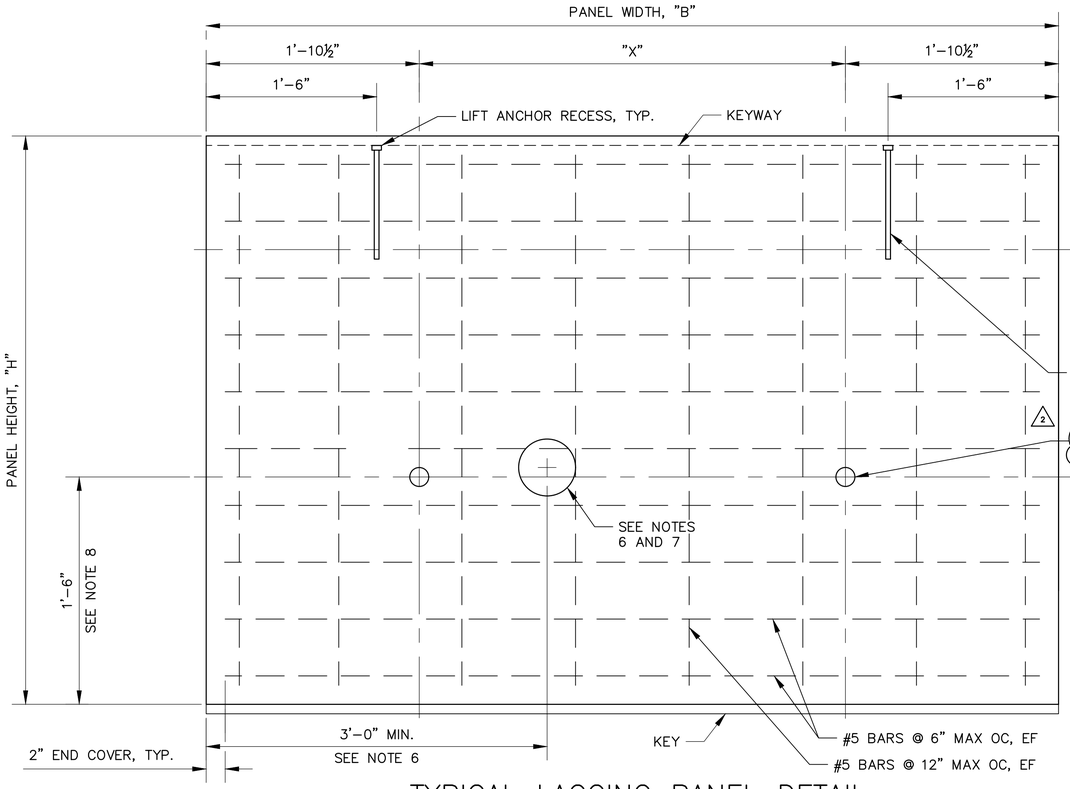
SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

RETAINING WALLS 1 AND 3
TYPICAL SECTIONS AND DETAILS

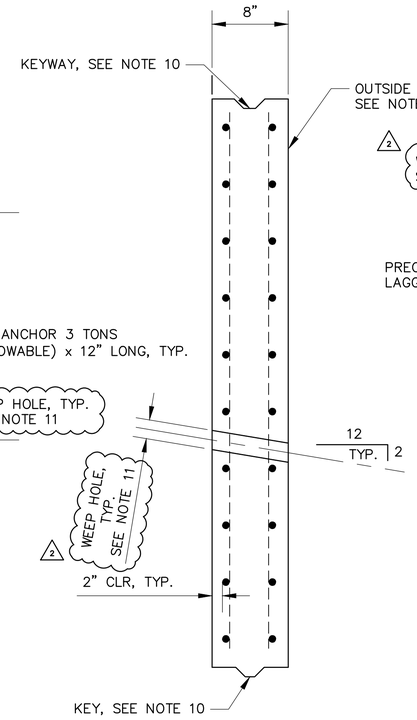
SCALE: AS SHOWN
PROJECT NO.: CIP: SANDAG-1147000/ MTS-2005109001
DRAWING NO.: S-5
SHEET NO.: 9

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3



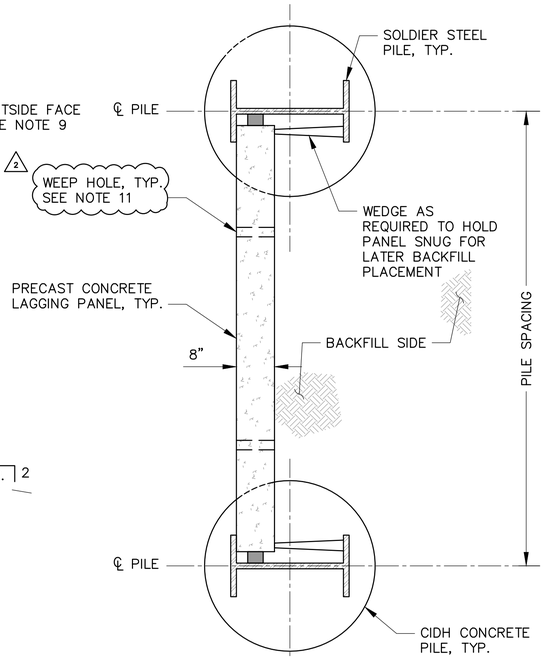
TYPICAL LAGGING PANEL DETAIL

SCALE: 1½" = 1'-0"



TYP. LAGGING PANEL SECTION

SCALE: 1½" = 1'-0"

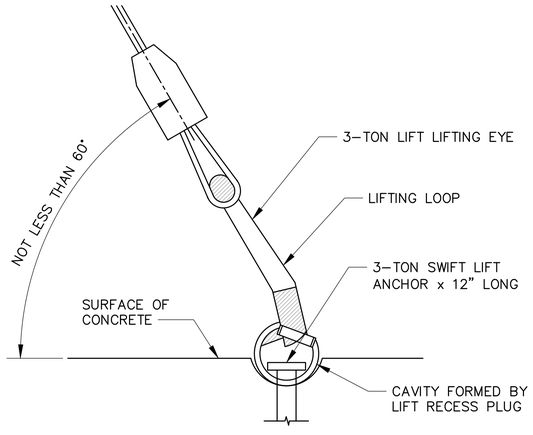


TYPICAL LAGGING PANEL PLAN

SCALE: NOT TO SCALE

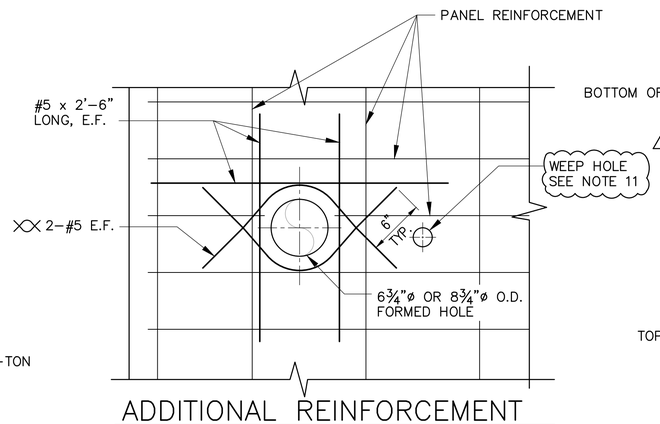
NOTES

1. 3-TON (ALLOWABLE) SWIFT LIFT RECESS PLUGS, ANCHORS AND LIFT EYES BY DAYTON OR EQUIVALENT, APPROVED BY ENGINEER.
2. THE MATERIALS FOR THIS LIFTING SYSTEM ARE CONSIDERED INCIDENTAL TO THE PANELS AND ARE TO BE ORDERED/SUPPLIED AS REQUIRED. FILL CAVITY WITH EPOXY GROUT AFTER SETTING PANEL.
3. THE MAXIMUM WATER TO CEMENTITIOUS MATERIAL RATIO SHALL NOT EXCEED 0.40.
4. REINFORCEMENT SHALL MEET THE REQUIREMENTS OF ASTM A934 FOR EPOXY COATING.
5. FOR PILE SPACING SEE "CAST-IN-DRILLED-HOLE PILE DATA TABLE" ON "RETAINING WALL 1 PLAN AND PROFILE" AND "RETAINING WALL 3 PLAN AND PROFILE" SHEETS.
6. 6¾"ø DRAIN HOLE OCCURS ON PANEL MARKED AS "D". 8¾"ø DRAIN HOLES OCCUR ON PANELS "E" AND "J. SEE "RETAINING WALL 1, PLAN AND PROFILE" SHEET FOR LOCATION. FULL DEPTH SEAL THE GAP BETWEEN THE DRAIN PIPE AND THE PANEL WITH SILICONE.
7. SEE "ADDITIONAL REINFORCEMENT DETAILS AT THE DRAIN HOLE" ON THIS SHEET.
8. WHERE THERE ARE 2-PANELS HIGH, PROVIDE WEEP HOLES ON BOTTOM PANELS ONLY.
9. FABRICATOR TO INDICATE OUTSIDE FACE.
10. OMIT KEYS FOR BASE OF BOTTOM PANELS. OMIT KEYWAYS FOR TOP OF UPPER PANELS.
11. CUT HOLE TO ACCOMMODATE 3" DIA. DRAIN PIPE.



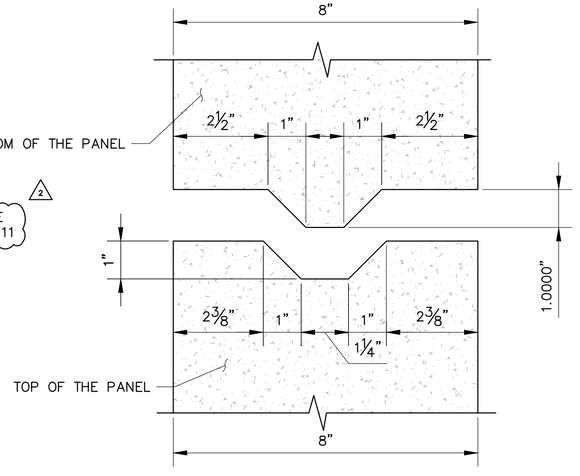
LIFT EYE DETAIL

SCALE: 6" = 1'-0"



ADDITIONAL REINFORCEMENT DETAILS AT THE DRAIN HOLE

SCALE: 1 1/2" = 1'-0"



KEYWAY DETAIL

SCALE: 6" = 1'-0"

NOTE: ADJUST SWIFT LIFT ANCHOR STUD DOWN AS NEEDED TO CLEAR KEYWAY.

PRECAST CONCRETE LAGGING PANEL TABLE

PANEL MARK ○	WIDTH (W)	HEIGHT (H)	DIST. (X)	NO. OF PANELS (RW1)	NO. OF PANELS (RW3)	TOTAL NO. OF PANELS
A	12'-0"	5'-6"	8'-3"	1	0	1
B	12'-0"	6'-0"	8'-3"	1	0	1
C	11'-0"	5'-6"	7'-3"	1	0	1
D	11'-0"	6'-0"	7'-3"	1	0	1
E	9'-3"	5'-6"	5'-6"	2	0	2
F	8'-0"	3'-0"	4'-3"	2	4	6
G	8'-0"	3'-6"	4'-3"	6	8	14
H	8'-0"	4'-0"	4'-3"	2	17	19
J	8'-0"	4'-6"	4'-3"	3	2	5
K	8'-0"	5'-0"	4'-3"	0	1	1
L	8'-0"	5'-6"	4'-3"	10	1	11
M	8'-0"	6'-0"	4'-3"	2	1	3
TOTAL NO. OF PANELS				31	34	65

NO.	DATE	REVISIONS	BY	CHK	APRV
2	6/20/25	ADDED NOTE 11 FOR WEEP HOLE.			
2	6/20/25	REVISED WEEP HOLE CALL-OUTS.			

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REGISTERED PROFESSIONAL ENGINEER — MATTHEW J. BRITTEN — C61869 — CIVIL — STATE OF CALIFORNIA

DESIGNED BY DY	DATE 9/24
DRAWN BY GE	9/24
CHECKED BY SG	9/24
SANDAG PRJ. MGR. DU	9/24

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

RETAINING WALLS 1 AND 3 CONCRETE PANEL DETAILS

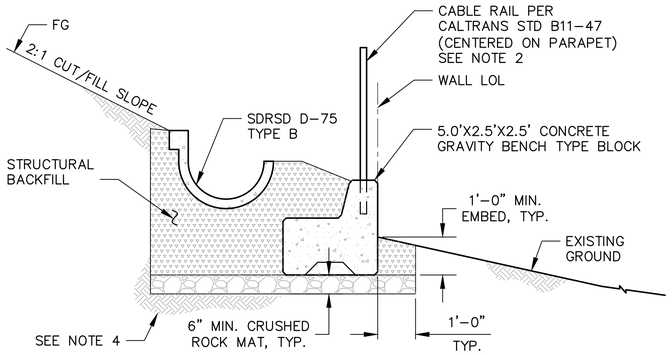
SCALE: AS SHOWN

PROJECT NO. CIP: SANDAG-1147000/ MTS-2005109001

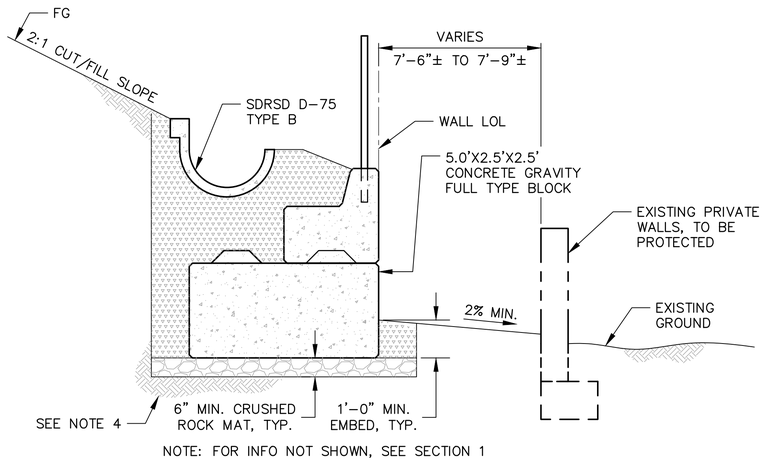
DRAWING NO. S-6

SHEET NO. 10

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

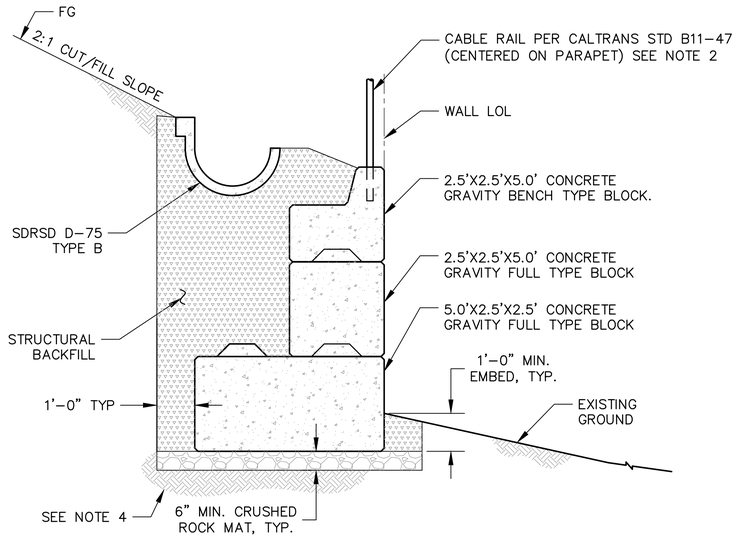


1 / S-2 1-BLOCK HIGH GRAVITY WALL
SCALE: NOT TO SCALE



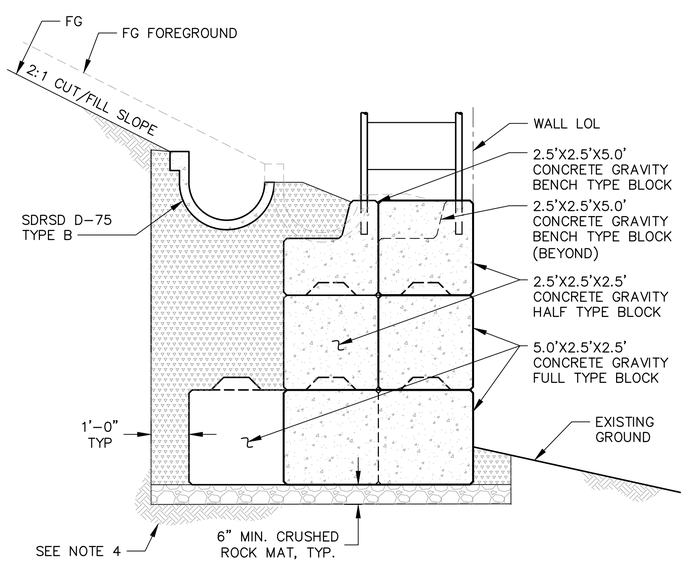
NOTE: FOR INFO NOT SHOWN, SEE SECTION 1

2 / S-2 2-BLOCK HIGH GRAVITY WALL
SCALE: NOT TO SCALE



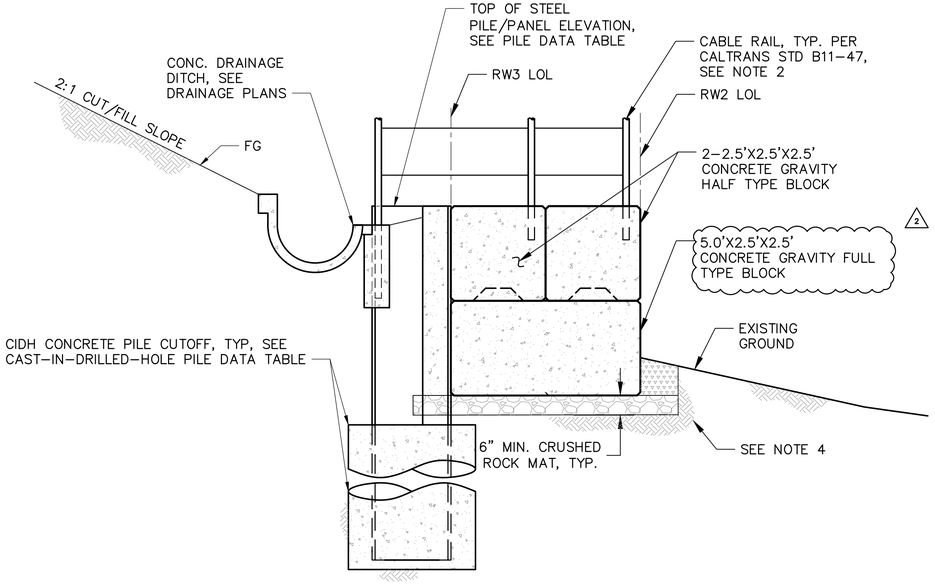
S-5, S-6

3 / S-2 3-BLOCK HIGH GRAVITY WALL
SCALE: NOT TO SCALE



NOTE: FOR INFO NOT SHOWN, SEE SECTION 1

4 / S-3 3-BLOCK HIGH GRAVITY WALL
SCALE: NOT TO SCALE



5 / S-3 2-BLOCK WITH SOLDIER PILE
SCALE: NOT TO SCALE

NOTES:

1. ADJUST LOCATION OF DRAINAGE HOLES AS NEEDED TO ACCOMMODATE CABLE RAIL POSTS.
2. ANCHORAGE OF RAIL POST SHALL BE A "POST POCKET" TYPE AS DEFINED IN CALTRANS STD B11-47. REINFORCEMENT SHOWN ON B11-47 FOR POST POCKET MAY BE ELIMINATED.
3. LEFT AND RIGHT OF THE ANGLE POINTS, THE BLOCKS IN THE FIRST COURSE SHALL BE SET ON 5 FT BASE PERPENDICULAR TO THE LOL FOR FULL HEIGHT.
4. NATIVE SOIL SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95%.

NO.	DATE	REVISIONS	BY	CHK	APRV
2	6/20/25	MODIFIED CALL-OUT			

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REGISTERED PROFESSIONAL ENGINEER — MATTHEW J. BRITTEN — CIVIL — No. C61869 — STATE OF CALIFORNIA

DESIGNED BY DY	DATE 9/24
DRAWN BY GE	9/24
CHECKED BY SG	9/24
SANDAG PRJ. MGR. DU	9/24

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

RETAINING WALL 2
WALL SECTIONS

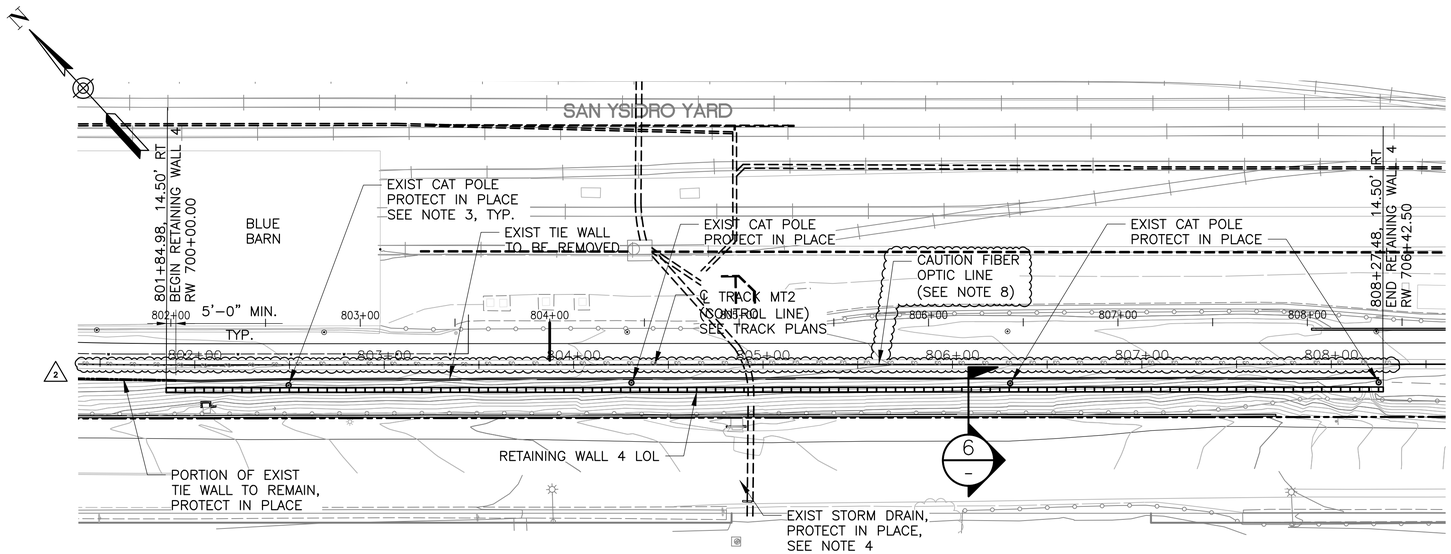
SCALE: NONE

PROJECT NO. CIP: SANDAG-1147000/ MTS-2005109001

DRAWING NO. S-7

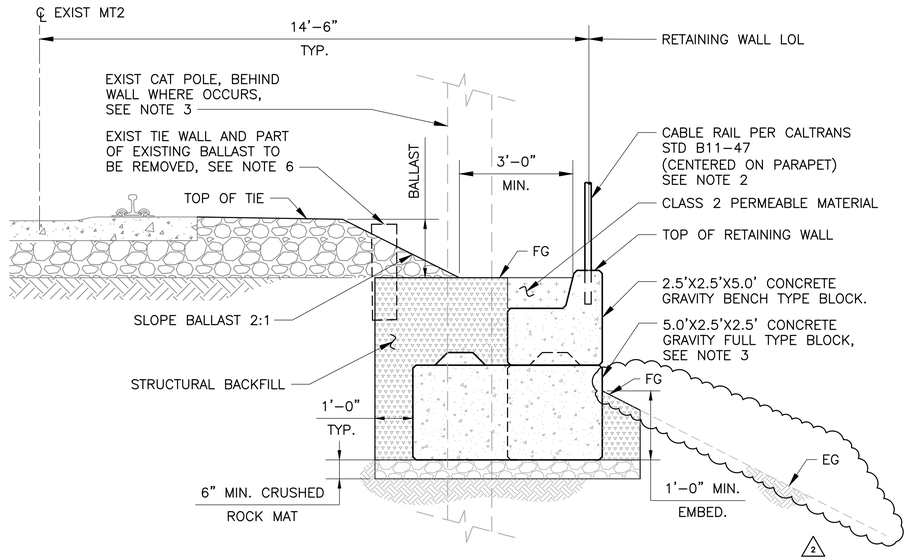
SHEET NO. 11

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3



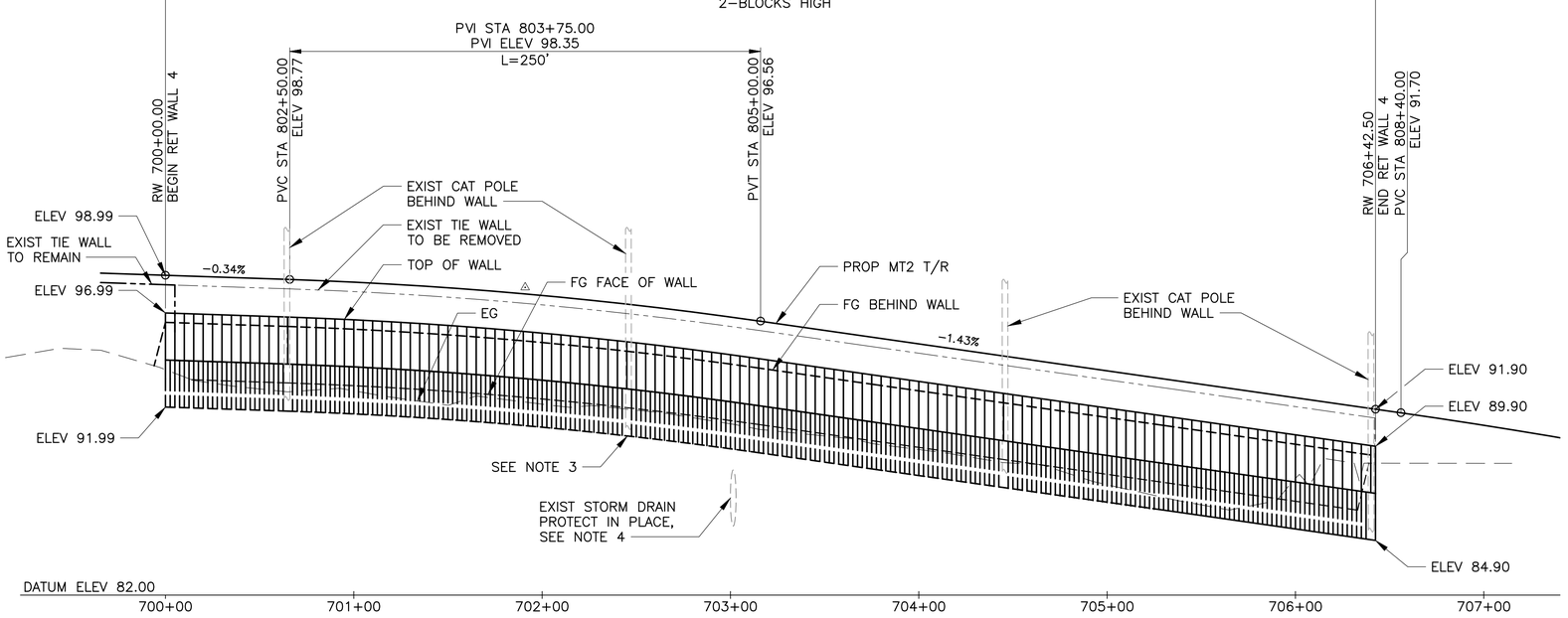
RETAINING WALL 4 – PLAN

SCALE: 1"=40'



6 – 2-BLOCK HIGH GRAVITY WALL

SCALE: NOT TO SCALE



RETAINING WALL 4 – PROFILE

SCALE: H: 1"=40' | V: 1"=4'

NOTES:

1. ADJUST LOCATON OF DRAINAGE HOLES AS NEEDED TO ACCOMMODATE CABLE RAIL POSTS.
2. ANCHORAGE OF RAIL POST SHALL BE A "POST POCKET" TYPE AS DEFINED IN CALTRANS STD B11-47. REINFORCEMENT SHOWN ON B11-47 FOR POST POCKET MAY BE ELIMINATED.
3. WHERE EXISTING CAT POLE OCCURS, GRAVITY BLOCK SHALL BE ROTATED TO AVOID POLE. ALSO ROUTE DRAINAGE PIPE TO AVOID POLE.
4. CONTRACTOR TO VERIFY SIZE AND LOCATION OF EXISTING STORM DRAIN PRIOR TO CONSTRUCTION.
5. SEE CIVIL PLANS FOR GRADING IMPROVEMENTS.
6. CONTRACTOR TO PROVIDE TEMPORARY SHORING IN ACCORDANCE WITH MTS/SDA&E EXCAVATION SUPPORT SYSTEMS TECHNICAL SPECIFICATIONS OR APPROVED ALTERNATIVE APPROACH, WITHOUT DISRUPTING REVENUE SERVICE.
7. NATIVE SOIL SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95%.

2 8. CONTRACTOR TO FIELD VERIFY LOCATION OF FIBER OPTIC LINE. WHERE CONFLICT OCCURS CONTRACTOR TO ADJUST LOCATION PER APPROVAL BY MTS

NO.	DATE	REVISIONS	BY	CHK	APRV
2	6/20/25	MODIFIED DETAIL 6			
2	6/20/25	ADDED FO LINE AND NOTE 8			

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REGISTERED PROFESSIONAL ENGINEER MATTHEW J. BRITTEN C61869 CIVIL STATE OF CALIFORNIA

DESIGNED BY DY	DATE 9/24
DRAWN BY GE	9/24
CHECKED BY SG	9/24
SANDAG PRJ. MGR. DU	9/24

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

RETAINING WALL 4
PLAN, PROFILE AND SECTION

SCALE: AS SHOWN

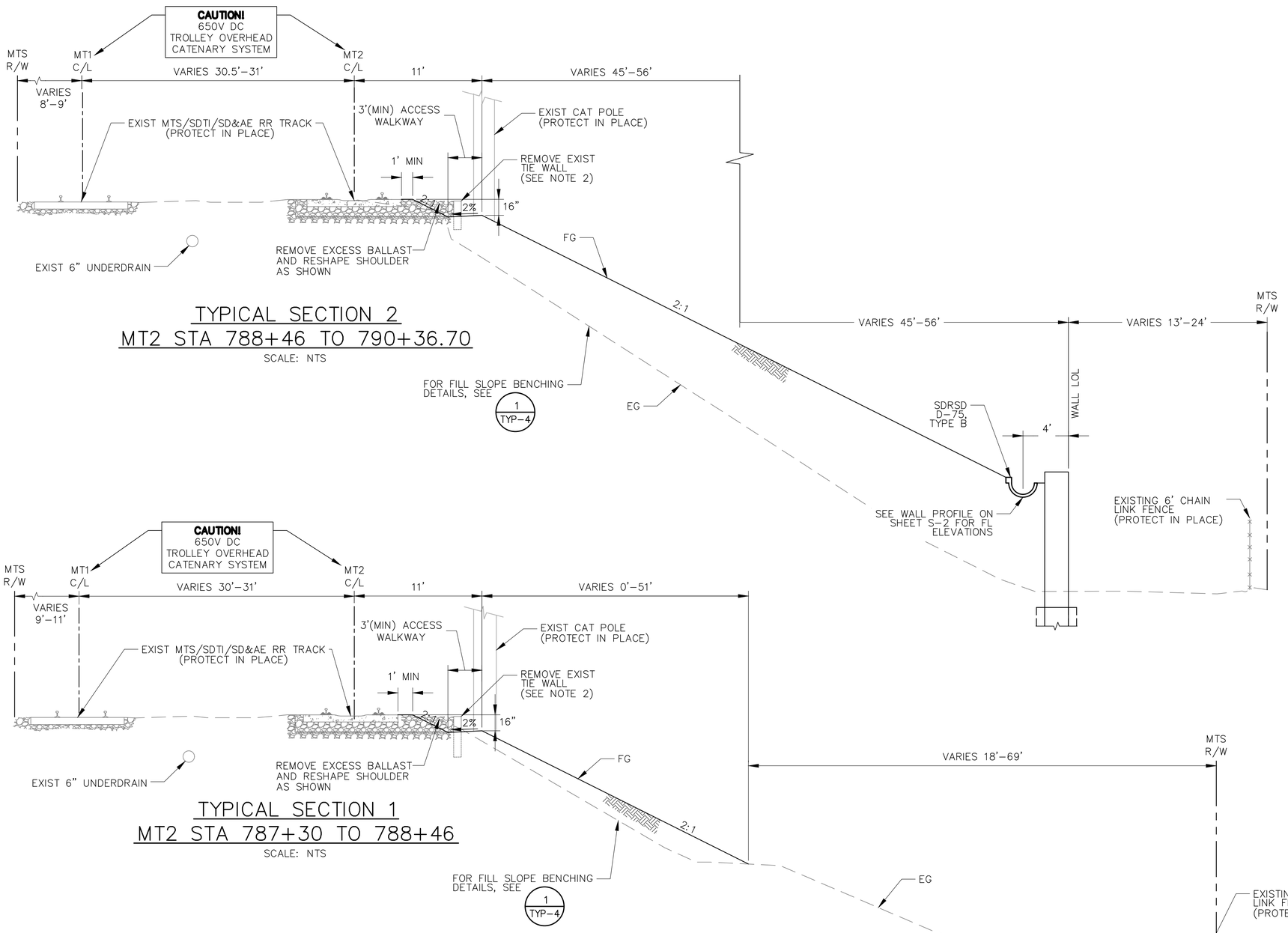
PROJECT NO. CIP: SANDAG-1147000/ MTS-2005109001

DRAWING NO. S-8

SHEET NO. 12

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

0 1 2 3



TYPICAL SECTION 2
MT2 STA 788+46 TO 790+36.70

SCALE: NTS

TYPICAL SECTION 1
MT2 STA 787+30 TO 788+46

SCALE: NTS

NOTES:

1. FOR ALL WALLS, SEE RETAINING WALL S–# SHEETS.
2. WHERE NECESSARY, PROVIDE TEMPORARY SHORING TO SUPPORT RAIL AND BALLAST SYSTEM.
3. MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL WALL FACES.

NO.	DATE	REVISIONS	BY	CHK	APRV

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REGISTERED PROFESSIONAL ENGINEER
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CIVIL
C61869
STATE OF CALIFORNIA

DESIGNED BY	DATE
MB	09/24
DRAWN BY	
KA	09/24
CHECKED BY	
MT	09/24
SANDAG PRJ. MGR.	
DU	

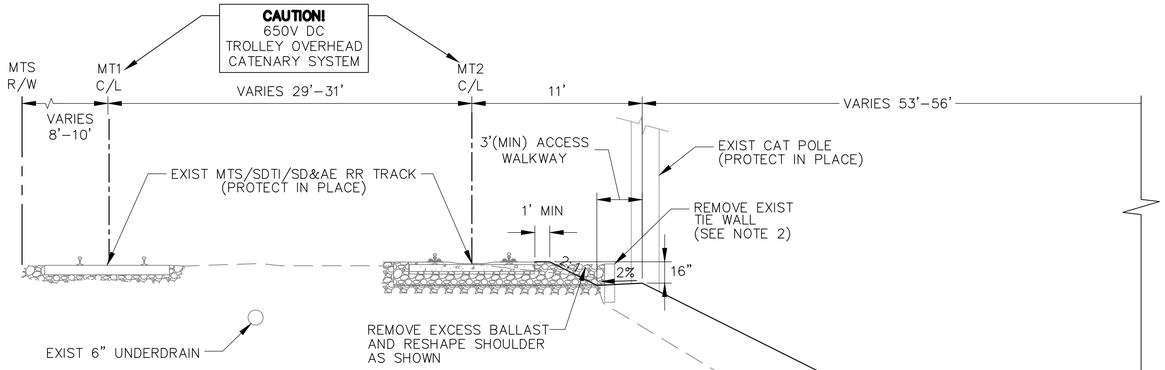
SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

TYPICAL SECTIONS

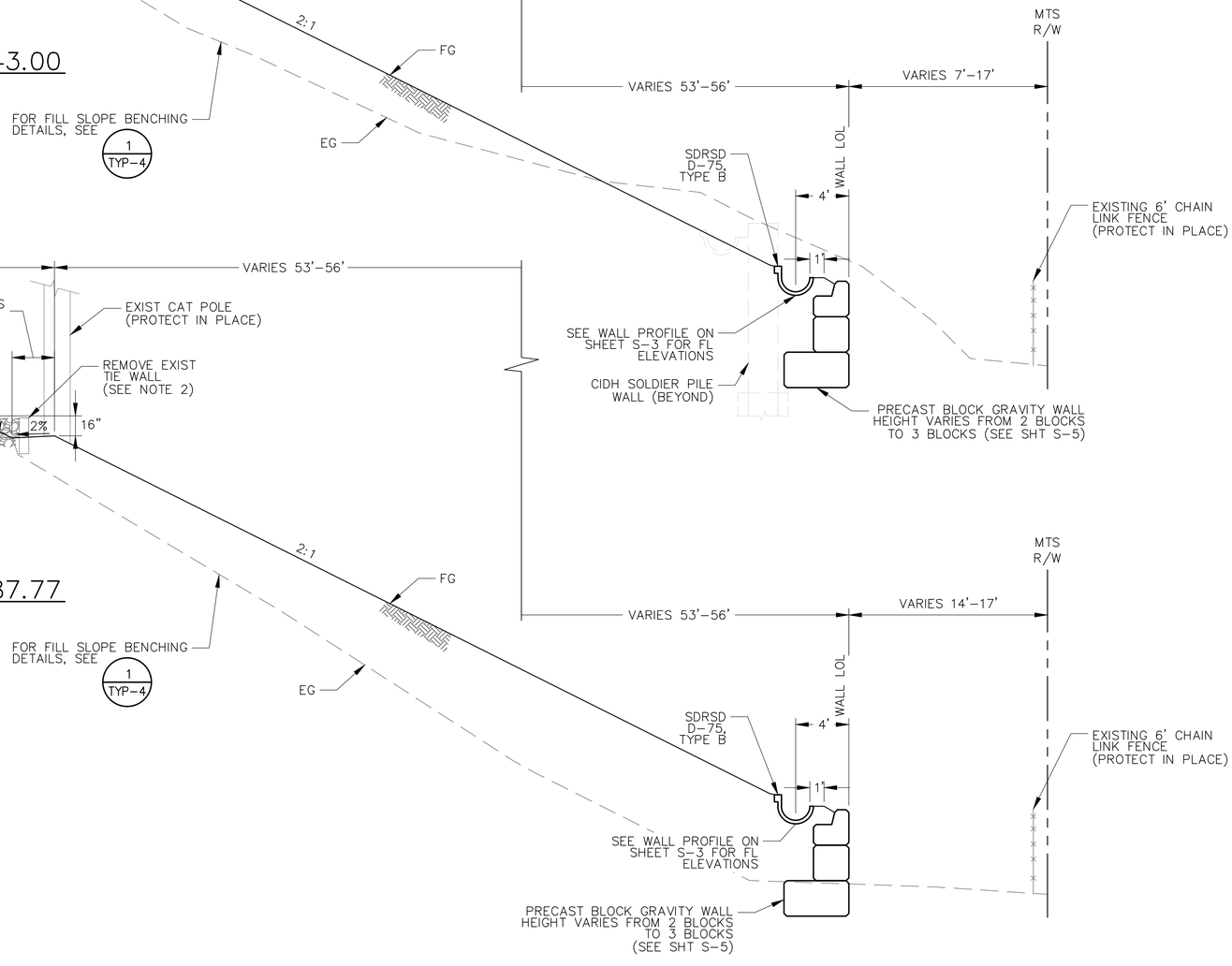
SCALE	NONE
PROJECT NO.	CIP: SANDAG-1147000/ MTS-2005109001
DRAWING NO.	TYP-1
SHEET NO.	13

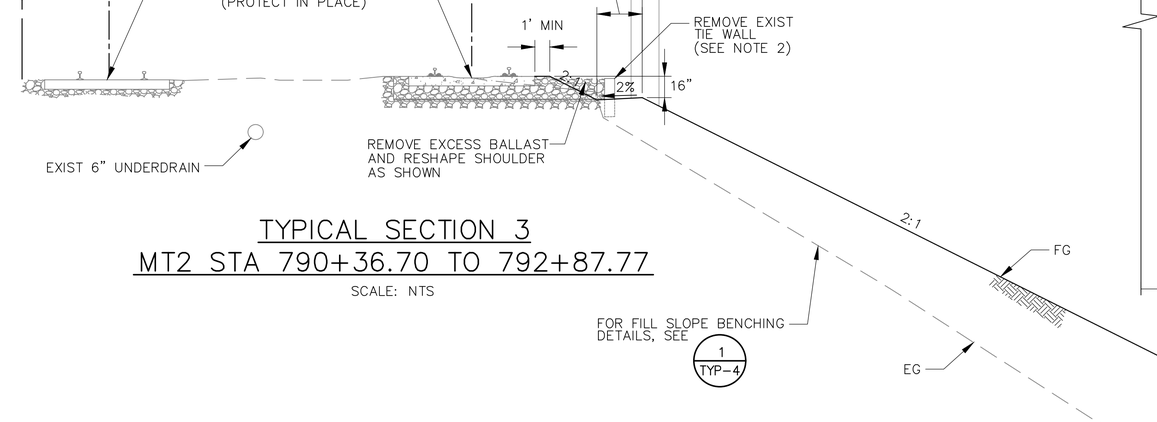
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3



TYPICAL SECTION 4
MT2 STA 792+87.77 TO 793+43.00

SCALE: NTS





TYPICAL SECTION 3
MT2 STA 790+36.70 TO 792+87.77

SCALE: NTS

NOTES:

1. FOR ALL WALLS, SEE RETAINING WALL S–# SHEETS.
2. WHERE NECESSARY, PROVIDE TEMPORARY SHORING TO SUPPORT RAIL AND BALLAST SYSTEM.
3. MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL WALL FACES.

NO.	DATE	REVISIONS	BY	CHK	APRV

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REGISTERED PROFESSIONAL ENGINEER — MATTHEW J. BRITTEN — CIVIL — C81869 — STATE OF CALIFORNIA

DESIGNED BY	MB	09/24
DRAWN BY	KA	09/24
CHECKED BY	MT	09/24
SANDAG PRJ. MGR.	DU	

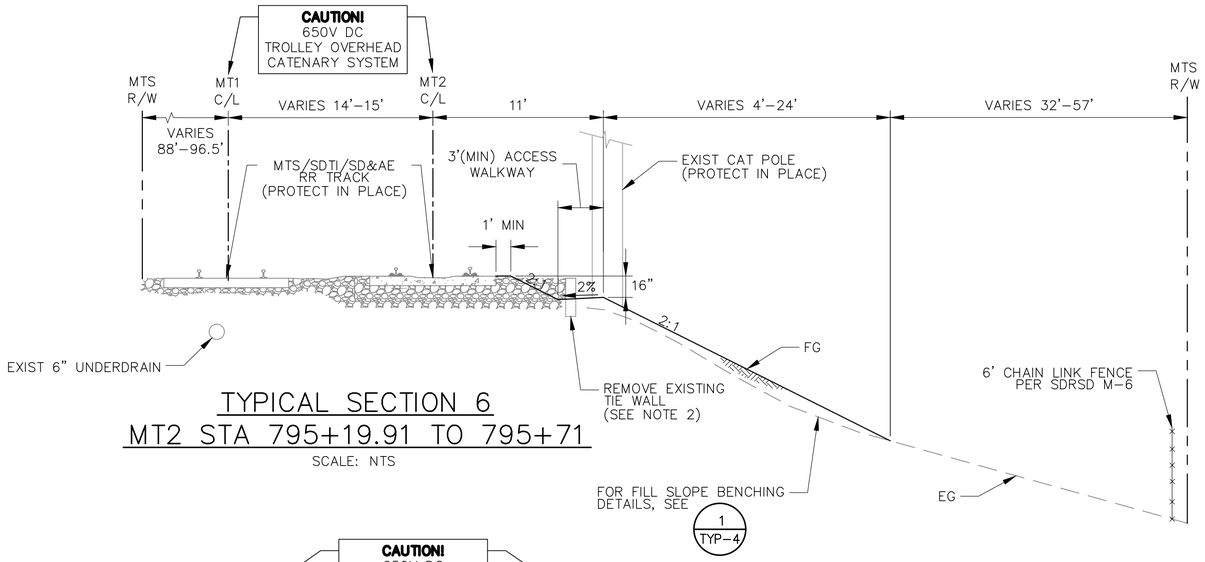
SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

TYPICAL SECTIONS

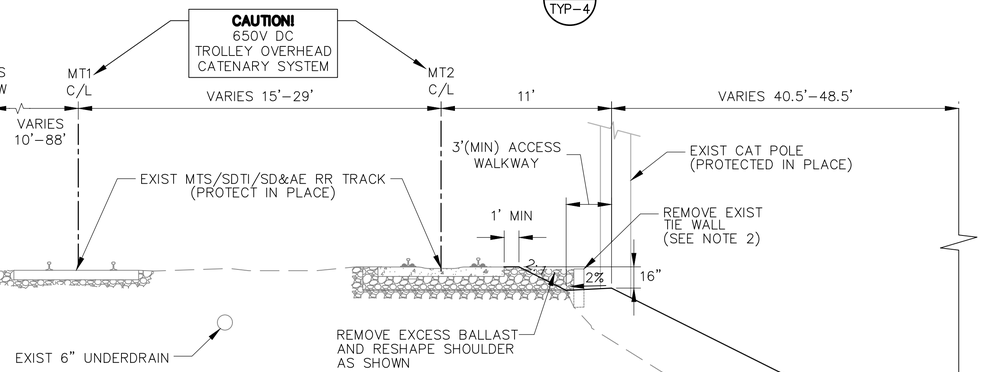
SCALE	NONE
PROJECT NO.	CIP: SANDAG-1147000/ MTS-2005109001
DRAWING NO.	TYP-2
SHEET NO.	14

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3



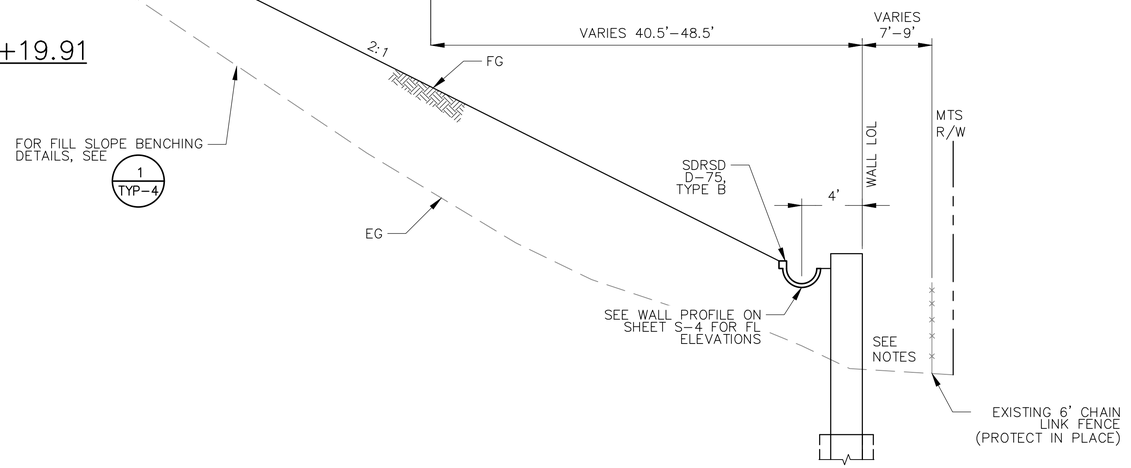
TYPICAL SECTION 6
MT2 STA 795+19.91 TO 795+71

SCALE: NTS

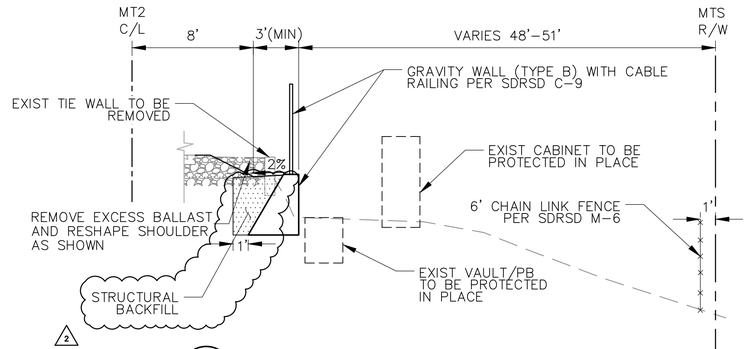


TYPICAL SECTION 5
MT2 STA 793+43.00 TO 795+19.91

SCALE: NTS



NOTES:
1. FOR ALL WALLS, SEE RETAINING WALL S-# SHEETS.
2. WHERE NECESSARY, PROVIDE TEMPORARY SHORING TO SUPPORT RAIL AND BALLAST SYSTEM.
3. MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL WALL FACES.



1 / – SECTION AT WALL: 795+71 TO 796+00

SCALE: NTS

NO.	DATE	REVISIONS	BY	CHK	APRV
2	6/20/25	ADDED STRUCTURAL BACKFILL LIMITS			

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REGISTERED PROFESSIONAL ENGINEER
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C61869
CIVIL
STATE OF CALIFORNIA

DESIGNED BY: MB	DATE: 09/24
DRAWN BY: KA	09/24
CHECKED BY: MT	09/24
SANDAG PRJ. MGR.: DU	

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

TYPICAL SECTIONS

SCALE: NONE

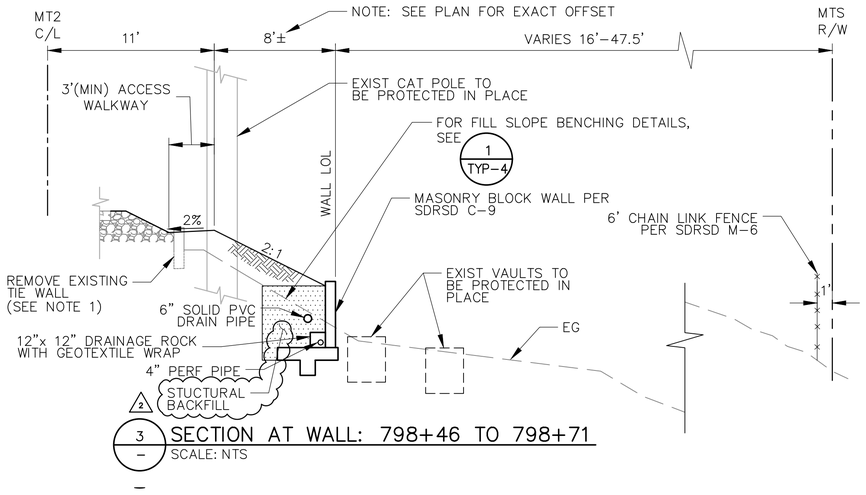
PROJECT NO.: CIP: SANDAG-1147000/ MTS-2005109001

DRAWING NO.: TYP-3

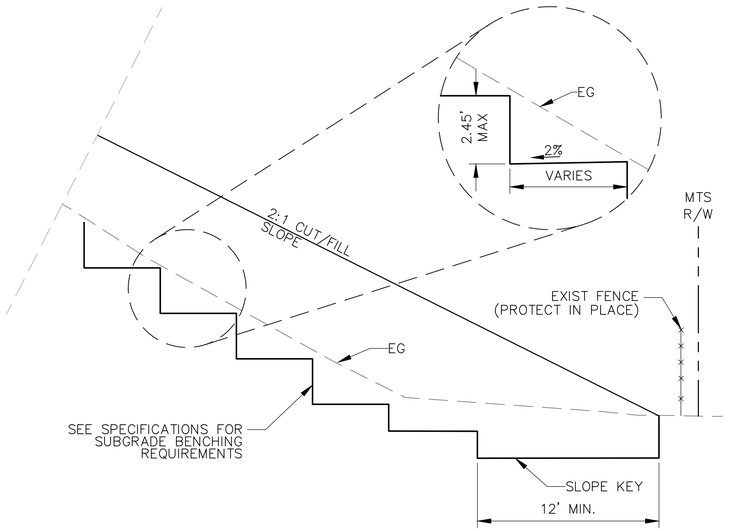
SHEET NO.: 15

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

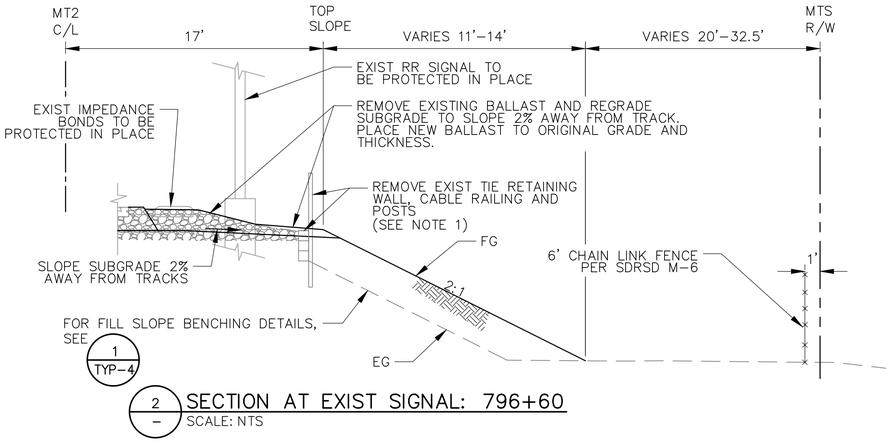
0 1 2 3



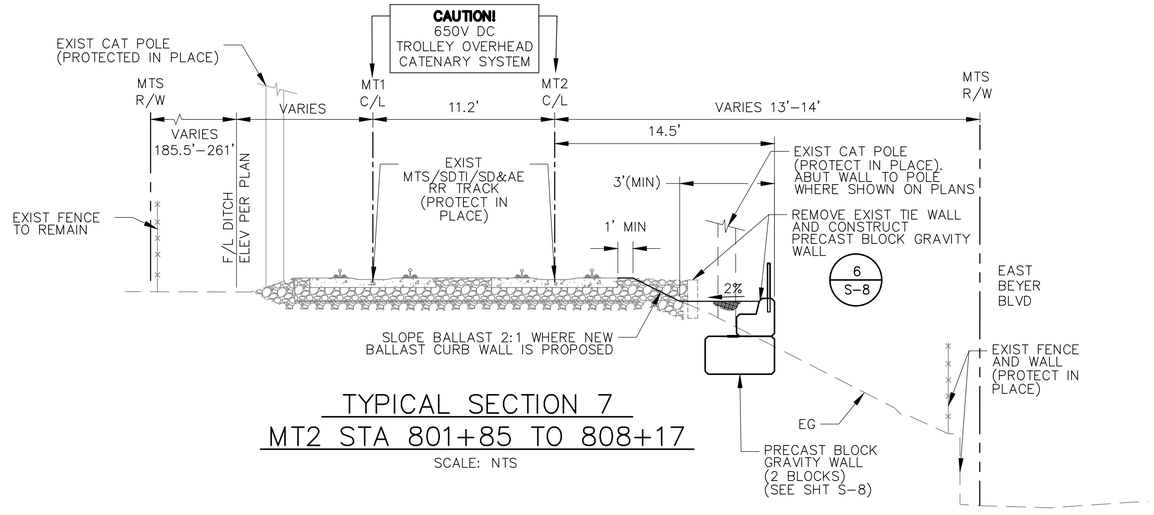
3 / – SECTION AT WALL: 798+46 TO 798+71
SCALE: NTS



1 / – BENCHING DETAILS
SCALE: NTS



2 / – SECTION AT EXIST SIGNAL: 796+60
SCALE: NTS



TYPICAL SECTION 7
MT2 STA 801+85 TO 808+17
SCALE: NTS

NOTES:
1. FOR ALL WALLS, SEE RETAINING WALL S–# SHEETS.
2. CONTRACTOR TO PROVIDE TEMPORARY SHORING IN ACCORDANCE WITH MTS/SDA&E EXCAVATION SUPPORT SYSTEMS TECHNICAL SPECIFICATIONS OR APPROVED ALTERNATIVE APPROACH, WITHOUT DISRUPTING REVENUE SERVICE.
3. MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL WALL FACES.

NO.	DATE	REVISIONS	BY	CHK	APRV
2	6/20/25	ADDED STRUCTURAL BACKFILL LIMITS			

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REGISTERED PROFESSIONAL ENGINEER
MATTHEW J. BRITTEN
C61869
CIVIL
STATE OF CALIFORNIA

DESIGNED BY	DATE
MB	09/24
DRAWN BY	
KA	09/24
CHECKED BY	
MT	09/24
SANDAG PRJ. MGR.	
DU	

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

TYPICAL SECTIONS

SCALE: NONE

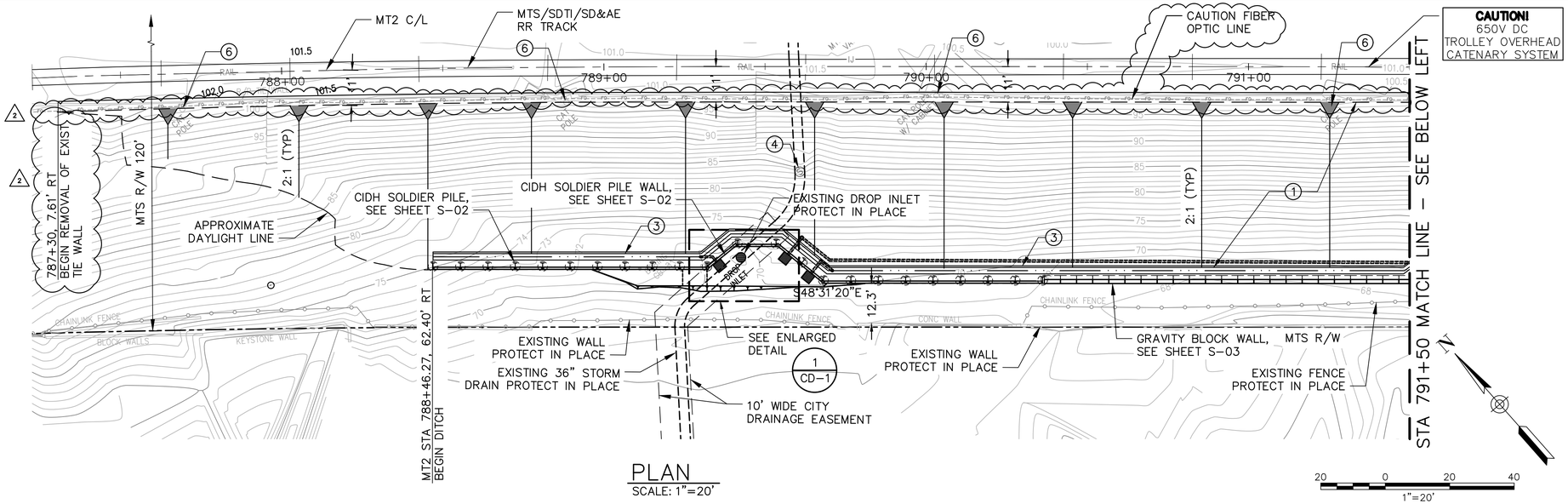
PROJECT NO.: CIP: SANDAG-1147000/ MTS-2005109001

DRAWING NO.: TYP-4

SHEET NO.: 16

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

0 1 2 3



PLAN
SCALE: 1"=20'

20 0 20 40
1"=20'

CONSTRUCTION NOTES

1. INSTALL COMPACTED FILL PER SPECS
2. INSTALL CHAIN LINK FENCE PER SDRSD M-20.
3. CONSTRUCT CONCRETE DITCH PER SDRSD D-75 TYPE B. LAYOUT PER "S" DRAWINGS. F/L POSITION PER TYP SECTIONS.
4. ADJUST EXISTING S.D.M.H. TO 6" ABOVE HIGH END OF SLOPE.
5. INSTALL NEW FENCE POST FOR EXISTING FENCE AS NECESSARY, TO MAINTAIN GAP OF 3 INCHES OR LESS FROM NEW CHAIN LINK FENCE.
6. PROTECT IN PLACE CATENARY POLES (TYP). EXTRA PRECAUTION SHALL BE TAKEN WHEN GRADING AND COMPACTING AROUND CATENARY POLES.

DISPOSITION NOTES

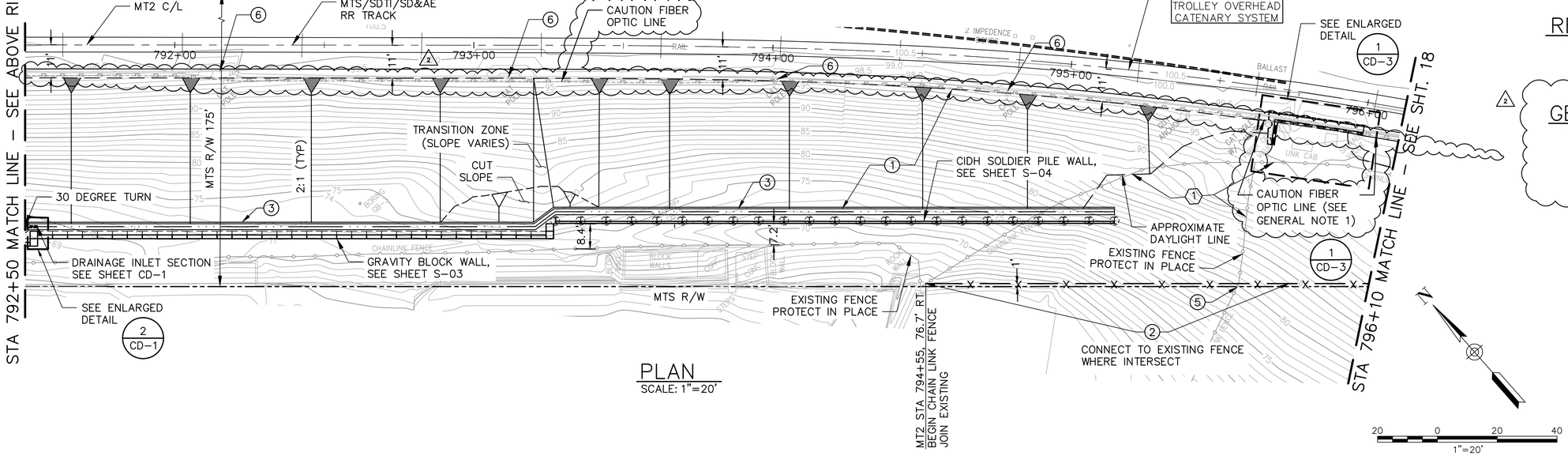
1. REMOVE EXIST FENCE ON THE MTS SIDE OF NEW FENCE

REFERENCE NOTES

1. SEE "S-" SHEETS FOR WALL IMPROVEMENTS

GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY LOCATION OF FIBER OPTIC LINE. WHERE CONFLICT OCCURS CONTRACTOR TO ADJUST LOCATION PER APPROVAL BY MTS.



PLAN
SCALE: 1"=20'

20 0 20 40
1"=20'

NO.	DATE	REVISIONS	BY	CHK	APRV
2	6/20/25	ADDED LIMIT NOTE			
2	6/20/25	ADDED FO LINE AND GENERAL NOTE 1			

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REGISTERED PROFESSIONAL ENGINEER — MATTHEW J. BRITTEN — CIVIL — CA 69869 — STATE OF CALIFORNIA

DESIGNED BY	DATE
MB	09/24
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KA	09/24
CHECKED BY	
MT	09/24
SANDAG PRJ. MGR.	
DU	

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

GRADING & DRAINAGE PLAN
SHEET 1 OF 3

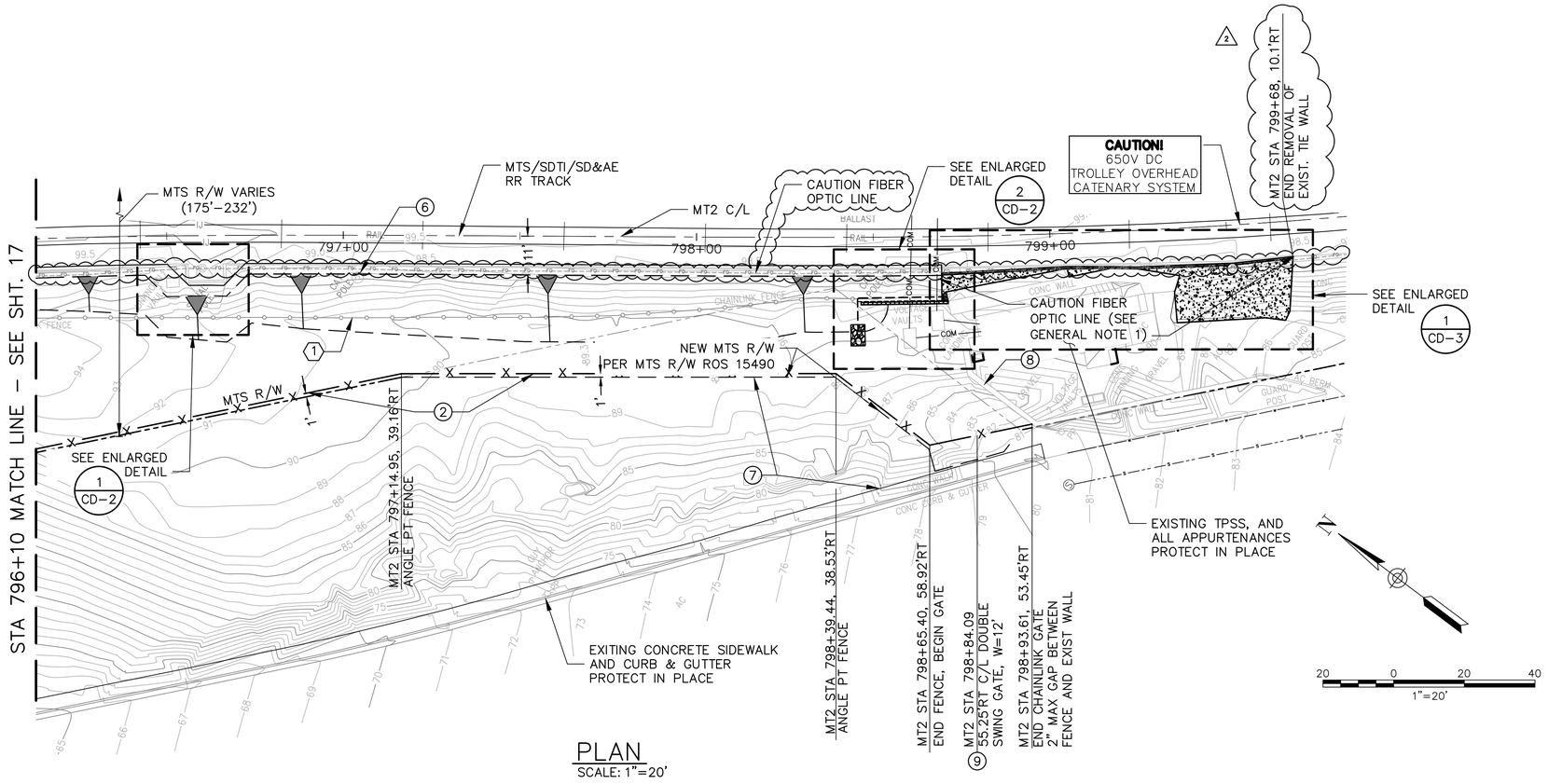
SCALE: AS SHOWN

PROJECT NO.: CIP: SANDAG-1147000/ MTS-2005109001

DRAWING NO.: C-1

SHEET NO.: 17

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES
0 1 2 3



PLAN
SCALE: 1"=20'

CONSTRUCTION NOTES

1. INSTALL COMPACTED FILL PER TYP. SECTIONS
2. INSTALL CHAINLINK FENCE PER SDSRD M–20. CONNECT TO EXIST FENCES WHERE INTERSECT
6. PROTECT IN PLACE CATENARY POLES (TYP). EXTRA PRECAUTION SHALL BE TAKEN WHEN GRADING AND COMPACTING AROUND CATENARY POLES.
7. GRADE AREA TO LIMITS SHOWN. LIMITS SHOWN ARE APPROXIMATE. CONTRACTOR TO FEATHER PROPOSED GRADES INTO EXISTING. AREAS OF FILL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION.
8. PROTECT IN PLACE EXISTING SUBSTATION AND RETAINING WALL
9. CONSTRUCT CHAIN LINK DOUBLE SWING GATE PER SDM–114, WIDTH PER PLAN.

DISPOSITION NOTES

1. REMOVE EXIST FENCE ON THE MTS SIDE OF NEW FENCE

GENERAL NOTES

2

1. CONTRACTOR TO FIELD VERIFY LOCATION OF FIBER OPTIC LINE. WHERE CONFLICT OCCURS CONTRACTOR TO ADJUST LOCATION PER APPROVAL BY MTS.

NO.	DATE	REVISIONS	BY	CHK	APRV
2	6/20/25	ADDED LIMIT NOTE.			
2	6/20/25	ADDED FO LINE AND GENERAL NOTE 1			

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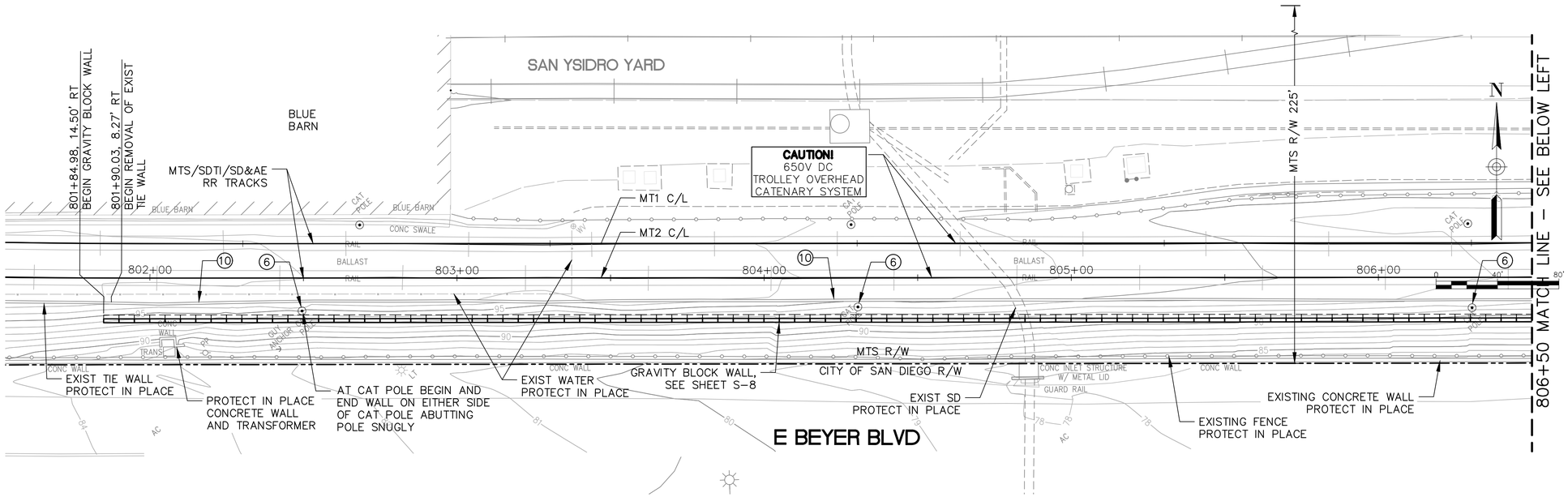
SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

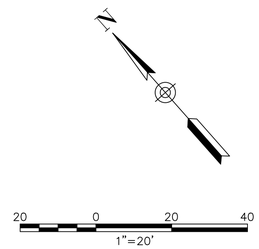
GRADING & DRAINAGE PLAN
SHEET 2 OF 3

SCALE: AS SHOWN
PROJECT NO.: CIP: SANDAG-1147000/ MTS-2005109001
DRAWING NO.: C-2
SHEET NO.: 18

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3



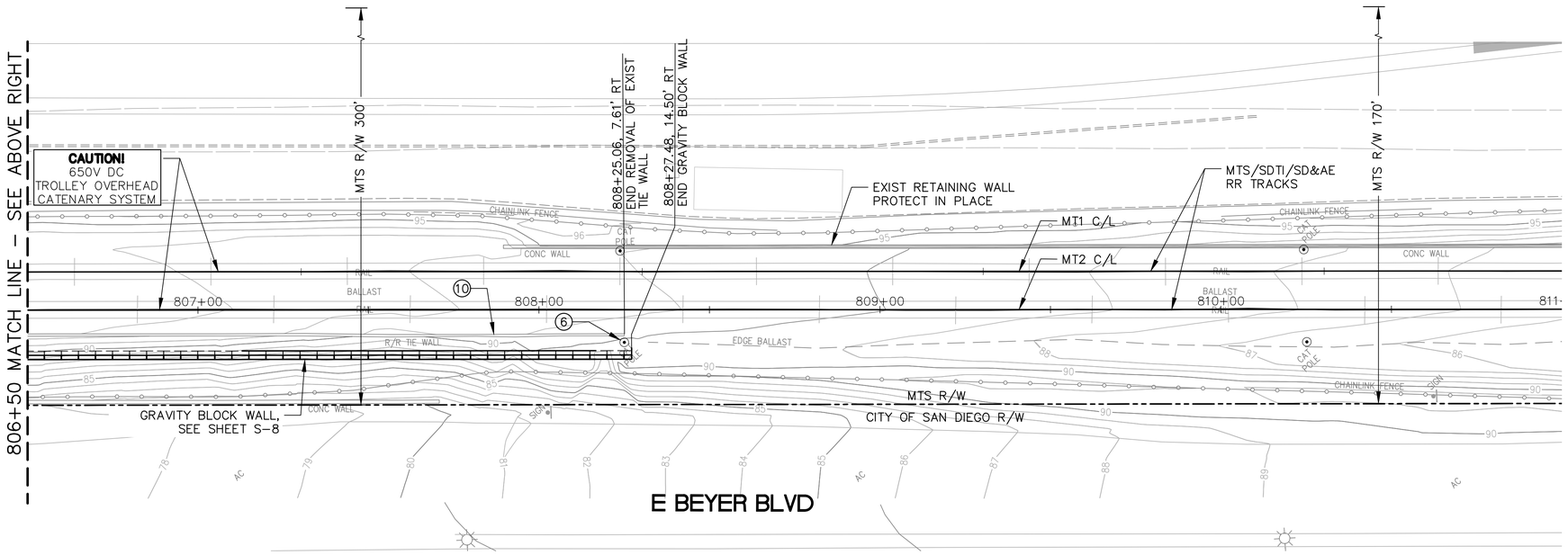
PLAN:
SCALE: 1"=20'



CONSTRUCTION NOTES

(6) PROTECT IN PLACE CATENARY POLES (TYP). EXTRA PRECAUTION SHALL BE TAKEN WHEN GRADING AND COMPACTING AROUND CATENARY POLES.

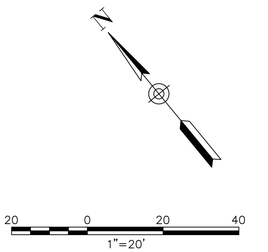
(10) REMOVE EXIST TIE WALL.



PLAN:
SCALE: 1"=20'

REFERENCE NOTES:

1. SEE "S–" SHEETS FOR WALL IMPROVEMENTS



NO.	DATE	REVISIONS	BY	CHK	APRV

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STATE OF CALIFORNIA

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MT	09/24
SANDAG PRJ. MGR.	
DU	

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

GRADING & DRAINAGE PLAN
SHEET 3 OF 3

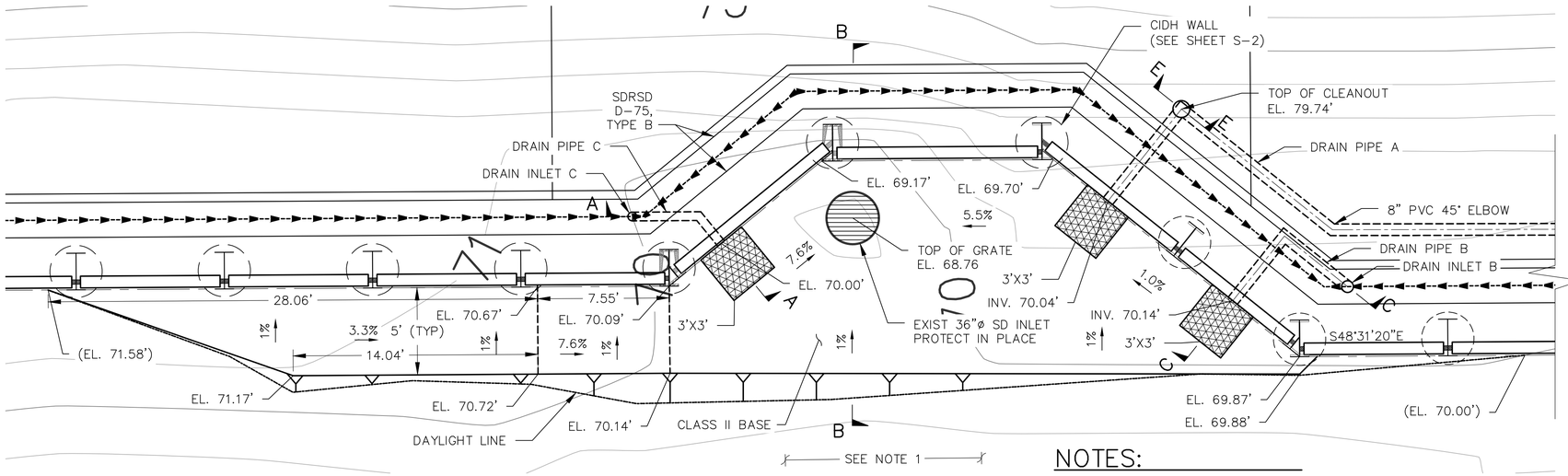
SCALE

PROJECT NO.
CIP: SANDAG-1147000/
MTS-2005109001

DRAWING NO. C-3

SHEET NO. 19

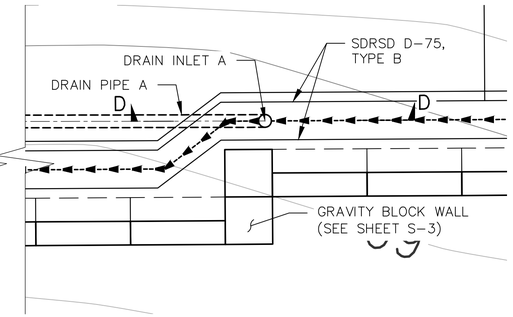
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3



1 DRAINAGE DETAIL
SCALE: 1"=4'

NOTES:

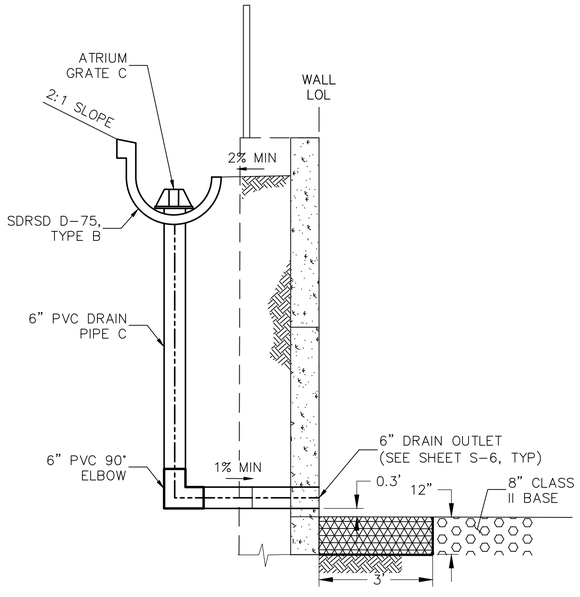
1. MAINTAIN POSITIVE DRAINAGE AWAY FROM WALLS UNLESS OTHERWISE INDICATED.



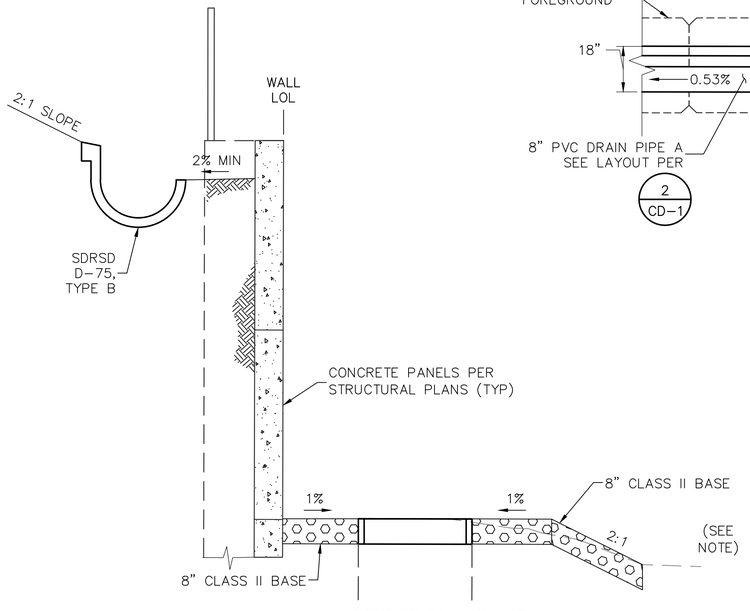
2 DRAINAGE INLET AT MT2 STA 791+54.16', 60.69' RT
SCALE: 1"=4'

LEGEND:

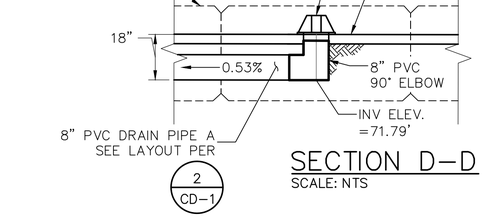
- SOLDIER PILE WALL
- CONCRETE
- ROCK/COBBLE
- CLASS II BASE
- FG



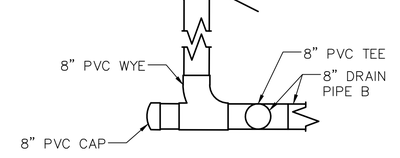
SECTION A–A
SCALE: NTS



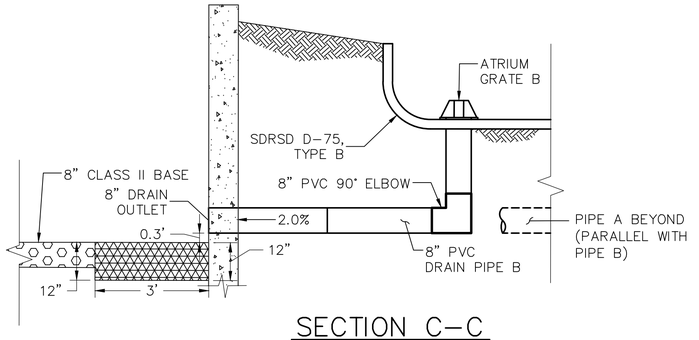
SECTION B–B
SCALE: NTS



SECTION D–D
SCALE: NTS



SECTION E–E
SCALE: NTS



SECTION C–C
SCALE: NTS

NO.	DATE	REVISIONS	BY	CHK	APRV

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REGISTERED PROFESSIONAL ENGINEER — MATTHEW J. BRITTEN — C61869 — CIVIL — STATE OF CALIFORNIA

	DATE
DESIGNED BY MB	09/24
DRAWN BY KA	09/24
CHECKED BY MT	09/24
SANDAG PRJ. MGR. DU	

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

CIVIL DETAILS
SHEET 1 OF 5

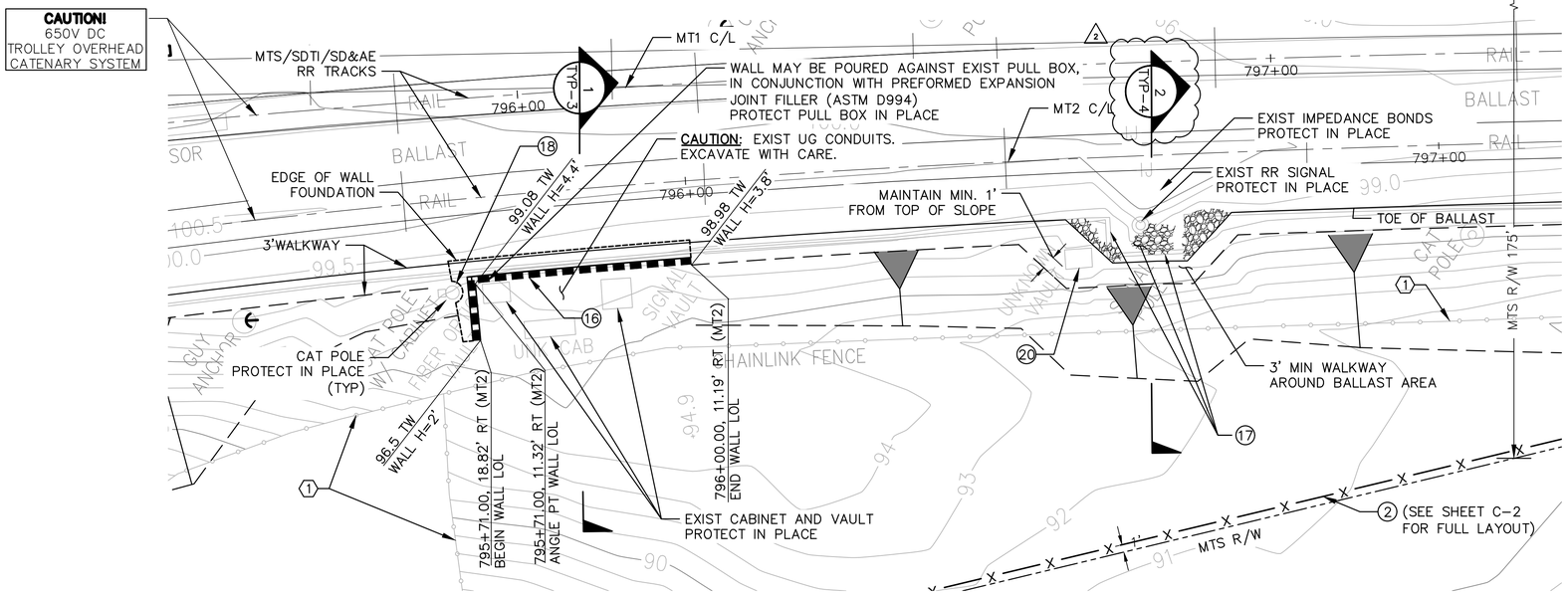
SCALE: NONE

PROJECT NO. CIP: SANDAG-1147000/ MTS-2005109001

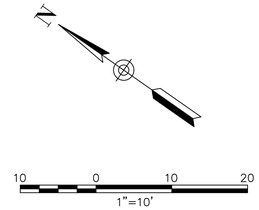
DRAWING NO. CD-1

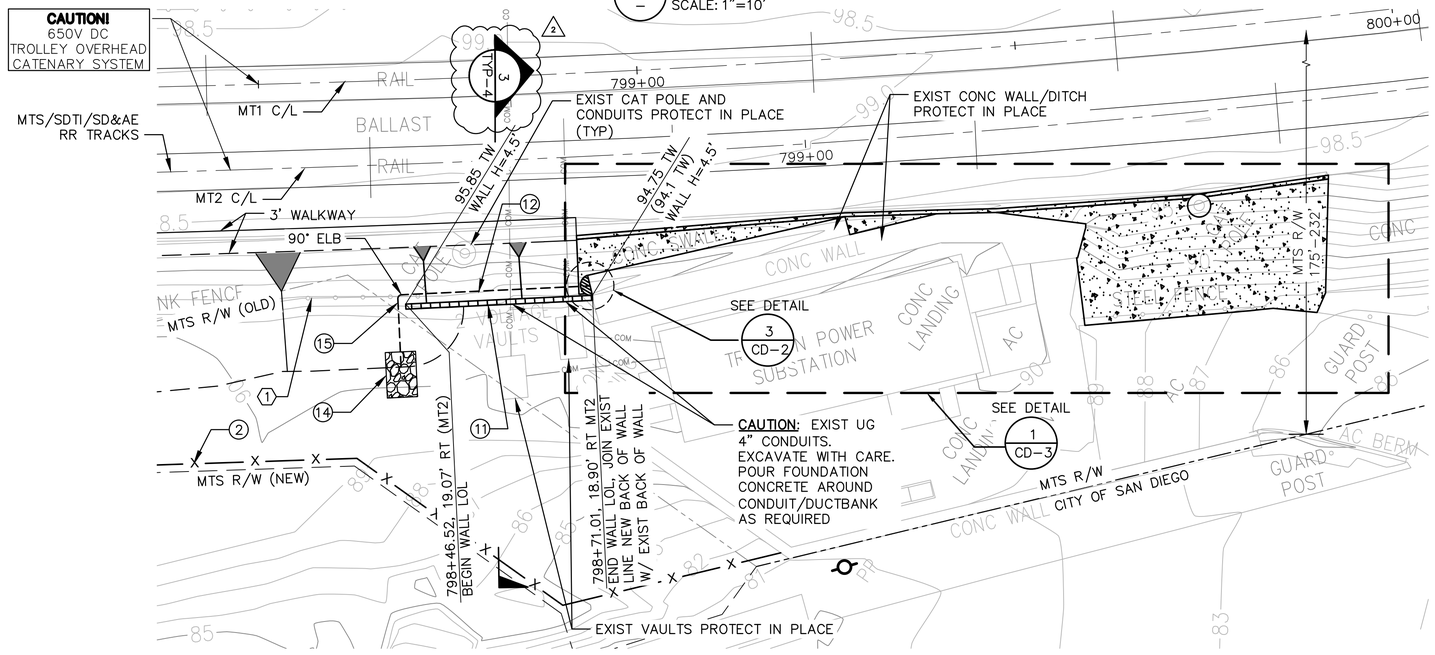
SHEET NO. 20

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

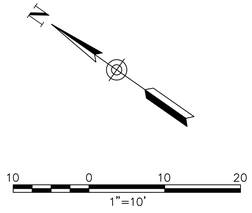


1 — WALL/GRADING—SIGNAL EQUIPMENT
SCALE: 1"=10'





2 — WALL NEAR NEW SUBSTATION
SCALE: 1"=10'



CONSTRUCTION NOTES

(2) INSTALL CHAIN LINK FENCE PER SDRSD M–20. CONNECT TO EXIST FENCES WHERE INTERSECT.

(11) CONSTRUCT MASONRY BLOCK RETAINING WALL PER SDRSD C–4.

(12) INSTALL 6" SCH 40 PVC DRAIN.

(13) INCORPORATE A CONCRETE SCUPPER AT THE END OF EXIST DITCH, CLOSING THE 2 SIDES WITH A HALF–CIRCLE. EMBED UPSTREAM END OF 6" PVC PIPE IN THE SCUPPER. DOWEL INTO EXISTING CONCRETE DITCH WITH #4 REBAR 6" MIN. AT 12" O.C. EXTEND DOWELS 6".

(14) CONSTRUCT 6' LONG X 4' WIDE X 1' DEEP ENERGY DISSIPATER. 2 FEET OF LENGTH SHALL BE BUILT INTO NEW SLOPE. DAYLIGHT/END 6" PVC PIPE AT SLOPE TOE. USE BALLAST FOR DISSIPATER MATERIAL ON FILTER FABRIC

(15) CONNECT 4" WALL DRAIN TO 6" DRAIN WITH TEE

(16) CONSTRUCT GRAVITY WALL PER SDRSD C–9, TYPE B.

(17) REMOVE EXIST TIE WALL, RAILING, AND BALLAST. RE–GRADE SUBGRADE TO SLOPE 2% AWAY FROM TRACK. PLACE NEW BALLAST TO ORIGINAL GRADE AND THICKNESS.

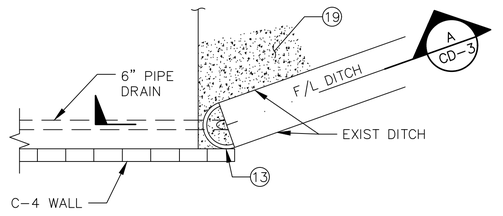
(18) CONSTRUCT WALL FOOTING AROUND CAT POLE SEE DETAIL 2 ON SHEET CD–5.

(19) CONSTRUCT CONCRETE SLOPE PROTECTION AND CURB PER SECTIONS A–E ON SHEETS CD–3 & CD–4

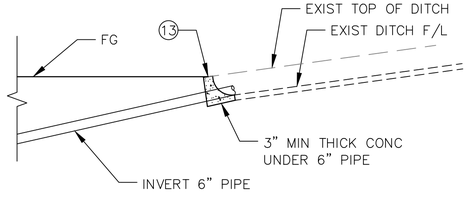
(20) ADJUST EXISTING VAULT TO NEW GRADE WITH VAULT EXTENSION(S). GRADE ADJUSTMENT APPROX. 24". CONTRACTOR TO FIELD VERIFY.

DEPOSITION NOTES

(1) REMOVE EXISTING FENCE ON MTS SIDE OF NEW FENCE.



3 — SCUPPER DETAIL
SCALE: 1"=4'



A — F/L ELEVATION VIEW
SCALE: 1"=4'

NO.	DATE	REVISIONS	BY	CHK	APRV
2	6/20/25	CHANGED SHEET REFERENCE FROM TYP–3 TO TYP–4			

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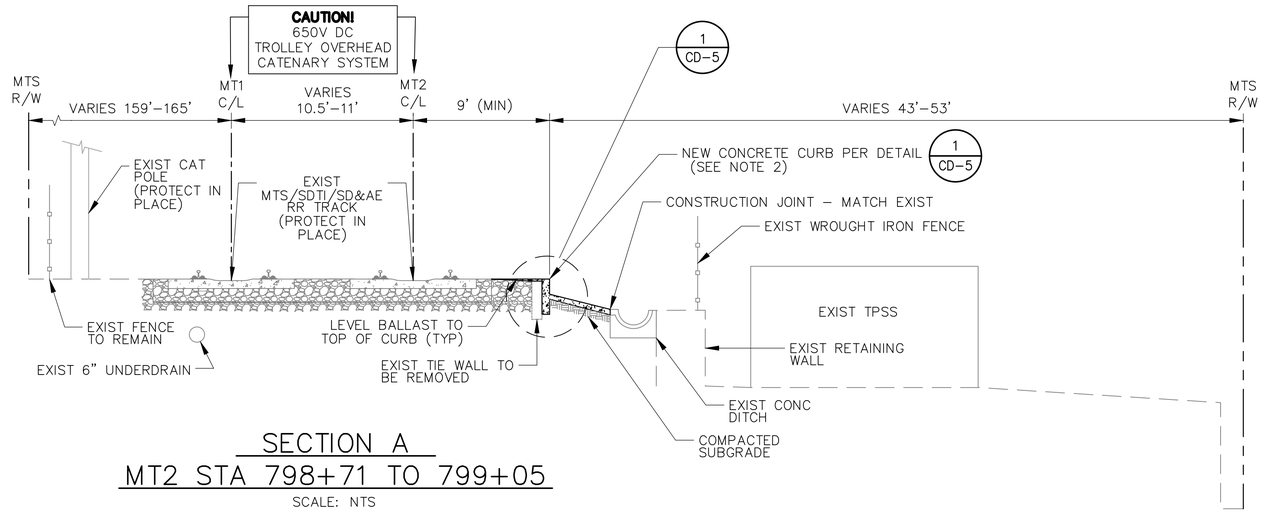
SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

CIVIL DETAILS
SHEET 2 OF 5

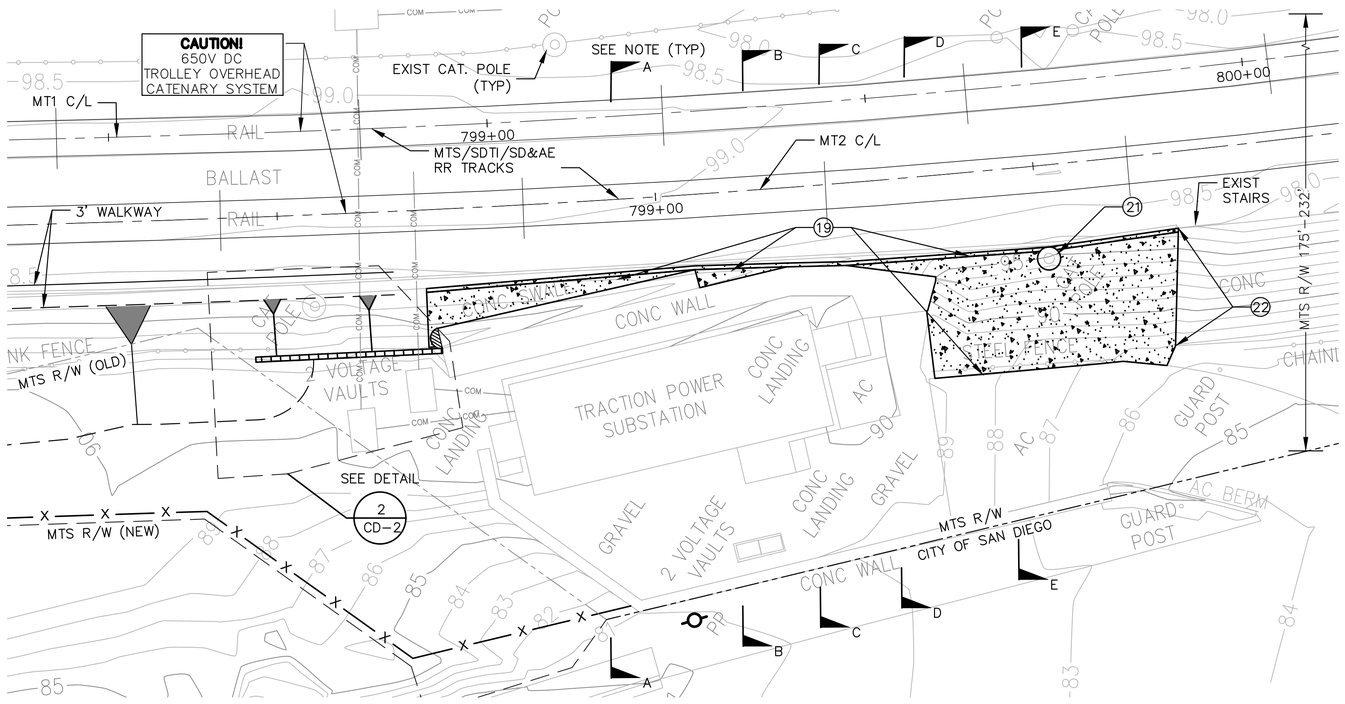
SCALE: AS SHOWN
PROJECT NO.: CIP: SANDAG-1147000/ MTS-2005109001
DRAWING NO.: CD-2
SHEET NO.: 21

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3



SECTION A
MT2 STA 798+71 TO 799+05

SCALE: NTS



SLOPE IMPROVEMENTS AT SUBSTATION

1 / – SCALE: 1"=10'

GENERAL NOTES:

1. AS NECESSARY PROVIDE TEMPORARY SHORING TO SUPPORT RAIL AND BALLAST SYSTEM.
2. TOP OF CURB TO BE LEVEL WITH TOP OF TIE OF TRACK MT2.
3. REMOVE ALL LOOSE, UNSTABLE MATERIAL.
4. ALL CONCRETE CURB/SLOPE PROTECTION SHALL BE MONOLITHIC.
5. ALL CONCRETE REINFORCEMENT PER CALTRANS SLOPE PAVING–FULL SLOPE–NO SHOW TYPICAL SECTION.
6. PREP SUBGRADE FOR SLOPE IMPROVEMENTS AND COMPACT TO 90% COMPACTION.
7. PROTECT IN PLACE ALL EXISTING UTILITIES AND STRUCTURES UNLESS OTHERWISE INDICATED.

CONSTRUCTION NOTES

(19) CONSTRUCT CONCRETE SLOPE PROTECTION AND CURB PER SECTIONS A–E ON SHEETS CD–3 & CD–4.

(21) INSTALL EXPANSION JOINT WITH SEALANT PER 2 / CD–2

(22) MATCH EXISTING CONCRETE SLOPE PROTECTION.

LEGEND

CONCRETE

NOTE: SEE SPECIAL SECTIONS ON THIS SHEET AND SHEETS CD–4, CD–5.

NO.	DATE	REVISIONS	BY	CHK	APRV

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SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

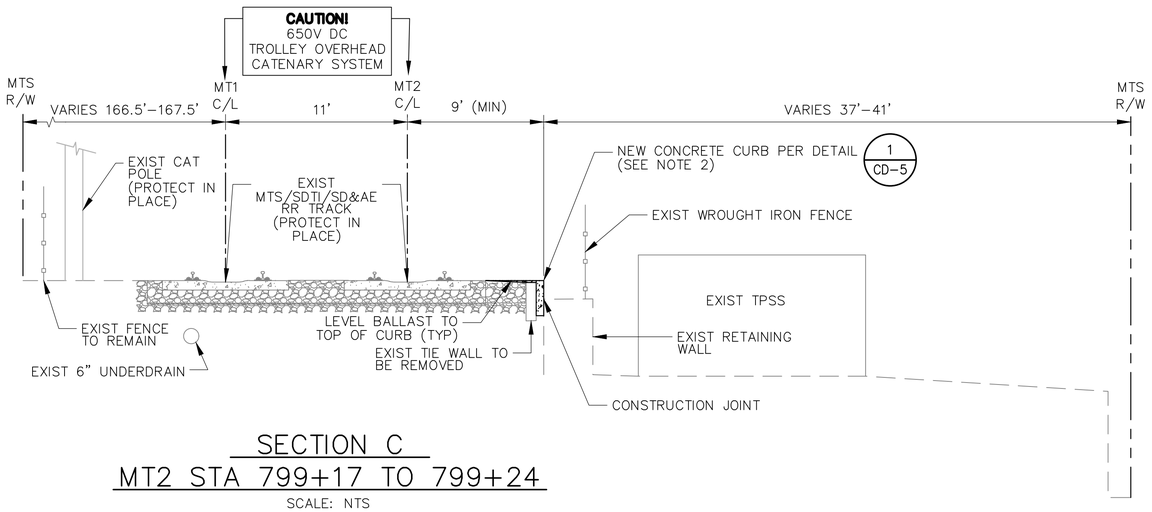
CIVIL DETAILS
SHEET 3 OF 5

SCALE	
AS SHOWN	
PROJECT NO. CIP: SANDAG-1147000/ MTS-2005109001	
DRAWING NO. CD-3	SHEET NO. 22

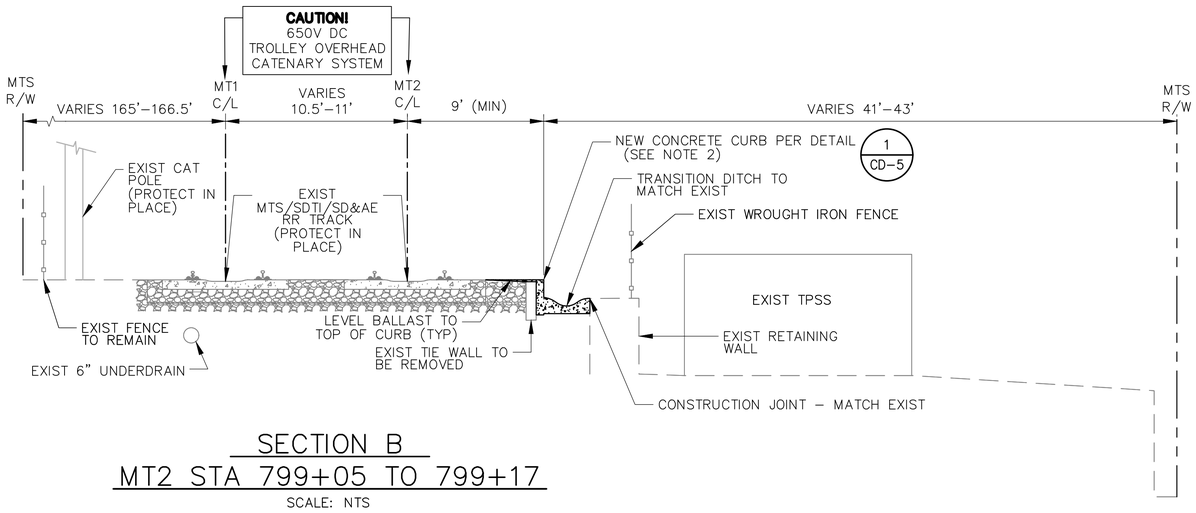
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3

GENERAL NOTES:

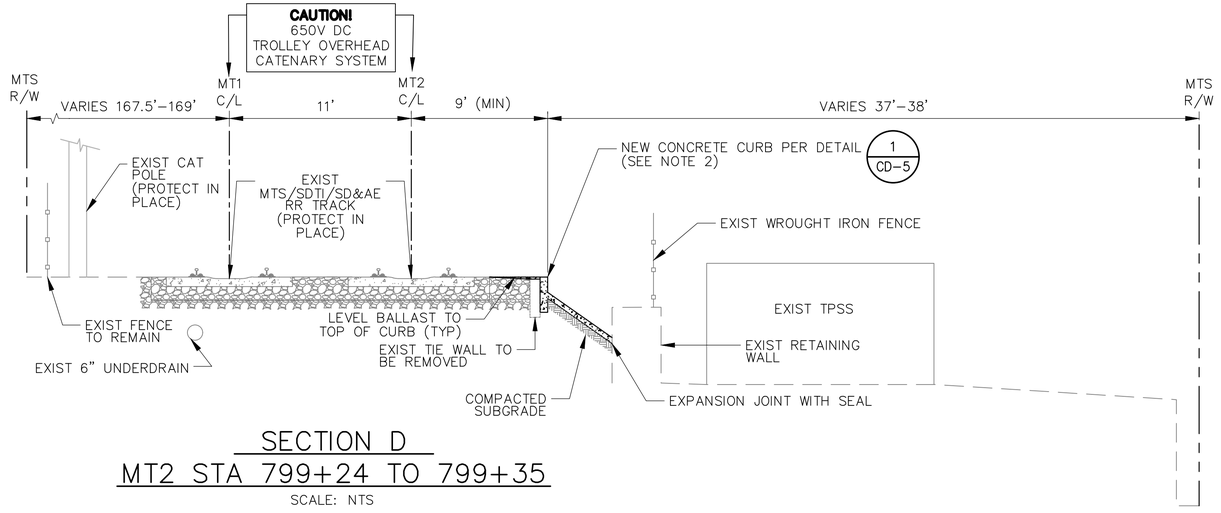
1. AS NECESSARY PROVIDE TEMPORARY SHORING TO SUPPORT RAIL AND BALLAST SYSTEM.
2. TOP OF CURB TO BE LEVEL WITH TOP OF TIE OF TRACK MT2.
3. REMOVE ALL LOOSE, UNSTABLE MATERIAL.
4. ALL CONCRETE CURB/SLOPE PROTECTION SHALL BE MONOLITHIC.
5. ALL CONCRETE REINFORCEMENT PER CALTRANS SLOPE PAVING–FULL SLOPE–NO SHOW TYPICAL SECTION.
6. PREP SUBGRADE FOR SLOPE IMPROVEMENTS AND COMPACT TO 90% COMPACTION.
7. PROTECT IN PLACE ALL EXISTING UTILITIES AND STRUCTURES.



SECTION C
MT2 STA 799+17 TO 799+24
SCALE: NTS



SECTION B
MT2 STA 799+05 TO 799+17
SCALE: NTS



SECTION D
MT2 STA 799+24 TO 799+35
SCALE: NTS

NO.	DATE	REVISIONS	BY	CHK	APRV

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REGISTERED PROFESSIONAL ENGINEER
MATTHEW J. BRITTEN
C61869
CIVIL
STATE OF CALIFORNIA

DESIGNED BY MB	DATE 09/24
DRAWN BY KA	09/24
CHECKED BY MT	09/24
SANDAG PRJ. MGR. DU	

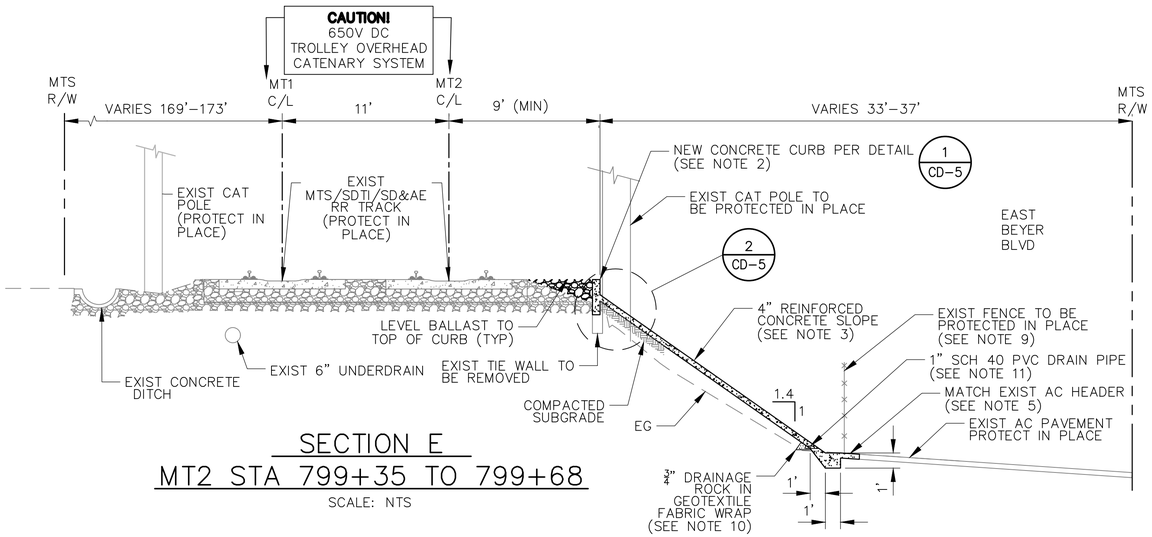
SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

CIVL DETAILS
SHEET 4 OF 5

SCALE	NONE
PROJECT NO.	CIP: SANDAG-1147000/ MTS-2005109001
DRAWING NO.	CD-4
SHEET NO.	23

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3

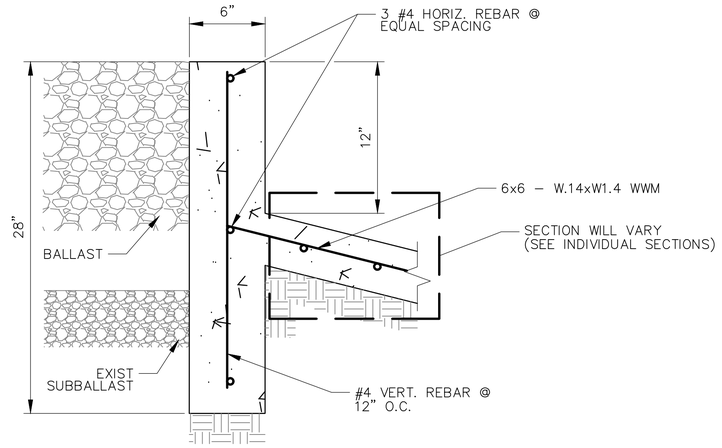


SECTION E
MT2 STA 799+35 TO 799+68

SCALE: NTS

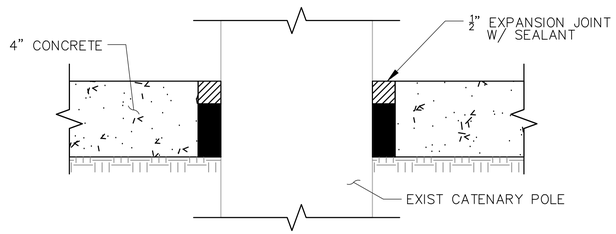
NOTES:

1. AS NECESSARY PROVIDE TEMPORARY SHORING TO SUPPORT RAIL AND BALLAST SYSTEM.
2. TOP OF CURB TO BE LEVEL WITH TOP OF TIE OF TRACK MT2.
3. PER MODIFIED CALTRANS SLOPE PAVING–FULL SLOPE–NO SKEW TYPICAL SECTION, FILE NO. xs4–210. EDGES SHALL NOT BE ROLLED
4. INSTALL 4" CONCRETE UNDER FENCE.
5. ALL CONCRETE CURB/SLOPE PROTECTION SHALL BE MONOLITHIC.
6. NOT USED.
7. PREP SUBGRADE FOR SLOPE IMPROVEMENTS AND COMPACT TO 90% COMPACTION.
8. PROTECT IN PLACE ALL EXISTING UTILITIES AND STRUCTURES.
9. EXCAVATE AROUND FENCE POSTS AND POST FOOTINGS AND POUR NEW CONCRETE AROUND POSTS AND FOOTINGS.
10. INSTALL ¾" GRAVEL WITH BASE AT 12" AND HEIGHT AT 6", ALONG FULL LENGTH OF SLOPE PAVING. GEOTEXTILE SHALL BE NON–WOVEN PER SPECIFICATIONS.
11. INSTALL 1" SCH 40 DRAIN PIPE EVERY 6' ALONG DRAINAGE ROCK FOR A TOTAL OF FIVE (5). EMBED UPSTREAM END OF DRAIN PIPE INTO DRAINAGE ROCK 4". LENGTH SHALL EXTEND BEYOND PROPOSED FG OR PAVED SLOPE. CUT EXCESS PIPE FLUSH AFTER SLOPE IS PAVED.



1 — NEW CONCRETE CURB TYPICAL ALL SECTION
TYPICAL ALL SECTION STA 798+71 TO 799+68

SCALE: NTS



2 — CONCRETE CONNECTION AT CATENARY POLE

NO.	DATE	REVISIONS	BY	CHK	APRV
1	10/7/24	ADDED CALL–OUTS ON SECTION E, REVISED NOTES 3 & 6, AND ADDED NOTES 10 & 11			

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REGISTERED PROFESSIONAL ENGINEER — MATTHEW J. BRITTEN — C61869 — CIVIL — STATE OF CALIFORNIA

DESIGNED BY MB	DATE 09/24
DRAWN BY KA	09/24
CHECKED BY MT	09/24
SANDAG PRJ. MGR. DU	

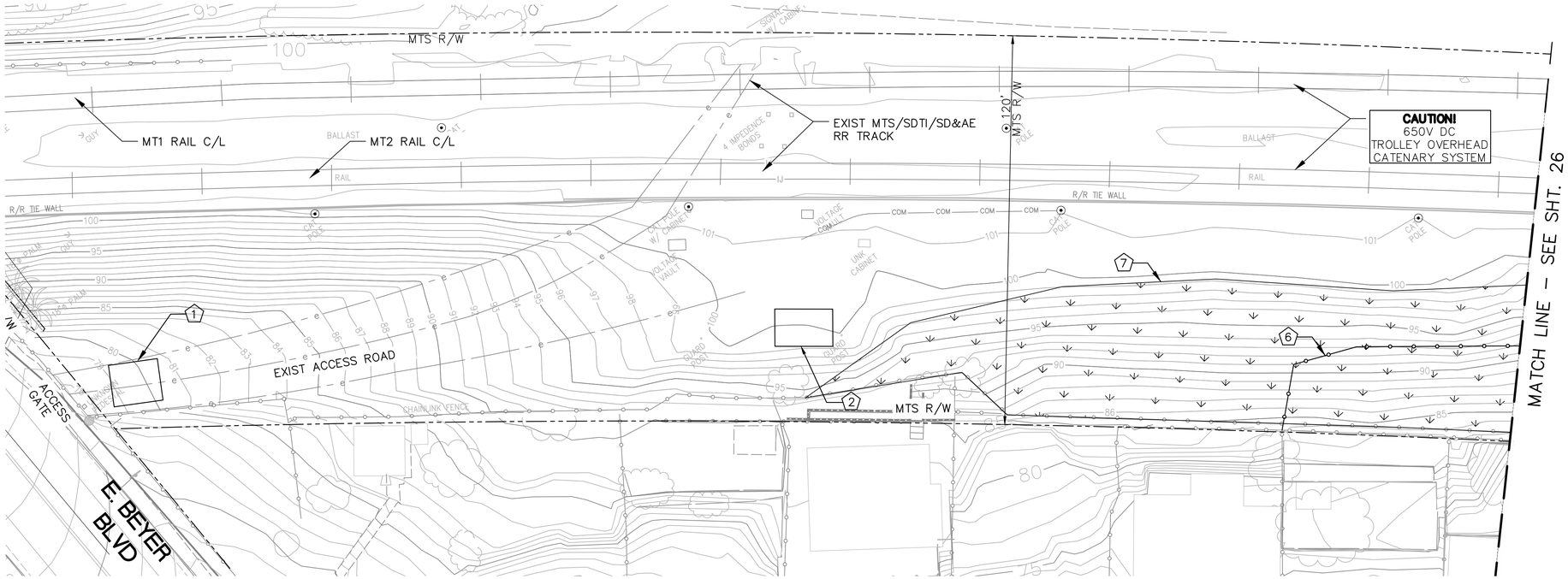
SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

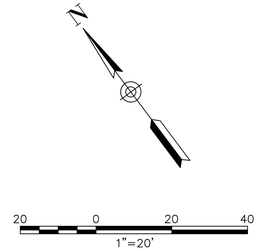
CIVIL DETAILS
SHEET 5 OF 5

SCALE	NONE
PROJECT NO.	CIP: SANDAG-1147000/ MTS-2005109001
DRAWING NO.	CD-5
SHEET NO.	24

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3



PLAN
SCALE: 1"=20'



CONSTRUCTION NOTES

1. INSTALL TEMPORARY CONSTRUCTION ENTRANCE (TYPE 2)
2. INSTALL CONCRETE WASHOUT PER CASQA BMP MANUAL WM-8
6. INSTALLATION OF ESA FENCING WILL BE AS DIRECTED BY THE ENVIRONMENTAL SPECIALIST
7. REFER TO THE CEQA ADDENDUM

LEGEND

- FIBER ROLL
- SILT FENCE
- ESA FENCE
- NON-NATIVE GRASSLAND

REFERENCE NOTES

1 SEE "C-" SHEETS FOR CONTOUR GRADING AND ACCESS ROAD

2 SEE "S-" SHEETS FOR WALL IMPROVEMENTS

NO.	DATE	REVISIONS	BY	CHK	APRV

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STATE OF CALIFORNIA

DESIGNED BY MB	DATE 09/24
DRAWN BY KA	09/24
CHECKED BY MT	09/24
SANDAG PRJ. MGR. DU	

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

EROSION CONTROL AND ENVIRONMENTAL COMPLIANCE PLAN SHEET 1 OF 4

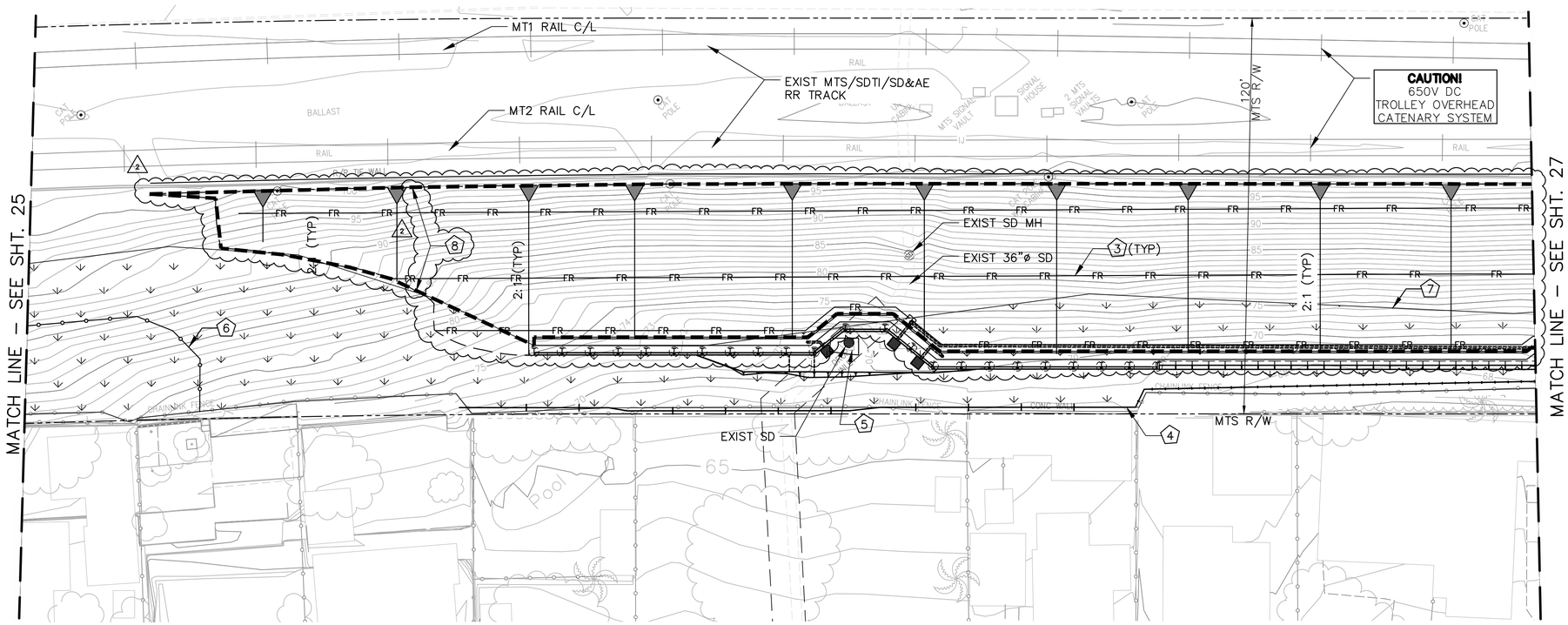
SCALE

PROJECT NO. CIP: SANDAG-1147000/ MTS-2005109001

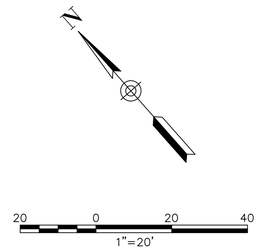
DRAWING NO. EC-1

SHEET NO. 25

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3



PLAN
SCALE: 1"=20'



CONSTRUCTION NOTES

3. INSTALL FIBER ROLL PER CASQA BMP MANUAL SE-5
4. INSTALL SILT FENCE PER CASQA BMP MANUAL SE-1
5. INSTALL INLET TYPE 3 PROTECTION PER CASQA BMP MANUAL SE-10
6. INSTALLATION OF ESA FENCING WILL BE AS DIRECTED BY THE ENVIRONMENTAL SPECIALIST
7. REFER TO THE CEQA ADDENDUM
8. LIMITS OF HYDROSEEDING

LEGEND

- LIMITS OF HYDROSEEDING
- FIBER ROLL
- SILT FENCE
- ESA FENCE
- NON-NATIVE GRASSLAND

REFERENCE NOTES

1 SEE "C-" SHEETS FOR CONTOUR GRADING AND ACCESS ROAD

2 SEE "S-" SHEETS FOR WALL IMPROVEMENTS

NO.	DATE	REVISIONS	BY	CHK	APRV
2	6/20/25	ADDED LIMIT LINE FOR HYDROSEEDING AND CALL OUT.			

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SANDAG PRJ. MGR. DU	

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

EROSION CONTROL AND ENVIRONMENTAL COMPLIANCE PLAN SHEET 2 OF 4

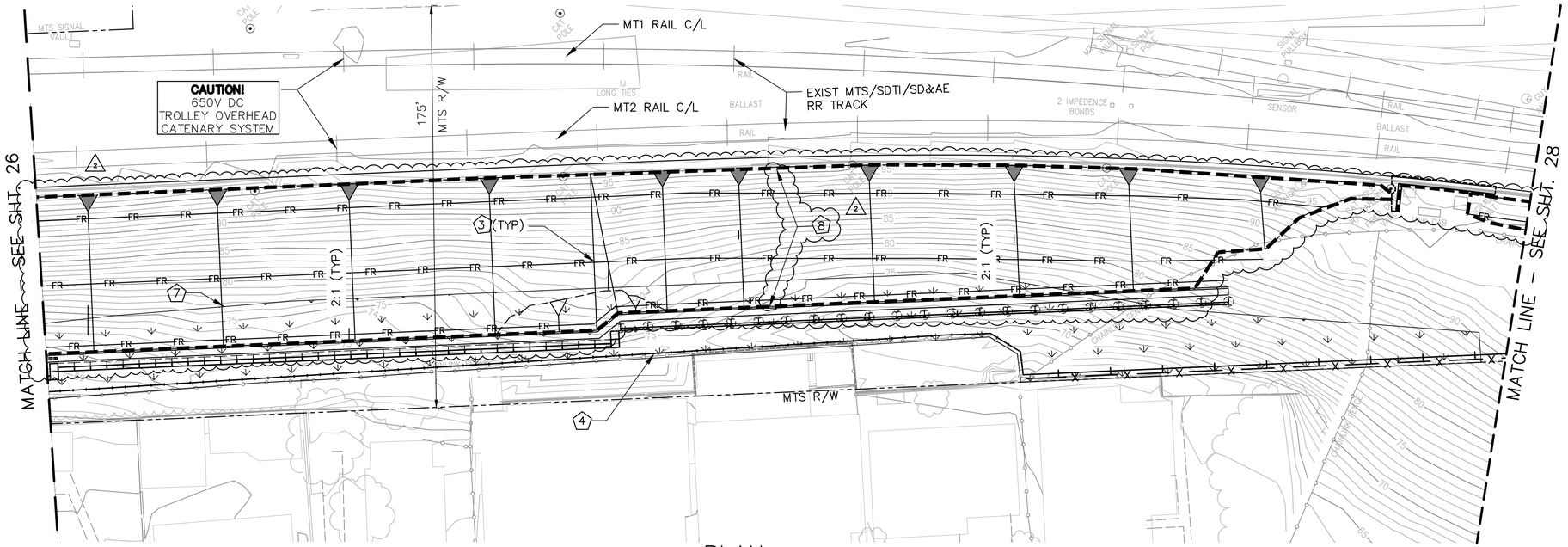
SCALE

PROJECT NO. CIP: SANDAG-1147000/ MTS-2005109001

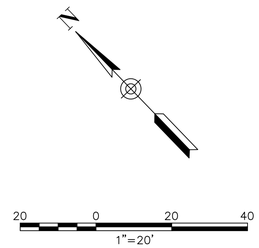
DRAWING NO. EC-2

SHEET NO. 26

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3



PLAN
SCALE: 1"=20'



CONSTRUCTION NOTES

3 INSTALL FIBER ROLL PER CASQA BMP MANUAL SE-5

4 INSTALL SILT FENCE PER CASQA BMP MANUAL SE-1

7 REFER TO THE CEQA ADDENDUM

8 LIMITS OF HYDROSEEDING

2

LEGEND

2 LIMITS OF HYDROSEEDING

FR FR FIBER ROLL

SILT FENCE

ESA FENCE

NON-NATIVE GRASSLAND

REFERENCE NOTES

1 SEE "C-" SHEETS FOR CONTOUR GRADING AND ACCESS ROAD

2 SEE "S-" SHEETS FOR WALL IMPROVEMENTS

NO.	DATE	REVISIONS	BY	CHK	APRV
2	6/20/25	ADDED LIMIT LINE FOR HYDROSEEDING AND CALL OUT.			

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SANDAG PRJ. MGR. DU	

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

EROSION CONTROL AND ENVIRONMENTAL COMPLIANCE PLAN SHEET 3 OF 4

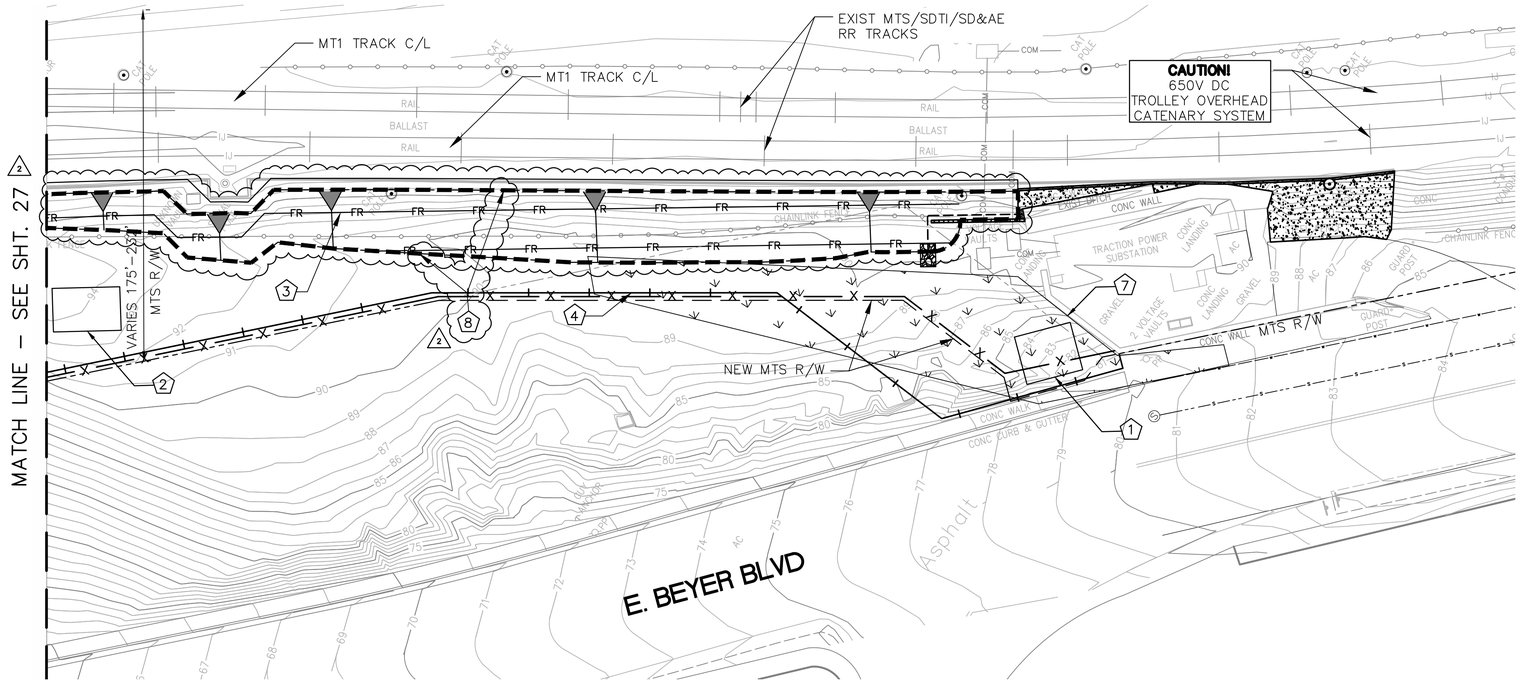
SCALE

PROJECT NO. CIP: SANDAG-1147000/ MTS-2005109001

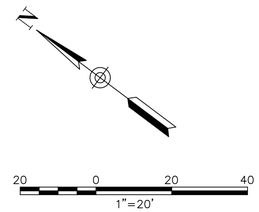
DRAWING NO. EC-3

SHEET NO. 27

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3



PLAN
SCALE: 1"=20'



CONSTRUCTION NOTES

1. INSTALL TEMPORARY CONSTRUCTION ENTRANCE (TYPE 2)
2. INSTALL CONCRETE WASHOUT PER CASQA BMP MANUAL WM-8
3. INSTALL FIBER ROLL PER CASQA BMP MANUAL SE-5
4. INSTALL SILT FENCE PER CASQA BMP MANUAL SE-1
7. REFER TO THE CEQA ADDENDUM
8. LIMITS OF HYDROSEEDING

LEGEND

- LIMITS OF HYDROSEEDING
- FIBER ROLL
- SILT FENCE
- ESA FENCE
- NON-NATIVE GRASSLAND

REFERENCE NOTES

1 SEE "C-" SHEETS FOR CONTOUR GRADING AND ACCESS ROAD

2 SEE "S-" SHEETS FOR WALL IMPROVEMENTS

NO.	DATE	REVISIONS	BY	CHK	APRV
2	6/20/25	ADDED LIMIT LINE FOR HYDROSEEDING AND CALL OUT.			

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C81869
STATE OF CALIFORNIA

DESIGNED BY MB	DATE 09/24
DRAWN BY KA	09/24
CHECKED BY MT	09/24
SANDAG PRJ. MGR. DU	

SANDAG MTS

SLOPE AND DRAINAGE IMPROVEMENTS ALONG SAN YSIDRO YARD

EROSION CONTROL AND ENVIRONMENTAL COMPLIANCE PLAN SHEET 4 OF 4

SCALE

PROJECT NO. CIP: SANDAG-1147000/ MTS-2005109001

DRAWING NO. EC-4

SHEET NO. 28

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

BID PRICE FORM

Beyer Blvd Slope Improvements (PWL439.0-25)
IFB
ADDENDUM NO. 2 - 7/9/2025

LINE NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
	GENERAL				
1.	Mobilization/Demobilization (not to exceed 10% total bid)	1	EA	$ 407,000.00	$ 407,000.00
2.	*[LINE LEFT BLANK INTENTIONALLY]*	*XX*	*XX*	*XX*	
3.	Progress Schedule	1	EA	$ 5,000.00	$ 5,000.00
4.	Enviromental Requirements	1	EA	$ 5,000.00	$ 5,000.00
				SUBTOTAL GENERAL	$ 417,000.00
	STORMWATER				
5.	Prepare SWPPP	1	LS	$ 5,000.00	$ 5,000.00
6.	Water Pollution Control	1	LS	$ 150,000.00	$ 150,000.00
7.	Temporary Concrete Washout	2	EA	$ 3,000.00	$ 6,000.00
8.	Temporary Silt Fence	690	LF	$ 8.00	$ 5,520.00
9.	Temporary Fiber Roll	2522	LF	$ 7.00	$ 17,654.00
10.	Temporary Construction Entrance (Type 2)	2	EA	$ 7,500.00	$ 15,000.00
11.	Temporary Drainage Inlet Protection	1	EA	$ 800.00	$ 800.00
12.	Erosion Control Move In/Out	3	EA	$ 1,500.00	$ 4,500.00
13.	Temporary Erosion Control	2	AC	$ 5,000.00	$ 10,000.00
14.	Street Sweeping	1	LS	$ 75,000.00	$ 75,000.00
				SUBTOTAL STORMWATER	$ 289,474.00
	EARTHWORK				
15.	Clearing and Grubbing	1	LS	$ 338,000.00	$ 338,000.00
16.	Slope Excavation	2990	CY	$ 40.00	$ 119,600.00
17.	South Access Roadway Grading	26	CY	$ 500.00	$ 13,000.00
18.	Import	5633	CY	$ 100.00	$ 563,300.00
19.	Structural Excavation	575	CY	$ 200.00	$ 115,000.00
20.	Structural Backfill	630	CY	$ 270.00	$ 170,100.00
21.	Pervious Backfill Material	5	CY	$ 1,000.00	$ 5,000.00
22.	Class 2 Aggregate Base	6	CY	$ 1,000.00	$ 6,000.00
				SUBTOTAL EARTHWORK	$ 1,330,000.00
	DRAINAGE				
23.	Concrete Drainage Structures (SDRSD D-75, Typ B)	675	LF	$ 140.00	$ 94,500.00
24.	Atrium Grate	3	EA	$ 500.00	$ 1,500.00
25.	6" PVC Drainage Pipes and Downdrains	33	LF	$ 80.00	$ 2,640.00
26.	6" PVC 90° Elbow	1	EA	$ 100.00	$ 100.00
27.	6" PVC Wye	1	EA	$ 100.00	$ 100.00
28.	8" PVC Drainage Pipes and Underdrain	207	LF	$ 60.00	$ 12,420.00
29.	8" PVC 90° Elbow	2	EA	$ 150.00	$ 300.00

30.	8" PVC Wye	1	EA	$ 150.00	$ 150.00
31.	8" PVC Cap	1	EA	$ 150.00	$ 150.00
32.	8" PVC Tee	1	EA	$ 150.00	$ 150.00
33.	8" PVC Cleanout	1	EA	$ 1,500.00	$ 1,500.00
34.	4" Perforated Plastic Pipe Underdrain	26	LF	$ 50.00	$ 1,300.00
35.	6" Rock/Cobble (2 locations)	1	LS	$ 5,000.00	$ 5,000.00
36.	Energy Dissipater	1	LS	$ 5,000.00	$ 5,000.00
				SUBTOTAL DRAINAGE	$ 124,810.00
	MINOR CONCRETE				
37.	Concrete Slope Protection	13	CY	$ 4,000.00	$ 52,000.00
38.	Expansion Joint and Seal	36	LF	$ 80.00	$ 2,880.00
				SUBTOTAL MINOR CONCRETE	$ 54,880.00
	STRUCTURES				
39.	Gravity Block Retaining Wall (Full Block)	406	EA	$ 1,050.00	$ 426,300.00
40.	Gravity Block Retaining Wall (Half Block)	2	EA	$ 1,500.00	$ 3,000.00
41.	Gravity Block Retaining Wall (Bench Block)	183	EA	$ 1,050.00	$ 192,150.00
42.	36" Cast-In-Drilled-Hole Concrete Piling	715	LF	$ 510.00	$ 364,650.00
43.	Steel Soldier Pile (W24 x 176)	1020	LF	$ 180.00	$ 183,600.00
44.	Precast Concrete Panels	2358	SF	$ 114.00	$ 268,812.00
45.	Clean and Paint Steel Soldier Piling	1	LS	$ 78,000.00	$ 78,000.00
46.	Gravity Retaining Wall (SDRSD C-9, Type B)	13	CY	$ 2,500.00	$ 32,500.00
47.	Bar Reinforcing Steel (Gravity Retaining Wall)	15	LBS	$ 50.00	$ 750.00
48.	CMU Retaining Wall (SDRSD C-4)	110	SF	$ 200.00	$ 22,000.00
49.	Class 2 Permeable Material	28	CY	$ 1,300.00	$ 36,400.00
50.	Core Drain Hole	7	EA	$ 700.00	$ 4,900.00
51.	Miscellaneous Metal	253	LBS	$ 30.00	$ 7,590.00
52.	Crushed Rock Mat	38	CY	$ 1,000.00	$ 38,000.00
				SUBTOTAL STRUCTURES	$ 1,658,652.00
	FENCING				
53.	Cable Railing	1321	LF	$ 100.00	$ 132,100.00
54.	Chain Link Fence	420	LF	$ 90.00	$ 37,800.00
55.	Chain Link Double Swing Gate (12' Wide)	1	EA	$ 9,000.00	$ 9,000.00
				SUBTOTAL FENCING	$ 178,900.00
	HYDROSEEDING				
56.	Hydroseeding	4840	SY	$ 3.90	$ 18,876.00
				SUBTOTAL HYDROSEEDING	$ 18,876.00
				Grand Total Basis of Award	$ 4,072,592.00

This all-inclusive pricing must include the costs for the bid bond, performance & payment bonds, and insurance. MTS will not pay additional costs, or separate costs for these.

Subcontractors (If no subcontractor bidder shall indicate "Not Applicable" and return with the bid packet)							Any time there is a change to a Subcontractor resubmit this attachment. Any change to these forms after bid submittal must be made in accordance with Public Contract Code sections 4100 et seq., as applicable, and as permitted by MTS.							
Company Name	**Type of DBE**	**% of Work**	**DIR Number**	**Dollar Value**	**Description of Work**	**Point of Contact First Name**	**Point of Contact Last Name**	**Email**	**Phone Number**	**Street Address**	**City**	**State**	**Zip**
SOUTHWEST V-DITCH	N/A	2.7	1000004410	$ 113,000	DRAINAGE DITCH & SLOPE PROTECTION	MARTY	LEITZMAN	MARTY@SWVDITCH.COM	951-781-4303	3625 PLACENTIA LANE	RIVERSIDE	CA	92501
ALCORN FENCE	DBE	3.6	1000001986	$ 147,000	FENCING & CABLE RAILING	JESSE	MADRIGAL	JMADRIGAL@ALCORNFENCE.COM	951-685-5871	64445 PEDLEY ROAD	RIVERSIDE	CA	92509
KELLER NORTH AMERICA, INC.	N/A	15.4	1000006388	$ 630,000	CIDH & PILING	CHRISTIAN	SANTISTEBAN	CHRISTIAN.SANTISTEBAN@KELLER-NA.COM	619-956-0850	1870 CORDELL COURT, SUITE 201	EL CAJON	CA	92020

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 12

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Fixed Route, Paratransit, and Minibus Services – Contract Amendments

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to:

1) Execute MTS Doc. No. B0708.6-20 (in substantially the same format as Attachment A), with Transdev North America (Transdev), in the amount of $9,514,848.00 for a $2.00 per hour wage increase for frontline employees for the provision of fixed-route, express, and Bus Rapid Transit (BRT) bus services at the East County and South Bay Divisions through June 30, 2031;

2) Ratify MTS Doc. No. B0703.10-20 (Attachment B) with First Transit, Inc. (First Transit) in the amount of $62,614.63 for the purchase of four wireless battery-powered mobile shop lifts for use at the Copley Park Division; and

3) Execute MTS Doc. No. B0703.16-19 (in substantially the same format as Attachment C), with First Transit in the amount of $2,505,054.00 for a $2.00 per hour wage increase for frontline employees for the provision of paratransit and fixed-route bus services through June 30, 2030.

Budget Impact

The total cost of the proposed amendments providing $2.00 per hour wage increases is estimated to be $9,514,848.00 for the Transdev Fixed Route contract (through June 30, 2031) and $2,505,054.00 for the First Transit ADA Paratransit and Minibus contract (through June 30, 2030).

Transdev Fixed Route Contract East County and South Bay Divisions B0708.6-20		First Transit ADA Paratransit and Minibus Contract Copley Park Division B0703.16-19	
Base Period	**Change**	**Base Period**	**Change**
Year 1 (7/1/21 thru 6/30/22)	$0	Year 1 (7/1/20 thru 6/30/21)	$0
Year 2 (7/1/22 thru 6/30/23)	$0	Year 2 (7/1/21 thru 6/30/22)	$0
Year 3 (7/1/23 thru 6/30/24)	$0	Year 3 (7/1/22 thru 6/30/23)	$0
Year 4 (7/1/24 thru 6/30/25)*	$513,215	Year 4 (7/1/23 thru 6/30/24)	$0
Year 5 (7/1/25 thru 6/30/26)	$1,179,708	Year 5 (7/1/24 thru 6/30/25)*	$212,016
Year 6 (7/1/26 thru 6/30/27)	$1,318,556	Year 6 (7/1/25 thru 6/30/26)	$435,134
Base Period Totals	**$3,011,479**	**Base Period Totals**	**$647,150**
Option Period I		**Option Period I**	
Year 7 (7/1/27 thru 6/30/28)	$1,440,094	Year 7 (7/1/26 thru 6/30/27)	$446,546
Year 8 (7/1/28 thru 6/30/29)	$1,571,056	Year 8 (7/1/27 thru 6/30/28)	$458,278
Option Period I - Totals	**$3,011,150**	**Option Period I - Totals**	**$904,824**
Option Period II		**Option Period II**	
Year 9 (7/1/29 thru 6/30/30)	$1,703,340	Year 9 (7/1/28 thru 6/30/29)	$470,339
Year 10 (7/1/30 thru 6/30/31)	$1,788,879	Year 10 (7/1/29 thru 6/30/30)	$482,741
Option Period II - Totals	**$3,492,219**	**Option Period II - Totals**	**$953,080**
Total (Base + Options)	**$9,514,848**	**Total (Base + Options)**	**$2,505,054**
GRAND TOTAL		**$12,019,902**	

**$2.00/hr wage increase effective January 1, 2025*

The above supplemental funding is allocated through revised fixed and variable contract formulas, which are attached to the draft amendments in Attachment A and C. No additional funding will be added to the First Transit ADA Paratransit and Minibus contract because the authorized funding exceeds anticipated needs because of lower-than-expected ridership during the COVID-19 pandemic (see First Transit Contract Reconciliation in Attachment D).

DISCUSSION:

In line with the public transit industry's best practices, to sustain long-term operating efficiency and reduce long-term operating costs, MTS has historically contracted out a portion of its transit services. This is done through two competitively bid 10-year contracts:

(1) Transdev Fixed Route. On December 10, 2020 (Agenda Item (AI) 30), the MTS Board approved MTS Doc. No. B0708.0-20 with Transdev in the amount of $911,362,781.00[1] for the provision of fixed-route, express, and BRT bus services for a six-year base period with two 2-year option terms (through June 30, 2031). Under this contract, Transdev operates a significant portion of MTS fixed-route bus operations including services in South Bay, Central San Diego, East County, Rural Lifeline, Commuter Express, and BRT. This service is operated out of MTS-owned South Bay (Chula Vista) and East County (El Cajon) bus maintenance facilities, where Transdev manages the day-to-day operations including vehicle maintenance, dispatching, and service delivery.

[1] Subsequent Board approved amendments bring the current contract total to $932,802,466.

(2) First Transit ADA Paratransit and Minibus. On April 16, 2020 (AI 30), the MTS Board approved MTS Doc. No. B0703.0-19 with First Transit in the amount of $333,398,821.18[2] for the provision of minibus fixed-route and paratransit bus services for a six-year base period with two 2-year option terms (through June 30, 2030). Under the agreement, both parties agreed to fixed operator rates with specific increases throughout the term of the contract. A contract with First Transit to operate both complementary paratransit and minibus fixed route bus service. These services are operated out of MTS-owned Copley Park Place Division (CPD), where First Transit manages the day-to-day operations including vehicle maintenance, dispatching, and service delivery.

These contracted services include purchased transportation through fixed and mileage-based costs, general bus stop maintenance of over 4,277 bus stops, transit center power washing, standby bus support, special events support, Trolley support services, rural bus fuel costs, and other miscellaneous pass-through costs as defined in the contract. MTS provides the necessary vehicles and facilities for our contracted operations.

Under the agreements, employee wage rates with specific increases throughout the term of the contract are used to set approved fixed fees and establish several variable formulas. The variable formulas are generally a per revenue hour or a per revenue mile rate that is charged depending on the amount of transit service Transdev or First Transit operates in a given month. The agreement forecasts estimated service levels throughout the life of the contract, but MTS only pays the variable costs actually incurred based on actual service levels.

Under these contracts, if unanticipated service growth or contraction occurs in future years and results in unanticipated expenses from what is estimated above, budget adjustments would be subject to approval by the CEO and the Board via the annual budget process. Routine increases or possible reductions in service levels are also be submitted to the Board together with any associated budgetary adjustments or additional spend authority needs as part of the periodic service level change process. The contracts also include stipulations for responsible wage and health benefits consistent with MTS Policy 31, Section 31.10.[3]

Bus Operator Wage Increases

As MTS emerged from the pandemic, the hiring and retention of bus operators and other front-line employees became a growing challenge for MTS and its contracted service providers. Competition for labor, the higher cost of living in San Diego, and a job market that has seen unprecedented wage increases, which made attracting new and retaining current bus operators extremely difficult at the current contract wage rates.

MTS has taken steps to address these hiring and retention issues over the last several years. In 2023, MTS's primary focus was on bus operator wages, rather than all frontline employees, such as mechanics, road supervisors, dispatchers, and technicians. On January 26, 2023 (AI 16), the Board approved an MTS funded $2.00 per hour wage increase for bus operators at the East County and South Bay bus divisions operated by Transdev. Also on January 26, 2023 (AI 15), the Board approved the same $2.00 per hour wage increase for bus operators at the

[2] Subsequent Board approved amendments bring the current contract total to $333,518,919.89. See Attachment D.
[3] Policy 31 (Providing Transit Services) can be found on the MTS website at: https://www.sdmts.com/sites/default/files/POLICY.31.PROVIDING%20TRANSIT%20SERVICES.pdf

Copley Park Division operated by First Transit. The Transdev package, valued at $21,439,684 over the remaining eight years of the contract, was part of a larger compensation package negotiated by Transdev with the unions representing its bus operators – the Amalgamated Transit Union (ATU) in East County and the Teamsters in South Bay. The First Transit package, valued at $16,639,833 over the remaining seven years of the contract, was also part of a larger compensation package negotiated by First Transit with the unions representing its bus operators – the Teamsters. The $2.00 per hour wage increase was passed on directly to bus operators and was not used to supplant compensation increases owed or promised by Transdev and First Transit during its negotiations. This action was intended to address the immediate recruitment and retention challenges that Transdev, First Transit, and MTS were facing in the bus operator positions.

On June 15, 2023 (AI 19) and December 14, 2023 (AI 24), additional funding was also approved to provide funding for wage and benefit increases to bus operators, road supervisors, and dispatchers across MTS's contracted divisions. This action followed a strike by certain Teamster Local 683 bargaining units in May 2023 and efforts by the Board to assist in resolving that strike, restoring service, and ensuring parity among contracted employees for the additional funding provided by MTS.

Other Frontline Employee Wage Increases – Today's Proposed Action

There are approximately 158 other types of front-line employees, including mechanics, road supervisors, dispatchers, and technicians, who did not receive the same $2.00 per hour benefit that bus operators received in 2023. On October 17, 2024 (AI 24), the MTS Board authorized the CEO to add up to an additional $1,365,000.00 annually ($9,555,000 in total estimated funding) to the Transdev and First Transit contracts to fund represented employee wage increases contingent upon Transdev and First Transit successfully executing outstanding Collective Bargaining Agreement (CBA) following negotiations. At that time, the $9,555,000 amount was MTS staff's best estimate of the total cost for Transdev and First Transit to implement at $2.00 per hour wage increase for the specific employees.

Following this October 2024 approval, MTS staff have reviewed and negotiated a framework and overall fiscal impact to implement the $2.00 per hour increase with Transdev and First Transit. This process identified additional costs that would be incurred by the contractors as a result of implementing a $2.00 per hour increase to the designated employees, including items such as additional workers compensation costs, pension costs, insurance costs, overhead, and other items. Once the overall costs were identified, the fixed fee and variable rate formulas in the contracts were revised to incorporate them. The final costs identified following this process differ from the estimated $1,365,000 per year that was included in the Board's October 17, 2024 (AI 24) approval, with the final amounts shown in the budget table above. The final cost estimate is $12,019,902 through the contract expiration dates of June 30, 2031 (Transdev) and June 30, 2030 (First Transit). This represents $2,464,901.50 in additional costs over the October 2024 estimate. The difference in the first and final estimates is primarily because MTS did not have access to First Transit and Transdev's full cost formulas in October 2024, and the ballpark annual estimate did not take into account the additional service and increased costs that generally cause costs under the agreements to escalate each year.

A condition of the Board's October 17, 2024 approval was that no increase be provided to Transdev or First Transit until and unless they negotiated new CBAs with the applicable unions, which would both provide labor peace and confirm that the $2.00 per hour wage increases had in fact been given to the applicable employees. Transdev and First Transit have met this requirement.

First Transit Contract Amendment – Ratification

Traditionally, when the CEO has used Board Policy 41[4] authority to approve contract amendments up to $150,000, the Board is asked to ratify such amendments the next time the contract is brought to the Board for amendment approval. On November 16, 2023, MTS Doc. No. B0703.10-19 (Amendment 10) (see Attachment B) was executed to provide $62,614.63 in funding for First Transit to purchase a set of wireless battery-powered mobile shop lifts for use at the Copley Park Division. MTS owns the Copley Park Division but provides it to First Transit during the term of the contract to operate ADA Paratransit and Minibus services. The mobile lift is considered an item that is MTS's responsibility to provide, and it will stay with the facility at the end of the contract. Therefore, this was considered an appropriate pass-through funding item that MTS approved reimbursement to First Transit for by Amendment 10.

Other amendments to the First Transit contract have been minor contract clarifications or amendments to update terms and conditions that do not require Board approval or ratification.

Other Amendments

The draft amendments (Attachments A and C) also include updates to contract language to comply with federal and state requirements or to memorialize minor contract clarifications or changes.

Staff Recommendation

Therefore, staff recommends the Board of Directors authorize the CEO to:

1. Execute MTS Doc. No. B0708.6-20 (in substantially the same format as Attachment A), with Transdev, in the amount of $9,514,848.00 for a $2.00 per hour wage increase for frontline employees for the provision of fixed-route, express, and BRT bus services at the East County and South Bay Divisions through June 30, 2031;

2. Ratify MTS Doc. No. B0703.10-20 (Attachment B) with First Transit in the amount of $62,614.63 for the purchase of four wireless battery-powered mobile shop lifts for use at the Copley Park Division; and

3. Execute MTS Doc. No. B0703.16-19 (in substantially the same format as Attachment C), with First Transit in the amount of $2,505,054.00 for a $2.00 per hour wage increase for frontline employees for the provision of paratransit and fixed-route bus services through June 30, 2030.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachments: A. Draft Transdev Amendment - MTS Doc. No. B0708.6-20
B. First Transit Amendment 10 - MTS Doc. No. B0703.10-19
C. Draft First Transit Amendment - MTS Doc. No. B0703.16-19
D. First Transit Contract Reconciliation

[4] Policy 41 (Signature Authority) can be found on the MTS website at: https://www.sdmts.com/sites/default/files/policy-no.-41.pdf

ATTACHMENT A WILL BE PROVIDED BEFORE BOARD MEETING

Metropolitan Transit System

Amendment 10

November 16, 2023 MTS Doc No. B0703.10-19

MINIBUS AND ADA PARATRANSIT FIXED ROUTE SERVICES – MOBILE LIFTS

First Transit, Inc.
Douglas Gies - Regional Vice President
Mathieu Le Bourhis - CFO
~~600 Vine Street, Suite 1400~~ 720 E. Butterfield Road, Suite 300
~~Cincinnati, OH, 45202~~ Lombard, Illinois 60148

This shall serve as Amendment No.10 to the original agreement B0703.0-19 as further described below.

SCOPE

Per the contract, First Transit shall provide an additional set of 4 wireless, Battery-Powered Mobile Shop lifts for MTS Copley Park Division (CPD) per the attached quote. First Transit will also be responsible for maintaining the lifts throughout the term of the contract. First Transit will bill MTS for the cost of the lifts and MTS will be the sole owner.

First Transit shall also continue to provide Minibus and ADA Paratransit Fixed Route Services, in accordance with the terms and conditions of the original contract, MTS Doc. No. B0703.0-19.

SCHEDULE

There shall be no changes to the contract schedule.

PAYMENT

This contract amendment shall authorize a cost increase in the amount of additional costs not to exceed $62,614.63 (inclusive of shipping and CA 7.75% sales tax). The total value of this contract including this amendment shall be in the amount of $179,528,860.37 ($179,466,245.74 for the current base contract plus $62,614.63 for this amendment). 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:

DocuSigned by: Douglas Gies 25D5148E8E80485...

DocuSigned by: Mathieu Le Bourhis 570D1570222B41D...

Douglas Gies, Regional Vice President
Mathieu Le Bourhis, CFO
First Transit, Inc.
Date: 12/4/2023

Attachment: First Transit/Stertil-Koni Quote #939 v2 dated 9/18/23

Quote

Stertil-Koni USA, Inc.
200 Log Canoe Circle
Stevensville, MD 21666
T: 410.643.9001
F: 410.643.8901

Quote #	939
Date	09/18/2023
Expires	10/18/2023
RSM	Ron Reazer

Billing Address
First Transit
Chris Lunn
7490 Copley Park Pl
San Diego, California
92111
chris.d.lunn@firstgroup.com

Shipping Address
First Transit
Chris Lunn
7490 Copley Park Pl
San Diego, California
92111
chris.d.lunn@firstgroup.com

National Accounts

Item	Qty	Price	Discount	Total
ST-1085-2FWA Set of 4 Wireless Battery-Powered Mobile Lifts at 74,000 lbs. capacity, 24V DC, ebright control box on every column with synthetic fixed front wheels and adjustable forks	1.00	$82,796.00	32.00%	$56,301.28

Comments

Subtotal:	$82,796.00
Discount:	($26,494.72)
Tax:	$4,363.35
Shipping:	$1,950.00
Total	$62,614.63

Subcontract:

Local Distributor:

Southwest Lift & Equipment, Inc.
Robert Stekkinger

robert@southwestlift.com
909.269.2852

Terms and Conditions

1. Extended warranty: 3-year parts and 2 years labor.
2. Inspections: Free annual inspections for 3 years.
3. Setup and training included.
4. Product availability and proposed delivery date provided ARO.
5. Purchase Orders MUST be issued to Stertil- Koni USA, Inc., not the Local Distributor. Please submit Purchase Orders to emmaleigh@stertil-koni and orders@stertil-koni.com.
6. Customer is responsible for paying sales tax, if any, when applicable.

ATTACHMENT C WILL BE PROVIDED BEFORE BOARD MEETING

Attachment D

First Transit ADA Paratransit and Minibus Contract Reconciliation
MTS Doc. No. B0703.0-19 thru B0703.16-19

	Term	Actual* or New Estimated Annual Cost per Am. 16	Original Contract	Difference + = under budget - = over budget
A.	Base Year 1 - FY21*	$13,994,191.00	$25,830,361.31	$11,836,170.31
B.	Base Year 2 - FY22*	$16,352,113.00	$27,471,034.79	$11,118,921.79
C.	Base Year 3 - FY23*	$25,272,553.00	$29,145,518.94	$3,872,965.94
D.	Base Year 4 - FY24*	$32,562,395.00	$30,683,321.68	-$1,879,073.32
E.	Base Year 5 - FY25	$34,560,859.00	$32,331,670.43	-$2,229,188.57
F.	Base Year 6 - FY26	$36,457,753.66	$33,883,964.51	-$2,573,789.15
	BASE YEAR SUBTOTAL	**$159,199,864.66**	**$179,345,871.66**	**$20,146,007.00**
G.	Option I (Yr 7) - FY 27	$38,390,148.41	$35,711,046.87	-$2,679,101.54
H.	Option I (Yr 8) - FY 28	$40,271,160.53	$37,476,591.37	-$2,794,569.16
	OPTION I SUBTOTAL	**$78,661,308.93**	**$73,187,638.24**	**-$5,473,670.69**
I.	Option II (Yr 9) - FY 29	$42,313,196.36	$39,384,119.37	-$2,929,076.99
J.	Option II (Yr 9) - FY 30	$44,557,256.62	$41,481,191.91	-$3,076,064.71
	OPTION II SUBTOTAL	**$86,870,452.98**	**$80,865,311.28**	**-$6,005,141.70**
	OPTIONS I&II SUBOTAL	**$165,531,761.92**	**$154,052,949.52**	**-$11,478,812.40**
	Mobile Lift Purchases (Am 1,3,4,10)	$182,998.71	$182,998.71	$0.00
	GRAND TOTAL	**$324,914,625.28**	**$333,581,819.89**	**$8,667,194.61**

First Transit ADA Paratransit and Minibus Contract Summary
B0703.0-19 through B0703.16-19

Document	Description	Authorization	Board Authorized Amount (including Option Years)	Exercised Contract Value (Base Years Only)
Original	Minibus and ADA Paratransit Fixed Route Contract	Board Approved 04/16/20 (AI 30)	$333,398,921.18	$179,345,871.66
AM 1	Purchase of one set of mobile lifts	CEO Authority Board Ratified 09/16/21 (AI 16)	$47,380.44	$179,393,252.10
AM 2	Authorizes payment structure changes due to COVID-19	CEO Authority Board Ratified 09/16/21 (AI 16)		$179,393,252.10
AM 3	Authorizes a new DriveCam System for minibuses	CEO Authority Board Ratified 09/16/21 (AI 16)	$23,486.40	$179,416,738.50
AM 4	Purchase of one set of mobile lifts	Board Approved 09/16/21 (AI 16)	$49,507.24	$179,466,245.74
AM 5	Approves taxi pass through cost changes	CEO Authority		$179,466,245.74
AM 6	Approves taxi incentive program	CEO Authority		$179,466,245.74
AM 7	Adds subcontractor	CEO Authority		$179,466,245.74
AM 8	Increase operator wages by $2/HR	Board Approved 1/26/23 (AI 15)	$16,639,833.00	$179,466,245.74
AM 9	Revises On Board Time Policy	CEO Authority		$179,466,245.74
AM 10	**Purchase of one set of mobile lifts**	**CEO Authority Today's Proposed Action - Ratify**	**$62,624.63**	**$179,528,870.37**
AM 11	Authorized $750,000 to be allocated to additional wages and benefits	Board Approved 12/14/23 (AI 24)	$750,000.00	$179,528,870.37
AM 12	Documents key personnel changes and taxi pass through costs	CEO Authority		$179,528,870.37
AM 13	Approves a change to incentives or assessments	CEO Authority		$179,528,870.37
AM 14	Changes OTP standard and VDDP certificate requirement	CEO Authority		$179,528,870.37
AM 15	Documents late cancellations	CEO Authority		$179,528,870.37
AM 16	**Increase frontline employees wages by $2/HR**	**Today's Proposed Action**	**$2,505,054.00**	**$179,528,870.37**
		TOTALS	**$333,581,919.89**	**$179,528,870.37**

Note: Overall Contract Value not increased for individual service-related / employee compensation amendments with a dollar value because of contract savings in FY 21 to FY 23

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 13

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Proposed Revisions to Taxicab Advisory Committee (TAC) Guidelines

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors adopt the proposed revisions to the TAC Guidelines (Attachment A).

TAC Recommendation

At its July 30, 2025 meeting, the TAC voted to recommend that the Board of Directors approve the staff recommendation, with 9 in favor (Committee Members: Board Member Sean Elo-Rivera, Abel Seifu, Aklilu Fray, Cesar Lopez, Eduardo Gonzalez, Gonzalo Ayala, Horacio Sanchez, Michael Anderson, and Thanh Nguyan in favor), 1 not in favor (Committee Member Alemayehu Tegegne not in favor), 5 absent (Committee Members David Tasem, Kidane Tesfagebriel, Laura Ramirez, Letty Canizalez, and Mikaiil Hussen absent) and 1 vacancy (Gaslamp Quarter Association).

Budget Impact

None with this action.

DISCUSSION:

The Taxicab Advisory Committee (TAC) is an advisory committee created by the MTS Board of Directors. The TAC is responsible for providing feedback and recommendations to staff, the Chief Executive Officer (CEO), and/or Board of Directors on taxicab related matters. The TAC is currently compromised of 16 voting members, which includes one (1) representative of the Board of Directors, three (3) taxicab lease driver representatives, six (6) taxicab permit holder representatives, and six (6) organizational and industry representatives.

The taxicab lease driver representatives and the taxicab permit holder representatives are elected by the taxicab industry every three (3) years. The organizational members are appointed by the Chief Executive Officer. Member organizations include: the San Diego Convention and Visitor's Bureau, the San Diego County Regional Airport Authority, the San

Diego Convention Center, the Gaslamp Quarter Association, Cross Border Express, and the United Taxi Workers Association.

The Gaslamp Quarter Association has missed several Taxicab Advisory Meetings and after various outreach, staff has confirmed they are no longer interested in participating. It is recommended that the TAC Guidelines be revised to remove the Gaslamp Quarter Association as an organizational member and replace this TAC seat with a representative of the Border Transportation Council.

The Border Transportation Council addresses various areas that impact the San Ysidro community, including promoting the use of legitimate transportation carriers. The Border Transportation Council has expressed interest in participating and has been a partner in MTS's strategies to combat wildcatting. If approved by the Board of Directors, the representative from the Border Transportation Council will be formally introduced at the next TAC Meeting on November 19, 2025.

Other proposed revisions to the TAC Guidelines are minor and non-substantive.

Therefore, staff recommends that the MTS Board of Directors adopt the proposed revisions to the TAC Guidelines.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachment: A. TAC Guidelines (proposed revisions in track changes)

Metropolitan Transit System

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
TAXICAB ADVISORY COMMITTEE GUIDELINES

1 PURPOSE

The Taxicab Advisory Committee's purpose is to:

1.1 Provide feedback to the Chief Executive Officer and designated staff on taxicab matters to formulate recommended courses of action that the Chief Executive Officer or Board of Directors, whichever applicable, may review for approval;

1.2 Review ~~summaries of~~ administrative ~~hearing officer decisions concerning~~ taxicab permit holder ~~and~~ lease driver ~~penalties~~penalty guidelines;

1.3 Discuss taxicab permit holders/lease drivers' written grievances;

1.4 Review summaries of complaints concerning taxicab service;

1.5 Review vehicle inspection criteria~~,~~ and process~~, results, and rankings~~;

1.6 Review the Chief Executive Officer's Annual Fee Schedule; and

1.7 Comment on MTS's work program concerning taxicab matters.

2 MEMBERSHIP

Sixteen voting members are appointed as follows:

2.1 One (1) representative of the MTS Board of Directors appointed on an annual basis, who will be designated by the MTS Board of Directors to serve as Chair of the Taxicab Advisory Committee.

~~2.2 One member appointed by the San Diego Convention and Visitor's Bureau, the San Diego County Regional Airport Authority, San Diego Convention Center, Gaslamp Quarter Association, Cross Border Express and the United Taxi Workers of San Diego (UTWSD), each serving a three-year term.~~

~~2.3~~2.2 ~~Each organization or agency~~Representatives from six (6) organizations or agencies, each serving a three-year term that may designate one (1) alternate member by providing written notification to the MTS Clerk of the Taxicab Advisory Committee~~.~~, divided as follows:

2.2.1 ~~The UTWSD~~One (1) member appointed by the San Diego Convention and Visitor's Bureau;

2.2.2 One (1) member appointed by the San Diego County Regional Airport Authority;

2.2.3 One (1) member appointed by the San Diego Convention Center;

2.2.4 One (1) member appointed by the Cross Border Express;

~~2.3.1~~2.2.5 One (1) member appointed by the United Taxi Workers of San Diego (UTWSD), that must either be: a current member of the UTWSD~~;~~ or be a current employee or other authorized representative of the UTWSD~~.~~; and

2.2.6 One (1) member appointed by the Border Transportation Council.

2.3 Six (6) taxicab permit holders in good standing, each serving a three-year term, elected by taxicab permit holders and lease drivers, divided as follows: four (4) seats are designated for representation of a permit holder with ~~a~~ one taxicab; and two (2) seats are designated for representation of permit holders of two (2) or more taxicabs.

2.4 Three (3) taxicab lease drivers in possession of a San Diego Sheriff's Department-issued Taxicab Driver Identification Card valid in the MTS areas of jurisdiction, being in good standing with the Sheriff's Licensing Division, each serving a three-year term, elected by taxicab permit holders and lease drivers.

2.5 The election shall comply with the following guidelines:

a. Taxicab lease driver representative elections shall take place every three years at the same time as the taxicab permit holder representative elections.

b. Taxicab lease drivers and taxicab permit holders are permitted to cast one vote per seat.

2.6 The taxicab permit holders, lease drivers and UTWSD representative shall meet the eligibility requirements at all times while serving on the Taxicab Advisory Committee.

2.7 A taxicab permit holder member unable to attend a meeting may appoint an alternate from the same permit category, that is in good standing with MTS, to attend in their absence.

2.8 A taxicab lease driver unable to attend a meeting may appoint another taxicab lease driver, who is in good standing with the Sheriff's Licensing Division, to attend in their absence.

2.9 The Taxicab Advisory Committee or the Chief Executive Officer or designee shall make an interim appointment if a member's seat becomes vacant within the three-year term.

2.10 The Vice Chair will be the For-Hire Vehicle Administration Manager.

2.11 One non-voting member will be appointed by the County of San Diego's Department of Agriculture, Weights and Measures.

2.12 One non-voting member will be appointed by the County of San Diego Sheriff's Department.

3 REMOVAL AND RESIGNATION

3.1 Any member who misses four (4) consecutive meetings may be subject to removal. For any member who has missed three (3) consecutive meetings, a documented warning shall be provided to the member.

3.2 A member may resign by providing written notification to the MTS Clerk of the Taxicab Advisory Committee.

4 MEETINGS

4.1 Taxicab Advisory Committee meetings are subject to the provisions of the Ralph M. Brown Act, California Government Code, Section 54950, et. seq.

4.2 Taxicab Advisory Committee meetings will be held quarterly at the offices of MTS and/or via remote teleconferenced meetings, as permissible.

4.3 The agenda for each meeting will be posted in the MTS lobby and/or MTS website, as permissible.

4.4 The agenda, backup materials, and minutes of the previous meeting will be sent to each member in advance of the meetings, upon request.

4.5 The Chair may call additional meetings, as necessary.

4.6 Fifty-one percent attendance is a quorum to hold a meeting.

5 VOTING

5.1 Each voting member of the Taxicab Advisory Committee has an equal vote.

5.2 Fifty-one percent of the votes of those in attendance will approve an item.

5.3 A roster of the Taxicab Advisory Committee members who voted will be provided to the MTS Board of Directors, along with the item, for MTS Board action on an agenda item.

6 SUBCOMIMITTEES

6.1 MTS Board of Directors approval is required to establish a standing subcommittee. The Workshop of Regulatory Matters is a standing subcommittee for Taxicab Advisory Committee and is subject to the Brown Act.

6.2 Chief Executive Officer or designee approval is required to establish an ad hoc subcommittee.

7 APPROVAL

7.1 These Guidelines were revised by the MTS Board of Directors on ~~November 18, 2021~~September 11, 2025.

7.2 The MTS Chief Executive Officer shall have the authority to implement additional procedures to carry out elections and maintain regular and orderly meetings of the Taxicab Advisory Committee.

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 14

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Orange Line Improvement Project Phase 2 Design Services – Work Order Amendment (WOA)

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute WOA356-AE-06.08 under MTS Doc. No PWL356.0-22 (in substantially the same format as Attachment A), with Pacific Rail Enterprise, Inc. (PRE), a Women Owned Business Enterprise (WBE) and Small Business (SB), in the amount of $257,931.52 for additional civil and signal design services for Phase 2 of the Orange Line Improvement Project.

Budget Impact

The cost of this amendment is estimated to be $257,931.52, and the total work order is estimated to be $6,643,862.17 (inclusive of this amendment). The project will be funded by the Capital Improvement Program (CIP) account 2005123501 – Orange Line Rail Signals Phase 2.

The overall Orange Line Improvement Project has a current budget of $151,056,700.00 across two phases:

Orange Line Improvement Costs	Phase 1	Phase 2	Total
Staff Admin	$170,400.00	$400,000.00	$570,400.00
Design	$2,928,800.00	$4,033,000.00	$6,961,800.00
Construction Management	$4,473,800.00	$6,819,000.00	$11,292,800.00
Program Management Services	$2,438,800.00	$0.00	$2,438,800.00
Owner-Furnished Materials	$10,369,700.00	$13,359,200.00	$23,728,900.00
Construction	$28,000,000.00	$50,940,800.00	$78,940,800.00
Construction Flagging and Bus Bridges	$2,340,000.00	$3,165,000.00	$5,505,000.00
Signal System Integration	$3,000,000.00	$3,000,000.00	$6,000,000.00
Contingency	$1,618,200.00	$14,000,000.00	$15,618,200.00
TOTAL	**$55,339,700.00**	**$95,717,000.00**	**$151,056,700.00**

Project funding currently includes two discretionary Transit and Intercity Rail Capital Program (TIRCP) grant awards of $13,100,000.00[1] (2022 grant for Phase 1) and $48,315,712.00 (2023 grant for Phase 2). TIRCP funds will be applied to construction costs in Phase 1 and to construction and Construction Management (CM) costs in Phase 2. On December 14, 2023 (Agenda Item (AI) 29), the Board approved the Senate Bill (SB) 125 Allocation Package, which allocated $26,000,000.00 in state SB 125 funds for the Phase 1 project. SB 125 funds will be applied to Phase 1 construction, Phase 1 equipment purchases, and the CM and PM Services contract. This architectural & engineering (A&E) design services contract will be funded, along with the remaining project costs, with MTS local matching funds.

DISCUSSION:

The Orange Line Improvement Project (OLIP) will make Trolley system improvements at various locations along the 17.6-mile Orange Line, benefitting the riding public and the cities of San Diego, Lemon Grove, La Mesa, and El Cajon. To do so, the OLIP will make track, signal, and grade crossing improvements along the Orange Line. For practical and grant funding reasons, the Project has been divided into two phases:

- Phase 1 is the work between 32nd/Commercial Station and Massachusetts Avenue Station.
- Phase 2 is the work between Massachusetts Avenue Station and El Cajon Transit Center.

Once completed, the OLIP will allow trolleys to safely operate at higher speeds and allow reverse-run on certain sections of the line, improving transit times and operational flexibility.

PRE is the A&E design firm that has been working on the OLIP since 2022. The PRE Work Order and amendments are summarized below:

Work Order No.	Purpose	Amount	Approval Date
WOA356-AE-06	Original Work Order – Phase 1 Design Services	$1,411,503.63	Board approval on 12/08/22, AI 13
WOA356-AE-06.01	Additional Survey Services	$25,250.30	Board ratification on 10/19/23, AI 10
WOA356-AE-06.02	Reallocation of Funds from Signal Design to Survey & OCS Field Visits ($36,537.46)	$0.00	Board ratification on 10/19/23, AI 10
WOA356-AE-06.03	Phase 2 Design Services	$2,533,199.09	Board approval on 10/19/23, AI 10

[1] TIRCP 2022 Award for the Orange line was a total of $14,560,000.00, with $13.1M dedicated to the Orange Line Improvement and the remaining funds to the Orange Line VMS upgrade project.

Work Order No.	Purpose	Amount	Approval Date
WOA356-AE-06.04	Phase 1 Software Design and Design Support During Construction	$1,517,309.03	Board approval on 7/18/24, AI 10
	Post-Board meeting staff adjustment to work order total due to formula error in original fee	$53,274.17	CEO Authority under Board Policy 41 Board ratification on 4/17/25, AI 12
WOA356-AE-06.05	Phase 2 Additional Track/Civil & Baltimore Jct OCS (Amendment 1)	$140,736.84	Board approval on 4/17/25, AI 12
WOA356-AE-06.06	Phase 1 Centralized Train Control (CTC) System Changes	$704,657.59	Board approval on 4/17/25, AI 12
WOA356-AE-06.07	No-Cost Time Extension for Phase 2 Design Services	$0.00	CEO Authority under Board Policy 41
WOA356-AE-06.08	Phase 2 Additional Civil and Signal Design Services (Amendment 2)	$257,931.52	**Today's Proposed Action**
	Total	**$6,643,862.17**	

On June 26, 2025, the CEO approved Work Order Amendment WOA 356-AE-06.07, for a three (3) month and eleven (11) day no-cost time extension due to unforeseen delay in Phase 2 design completion. The delay was primarily caused by surveying, below-grade inspections, and regulatory coordination of grade crossing design.

Today's proposed action will approve WOA356-AE-06.08, to support updates to civil and signal design changes at Phase 2 project locations, including signal enclosure right-of-way evaluations, fiber optic conduit plans, Americans with Disability Act (ADA) compliance adjustments, added drainage improvements, and related California Public Utilities Commission (CPUC) and city compliance tasks.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Work Order Amendment No. WOA356-AE-06.08 under MTS Doc No. PWL356.0-22 (in substantially the same format as Attachment A) with PRE, a WBE and SB, in the amount of $257,931.52 for additional civil and signal design services for Phase 2 of the Orange Line Improvement Project.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachments: A. Draft Work Order Amendment MTS Doc No. PWL356.0-22 WOA356-AE-06.08

Metropolitan Transit System

September 11, 2025

MTS Doc. No. PWL356.0-22
Work Order No. WOA356-AE-06.08

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

Dear Mrs. Seccombe:

Subject: AMENDMENT NO. 8 TO WORK ORDER WOA356-AE-06, TO MTS DOC. NO. PWL356.0-22, GENERAL ENGINEERING SERVICES FOR THE ORANGE LINE IMPROVEMENT PROJECT – PHASE 2

This letter shall serve as Amendment No. 8 to our agreement for Work Order WOA356-AE-06 to MTS Doc. No. PWL356.0-22, for engineering services under the General Engineering Consultant Agreement, as further described below.

SCOPE OF SERVICES

This Amendment shall add additional civil and signal design services for Phase 2 of the Orange Line Improvement Project for Phase 2 of the Project. (Attachment A).

SCHEDULE

This Amendment shall add eighty-one (81) calendar days to the Phase 2 Schedule. The Phase 2 Schedule shall remain in effect through December 31, 2025.

PAYMENT

This Amendment shall add to the $257,931.52 to the Payment for Phase 2. The revised Payment for Phase 2 shall be in the amount of $2,931,867.45 (Attachment B).

The combined Payment for Phases 1 and 2 is $ $6,643,862.17. Payment shall be based on actual costs, and shall not be exceeded without prior authorization of MTS

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

TITLE: Orange Line Improvement Phase 2 Design **WOA #:** WOA356-AE-06.08 Amendment #2

I. PROJECT DESCRIPTION

This amendment shall provide added funding for civil design, signal design, for Phase 2 of the Project described below.

SCOPE OF WORK

This amendment does not include additional grade crossing design work needed per CPUC review received August 5, 2025.

The scope of work shall consist of the following tasks and deliverables:

Task 2.6 – Signal Enclosure ROW Property Evaluation/Coordination

Identify all signal enclosure areas that have limited MTS right-of-way by incorporating record of survey CAD. Coordinate with OLIP Program Management consultant to determine placement of signal enclosures outside MTS right-of-way when necessary. Create exhibits for 4 locations (Lemon, University, La Mesa, and Allison) to share with City representatives. Meet with City representatives on site to discuss signal enclosure placement. Add design for signal enclosure protection at Lemon Avenue based on signal enclosure placement near Lemon Grove Avenue and vehicular traffic.

Task 2.7 – Site Specific Layout Adjustment

Historical topography CAD for the area between Baltimore Junction and El Cajon station shown on fiber installation PDF asbuilts could not be provided by SANDAG. Create track alignment in CAD for stationing using fiber asbuilts as reference and utilize aerial imagery to enhance site specific layouts for new signal enclosure placements. Within the urban areas of La Mesa and Lemon Grove, add aerial imagery to highlight areas of concrete or asphalt pavement where excavation is necessary to install new conduits and pull boxes.

Task 2.8 – Green Line Fiber Replacement and New 24 Fiber Cable

The Green line section of existing fiber cable between Baltimore Junction and El Cajon was terminated in the legacy signal enclosures that are to be removed by the project. Terminations in the 144 fiber cable section between Baltimore Junction and Grossmont station do not have sufficient slack to facilitate the splice changes required. Terminations in the 72 fiber cable section between Grossmont station and El Cajon station have sufficient fiber slack to make splice changes, but between Amaya Station and El Cajon station, there are 10 aerial terminations where a similar investment can be made to replace the 72 fiber cable and align the terminations with the new signal enclosures. Create fiber plans that show installation the new 24 fiber cable to support signal vital and maintenance functions. Utilize the same fiber plans to identify the areas of replacement of existing 144 and 72 fiber optic cable.

Task 2.9 – Orange Line Fiber Pullback Plans

In the 3 areas of Lemon Grove, La Mesa and I-8 Ramps along the Orange Line, the 144 fiber cable and 24 fiber cable was installed underground in existing conduit infrastructure that ran into the legacy signal enclosures that are to be removed in this project. In some of these legacy cases, slack loops and/or splice enclosures are installed. Create fiber pullback and/or

replacement plans to remove this cable from the legacy enclosures and install in new conduit alignment.

Task 2.10 – Site Specific Investigations

At time of design, it was intended to use RoadView explorer, a cloud hosted lidar and imagery tool, for extensive site investigations of the MTS right of way. This tool became unavailable for site specific investigations. Funding is necessary to support additional field investigations for the Site Specific Layouts to identify where enviroblock retaining walls, signal platform structures, and pullbox placements can be optimized, which will assist the construction contractor bid process and time to construct.

Task 3.7.7 – High Street ADA Adjustments & GO-88 Application

As design of High Street crossing panels was completed, it was identified that the differing elevation of the two tracks at the crossing presents ADA issues. The design will include a regression analysis of each track from the bridges over HW 94 and crossovers east of the crossing. Curbs, sidewalks, and ped ramps will be modified. Due to the change in track profile, a GO-88B application is now necessary. Time is included for CPUC review and comment for multiple revisions based on past reviews.

Task 3.7.8 – Lemon Avenue ADA Adjustments

The Lemon Avenue ADA ramp in the northeast quadrant will be impacted by the crossing panel installation and needs design adjustment. The design will be adjusted to incorporate survey information.

Task 3.7.9 – La Mesa ADA Adjustments

The La Mesa Blvd ADA ramp in the northeast quadrant will be impacted by the crossing panel installation and need design adjustment. The design will be adjusted to incorporate survey information.

Task 3.8.7 – CPUC GO-88 Application (El Cajon, 47th, La Mesa)

CPUC requires GO-88B application for pedestrian crossing locations within stations. These will be impacted when the station track is replaced. ENS and Crossing signage will be added to the design. Time is included for CPUC review and comment for multiple revisions based on past reviews.

Task 3.9.2.1 – El Cajon Station Drainage Re-Design for Carrier Pipe

Add carrier pipe to jack and bore casing to meet design criteria provided by MTS. Adjust design for larger pipe requirements. Redesign concrete paving cross section of track based on rubber insert detail provided by MTS.

Task 3.9.10 – Hill Street Drainage Analysis to Palm Avenue

Analyze the Hill Street drainage system along the track west of Palm Avenue. Investigate the addition of catch basins between the tracks and east of the east bound track connecting to the Palm Avenue storm drain system.

II. Period of Performance

The Scope of Services, as described above, shall be performed with all associated deliverables provided to MTS by December 31th, 2025.

ATTACHMENT B
NEGOTIATED FEE PROPOSAL

Work Order Estimate Summary

MTS Doc. No.	**PWL356.0-22**
Work Order No.	**WOA356-AE-06.08**
Attachment:	**B**

Work Order Title: **OLIP Phase 2 Civil/Track/Signal Design Revision**

Project No:

Table 1 - Cost Codes Summary (Costs & Hours)

Task	Cost Codes Description	Total Costs
2	Signal Design	$147,394.72
3	Track Replacement and Station Pedestrian Walkway Civil Design	$110,536.80
	Totals =	**$257,931.52**

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

Task	TASKS/WBS Description	Labor Hrs	Total Costs
2	Signal Design	1096.00	$147,394.72
3	Track Replacement and Station Pedestrian Walkway Civil Design	440.00	$110,536.80
	Totals =	**1,536.0**	**$257,931.52**

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.	1,536.0	$257,931.52
				Totals =	**1,536.0**	**$257,931.52**

Work Order Estimate Summary

Consultant/Subconsultant: **PACIFIC RAILWAY ENTERPRISES**

Total Hours = **1,536**

Total Costs = **$257,931.52**

Work Order Title: **OLIP Phase 2 Civil/Track/Signal Design Revision**

Attachment: **B**

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Engineer - Principal (Systems)	Engineer - Principal (Civil)	Technical Expert (Design)	Technical Expert (Constructability	Task Manager	Technician - Senior	Technician - 1	Engineer - 1	Total Hours	Totals
				$251.22	$251.22	$218.45	$218.45	$182.40	$150.46	$100.85	$85.74		
1	**Task 2**	**Signal Design**											
	2.6 Signal Enclosure ROW Property Evaluation /Coordination				16		40		40	80		176	$26,843.92
	2.7 Site Specific Layout Adjustments					80			40	240		360	$47,698.40
	2.8 Green line fiber replacement and 24 fiber addition			24							240	264	$26,606.88
	2.9 Orange Line fiber pullback plans			16					40		80	136	$16,897.12
	2.10 Site specific investigations						40	80	40			160	$29,348.40
												0	$0.00
		Subtotals (Hours) =	N/A	40	16	80	80	80	160	320	320	1,096	$147,394.72
		Subtotals (Costs) =	$0.00	$10,048.80	$4,019.52	$17,476.00	$17,476.00	$14,592.00	$24,073.60	$32,272.00	$27,436.80	**1,096**	**$147,394.72**
2	**Task 3**	**Track Replacement and Station Pedestrian Walkway Civil Design**											
	Task 3.7	**Grade Crossing Replacement**											
	3.7.7 High Street ADA Adjustments & GO-88 Application				160							160	$40,195.20
	3.7.8 Lemon Ave ADA Adjustments				40							40	$10,048.80
	3.7.9 La Mesa ADA Adjustments				40							40	$10,048.80
	Task 3.8	**3 Station Track Replacement**											
	3.8.7 CPUC GO-88 Application (El Cajon, 47th, La Mesa)				120							120	$30,146.40
	Task 3.9	**El Cajon Station Drainage**											
	3.9.2.1 Design (Carrier Pipe)				40							40	$10,048.80
	3.9.10 Hill Street drainage analysis to Palm Avenue				40							40	$10,048.80
												0	$0.00
		Subtotals (Hours) =	N/A	0	440	0	0	0	0	0	0	440	$110,536.80
		Subtotals (Costs) =	$0.00	$0.00	$110,536.80	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**440**	**$110,536.80**
		Totals (Summary) =										**1,536**	**$257,931.52**
		Total (Hours) =	N/A	40	456	80	80	80	160	320	320	1,536.00	
		Total (Costs) =	$0.00	$10,048.80	$114,556.32	$17,476.00	$17,476.00	$14,592.00	$24,073.60	$32,272.00	$27,436.80		$257,931.52
		Percentage of Total (Hours) =	N/A	3%	30%	5%	5%	5%	10%	21%	21%	100%	
		Percentage of Total (Costs) =	0%	4%	44%	7%	7%	6%	9%	13%	11%		100%

Work Order Estimate Summary

Consultant/ Subconsultant: **Pacific Railway Enterprises**

Work Order Title: **OLIP Phase 2 Civil/Track/Signal Design Revision**

Attachment: **B**

TASKS/WBS (1-5)

ODC Item	Description	Unit	Unit Cost	Task 1		Task 2		Task 3		Task 4		Task 5	
				Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	Mileage	MI	$0.700		$0.00		$0.00		$0.00		$0.00		$0.00
2	City Permit fees	Ea	$7,500.000		$0.00		$0.00		$0.00		$0.00		$0.00
3	Potholing	Ea	$10,000.000		$0.00		$0.00		$0.00		$0.00		$0.00
4					$0.00		$0.00		$0.00		$0.00		$0.00
5					$0.00		$0.00		$0.00		$0.00		$0.00
6					$0.00		$0.00		$0.00		$0.00		$0.00
7					$0.00		$0.00		$0.00		$0.00		$0.00
8					$0.00		$0.00		$0.00		$0.00		$0.00
9					$0.00		$0.00		$0.00		$0.00		$0.00
10					$0.00		$0.00		$0.00		$0.00		$0.00
				Subtotal =	**$0.00**	Subtotal =	**$0.00**	Subtotal =	**$0.00**	Subtotal =	**$0.00**	Subtotal =	**$0.00**

TASKS/WBS (6-10)

ODC Item	Description	Task 6		Task 7		Task 8						Totals	
		Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	Mileage		$0.00		$0.00		$0.00		$0.00		$0.00	**0**	**$0.00**
2	City Permit fees		$0.00		$0.00		$0.00		$0.00		$0.00	**0**	**$0.00**
3	Potholing		$0.00		$0.00		$0.00		$0.00		$0.00	**0**	**$0.00**
4	0		$0.00		$0.00		$0.00		$0.00		$0.00	**0**	**$0.00**
5	0		$0.00		$0.00		$0.00		$0.00		$0.00	**0**	**$0.00**
6	0		$0.00		$0.00		$0.00		$0.00		$0.00	**0**	**$0.00**
7	0		$0.00		$0.00		$0.00		$0.00		$0.00	**0**	**$0.00**
8	0		$0.00		$0.00		$0.00		$0.00		$0.00	**0**	**$0.00**
9	0		$0.00		$0.00		$0.00		$0.00		$0.00	**0**	**$0.00**
10	0		$0.00		$0.00		$0.00		$0.00		$0.00	**0**	**$0.00**
		Subtotal =	**$0.00**	Subtotal =	**$0.00**	Subtotal =	**$0.00**	Subtotal =	**$0.00**	Subtotal =	**$0.00**	**Totals =**	**$0.00**

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 15

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Blue Barn Underground Storage Tanks (UST) Closure – 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. PWL433.0-25 (in substantially the same format as Attachment A), with Whillock Contracting, Inc. (Whillock) in the amount of $250,552.00, for the closure of three (3) UST and related work at the San Ysidro Freight Yard.

Budget Impact

The total cost of this contract is estimated to be $250,552.00. Thie project will be funded by the San Diego and Arizona Eastern Railway (SD&AE) Operating Budget account 771017-571142.

DISCUSSION:

MTS and SD&AE own the San Ysidro Freight Yard, which is operated by San Diego and Imperial Valley Railroad (SD&IV). This freight yard contains a maintenance shop referred to as the "Blue Barn." Just south of the Blue Barn are three (3) USTs holding oil and diesel that must be permanently removed or closed in place by December 31, 2025, to meet compliance with 2014 California Senate Bill 445, "*Underground storage tanks: hazardous substances: petroleum: groundwater and surface water contamination.*" Since removal would introduce a great risk of disruption to Freight and Trolley operations, and the tanks are no longer in use, MTS is pursuing a "closure in place" of the three (3) USTs.

On June 20, 2025, MTS issued an Invitation for Bids (IFB) seeking a contractor to provide tank closure services. The scope of work for this project includes a full closure in place of the three (3) existing USTs, removal of all above-ground tank accessories (pump stations, piping, valves, manhole covers, sensors, monitoring consoles, etc.), and all authority-required permitting and testing (Attachment B).

Four (4) bids were received on August 4, 2025, from the following firms:

Firm	Certification	Grand Total
MTS – Independent Cost Estimate (ICE)		*$217,342.44*
Alpha Petroleum Transport Inc., II[1]	*N/A*	*$205,883.03 (bid rejected for non-responsiveness)*
Whillock Contracting, Inc.	**N/A**	**$250,552.00**
Sitka Construction Group	N/A	$293,000.00
Western Pump, Inc.	N/A	$301,848.41

[1]*The bid submitted by Alpha Petroleum Transport Inc II was determined to be nonresponsive because they did not bid per the IFB requirements in using the MTS Bid Form.*

On August 5, 2025, Western Pump sent a protest letter *"protesting the participation and eligibility of certain bidders who did not arrive on time—or were not present during the mandatory job walk for the project titled MTS DOC. NO. PWL443.0-25, held on 7.8.25 at 10am."* On August 11, 2025, MTS responded to the protest letter and determined that the protest had no merit and was therefore denied. The July 8, 2025 site visit was scheduled to start at 10:00am; however, the meeting start was delayed until approximately 10:30am so that MTS staff could provide site access to the bidders who were assembled outside the access-controlled site. Each of the four (4) bidders were in attendance and an attendee list was posted on PlanetBids on July 10, 2025 for all interested parties to see. Western Pump did not pursue their protest to the next stage after receiving MTS's response.

Based on the bids received, and in comparison to MTS's ICE, staff determined Whillock's to be fair and reasonable (Attachment C).

This award is not subject to the Project Labor Agreement (PLA) requirements approved under Board Policy No. 66 because the MTS ICE was under $1 million.

Work is expected to be completed within 51 days of issuance of the notice to proceed. Whillock has designated the following subcontractors to perform a portion of the work, as detailed further in Attachment D.

Subcontractor Name	Firm Certifications
Kirk Paving, Inc.	Small Business (SB)
Nieto and Sons Trucking, Inc.	SB

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Contract No. PWL433.0-25 (in substantially the same format as Attachment A), with Whillock in the amount of $250,552.00, for the closure of three (3) UST and related work at the San Ysidro Freight Yard.

/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.PWL443.0-25
B. Scope of Work, Specifications, Drawings
C. Costs
D. Subcontractor List

Metropolitan Transit System

STANDARD CONSTRUCTION AGREEMENT

FOR

MTS DOC. NO. PWL433.0-25

BLUE BARN UNDERGROUND STORAGE TANKS CLOSURE

THIS AGREEMENT is entered into this _____ day of _____ 2025, 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: Whillock Contracting, Inc.

Address: P.O. Box 2322
La Mesa, CA 91943

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

Email: estimating@whillockcontracting.com

Telephone: (619) 579-0700

Authorized person to sign contracts Tory Whillock (Name) Secretary (Title)

The specified Contract Documents are part of this Agreement. The Contractor agrees to furnish to MTS services and materials, as follows:

Contractor shall furnish all necessary management, supervision, labor, materials, tools, supplies, equipment, plant, services, engineering, testing and/or any other act or thing required to diligently and fully perform and complete the Project as specified in accordance with the Standard Agreement and General Conditions (Exhibit A), Scope of Work, Special Conditions and Attachments (Exhibit B), Bid Price Form (Exhibit C), and Forms (Exhibit D).

SCOPE OF WORK.

Contractor, for and in consideration of the payment to be made to Contractor as hereinafter provided, shall furnish all plant, labor, technical and professional services, supervision, materials and equipment, other than such materials and equipment as may be specified to be furnished by MTS, and perform all operations necessary to complete the Work in strict conformance with the Contract Documents (defined below) for the following public work of improvement:

BLUE BARN UNDERGROUND STORAGE TANKS CLOSURE

Contractor is an independent contractor and not an agent of MTS. The Contractor and its surety shall be liable to MTS for any damages arising as a result of the Contractor's failure to comply with this obligation.

CONTRACT TIME.

Time is of the essence in the performance of the Work. The Work shall be commenced by the date stated in MTS's Notice to Proceed. The Contractor shall complete all Work required by the Contract Documents **within 270 calendar days** from the commencement date stated in the Notice to Proceed. By its signature hereunder, Contractor agrees the Contract Time is adequate and reasonable to complete the Work.

CONTRACT PRICE.

MTS shall pay the Contractor as full compensation for the performance of the Contract, subject to any additions or deductions as provided in the Contract Documents, and including all applicable taxes and costs, the sum of two hundred fifty thousand, five hundred fifty-two dollars ($250,552.00). Payment shall be made as set forth in the General Conditions.

PROVISIONS REQUIRED BY LAW.

Each and every provision of law required to be included in these Contract Documents shall be deemed to be included in these Contract Documents. The Contractor shall comply with all requirements of the California Labor Code applicable to this Project.

INDEMNIFICATION.

Contractor shall provide indemnification as set forth in the General Conditions.

PREVAILING WAGES.

Contractor shall be required to pay the prevailing rate of wages in accordance with the Labor Code which such rates shall be made available at MTS's Administrative Office or may be obtained online at http://www.dir.ca.gov and which must be posted at the job site.

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

SCOPE OF WORK/MINIMUM TECHNICAL SPECIFICATIONS

** License A and Hazardous Substances Removal Certification required for the duration of the contract.

1. GENERAL

There is no longer a need for the three (3) large capacity single-walled underground storage tanks (USTs) that are currently in place but no longer in use at the San Ysidro Freight Yard (containing a shop referred to as the “Blue Barn”). These are single-walled tanks understood to have been installed before 1984 that must be permanently closed before December 31st, 2025 to meet compliance with CA SB445. Due to logistical challenges and posed risk to critical adjacent structures from full tank removal, this project generally consists of the closure in place of these three USTs and removal of all above-ground appurtenances. Contractor will also be responsible for all necessary reporting and coordination with appropriate authorities having jurisdiction (AHJ) associated with removal and closures of the USTs. All work to occur at the San Ysidro Freight Yard (2711 East Beyer Boulevard, San Diego, California 92173). This facility is owned by Metropolitan Transit System and San Diego and Arizona Eastern Railway

2. STAGING

Contractor is to keep and store all materials within a predesignated laydown area. It is assumed the laydown area will be within and adjacent to the tank closures. Size and location of the laydown area is to be coordinated with the MTS Project Manager. All property stored onsite is the responsibility of the contractor and MTS shall not be held liable for any and all equipment, material, tools, etc. All deliveries to the site shall be coordinated through the MTS Project Manager. Only vehicles necessary for that day’s controlling activities may be parked onsite adjacent to the work area. Remaining vehicles are to be park on adjacent streets and public parking areas.

3. TEMP FACILITIES

Contractor is responsible for providing all necessary temporary facilities including but not limited to: power, water, temporary fencing with fabric, K-rails, and any/all BMPs necessary for the duration of the project. Contractor will also be responsible for developing storm water protection plan, as well as obtaining any storm water permits necessary and maintaining them for the duration of the project. Contractor is to provide trench plates over any open excavations left overnight outside of the work limits.

4. SAFETY

Diligent caution must be taken during the undertaking of this work. Due to the 24-hour nature of operations at the San Ysidro Freight Yard and within the Blue Barn, extreme caution must be observed while driving in the yard and working in this location. The three USTs and their pump islands are adjacent to active lines entering the Blue Barn. Any open excavations or areas of newly placed concrete/pavement left overnight must be appropriately marked off with a suitable combination of delineators, warning lights, caution tape, and/or A-frames and/or temp fencing. Contractor must always be aware of their surroundings and yield the right-of-way to trains and SDIV vehicles and equipment.

Contractor must have all employees participate in SDIV rail safety training. Max speed in the yard is 10 MPH. Contractor, subcontractors, vendors and supplier are to adhere to the speed limit,

stop at all stop signs, and stop at all crosswalks. Failure to do so will result in MTS not granting any future vehicular access to the San Ysidro Freight Yard property.

5. WASTE

The contractor is responsible for legally disposing of any and all waste in relation to the work. The contractor shall not use any MTS receptacles to dispose of material generated during the performance of this contract. Contractor is responsible for general cleanup at the end of each work day and the Contractor is to perform a final clean to meet the current condition and cleanliness of the on-site paving.

It is assumed that there will be hazardous materials that will have to be exported. The Contractor is responsible for any and all costs associated with the removal, permits, hauling, and disposing of the exported materials as required by authorities having jurisdiction.

6. SUBMITTALS

The contractor shall provide submittals showing product data, details, and necessary information for all items including but not limited to the following:

Phasing & Work Plan
Construction Schedule
Laydown area plan & impact footprint plan
Final Package of stamped/permitted as-builts with all appropriate approvals from necessary AHJs
AC mix design for paving following demo of secondary containment and pump islands
Product data, details, and necessary information for all materials imported for tank closure
Contractor shall submit all agency documentation associated with the UST closures for record.

7. DRAWINGS

There are known as-builts for the area where the work is to occur as well as hand-drawn schematic diagrams detailing the tank and some appurtenances. These as-builts are included in the bid package as additional attachments. The contractor shall verify and familiarize themselves with all existing site conditions and Contract Documents.

8. SCHEDULE AND SEQUENCING

All work shall be completed within fifty-one (51) calendar days from issuance of the Notice to Proceed and no later than December 31st, 2025. The intent is to allow suitable time for the administrative functions such as procuring the permits as well as the time needed for soil testing and outside agency scheduling. Contractor is to perform its best due diligence to limit construction activities and impacts to freight yard operations. Actual construction activities shall not exceed 21 calendar days.

9. GEOTECHNICAL ENGINEER

Contractor is to provide MTS project manager 48-hour notice before any inspections, concrete pours/paving, or soil testing. Prior to exporting any soil, contractor is to notify MTS. Contractor is to coordinate soil sampling and analysis for constituents of concern, and provide the results to MTS as necessity of proper disposal. Contractor is responsible for any and all soils tests, either single or ongoing, for the duration of the project and as is necessary for the scope of this project. Contractor will also be responsible for all fees associated with ongoing and spot testing of all soils/ other necessary testing such as line integrity testing. Contractor is also responsible for all

coordination with all necessary AHJ such as County DEH, Water Quality Board, and Fire Department.

10. PERMITTING

Contractor is responsible for obtaining and paying for all necessary permits from the County of San Diego, Water Quality Board, appropriate Fire Authority, and any other necessary reporting bodies or authorities having jurisdiction. Contractor is to meet all requirements of the San Diego County Hazardous Materials Division in regards to the UST closures, licensing requirements, and administrative functions. MTS will provide an EPA ID for any hazardous material removal. Contractor is responsible for pumping out, removing, and properly disposing of any residual fluids in the USTs in conformance with all Federal, State, and Local requirements. Contractor is responsible for submitting and coordinating the Plan Check Permit Application and paying all associated fees. Contractor is responsible for providing all other documentation to the County such as site maps, proof of licensing, proof of hazardous removal certificate, etc. Contractor is responsible for scheduling and coordinating all necessary agency personnel to be onsite during or following the UST closure activities. Furthermore, the contractor is required to adhere to all regulations, procedures, and requirements set forth in:

Code of Federal Regulations (CFR), parts 280-281
California Health and Safety Code, Chapter 6.7
California Code of Regulations (CCR), Chapter 16 Title 23
Title 6, Division 8, Chapter 10 of the San Diego County Code
Land and Water Quality Division Site Assessment and Mitigation (SAM)
California State Water Resources Control Board Local Guidance-171

11. DETAILED SCOPE OF WORK

There are three existing single-walled USTs south of the Blue Barn:

T001 (Oil) – 6,500 gal capacity oil tank currently holding 521 gals.
T002 (North Diesel) – 20,000 gal capacity diesel tank currently holding 2,682 gal.
T003 (South Diesel) – 20,000 gal capacity diesel tank currently holding 2,256 gal.

These tanks are no longer in use and no known leaks have ever occurred. Each tank has a 6’x11’ pump island with an adjacent 12’x20’ secondary spill containment (within the freight yard track).

The contractor will be responsible for providing all labor, testing, materials, and equipment needed to perform a complete closure in place of these three tanks per AHJ standards, regulations, and guidelines, including emptying of all fluids and any cleaning or slurry fill required.

All at grade and above grade appurtenances shall be removed including manhole covers, concrete pads surrounding manholes, vents, shutoffs, sump cover, sensors, consoles, alarms, pumps, pump islands, secondary containments, piping, and sumps. There are four (4) concrete pads roughly 8’ x 8’ and one (1) concrete pad roughly 13’ x 8’. All grade areas where items were removed shall be backfilled and then in-filled with pavement and base to match and be flush with existing adjacent pavement sections and be verified in the field. All fuel monitoring systems above grade in the Blue Barn shall be removed in their entirety and the wall behind shall be repaired, patched and painted. Location and dimensions of the tanks and their appurtenances shall be traced and verified in the field. The contractor is responsible for re-striping all striped lines removed or damaged as part of this project. The striping shall be re-striped with two coats of water

based paint in conformance with the Caltrans Standard Specifications, 2015 edition Section 84-2.03C(3). Any new striping shall match the existing color and layout.

Contractor will be responsible for filing and obtaining all necessary permits for the closure-in-place of the USTs prior to the start of the UST closure construction phase. Contractor will also be responsible for paying all associated fees for permitting and inspections.

Contractor will be required to submit a final package to MTS of all appropriate drawings, as-builts, permits, and testing results obtained throughout duration of all phases of the project.

Pump island and secondary containment for T002

SAN DIEGO ASSOCIATION OF GOVERNMENTS

FINAL ENGINEERING DRAWINGS

AS-BUILT
CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE

DATE: 4/3/2017

SAN YSIDRO YARD IMPROVEMENT PROJECT
CONTRACT CIP - 1300601

SANDAG

Bureau Veritas North America
10620 Treena Street, Suite 200
San Diego, CA 92131
Tel: (858) 451-6100 Fax: (858) 451-2846
www.us.bureauveritas.com

OCTOBER 2013

CONFORMED

SAN YSIDRO YARD IMPROVEMENT PROJECT
CONTRACT CIP-1300601

SAN YSIDRO YARD IMPROVEMENT PROJECT

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY ENGINEER OF RECORD DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A NOTICE TO PROCEED HAS BEEN ISSUED.

2. THE APPROVAL OF THIS PLAN DOES NOT AUTHORIZE THE CONTRACTOR TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.)

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, A LAND SURVEYOR SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.

4. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID FOR CITY PROPERTY ONLY. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TOLL FREE 1-800-422-4133, TWO DAYS BEFORE YOU DIG ON CITY PROPERTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INDEPENDENTLY LOCATING SUBSURFACE UTILITIES ON SITE PRIOR TO EXCAVATION.

5. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT GRADING AND/OR CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCES CONTROL BOARD AND THE CITY OF SAN DIEGO MUNICIPAL CODE AND STORM WATER STANDARDS MANUAL.

6. "PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OF-WAY, SATISFACTORY TO THE PERMIT- ISSUING AUTHORITY.

7. ALL EXISTING AND/OR PROPOSED PUBLIC UTILITY SYSTEM AND SERVICE FACILITIES SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH SECTION 144.0240 OF THE CITY OF SAN DIEGO MUNICIPAL CODE.

8. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARK-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE CITY OF SAN DIEGO FIELD ENGINEERING DIVISION (858) 627-3200 FOR WORK WITHIN THE CITY RIGHT OF WAY AND WITH TIM ALLISON AT (619) 595-4903 FOR WORK WITHIN MTS RIGHT OF WAY.

9. A RIGHT OF ENTRY PERMIT IS NECESSARY WHEN ENTERING MTS / SAN DIEGO AND ARIZONA EASTERN (SDAE) RIGHT-OF-WAY, INCLUDING AIRSPACE, FOR ANY PURPOSE. A PERMIT IS ALSO REQUIRED WHEN WORKING IN PUBLIC RIGHT-OF-WAY OCCUPIED BY MTS / SDAE FACILITIES.

10. PRIOR TO RIGHT OF ENTRY, A CERTIFICATE OF INSURANCE FROM THE CONTRACTOR'S INSURANCE COMPANY MUST BE SUBMITTED AND APPROVED BY MTS. LIMITS OF COVERAGE ARE NOT LIMITED AND SUBJECT TO PROJECT REVIEW REQUIREMENTS BY MTS. MTS SHALL BE NAMED THE CERTIFICATE HOLDER WITH THE FOLLOWING ENTITIES LISTED AS ADDITIONAL INSUREDS:

- METROPOLITAN TRANSIT SYSTEM (MTS)
- SAN DIEGO TROLLEY, INC. (SDTI)
- SAN DIEGO AND ARIZONA EASTERN (SDAE) RAILWAY
- SAN DIEGO AND IMPERIAL VALLEY (SDIV) RAILROAD
- SAN DIEGO TRANSIT CORPORATION (SDTC), THEIR DIRECTORS, OFFICERS, AGENTS AND EMPLOYEES AS ADDITIONAL INSUREDS AS THEIR INTERESTS MAY APPEAR.

MOST GENERAL LIABILITY INSURANCE DOES NOT COVER RAILROADS. ANY EXCLUSIONS RELATING TO PERFORMANCE OF OPERATIONS WITHIN THE VICINITY OF ANY RAILROAD, BRIDGE, TRESTLE, TRACK, ROADBED, TUNNEL, UNDERPASS, OR CROSSING MUST BE DELETED FROM THE POLICY. IF THE EXCLUSIONS CANNOT BE REMOVED, A SEPARATE RAILROAD PROTECTIVE LIABILITY POLICY WILL BE REQUIRED.

11. ANY CONTRACTORS OR SUBCONTRACTORS PERFORMING WORK ON THE RAILROAD RIGHT-OF-WAY, OR ENTERING THE RIGHT-OF-WAY ON BEHALF OF PERMITTEE, SHALL BE DEEMED AGENTS OF PERMITTEE.

12. PERMITTEE'S ON-SITE SUPERVISION SHALL RETAIN/MAINTAIN A FULLY EXECUTED COPY OF THE RIGHT OF ENTRY PERMIT AT ALL TIMES WHILE ON THE RAILROAD RIGHT-OF-WAY.

13. LRT FLAGGING AS ADMINISTERED BY THE SAN DIEGO TROLLEY, INC. (SDTI) WILL BE REQUIRED ANYTIME WORK IS WITHIN 15 FEET OF ANY OPERABLE TRACK INCLUDING AIRSPACE OR AS DEEMED NECESSARY BY MTS. AN SDTI FLAGPERSON REQUEST FORM MUST BE SUBMITTED TO SDTI A MINIMUM OF 3 BUSINESS DAYS PRIOR TO ANTICIPATED WORK. WORK THAT INVOLVES PERSONNEL OR EQUIPMENT WITHIN 25 FEET OF THE CENTERLINE OF ANY ACTIVE FREIGHT TRACK OR AS DEEMED NECESSARY BY TRAINMASTER OF OPERATIONS MUST HAVE A RAILWAY FLAGPERSON FOR THE DURATION OF THE WORK.

14. A PRE-CONSTRUCTION MEETING WILL BE REQUIRED WITH MTS AND SDTI PRIOR TO WORK COMMENCING WITHIN THE RIGHT-OF-WAY. A WRITTEN NOTICE OF PLANNED START OF WORK MUST BE SUBMITTED TO MTS A MINIMUM OF FIVE BUSINESS DAYS PRIOR TO WORK STARTING IN THE RIGHT-OF-WAY. ALL WORK WILL BE STOPPED AND PERMITTEE WILL NOT BE ALLOWED IN THE RIGHT-OF-WAY WITHOUT PROPER NOTIFICATION.

15. PERMITTEE AGREES TO COORDINATE ON A DAILY BASIS A REASONABLE ACCESS TO ALL MTS/SD&AE FACILITIES WITH SDTI. TROLLEY OPERATIONS ARE GENERALLY FROM THE HOURS OF 4:00 A.M. TO 2:00 A.M. THE FOLLOWING DAY.

16. PERMITTEE MUST ADHERE TO CONSTRUCTION AND SAFETY STANDARDS REQUIRED BY MTS OR THEIR CONTRACTORS WHEN WORKING WITHIN THE RIGHT-OF-WAY.

17. PERMITTEE AGREES TO RESTORE ALL FACILITIES, IMPROVEMENTS, LANDSCAPING, ETC., TO THEIR ORIGINAL CONDITION BY THE COMPLETION OF WORK OR AS SHOWN ON PLANS.

18. PERMITTEE AGREES THAT NO WORK BY HIMSELF/HERSELF OR HIS/HER AUTHORIZED AGENT WILL INTERFERE WITH RAILROAD/TROLLEY OPERATIONS.

19. PERMITTEE SHALL NOT STORE EQUIPMENT, TOOLS, AND MATERIALS WITHIN FIFTEEN FEET OF ANY OPERABLE TRACK.

20. PERMITTEE SHALL REMOVE ALL OF PERMITTEE'S TOOLS, EQUIPMENT, AND MATERIALS FROM RAILROAD PREMISES PROMPTLY UPON COMPLETION OF WORK, RESTORING RAILROAD PREMISES TO THE SAME STATE AND CONDITION AS WHEN PERMITTEE ENTERED THEREON.

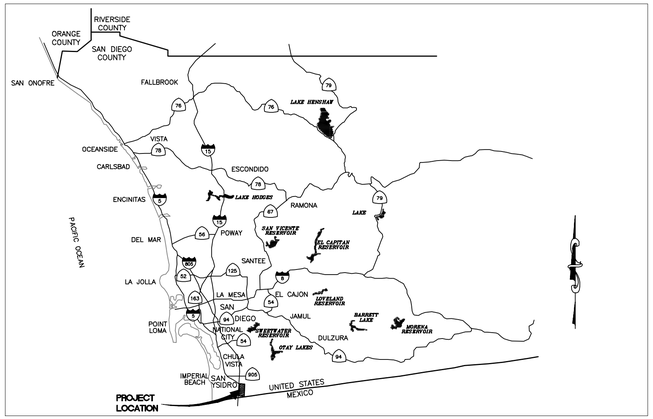
21. NO VEHICULAR CROSSING OVER TRACKS SHALL BE INSTALLED OR USED BY PERMITTEE WITHOUT PRIOR WRITTEN PERMISSION OF RAILROAD.

22. PERMITTEE SHALL PERFORM ALL WORK IN ACCORDANCE WITH APPLICABLE CALIFORNIA PUBLIC UTILITIES COMMISSION, OSHA REGULATIONS, MTS LRT DESIGN CRITERIA AND AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION (AREMA) GUIDELINES.

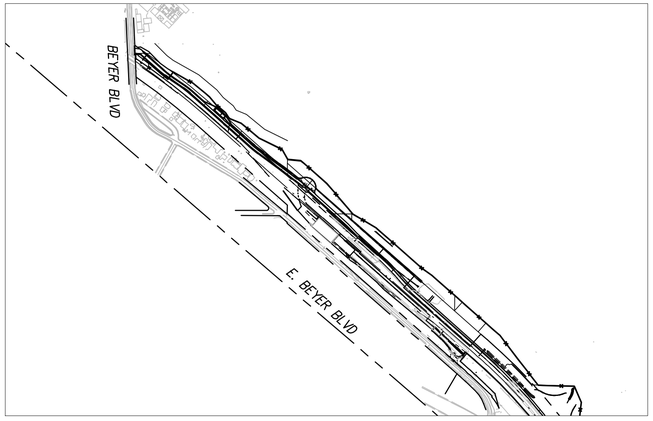
23. A MINIMUM FIVE-FOOT-WIDE ACCESSIBLE PEDESTRIAN PATH THROUGH THE CONSTRUCTION SITE SHALL BE MAINTAINED AT ALL TIMES. THE CONSTRUCTION BOUNDARY SHALL CONSIST OF A TOP AND BOTTOM RAIL CONSTRUCTED OF 3/4-INCH PLASTIC PIPE, ANY OPERABLE TRACK PLASTIC MESH, OR APPROVED EQUAL. YELLOW CAUTION TAPE IS NOT ACCEPTABLE.

24. PERMITTEE SHALL NOT USE OR STORE HAZARDOUS SUBSTANCES, AS DEFINED BY THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, AS AMENDED ("CERCLA") OR PETROLEUM OR OIL AS DEFINED BY APPLICABLE ENVIRONMENTAL LAWS ON THE RAILROAD RIGHT-OF-WAY.

25. A WRITTEN NOTICE SHALL BE SUBMITTED TO MTS WHEN WORK IS COMPLETED WITHIN THE RIGHT-OF-WAY. ANY ADDITIONAL WORK REQUIRED TO REPLACE OR REPAIR THE RAILROAD FACILITIES IN GOOD WORKING ORDER WILL BE THE PERMITTEE'S RESPONSIBILITY PRIOR TO RELIEF FROM MAINTENANCE WITHIN THE PERMIT AREA.



VICINITY MAP



DETAIL MAP

26. FURTHER INFORMATION REGARDING ACCESS TO MTS RIGHT OF WAY CAN BE OBTAINED FROM:
- HTTP://WWW.SDMTS.COM/BUSINESS/PERMIT.ASP
- MTS RIGHT OF WAY SERVICES TELEPHONE (619) 557-4501

27. DEVIATIONS FROM THESE SIGNED PLANS WILL NOT BE ALLOWED UNLESS A CONSTRUCTION CHANGE IS APPROVED BY THE CITY ENGINEER OR THE CHANGE IS REQUIRED BY THE CITY INSPECTOR FOR WORK WITHIN CITY RIGHT OF WAY.

28. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE RESIDENT ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT BY THE CITY OF SAN DIEGO.

29. CONTRACTOR SHALL REMOVE AND REPLACE ALL UTILITY BOXES SERVING AS HANDHOLES THAT ARE NOT IN "AS-NEW" CONDITION IN PROPOSED SIDEWALK. DAMAGED BOXES, OR THOSE THAT ARE NOT IN COMPLIANCE WITH CURRENT CODE SHALL BE REMOVED AND REPLACED WITH NEW BOXES, INCLUDING WATER, SEWER, TRAFFIC SIGNALS, STREET LIGHTS, DRY UTILITIES-SDG&E, SPRINT, ETC. ALL NEW METAL LIDS SHALL BE SLIP RESISTANT (FRICTION FACTOR >/= 0.50) AND INSTALLED FLUSH WITH PROPOSED GRADE. IF A SLIP RESISTANT METAL LID IS NOT COMMERCIALLY AVAILABLE FOR THAT USE, NEW BOXES AND LIDS SHALL BE INSTALLED.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH THE CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY SANDAG, THE CITY OF SAN DIEGO AND MTS IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

SHARON L. HUMPHREYS, R.C.E. # 60946, EXP. 12-31-2014

WORK TO BE DONE

THE SAN YSIDRO YARD IMPROVEMENT PROJECT CONSISTS OF THREE BASIC COMPONENTS INCLUDING BUT NOT LIMITED TO:

1. SAN YSIDRO YARD NORTH LEAD EXTENSION. INCREASE THE LENGTH OF THE LEAD BETWEEN THE SAN YSIDRO YARD AND THE TROLLEY MAINLINE.

2. SAN YSIDRO YARD STORAGE EXPANSION. CONSTRUCT TWO NEW STORAGE TRACKS ON THE EAST SIDE OF THE YARD, NEW AND MODIFIED RAILROAD, SWITCHING AND SIGNALING SYSTEMS AND CROSSOVER LOCATIONS, AND RELOCATE AND RECONFIGURE CATENARY POLES.

3. SAN YSIDRO YARD ASSOCIATED IMPROVEMENTS. CONSTRUCT ACCESS ROADS AND ASSOCIATED INTERSECTION IMPROVEMENTS, MAINTENANCE AND ACCESS ROAD EXTENSIONS AND REALIGNMENT, RECONFIGURATION OF THE ONSITE TRUCK CIRCULATION ROUTE, SECURITY GATES, SECURITY FENCES, LIGHT STANDARDS TO ALLOW FOR NIGHT OPERATIONS AND SITE SECURITY, CAMERAS, RETAINING WALLS, SITE GRADING, UTILITIES, STORM DRAINS, EROSION CONTROL, WATER QUALITY AND DRAINAGE IMPROVEMENTS INCLUDING DETENTION BASINS AND ACCESS ROUTES FOR MAINTENANCE.

STANDARD SPECIFICATIONS:

1. STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, 2006 SPECIFICATIONS.
2. STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION, 2009 EDITION (GREENBOOK), DOCUMENT NO. PITS0504091, FILED MAY 4, 2009, INCLUDING THE REGIONAL AND CITY OF SAN DIEGO SUPPLEMENT, DOCUMENT NO. PITS0504092, FILED MAY 4, 2009.
3. 1999 STANDARD SPECIAL PROVISIONS FOR SIGNALS, LIGHTING AND ELECTRICAL SYSTEMS OF THE CITY OF SAN DIEGO, DOCUMENT NO. 769842, FILED OCTOBER 22, 1999.
4. CALIFORNIA MANUAL UNIFORM TRAFFIC CONTROL DEVICES (FHWA'S MUTCD 2003 EDITION, AS AMENDED FOR USE IN CALIFORNIA), DOCUMENT NO. AEC1231064, FILED DECEMBER 31, 2006.

STANDARD DRAWINGS:

1. CITY OF SAN DIEGO STANDARD DRAWINGS, INCLUDING ALL REGIONAL STANDARD DRAWINGS, DOCUMENT NO. AEC1231063, FILED DECEMBER 31, 2006.
2. STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, 2010 (U.S. CUSTOMARY) UNIT STANDARD PLANS.

OWNER

MTS
1255 IMPERIAL AVENUE, SUITE 1000
SAN DIEGO, CA 92101

SANDAG
401 B STREET, SUITE 800
SAN DIEGO, CA 92101

REFERENCE DRAWINGS (CITY OF SAN DIEGO)

16864-D, 18516-2-D, 18516-3-D, 18516-4-D, 18516-5-D,
18516-6-D,17303-2-D, 17303-1,18516-6-D,14428-1-D,5470-D
16864-2-D, 16864-1-D, 15351-8-D, 15351-7-D, 15238-2-D

AS-BUILT
CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE

DATE: 4/3/2017

DIGALERT
DIAL TOLL FREE
811
AT LEAST TWO DAYS BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

ATTENTION IS DIRECTED TO THE POSSIBLE EXISTENCE OF UNDERGROUND FACILITIES NOT KNOWN OR IN A LOCATION DIFFERENT FROM THAT WHICH IS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TAKE STEPS TO ASCERTAIN THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.

BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING UNDERGROUND SERVICE ALERT AT 811 FOR WORK WITHIN CITY RIGHT OF WAY. FOR WORK WITHIN MTS RIGHT OF WAY, THE CONTRACTOR IS RESPONSIBLE FOR INDEPENDENTLY LOCATING UNDERGROUND UTILITIES.

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

NO.	DATE	REVISIONS	BY	CHK	APRV
0	10/2013	CONFORMED	SM	MB	MB
1	11/21/16	AS- BUILT	VS	PB	BD

Bureau Veritas North America, Inc.
10620 Treena Street Suite 170
San Diego, CA 92131
Tel: (858) 451-6100 Fax: (858) 451-2846
www.us.bureauveritas.com

REGISTERED PROFESSIONAL ENGINEER — MONTE L. BOWERS — Exp. 03/31/14 — CIVIL — STATE OF CALIFORNIA

		DATE
DESIGNED BY	SJH	06/12
DRAWN BY	SJH	06/12
CHECKED BY	WG	06/12
PRJ. ENG.	SH	06/12

SANDAG

SAN YSIDRO YARD IMPROVEMENT PROJECT

TITLE SHEET

SCALE: AS SHOWN
CONTRACT NO.: CIP 1300601
DRAWING NO.: C-1
SHEET NO.: 1

CONFORMED
OCTOBER 2013

Drawing name: P:\17102 San Ysidro Final Design\Cadd\01_Sheets\Final Submittal\C01 - TITLE SHEET.dwg COVER Oct 25, 2013 12:35pm by: stmccarthy

SHEET INDEX

ADDED SHEETS

24A	C-24A	NORTH DRIVEWAY PLAN AND PROFILE
116A	TD-5	TURNOUT F DETAILS

ADDED SIGNALING SHEETS

143A	TO-S94	TEMPORARY SPLICE S94 INTERLOCKING S1452RC
144A	SA-10	P/B INSTALLATION DETAILS S94 INTERLOCKING
201A	S1517PJB_1	PARKING LOT (XING #30) POLE JCT. BOX PJB TERMINATIONS
201B	S1517RC_1	PARKING LOT (XING #30) S1517RC LOCATION PLAN
201C	S1517RC_2A	PARKING LOT (XING #30) S1517RC TRACK CIRCUITS
201D	S1517RC_2B	PARKING LOT (XING #30) S1517RC TRACK CIRCUITS
201E	S1517RC_3	PARKING LOT (XING #30) S1517RC LINE CIRCUITS
201F	S1517RC_4	PARKING LOT (XING #30) S1517RC GATE CIRCUITS
201G	S1517RC_5	PARKING LOT (XING #30) S1517RC GATE CIRCUITS
201H	S1517RC_6	PARKING LOT (XING #30) S1517RC POWER CIRCUITS
201I	S1517RC_7	PARKING LOT (XING #30) S1517RC CASE LAYOUT
201J	S1517RC_8	PARKING LOT (XING #30) S1517RC CABLE LINE-UP
201K	DX3_1	DX3 CASE PSO CIRCUITS
201L	S1530RC_2	DX3 CASE SIGNAL CIRCUITS
201M	DX3_3	DX3 CASE PSO CASE LAYOUT
201N	S1533RC_1	S98 INTERLOCKING S1533RC LOCATION PLAN
201O	S1533RC_2	S98 INTERLOCKING S1533RC TRACK CIRCUITS
201P	S1533RC_3	S98 INTERLOCKING S1533RC LINE CIRCUITS
201Q	S1533RC_4	S98 INTERLOCKING S1533RC TRACK CIRCUITS
201R	S1533RC_5	S98 INTERLOCKING S1533RC TRACK CIRCUITS
201S	S1533RC_6	S98 INTERLOCKING S1533RC TRACK CIRCUITS
201T	S1533RC_7	S98 INTERLOCKING S1533RC SIGNAL CIRCUITS
201U	S1533RC_8	S98 INTERLOCKING S1533RC GATE CIRCUITS
201V	S1533RC_9	S98 INTERLOCKING S1533RC GATE CIRCUITS
201W	S1533RC_10	S98 INTERLOCKING S1533RC GATE CIRCUITS
201X	S1533RC_11	S98 INTERLOCKING S1533RC SIGNAL CIRCUITS
201Y	S1533RC_12	S98 INTERLOCKING S1533RC GATE CIRCUITS
201Z	S1533RC_13	S98 INTERLOCKING S1533RC GATE CIRCUITS
201AA	S1533RC_14	S98 INTERLOCKING S1533RC ROUTE SELECT CIRCUITS
201AB	S1533RC_15	S98 INTERLOCKING S1533RC ROUTE SELECT CIRCUITS
201AC	S1533RC_16	S98 INTERLOCKING S1533RC SIGNAL CIRCUITS
201AD	S1533RC_17	S98 INTERLOCKING S1533RC SWITCH REQUEST
201AE	S1533RC_18	S98 INTERLOCKING S1533RC TWC CIRCUITS
201AF	S1533RC_19	S98 INTERLOCKING S1533RC TWC CIRCUITS
201AG	S1533RC_20	S98 INTERLOCKING S1533RC SWITCH S97 CIRCUITS
201AH	S1533RC_21	S98 INTERLOCKING S1533RC SWITCH S97 CIRCUITS
201AI	S1533RC_22	S98 INTERLOCKING S1533RC SWITCH S99 CIRCUITS
201AJ	S1533RC_23	S98 INTERLOCKING S1533RC SWITCH S99 CIRCUITS
201AK	S1533RC_24	S98 INTERLOCKING S1533RC REPEATER CIRCUITS
201AL	S1533RC_25	S98 INTERLOCKING S1533RC POWER CIRCUITS
201AM	S1533RC_26	S98 INTERLOCKING S1533RC S7 POWER CONNECTIONS
201AN	S1533RC_27	S98 INTERLOCKING S1533RC ENERGY LOOP CIRCUITS
201AO	S1533RC_28	S98 INTERLOCKING S1533RC RACK LAYOUTS
201AP	S1533RC_29	S98 INTERLOCKING S1533RC DETAIL RACK LAYOUTS
201AQ	S1533RC_30	S98 INTERLOCKING S1533RC DETAIL RACK LAYOUTS
201AR	S1533RC_31	S98 INTERLOCKING S1533RC WALL BOARD LAYOUT
201AS	S1533RC_32	S98 INTERLOCKING S1533RC DETAIL TERMINALS
201AT	S1533RC_33	S98 INTERLOCKING S1533RC WALL BOARD C LAYOUT
201AU	S1533RC_33A	S98 INTERLOCKING S1533RC RACK LAYOUT
201AV	S1533RC_34	S98 INTERLOCKING S1533RC ENTRANCE BOARD
201AW	S1533RC_35	S98 INTERLOCKING S1533RC DETAIL ENTRANCE BOARD
201AX	S1533RC_36	S98 INTERLOCKING S1533RC FLOOR LAYOUT
201AY	S1533RC_37	S98 INTERLOCKING S1533RC DX1 & DX2 LAYOUTS

ADDED COMMUNICATIONS SHEETS

243A	CM-10A	ACCESS CONTROLLER WIRING DIAGRAM
257A	CM-24A	REMOTE ACCESS CONTROL ASSEMBLY
258A	CM-25A	ACCESS GATE SYSTEM WIRING DIAGRAM
258B	CM-25B	TYPICAL GATE WIRING SCHEMATIC

AS-BUILT
CONTRACT NO.: CIP 1300601
RESIDENT ENGINEER'S SIGNATURE
DATE: 4/3/2017

NO.	DATE	REVISIONS	BY	CHK	APRV
0	03/2013	CONFORMED			
1	05/15/15	CCO-34 - SHEET 2 OF 8	BM	PB	BD
2	07/07/15	CCO-43 - SHEET 3 OF 6	PB	BD	BD
3	07/27/15	CCO-32.1 - SHEET 3 of 9	PB	BD	BD
4	11/21/16	AS-BUILT	VS	PB	BD

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REGISTERED PROFESSIONAL ENGINEER — SHARON L. HUMPHREYS — No. 60846 — Exp. 12/31/14 — CIVIL — STATE OF CALIFORNIA

		DATE
DESIGNED BY	SJH	06/12
DRAWN BY	SJH	06/12
CHECKED BY	WG	06/12
PRJ. ENG.	SH	06/12

SANDAG

SAN YSIDRO YARD IMPROVEMENT PROJECT

SHEET INDEX

SCALE: AS SHOWN
CONTRACT NO.: CIP 1300601
DRAWING NO.: C-2
SHEET NO.: 2

CONFORMED MARCH 2013

Drawing name: P:\17102 San Ysidro Final Design\Cadd\01_Sheets\Final Submittal\C02 - SHEET INDEX.dwg C02 May 17, 2013 11:08am by: stmccarthy

ABBREVIATIONS

AGGREGATE BASE	AB
BOTTOM OF WALL	BW
CALTRANS	CT
CALTRANS STANDARD DRAWINGS	CTSD
CENTERLINE	C/L
CLEAN OUT	CO
CAST IN PLACE	CIP
COMMUNICATION	COMM
CONCRETE	CONC
CURB	CB
CATCH BASIN	CB
DRIVEWAY	DWY
EXISTING	EX
ELECTRIC	ELEC
ELEVATION	ELEV
EXISTING GRADE	EG
FINISH SURFACE	FS
FINISH SUBGRADE	FSG
GRADE BREAK	GB
IRRIGATION	IRR
LANDSCAPE AREA	LS
LATERAL	LAT
LINEAR FEET	LF
MAXIMUM	MAX
MANHOLE	MH
MANUFACTURER	MFR
MASONRY	MSE
MINIMUM	MIN
METROPOLITAN TRANSIT SYSTEMS	MTS
NOT IN CONTRACT	NIC
NOT TO SCALE	NTS
ON CENTER	O.C.
PEDESTRIAN	PED
PERFORATED CORRUGATED STEEL PIPE	PCSP
POINT OF CURB RETURN	PCR
POLYVINYL CHLORIDE	PVC
PORTLAND CEMENT CONCRETE	PCC
POWER POLE	PP
PROPERTY LINE	P/L
PRIVATE	PVT
POUNDS PER SQUARE INCH	PSI
PULL BOX	PB
REINFORCED CONCRETE PIPE	RCP
RETAINING	RET
RIGHT-OF-WAY	R/W
RIM ELEVATION OF MANHOLE	RIM
SAN DIEGO ASSOCIATION OF GOVERNMENTS	SANDAG
SAN DIEGO GAS & ELECTRIC COMPANY	SDGE
SAN DIEGO REGIONAL STANDARD DRAWINGS	S.D.R.S.D.
SAN DIEGO TRANSIT, INC.	SDTI
SCHEDULE	SCH.
SIDEWALK	SW
STORM DRAIN	SD
SEWER	SWR
TRANSITION	TRANS
TOP OF CURB	TC
TOP OF DIKE	TD
TOP OF GRADE	TG
TOP OF RAIL	TR
TOP OF WALL	TW
TYPICAL	TYP
UNDER DRAIN	UD
UNLESS OTHERWISE NOTED	U.O.N.
VITRIFIED CLAY PIPE	V.C.
WATER	WTR
WATTS	W
WATER METER (BOX)	WM

LEGEND

ITEM	SYMBOL
RIGHT-OF-WAY LINE	
EXIST CONTOUR	15
EXIST SPOT ELEVATION	× 14.3
EXIST CURB & GUTTER	
EXIST SIDEWALK	
EXIST SEWER MAIN	S
EXIST WATER SERVICE	W W
EXIST STORM DRAIN PIPE	
EXIST CURB INLET	DI
EXIST STORM DRAIN	
EXIST CLEANOUT	
EXIST SIGNAL CABINET	
EXIST WATER VAULT	
EXIST FIRE HYDRANT	
EXIST WATER METER BOX	
EXIST TREE	
EXIST STREET LIGHT	
EXIST CONCRETE DITCH	
HEADWALL	
RELAY CASE PAD	
STORM DRAIN	
RETAINING WALL	
STORM DRAIN	
BROW AND TERRACE DITCH	
PERFORATED PIPE	

FIRE PROTECTION NOTES

1. THIS PLAN SET INCLUDES ON-SITE HYDRANT LOCATIONS AND ASSOCIATED UNDERGROUND PIPING FOR HYDRANTS AND FIRE SERVICE.

2. LOCATION AND SIZING OF UNDERGROUND FIRE PROTECTION PIPING ARE FOR REFERENCE ONLY. A SEPARATE SUBMITTAL IS REQUIRED FOR ALL FIRE PROTECTION SYSTEMS AND PIPING. FIRE PROTECTION SYSTEMS SHALL BE DESIGNED BY A LICENSED FIRE PROTECTION CONTRACTOR OR LICENSED PROFESSIONAL ENGINEER AND SUBMITTED TO THE FIRE DEPARTMENT FOR APPROVAL..

3. THESE PLANS SHALL NOT BE CONSIDERED APPROVED FOR THE INSTALLATION OF UNDERGROUND FIRE SERVICE AND FIRE HYDRANTS. SINGLE LINE PLANS SHALL BE SUB-MITTED SEPARATELY TO THE FIRE DEPARTMENT FOR APPROVAL PRIOR TO INSTALLATION.

WATER NOTES

1. ALL VALVES WILL BE FLANGED TO CROSSES AND TEES. ONLY GATE VALVES SHALL BE USED IN FIRE HYDRANT INSTALLATIONS. ALL BURIED DUCTILE AND GRAY CAST IRON PIPE, FITTINGS, VALVES AND APPURTENANCES SHALL BE COATED WITH A DIELECTRIC COATING: A LIQUID EPOXY COATING SYSTEM PER AWWA C-210 AT 24 MILS MINIMUM DRY FILM THICKNESS (MDFT), OR A COLD APPLIED THREE PART SYSTEM PETROLEUM WAX TAPE PER AWWA C-217, OR A 100% POLYURETHANE COATING OF 24 MILS MDFT SUITABLE FOR BURIED USE.

2. ALL PROPOSED WATER FACILITY INSTALLATIONS SHALL BE CONSTRUCTED WITH MATERIALS CURRENTLY LISTED IN THE MOST CURRENT EDITION OF THE CITY OF SAN DIEGO WATER UTILITIES DEPARTMENT APPROVED MATERIALS LIST AS REFERENCED IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

GRADING AND GEOTECHNICAL NOTES

1. ALL GRADING SHALL BE DONE UNDER OBSERVATION AND TESTING BY A QUALIFIED CIVIL ENGINEER OR GEOTECHNICAL ENGINEER AND, IF REQUIRED, BOTH A QUALIFIED CIVIL ENGINEER OR GEOTECHNICAL ENGINEER AND AN ENGINEERING GEOLOGIST. ALL GRADING MUST BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY ORDINANCES AND THE RECOMMENDATIONS AND SPECIFICATIONS SET FORTH IN THE SOILS REPORT OR GEOLOGICAL/GEOTECHNICAL INVESTIGATION ENTITLED:

PRELIMINARY GEOTECHNICAL EVALUATION
SAN YSIDRO RAIL YARD EXPANSION
MAY 2, 2008
NINYO & MOORE

GOETECHNICAL EVALUATION
SAN YSIDRO RAIL YARD EXPANSION
JUNE 30, 2009
NINYO & MOORE

GEOTECHNICAL EVALUATION
SAN YSIDRO RAIL YARD IMPROVEMENT PROJECT
JULY 27, 2012
NINYO & MOORE

2. ALL FILL MATERIAL SHALL BE COMPACTED IN COMPLIANCE WITH THE GEOTECHNICAL REPORTS.

3. AT THE COMPLETION OF THE GRADING OPERATIONS FOR THE EARTHWORK SHOWN ON THIS PLAN, AN AS-GRADED SOILS REPORT, OR IF REQUIRED, AN AS-GRADED SOILS AND GEOLOGICAL REPORT WILL BE PREPARED IN ACCORDANCE WITH CALIFORNIA BUILDING CODE AND THE CITY OF SAN DIEGO TECHNICAL GUIDELINES FOR GEOTECHNICAL REPORTS. THE FINAL "AS-GRADED" GEOTECHNICAL REPORT WILL BE SUBMITTED TO THE FIELD ENGINEERING SECTION OF PUBLIC WORKS AND A SECOND COPY TO THE GEOLOGY SECTION OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT WITHIN 15 DAYS IF THE COMPLETION OF GRADING. WHERE GEOLOGIC INSPECTION IS INDICATED IN THE PROJECT PLANS, REPORTS OR SPECIFICATIONS, THE FINAL REPORT MUST ALSO BE REVIEWED AND SIGNED BY A CALIFORNIA CERTIFIED ENGINEERING GEOLOGIST.

4. IF THE GEOTECHNICAL CONSULTANT OF RECORD IS CHANGED FOR THE PROJECT, THE WORK SHALL BE STOPPED UNTIL THE REPLACEMENT HAS AGREED IN WRITING TO ACCEPT THE RESPONSIBILITY WITHIN THE AREA OF THEIR TECHNICAL COMPETENCE FOR APPROVAL UPON COMPLETION OF WORK. IT SHOULD BE THE DUTY OF THE PERMITTEE TO NOTIFY THE CITY ENGINEER AND THE LDR GEOLOGY SECTION OF THE DEVELOPMENT SERVICES DEPARTMENT IN WRITING OF SUCH CHANGE PRIOR TO THE RECOMMENCEMENT OF GRADING.

5. THESE IMPROVEMENT PLANS HAVE BEEN REVIEWED BY THE UNDERSIGNED AND FOUND TO BE IN CONFORMANCE WITH THE RECOMMENDATIONS AND SPECIFICATIONS CONTAINED IN THE REFERENCED GEOTECHNICAL REPORTS PREPARED FOR THIS PROJECT.

GREGORY FARRAND CEG 1087

REGISTERED GEOLOGIST GREGORY T. FARRAND No. 1087 CERTIFIED ENGINEERING GEOLOGIST Exp. 2-28-14 STATE OF CALIFORNIA

EMIL RUDOLPH PE 64301

REGISTERED PROFESSIONAL ENGINEER EMIL RUDOLPH No. 2737 Exp. 6/30/15 GEOTECHNICAL STATE OF CALIFORNIA

NINYO & MOORE

5710 RUFFIN ROAD
SAN DIEGO, CA 92123
(858) 576-1000

AS-BUILT
CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE

DATE: 4/3/2017

NO.	DATE	REVISIONS	BY	CHK	APRV
0	03/2013	CONFORMED			
1	11/21/16	AS-BUILT	VS	PB	BD

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REGISTERED PROFESSIONAL ENGINEER SHARON L. HUMPHREYS No. 60816 Exp. 12/31/14 CIVIL STATE OF CALIFORNIA

DESIGNED BY SJH	DATE 06/12
DRAWN BY SJH	06/12
CHECKED BY WG	06/12
PRJ. ENG. SH	06/12

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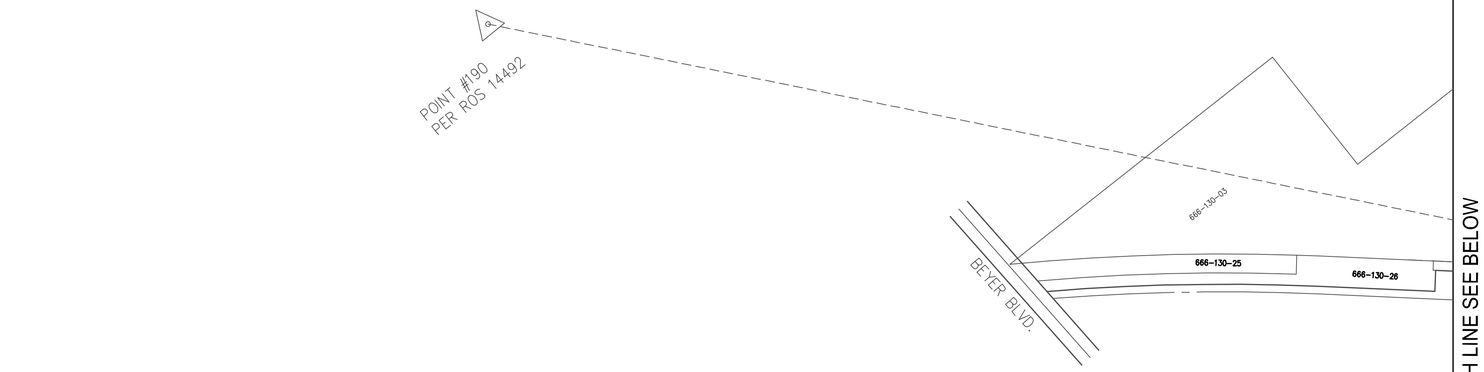
SAN YSIDRO YARD IMPROVEMENT PROJECT

PROJECT NOTES, LEGEND, ABBREVIATIONS

SCALE AS SHOWN
CONTRACT NO. CIP 1300601
DRAWING NO. C-3 | SHEET NO. 3

CONFORMED MARCH 2013

Drawing name: P:\17102 San Ysidro Final Design\Cadd\01_Sheets\Final Submittal\C03 - PROJECT NOTES, LEGEND, ABBERVIATIONS.dwg 033 Aug 14, 2013 1:14pm by: stmccarthy



HORIZONTAL DATUM

NAD83, ZONE 6 (1991.35 EPOCH)

BASIS OF BEARINGS

DETERMINED LOCALLY BY A LINE BETWEEN POINT #190 PER ROS 14492 AND POINT #1A PER ROS 15487, I.E. S 39°32'33" E 7,369.88' GRID.

BENCHMARK

NGS BENCHMARK Z1411
ELEVATION: 80.18'
DATUM: NAVD 88

PRIMARY CONTROL

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
11	1787404.510	6335772.530	514.36'	SDGPS 11-01 ROS 14492
24	1791073.500	6309731.680	152.55'	SDGPS 24 ROS 14492
55	1778149.429	6322084.508	106.80'	PT. #1A ROS 15487
190	1783831.440	6317394.050	143.77'	CALTRANS BRASS DISC ROS 14492

SUPPLEMENTAL CONTROL

LOCAL SUPPLEMENTAL CONTROL POINTS WERE ESTABLISHED HORIZONTALLY BY FAST-STATIC SURVEY METHODS AND VERTICALLY BY 3RD ORDER LEVEL LOOP.

SUPPLEMENTAL CONTROL POINTS:

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
101	1780741.15	6320131.94	128.70'	CP BAR & CAP "AGUIRRE TRAVPT"
102	1782181.64	6318395.47	103.62'	CP BAR & CAP "AGUIRRE TRAVPT"
103	1781600.71	6319041.72	103.46'	CP BAR & CAP "AGUIRRE TRAVPT"
104	1781095.23	6319712.02	106.62'	CP BAR & CAP "AGUIRRE TRAVPT"
105	1780521.72	6320284.47	109.35'	CP BAR & CAP "AGUIRRE TRAVPT"
106	1780164.84	6320797.45	115.58'	CP BAR & CAP "AGUIRRE TRAVPT"
108	1779556.12	6321340.20	114.64'	CP BAR & CAP "AGUIRRE TRAVPT"
109	1779222.31	6321619.66	134.76'	CP BAR & CAP "AGUIRRE TRAVPT"
110	1778846.38	6321782.48	101.97'	CP BAR & CAP "AGUIRRE TRAVPT"
111	1778371.17	6322016.68	108.82'	CP "X" ON PLATFORM
112	1780037.33	6320678.98	95.31'	CP BAR & CAP "AGUIRRE TRAVPT"
113	1780515.83	6320101.21	96.70'	CP MAG NAIL

SURVEYOR ADDRESS

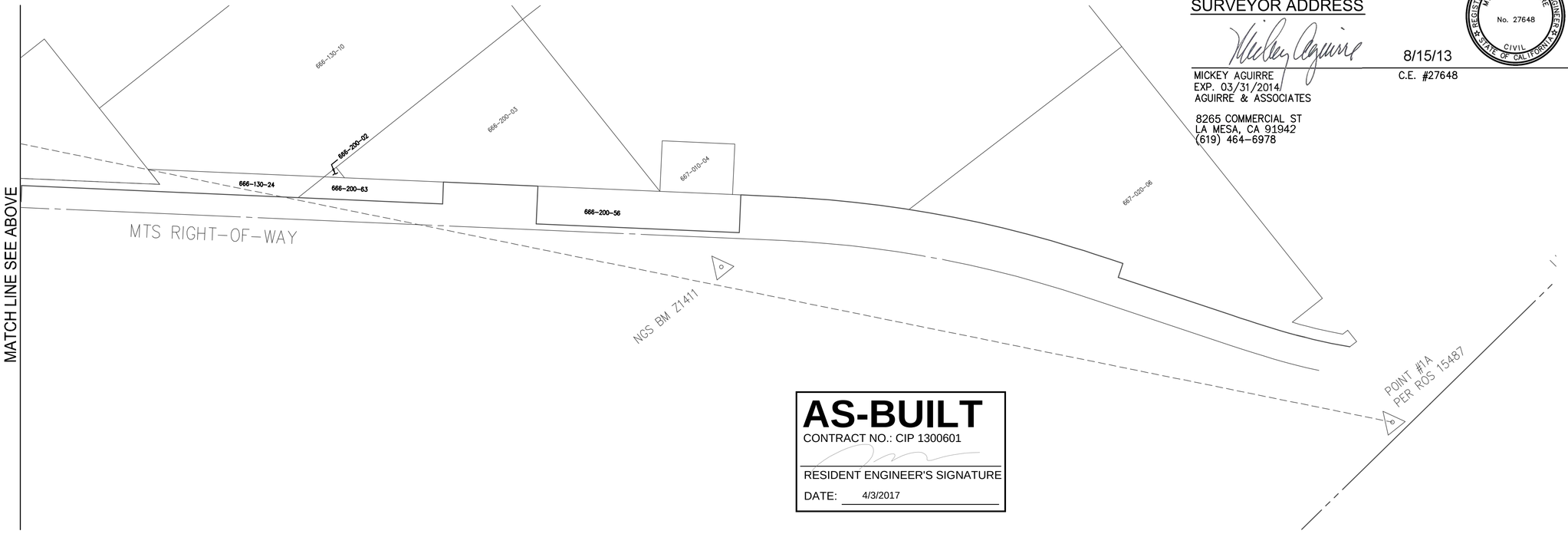
REGISTERED PROFESSIONAL ENGINEER — MICKEY B. AGUIRRE — No. 27648 — CIVIL — STATE OF CALIFORNIA

8/15/13

MICKEY AGUIRRE
EXP. 03/31/2014
AGUIRRE & ASSOCIATES

C.E. #27648

8265 COMMERCIAL ST
LA MESA, CA 91942
(619) 464-6978



AS-BUILT
CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE

DATE: 4/3/2017

GRAPHIC SCALE
200 0 200 400
1"=200'

NO.	DATE	REVISIONS	BY	CHK	APRV
0	03/2013	CONFORMED			
1	11/21/16	AS-BUILT	VS	PB	BD

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		DATE
DESIGNED BY	SJH	06/12
DRAWN BY	SJH	06/12
CHECKED BY	WG	06/12
PRJ. ENG.	SH	06/12

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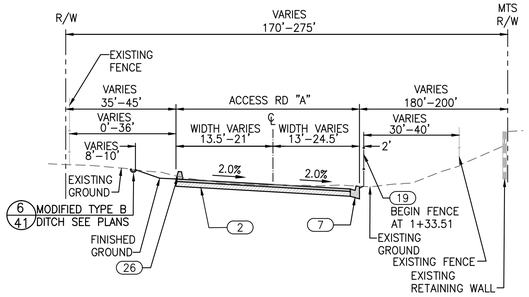
SAN YSIDRO YARD IMPROVEMENT PROJECT

SURVEY CONTROL SHEET

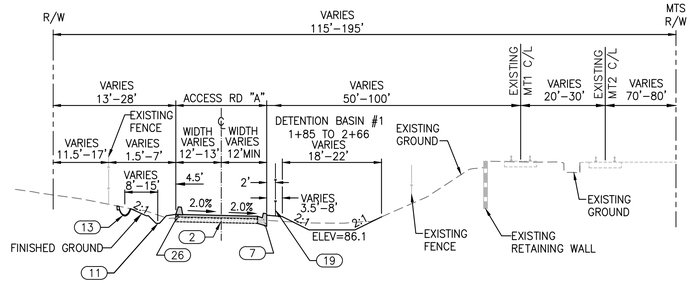
SCALE: AS SHOWN
CONTRACT NO.: CIP 1300601
DRAWING NO.: C-4
SHEET NO.: 4

CONFORMED MARCH 2013

Drawing name: P:\17102 San Ysidro Final Design\Cadd\01_Sheets\Final Submittal\C04 - SURVEY CONTROL SHEET.dwg Aug 14, 2013 1:27pm by: slmccarthy



STA 1+29.22 TO STA 1+89.54
NOT TO SCALE



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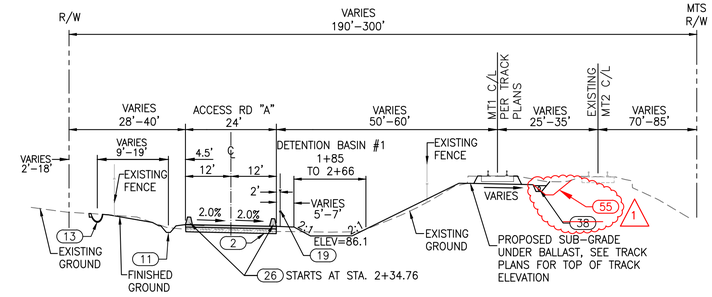
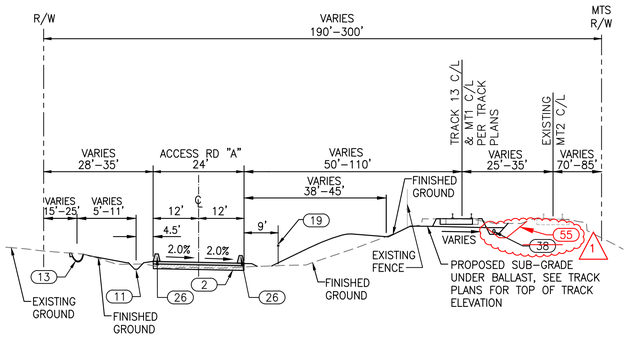
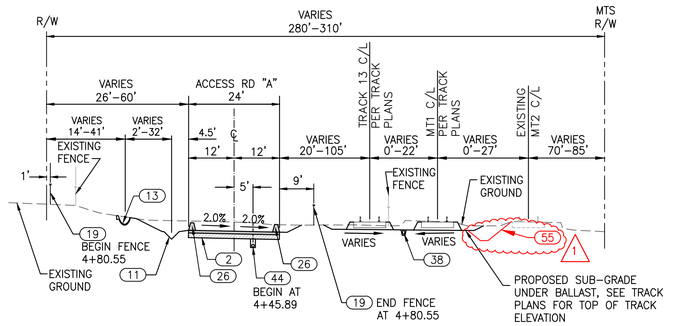


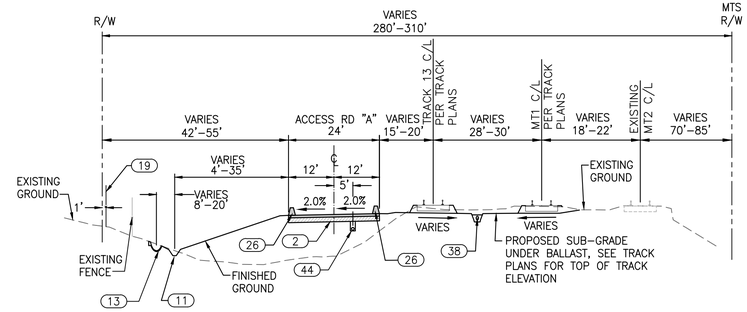
STA 2+19.96 TO STA 2+66
NOT TO SCALE



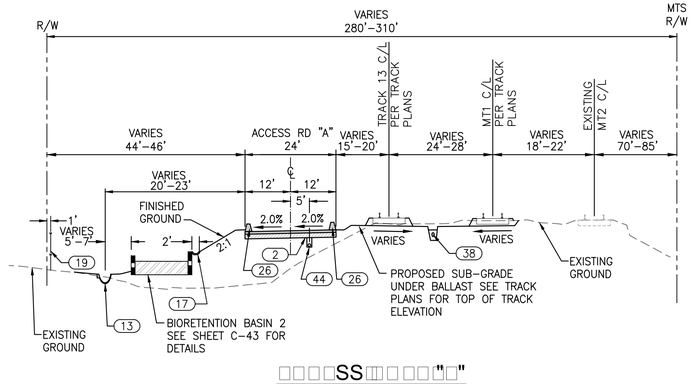
STA 2+66 TO STA 3+25
NOT TO SCALE



STA 3+25 TO STA 8+10
NOT TO SCALE



STA 8+10 TO STA 9+21.60
NOT TO SCALE



STA 9+21.60 TO STA 10+13.94
NOT TO SCALE

AS-BUILT
CONTRACT NO.: CIP 1300601
RESIDENT ENGINEER'S SIGNATURE
DATE: 4/3/2017

CONSTRUCTION NOTES

2 CONSTRUCT 4" A.C. OVER 11" ~~CTB~~ CL II AB (RFI NO. 18) 2
7 CONSTRUCT 6" CURB AND GUTTER TYPE G PER S.D.R.S.D. G–2
11 CONSTRUCT CONCRETE DRAINAGE CHANNEL PER S.D.R.S.D. D–70
13 CONSTRUCT CONCRETE BROW DITCH TYPE B PER S.D.R.S.D. D–75
17 CONSTRUCT CONCRETE GUTTER W/ 6" INLET DRAIN AND GRATE PER C.T.S.D. B3–9
19 CONSTRUCT 8'–0" HIGH CHAINLINK FENCE PER C.T.S.D. A85 W/ BARBED WIRE POST TOP PER C.T.S.D. A85A
26 CONSTRUCT 6" A.C. TYPE A BERM PER S.D.R.S.D. G–5
38 CONSTRUCT 6" PERFORATED PIPE PER DETAIL 2 SHEET D–12
44 CONSTRUCT TRENCH FOR FIBER OPTIC CABLE PER DETAIL 8 SHEET C–41.
55 SEE DETAIL 5–58: TRACK DITCH ON SHEET D–12 1

NOTES

1. ± INDICATES VARIATION IN TRACK SEPARATION DISTANCES OF 1' TO 5'

REGISTERED PROFESSIONAL ENGINEER
BETHANY G. DUNN
No. 68721
Exp. 06/30/15
CIVIL
STATE OF CALIFORNIA
1

NO.	DATE	REVISIONS	BY	CHK	APRV
0	3/2013	CONFORMED			
1	6/22/15	CCO–44 – SHEET 3 of 11	BM	PB	BD
2	11/21/16	AS-BUILT	VS	PB	BD

BUREAU VERITAS
1828
Bureau Veritas North America, Inc.
[illegible]

REGISTERED PROFESSIONAL ENGINEER
MONTE L. BOWERS
C 26193
Exp. 03/31/14
CIVIL
STATE OF CALIFORNIA

		DATE
DESIGNED BY	S[illegible]	06/12
DRAWN BY	S[illegible]	06/12
CHECKED BY	[illegible]	06/12
PRJ. ENG.	S[illegible]	06/12

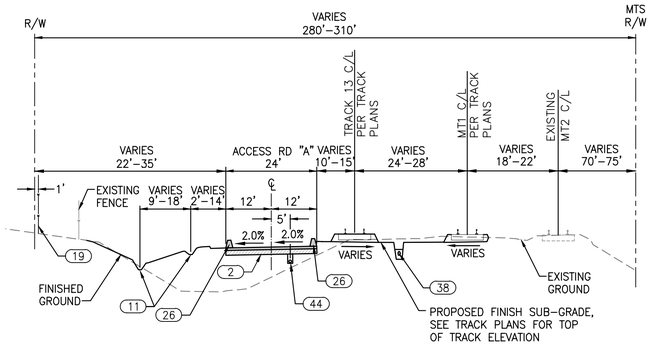
SANDAG

SAN YSIDRO YARD IMPROVEMENT PROJECT

T[illegible]S[illegible]T[illegible]NS

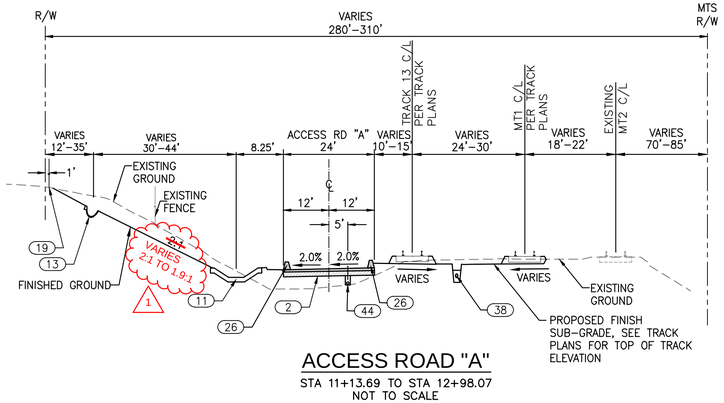
SCALE [illegible]
CONTRACT NO. [illegible]
DRAWING NO. [illegible]
SHEET NO. [illegible]

FINAL PLANS MARCH 2013



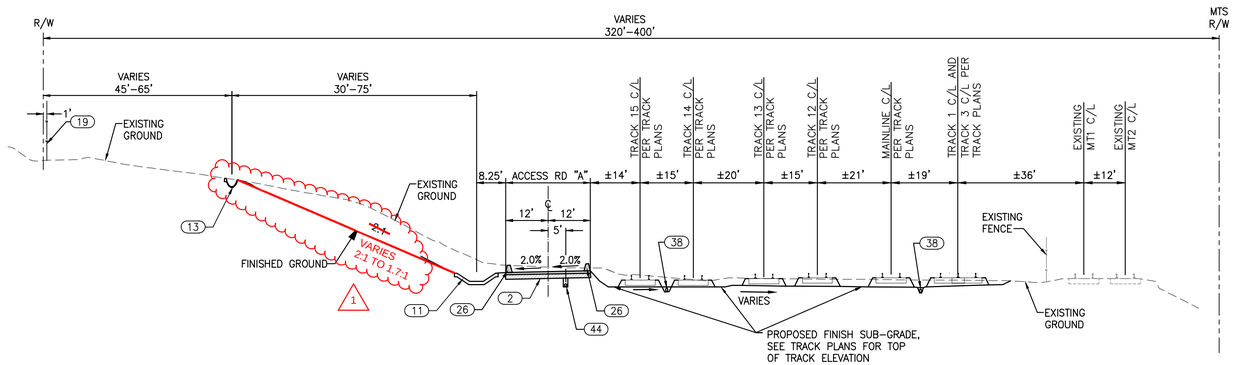
ACCESS ROAD "A"

STA 10+13.94 TO STA 11+13.69
NOT TO SCALE



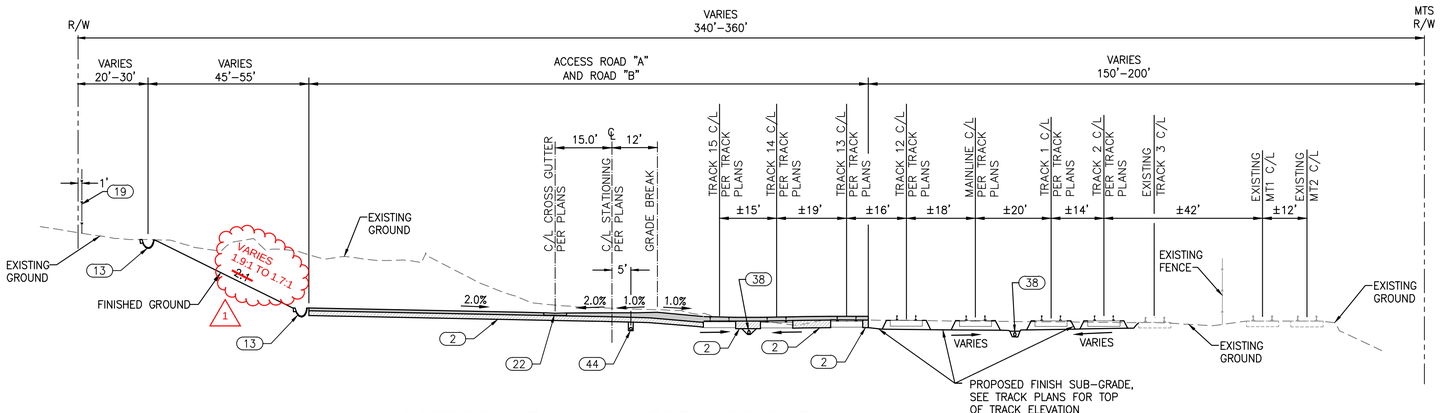
ACCESS ROAD "A"

STA 11+13.69 TO STA 12+98.07
NOT TO SCALE



ACCESS ROAD "A"

STA 12+98.07 TO STA 17+66.22
NOT TO SCALE



ACCESS ROAD "A" AND ACCESS ROAD "B"

ROAD "A" STA 17+66.22 TO STA 19+82.46
ROAD "B" STA 10+00 TO STA 11+43
NOT TO SCALE

CONSTRUCTION NOTES:

(2) CONSTRUCT 4" A.C. OVER 11" ~~CTB~~ CL II AB (RFI NO. 18) 2

(11) CONSTRUCT CONCRETE DRAINAGE CHANNEL PER S.D.R.S.D. D–70

(13) CONSTRUCT CONCRETE BROW DITCH TYPE B PER S.D.R.S.D. D–75

(19) CONSTRUCT 8'–0" HIGH CHAINLINK FENCE PER C.T.S.D. A85 W/ BARBED WIRE POST TOP PER C.T.S.D. A85A

(22) CONSTRUCT GUTTER PER S.D.R.S.D. G–12 WITH OUT SPANDRELS (WIDTH = 6')

(26) CONSTRUCT 6" A.C. TYPE A BERM PER S.D.R.S.D. G–5

(38) CONSTRUCT PERFORATED PIPE PER DETAIL 2 SHEET D–12

(44) CONSTRUCT TRENCH FOR FIBER OPTIC CABLE PER DETAIL 8 SHEET C–41.

NOTE:

1. ± INDICATES VARIATION IN TRACK SEPARATION DISTANCES OF 1' TO 5'

AS-BUILT
CONTRACT NO.: CIP 1300601
RESIDENT ENGINEER'S SIGNATURE
DATE: 4/3/2017

1

REGISTERED PROFESSIONAL ENGINEER — BETHANY C. DUNN — No. 68721 — Exp. 09/30/15 — CIVIL — STATE OF CALIFORNIA

SANDAG
Issued For Construction
By: DV Date: 09/18/2014
This Plan Sheet supersedes the all previous similarly titled Plan Sheets

NO.	DATE	REVISIONS	BY	CHK	APRV
0	10/2013	CONFORMED	SM	MB	MB
1	4/17/14	CCO 5 - SHEET 3 OF 16	PB	EW	EW
2	11/21/16	AS-BUILT	VS	PB	BD

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REGISTERED PROFESSIONAL ENGINEER — MONTE L. BOWERS — C 29495 — Exp. 03/31/14 — CIVIL — STATE OF CALIFORNIA

DESIGNED BY SJH	DATE 06/12
DRAWN BY SJH	06/12
CHECKED BY WG	06/12
PRJ. ENG. SH	06/12

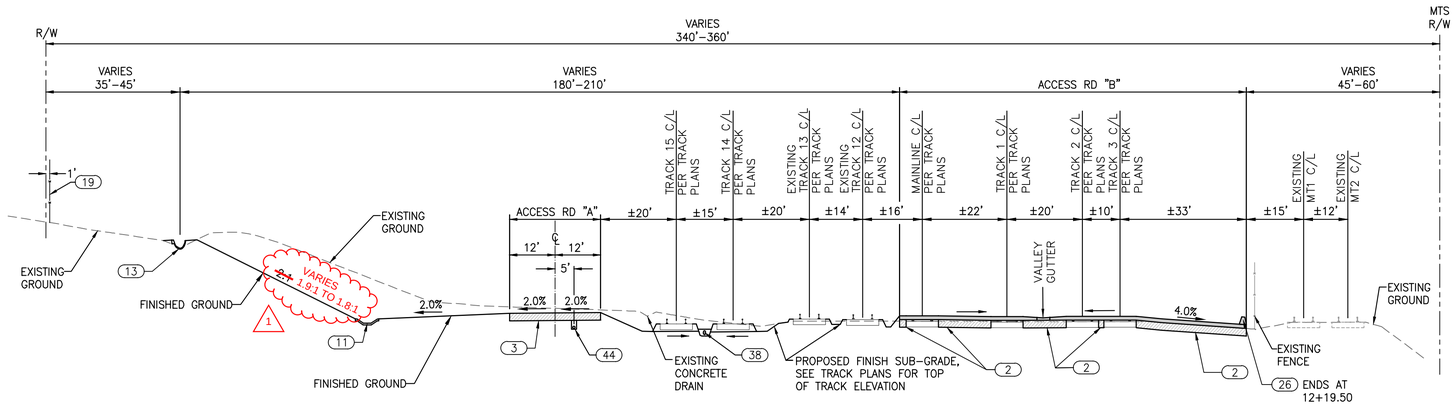
SANDAG

SAN YSIDRO YARD IMPROVEMENT PROJECT

TYPICAL SECTIONS

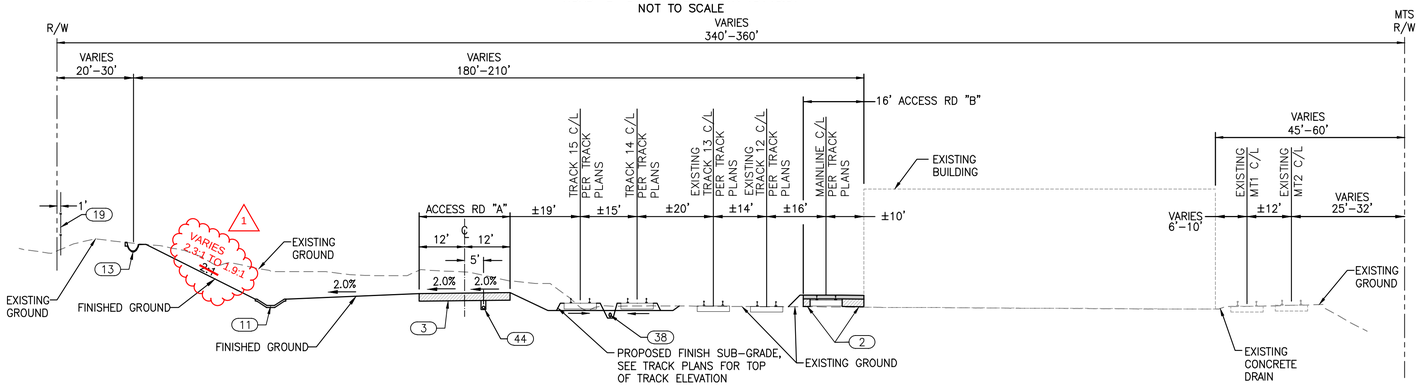
SCALE: AS SHOWN
CONTRACT NO.: CIP 1300601
DRAWING NO.: C-6
SHEET NO.: 6

CONFORMED OCTOBER 2013



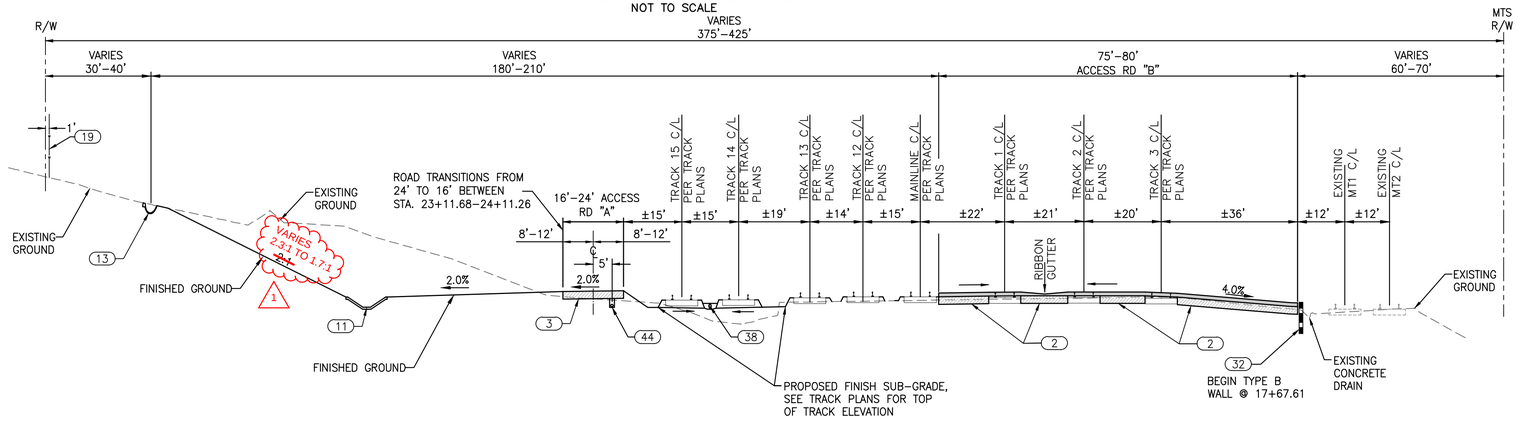
ACCESS ROAD "A" AND ACCESS ROAD "B"

ROAD "A" STA 19+82.46 TO STA 21+11.49
ROAD "B" STA 11+43 TO STA 13+10.97
NOT TO SCALE



ACCESS ROAD "A" AND ACCESS ROAD "B"

ROAD "A" STA 21+11.49 TO STA 23+11.68
ROAD "B" STA 13+10.97 TO STA 15+12
NOT TO SCALE



ACCESS ROAD "A" AND ACCESS ROAD "B"

ROAD "A" STA 23+11.68 TO STA 30+05
ROAD "B" STA 15+12 TO STA 22+14.74
NOT TO SCALE

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Issued For Construction

By: DV Date: 09/18/2014

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AS-BUILT

CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE

DATE: 4/3/2017

REGISTERED PROFESSIONAL ENGINEER BETHANY E. DAVIS No. 68721 Exp. 09/30/15 CIVIL STATE OF CALIFORNIA

1

CONSTRUCTION NOTES:

(2) CONSTRUCT 4" A.C. OVER 11" ~~CTB~~ CL II AB (RFI NO. 18) 2
(3) CONSTRUCT 13" CTB
(11) CONSTRUCT CONCRETE DRAINAGE CHANNEL PER S.D.R.S.D. D–70
(13) CONSTRUCT CONCRETE BROW DITCH TYPE B PER S.D.R.S.D. D–75
(19) CONSTRUCT 8'–0" HIGH CHAINLINK FENCE PER C.T.S.D. A85 W/ BARBED WIRE POST TOP PER C.T.S.D. A85A
(26) CONSTRUCT 6" A.C. BERM TYPE A PER S.D.R.S.D. G–5
(32) CONSTRUCT CONCRETE GRAVITY WALL TYPE B PER S.D.R.S.D. C–9
(38) CONSTRUCT PERFORATED PIPE PER DETAIL 2 SHEET D–12
(44) CONSTRUCT TRENCH FOR FIBER OPTIC CABLE PER DETAIL 8 SHEET C–41.

NOTE:

1. ± INDICATES VARIATION IN TRACK SEPARATION DISTANCES OF 1' TO 5'

NO.	DATE	REVISIONS	BY	CHK	APRV
0	10/2013	CONFORMED	SM	MB	MB
1	4/17/14	CCO 5 - SHEET 4 OF 16	PB	EW	EW
2	11/21/16	AS-BUILT	VS	PB	BD

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REGISTERED PROFESSIONAL ENGINEER MONTE L. BOWERS C 28495 Exp. 03/31/14 CIVIL STATE OF CALIFORNIA

DESIGNED BY SJH	DATE 06/12
DRAWN BY SJH	06/12
CHECKED BY WG	06/12
PRJ. ENG. SH	06/12

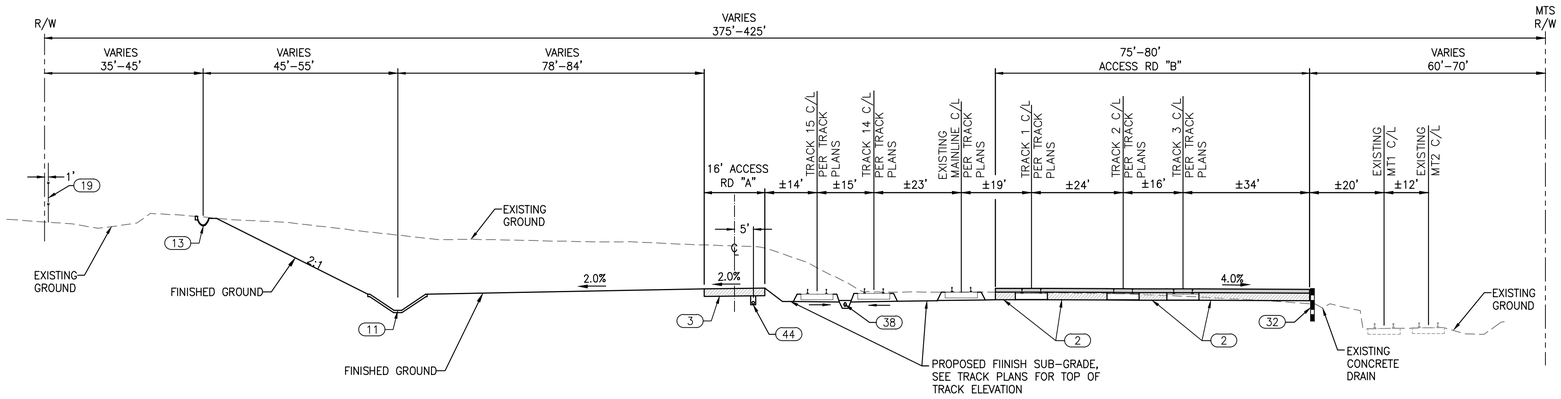
SANDAG

SAN YSIDRO YARD IMPROVEMENT PROJECT

TYPICAL SECTIONS

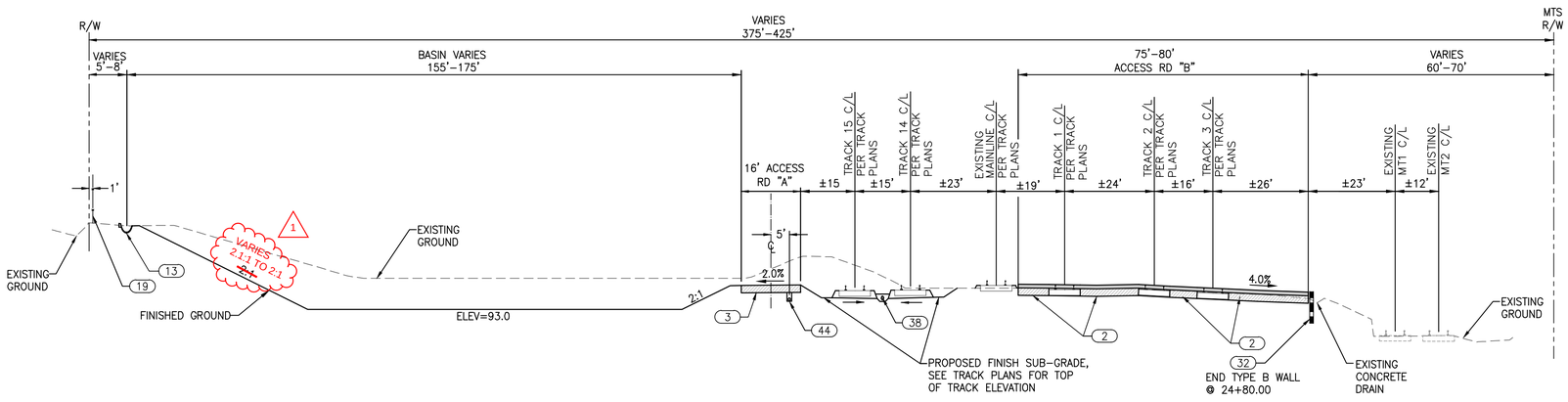
SCALE AS SHOWN
CONTRACT NO. CIP 1300601
DRAWING NO. C-7 SHEET NO. 7

CONFORMED OCTOBER 2013



ACCESS ROAD "A" AND ACCESS ROAD "B"

ROAD "A" STA 30+05 TO STA 30+48.78
ROAD "B" STA 22+14.74 TO STA 22+67.46
NOT TO SCALE



ACCESS ROAD "A" AND ACCESS ROAD "B"

ROAD "A" STA 30+48.78 TO STA 32+82.74
ROAD "B" STA 22+67.46 TO STA 25+02.05
NOT TO SCALE

CONSTRUCTION NOTES:

(2) CONSTRUCT 4" A.C. OVER 11" ~~CTB~~ CL II AB (RFI NO. 18) 2
(3) CONSTRUCT 13" CTB
(11) CONSTRUCT CONCRETE DRAINAGE CHANNEL PER S.D.R.S.D. D–70
(13) CONSTRUCT CONCRETE BROW DITCH TYPE B PER S.D.R.S.D. D–75
(19) CONSTRUCT 8'–0" HIGH CHAINLINK FENCE PER C.T.S.D. A85 W/ BARBED WIRE POST TOP PER C.T.S.D. A85A
(32) CONSTRUCT CONCRETE GRAVITY WALL TYPE B PER S.D.R.S.D. C–9
(38) CONSTRUCT PERFORATED PIPE PER DETAIL 2 SHEET D–12
(44) CONSTRUCT TRENCH FOR FIBER OPTIC CABLE PER DETAIL 8 SHEET C–41.

NOTE:

1. ± INDICATES VARIATION IN TRACK SEPARATION DISTANCES OF 1' TO 5'

AS-BUILT
CONTRACT NO.: CIP 1300601
RESIDENT ENGINEER'S SIGNATURE
DATE: 4/3/2017

REGISTERED PROFESSIONAL ENGINEER BETHANY C. DAVIS No. 68721 Exp. 09/30/15 CIVIL STATE OF CALIFORNIA 1

SANDAG
Issued For Construction
By: DV Date: 09/18/2014
This Plan Sheet supersedes the all previous similarly titled Plan Sheets

NO.	DATE	REVISIONS	BY	CHK	APRV
0	10/2013	CONFORMED	SM	MB	MB
1	4/17/14	CCO 5 - SHEET 5 OF 16	PB	EW	EW
2	11/21/16	AS-BUILT	VS	PB	BD

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REGISTERED PROFESSIONAL ENGINEER MONTE L. BOWERS No. 26193 Exp. 03/31/14 CIVIL STATE OF CALIFORNIA

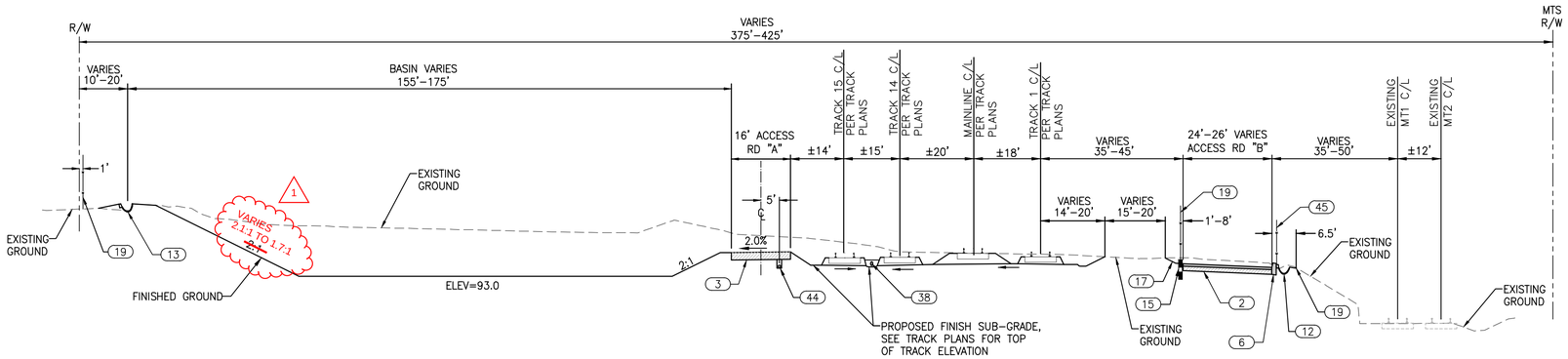
		DATE
DESIGNED BY	SJH	06/12
DRAWN BY	SJH	06/12
CHECKED BY	WG	06/12
PRJ. ENG.	SH	06/12

SAN YSIDRO YARD IMPROVEMENT PROJECT

TYPICAL SECTIONS

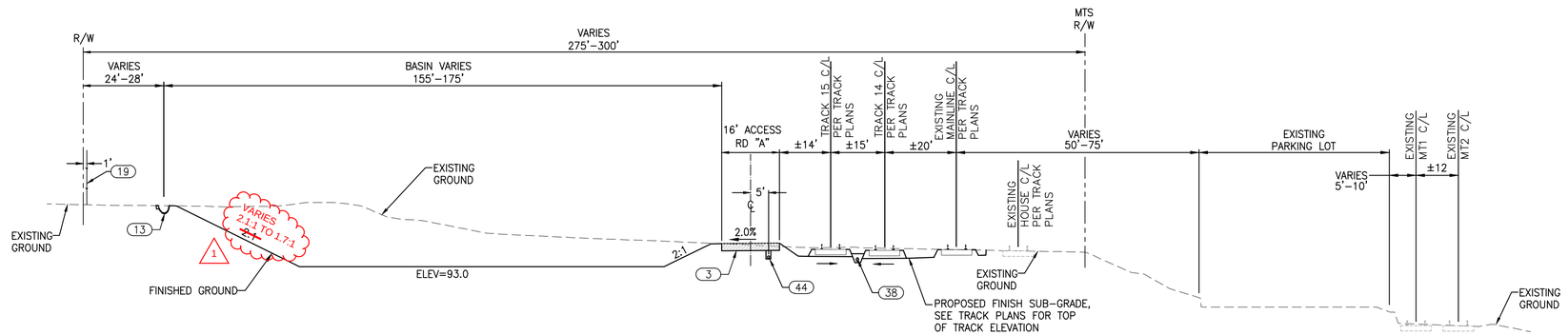
SCALE: AS SHOWN
CONTRACT NO.: CIP 1300601
DRAWING NO.: C-8
SHEET NO.: 8

CONFORMED OCTOBER 2013



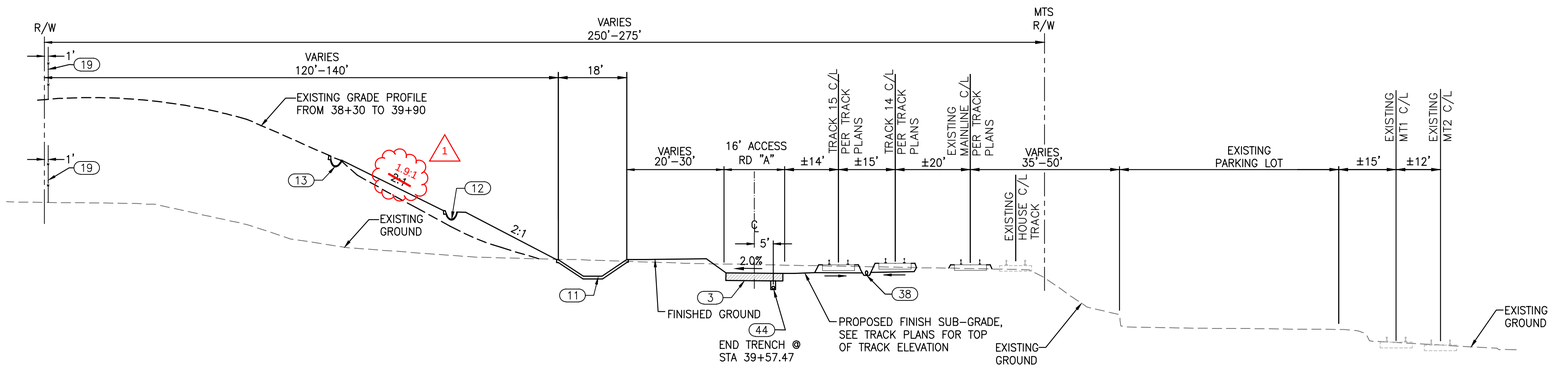
ACCESS ROAD "A" AND ACCESS ROAD "B"

ROAD "A" STA 32+82.74 TO STA 36+95.64
ROAD "B" STA 25+02.05 TO STA 29+48
NOT TO SCALE



ACCESS ROAD "A"

STA 36+95.64 TO STA 38+30
NOT TO SCALE



ACCESS ROAD "A"

STA 38+30 TO STA 43+28.25
NOT TO SCALE

AS-BUILT
CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE
DATE: 4/3/2017

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Issued For Construction
By: DV Date: 09/18/2014

This Plan Sheet supersedes the all previous similarly titled Plan Sheets

CONSTRUCTION NOTES:

(2) CONSTRUCT 4" A.C. OVER 11" ~~CTB~~ CL II AB (RFI NO. 18) 2
(3) CONSTRUCT 13" CTB
(11) CONSTRUCT CONCRETE DRAINAGE CHANNEL PER S.D.R.S.D. D–70
(12) CONSTRUCT CONCRETE TERRACE DITCH TYPE D PER S.D.R.S.D. D–75
(13) CONSTRUCT CONCRETE BROW DITCH TYPE B PER S.D.R.S.D. D–75
(15) CONSTRUCT CONCRETE RETAINING WALL PER C.T.S.D. B3–1A
(17) CONSTRUCT CONCRETE GUTTER W/ 6" INLET DRAIN AND GRATE PER C.T.S.D. B3–9
(19) CONSTRUCT 8'–0" HIGH CHAINLINK FENCE PER C.T.S.D. A85 W/ BARBED WIRE POST TOP PER C.T.S.D. A85A
(38) CONSTRUCT PERFORATED PIPE PER DETAIL 2 SHEET D–12
(44) CONSTRUCT TRENCH FOR FIBER OPTIC CABLE PER DETAIL 8 SHEET C–41.
(45) CONSTRUCT 4'–0" HIGH CHAINLINK FENCE PER C.T.S.P. A85

NOTE:

1. ± INDICATES VARIATION IN TRACK SEPARATION DISTANCES OF 1' TO 5'

NO.	DATE	REVISIONS	BY	CHK	APRV
0	10/2013	CONFORMED	SM	MB	MB
1	4/17/14	CCO 5 - SHEET 6 OF 16	PB	EW	EW
2	11/21/16	AS-BUILT	VS	PB	BD

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REGISTERED PROFESSIONAL ENGINEER — MONTE L. BOWERS — C 28193 Exp. 03/31/14 — CIVIL — STATE OF CALIFORNIA

		DATE
DESIGNED BY	SJH	06/12
DRAWN BY	SJH	06/12
CHECKED BY	WG	06/12
PRJ. ENG.	SH	06/12

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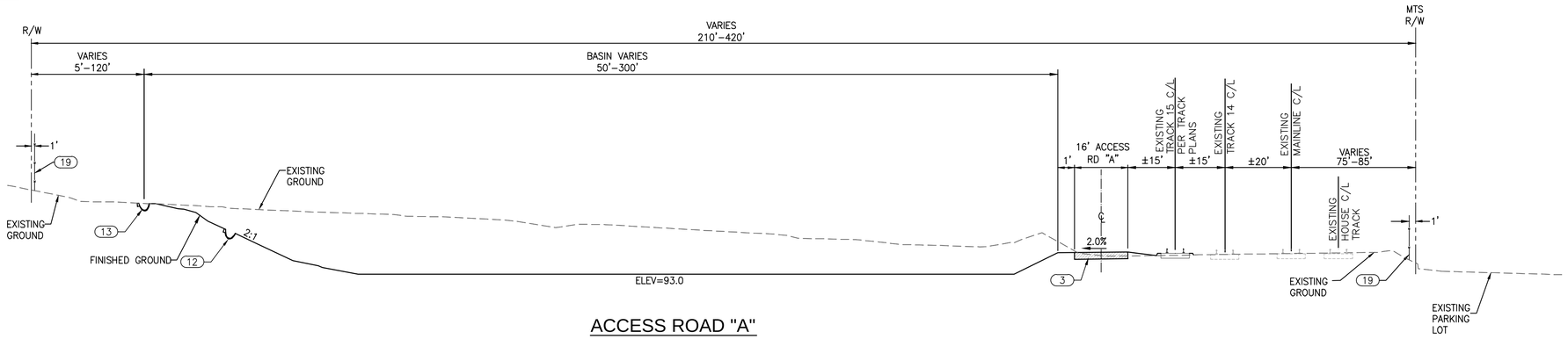
SAN YSIDRO YARD IMPROVEMENT PROJECT

TYPICAL SECTIONS

SCALE	AS SHOWN
CONTRACT NO.	CIP 1300601
DRAWING NO.	C-9
SHEET NO.	9

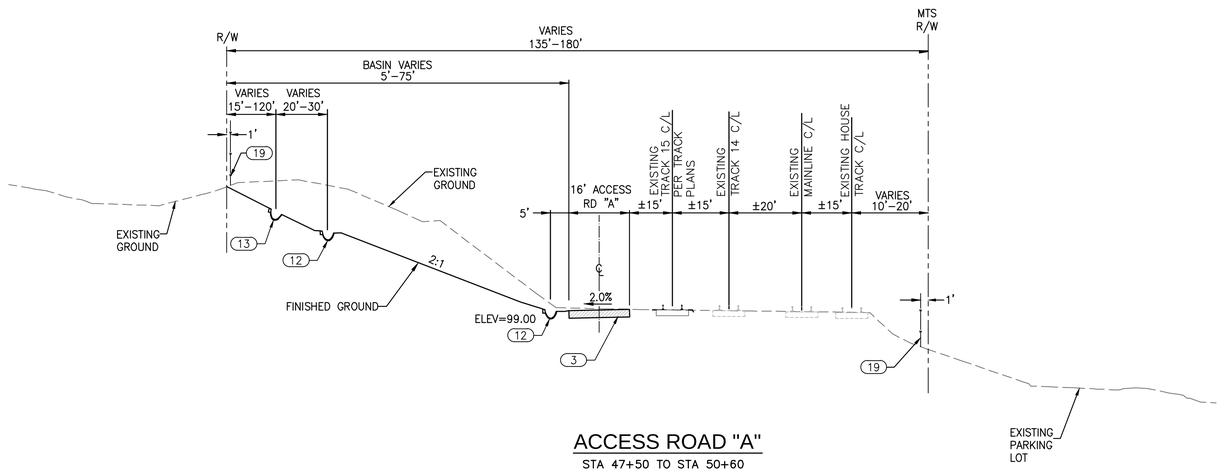
CONFORMED OCTOBER 2013

Drawing name: P:\17102 San Ysidro Final Design\Cad\01_Sheets\Final Submittal\C09 – TYPICAL SECTIONS.dwg LAYOUT Oct 24, 2013 1:32pm by: slmccarthy



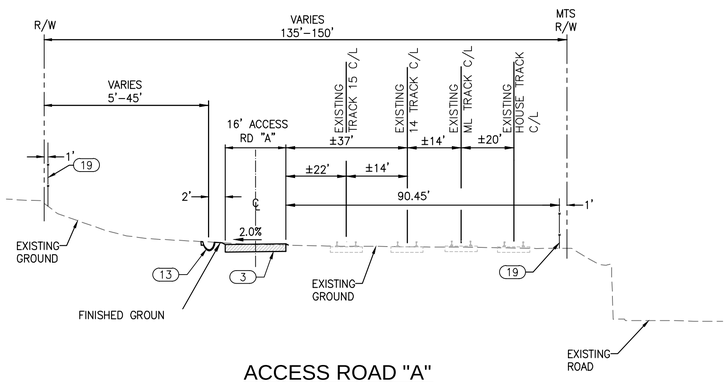
ACCESS ROAD "A"

STA 43+28.25 TO STA 47+50
NOT TO SCALE



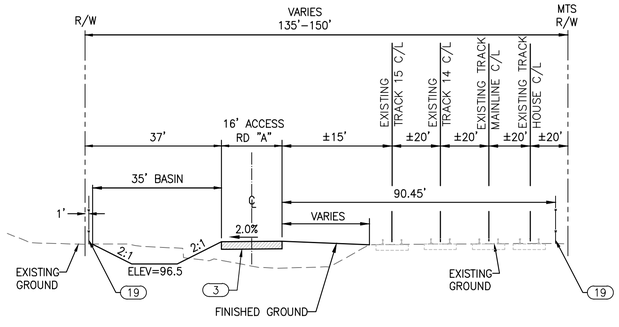
ACCESS ROAD "A"

STA 47+50 TO STA 50+60
NOT TO SCALE



ACCESS ROAD "A"

STA 50+60 TO STA 52+29.77
NOT TO SCALE



ACCESS ROAD "A"

STA 52+29.77 TO STA 54+20.06
NOT TO SCALE

AS-BUILT

CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE

DATE: 4/3/2017

CONSTRUCTION NOTES:

(3) CONSTRUCT 13" ~~XTB~~ CL II AB (RFI NO. 18) 1

(12) CONSTRUCT CONCRETE TERRACE DITCH TYPE D PER S.D.R.S.D. D–75

(13) CONSTRUCT CONCRETE BROW DITCH TYPE B PER S.D.R.S.D. D–75

(19) CONSTRUCT 8'–0" HIGH CHAINLINK FENCE PER C.T.S.D. A85 W/ BARBED WIRE POST TOP PER C.T.S.D. A85A

NOTE:

1. ± INDICATES VARIATION IN TRACK SEPARATION DISTANCES OF 1' TO 5'

NO.	DATE	REVISIONS	BY	CHK	APRV
0	03/2013	CONFORMED			
1	11/2016	AS-BUILT	VS	PB	BD

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REGISTERED PROFESSIONAL ENGINEER — SHARON L. HUMPHREYS — No. 60946 — Exp. 12/31/14 — CIVIL — STATE OF CALIFORNIA

DESIGNED BY SJH	DATE 06/12
DRAWN BY SJH	06/12
CHECKED BY WG	06/12
PRJ. ENG. SH	06/12

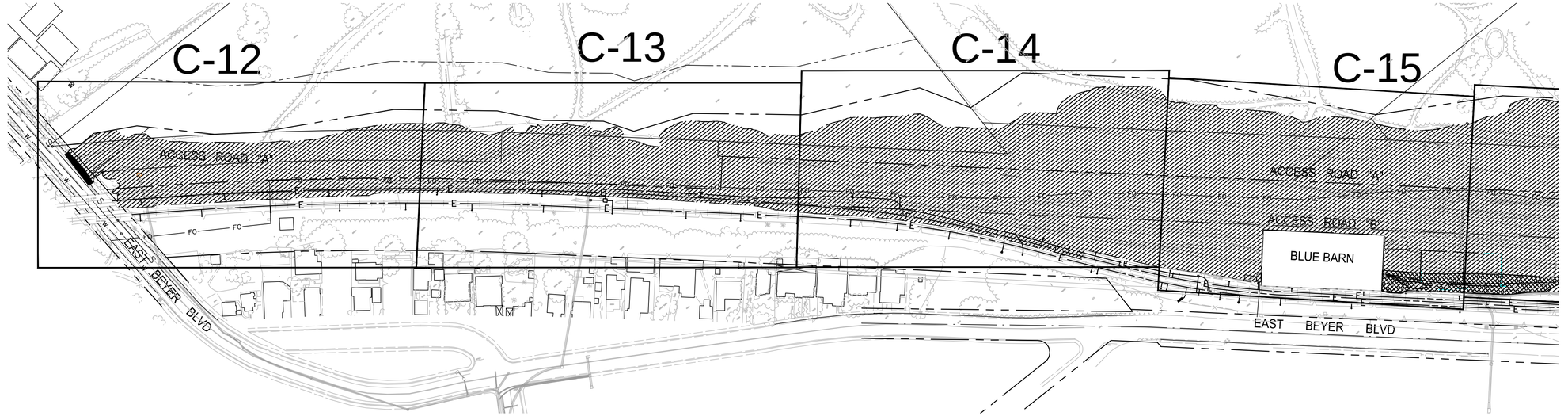
SANDAG

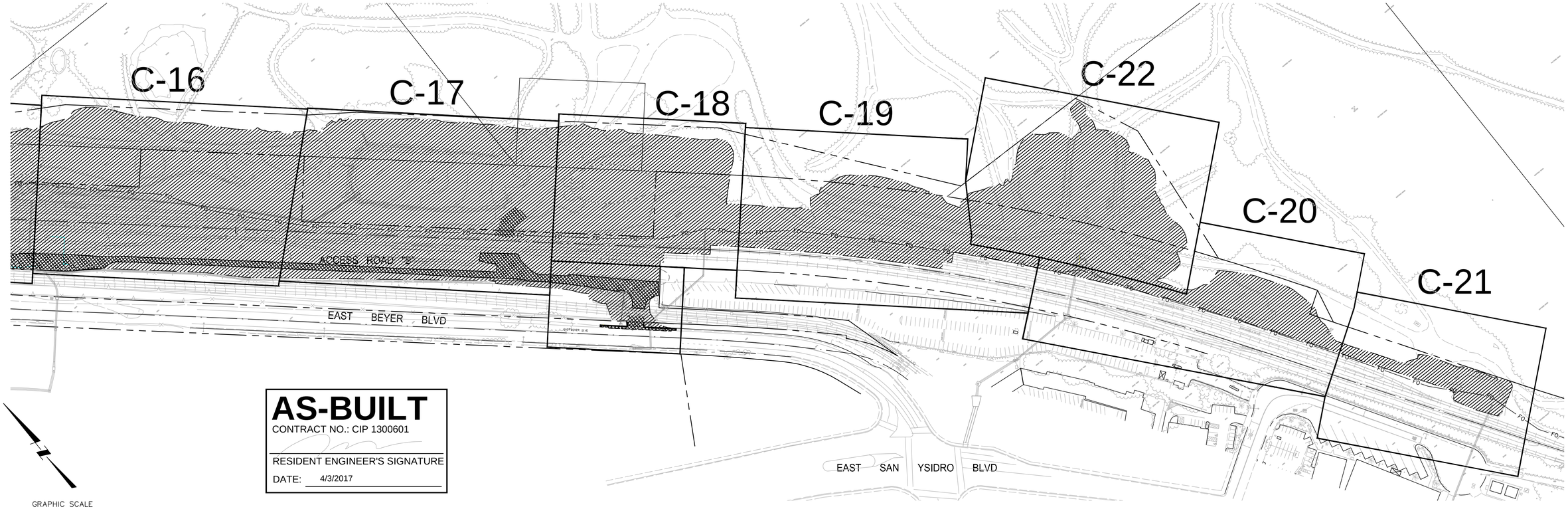
SAN YSIDRO YARD IMPROVEMENT PROJECT

TYPICAL SECTIONS

SCALE	AS SHOWN
CONTRACT NO.	CIP 1300601
DRAWING NO.	C-10
SHEET NO.	10

CONFORMED MARCH 2013





AS-BUILT
CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE

DATE: 4/3/2017

GRAPHIC SCALE
100 0 100 200
1"=100'

NO.	DATE	REVISIONS	BY	CHK	APRV
0	03/2013	CONFORMED			
1	11/2016	AS-BUILT	VS	PB	BD

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Tel: (858) 451-6100 Fax: (858) 451-2846
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REGISTERED PROFESSIONAL ENGINEER
SHARON L. HUMPHREYS
No. 60846
Exp. 12/31/14
CIVIL
STATE OF CALIFORNIA

		DATE
DESIGNED BY	SJH	06/12
DRAWN BY	SJH	06/12
CHECKED BY	WG	06/12
PRJ. ENG.	SH	06/12

SANDAG

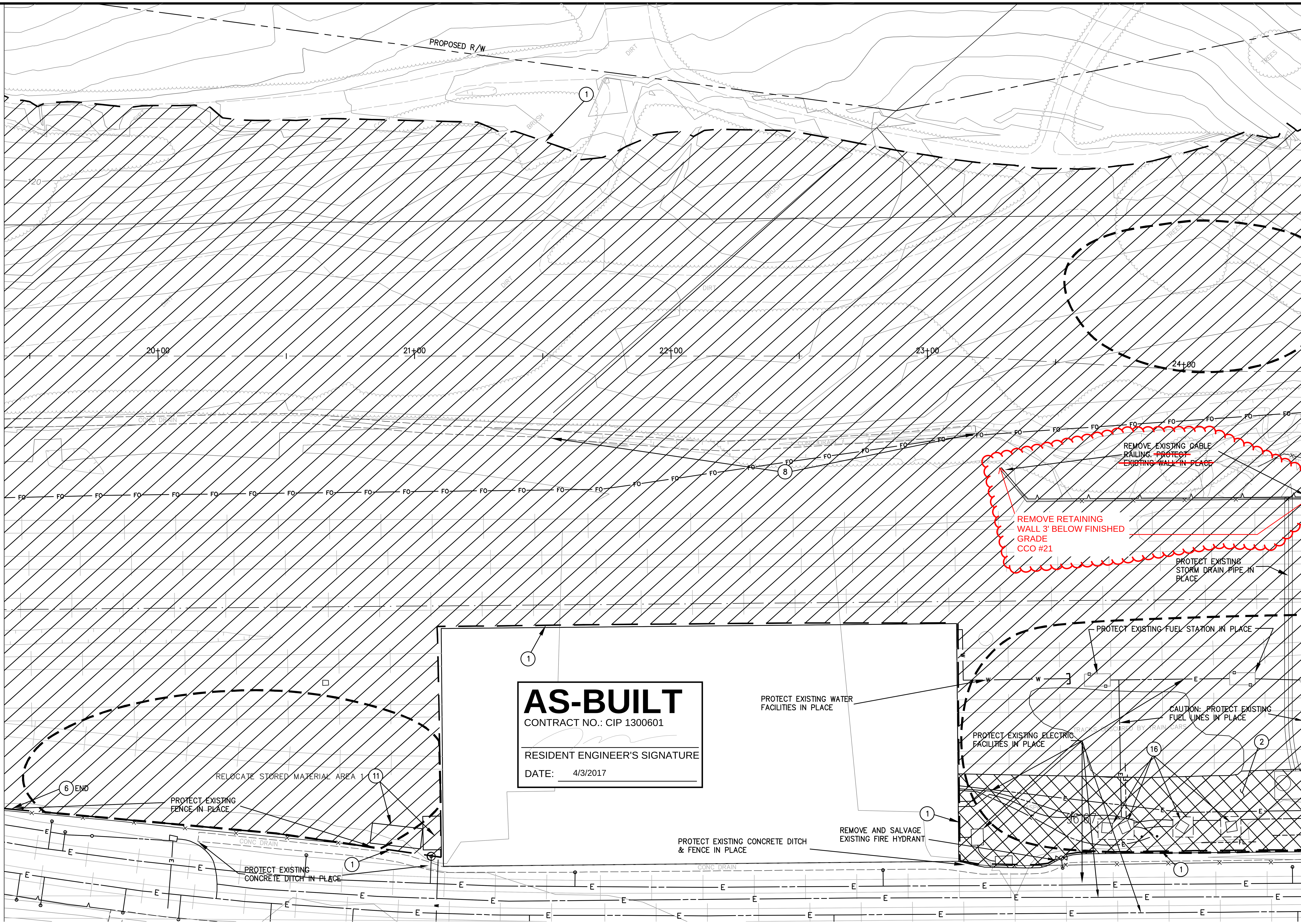
SAN YSIDRO YARD IMPROVEMENT PROJECT

CIVIL DEMOLITION PLAN
KEY MAP

SCALE: AS SHOWN
CONTRACT NO.: CIP 1300601
DRAWING NO.: C-11
SHEET NO.: 11

CONFORMED
MARCH 2013

Drawing name: P:\17102 San Ysidro Final Design\Cadd\01_Sheets\Final Submittal\C11 - DEMOLITION PLAN KEY MAP.dwg Check E May 17, 2013 11:10am by: stmccarthy



AS-BUILT

CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE

DATE: 4/3/2017

WORK TO BE DONE

1. CLEARING & GRUBBING LIMITS
2. REMOVE AND DISPOSE OF EXISTING PAVEMENT AND BASE
6. REMOVE AND DISPOSE OF EXISTING FENCE
8. REMOVE AND DISPOSE OF EXISTING CONCRETE DITCH
11. REMOVE AND SALVAGE EXISTING STORED MATERIAL AS DIRECTED PER SPECIFICATIONS
16. CAUTION: PROTECT EXISTING UNDERGROUND STORAGE TANKS IN PLACE, RAISE TANK MANHOLES, LIDS, VALVE COVERS, CAPS, AND CONCRETE SUPPORT PADS TO FINISH SURFACE.

NOTES:

1. CONTRACTOR TO REPLACE CURB AND GUTTER, AND/OR SIDEWALK DAMAGED DURING CONSTRUCTION.
2. EXISTING UTILITIES SHOWN ON PLANS WERE OBTAINED FROM AS-BUILT PLAN RESEARCH. CONTRACTOR SHALL VERIFY EXACT LOCATION OF EXISTING UTILITIES IN FIELD PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO PROVIDE ACCESS TO DRIVEWAYS DURING CONSTRUCTION.
4. FOR CIVIL IMPROVEMENTS AT THIS LOCATION SEE IMPROVEMENT PLAN SHEET C-27.
5. FOR TRACK, OCS, AND SIGNAL DEMOLITION PLANS, SEE TRACK, OCS, AND SIGNAL PLANS, RESPECTIVELY.
6. PROTECT MTS OCS POLES AND OVERHEAD WIRES.

1

LEGEND:

- CLEAR AND GRUB
- REMOVE AND DISPOSE OF EXISTING PAVEMENT & BASE
- REMOVE AND DISPOSE OF EXISTING CURB, GUTTER & BASE
- REMOVE AND DISPOSE OF EXISTING SIDEWALK
- SAWCUT EXISTING PAVEMENT
- LIMITS OF WORK
- PROPOSED R/W
- IMPACTED SOIL AREA

GRAPHIC SCALE

20 0 20 40

1"=20'

NO.	DATE	REVISIONS	BY	CHK	APRV
0	03/2013	CONFORMED			
1	11/2016	AS-BUILT	VS	PB	BD

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REGISTERED PROFESSIONAL ENGINEER SHARON L. HUMPHREYS No. 60946 Exp. 12/31/14 CIVIL STATE OF CALIFORNIA

	DATE
DESIGNED BY SJH	06/12
DRAWN BY SJH	06/12
CHECKED BY WG	06/12
PRJ. ENG. SH	06/12

SANDAG

SAN YSIDRO YARD IMPROVEMENT PROJECT

CIVIL DEMOLITION PLAN, ACCESS ROAD "A", STA 19+45 TO STA 24+50

SCALE: AS SHOWN

CONTRACT NO.: CIP 1300601

DRAWING NO.: C-15

SHEET NO.: 15

CONFORMED MARCH 2013

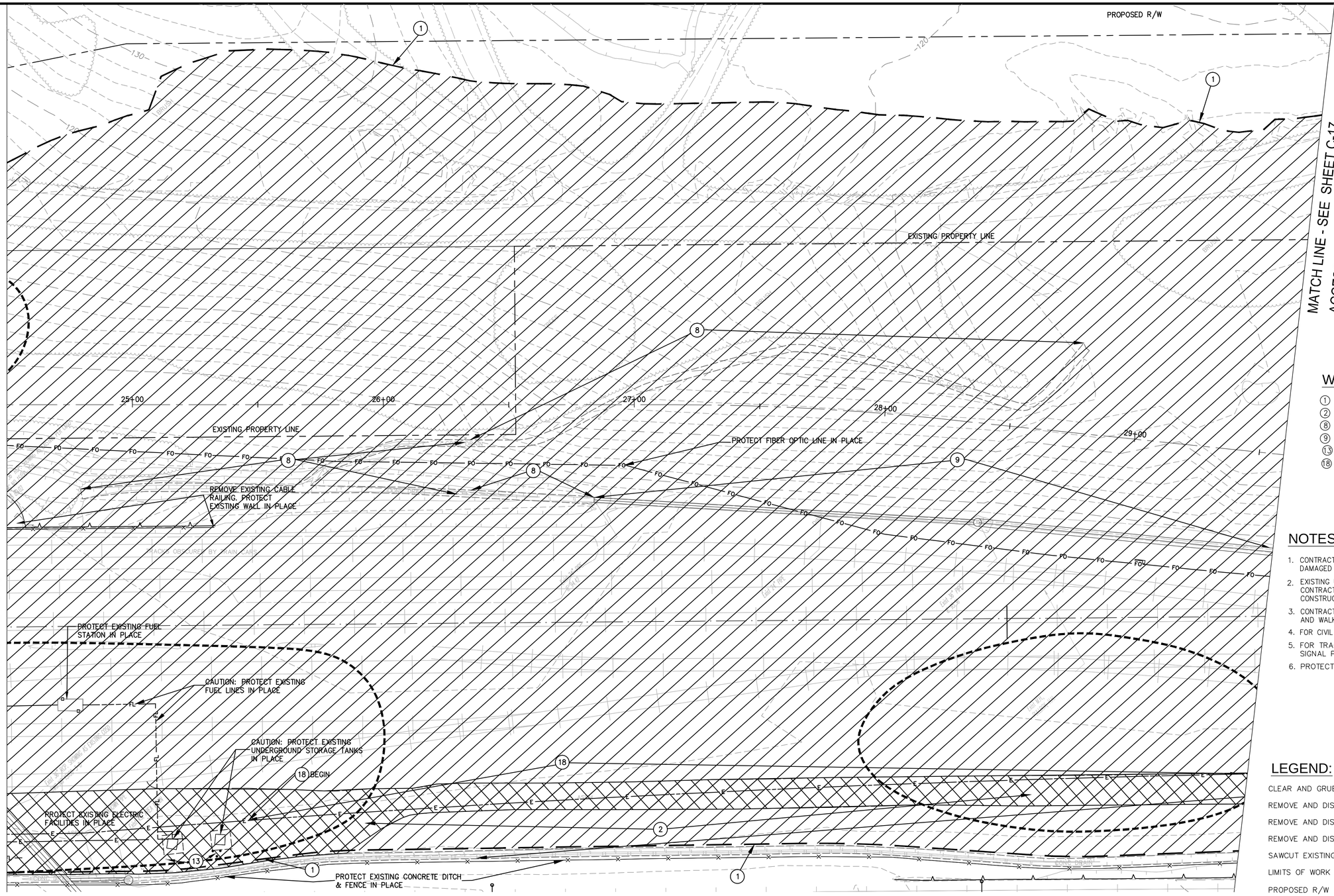
Drawing name: P:\17102 San Ysidro Final Design\Cadd\01_Sheets\Final Submittal\C15 - DEMOLITION PLAN.dwg Check E May 17, 2013 11:15am by: stmccarthy

AS-BUILT

CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE

DATE: 4/3/2017



WORK TO BE DONE

1. CLEARING & GRUBBING LIMITS
2. REMOVE AND DISPOSE OF EXISTING PAVEMENT AND BASE
8. REMOVE AND DISPOSE OF EXISTING CONCRETE DITCH
9. REMOVE AND DISPOSE OF EXISTING STORM DRAIN PIPE
13. REMOVE AND DISPOSE OF BOLLARDS
18. REMOVE AND CAP ELECTRIC LINE.

NOTES:

1. CONTRACTOR TO REPLACE CURB AND GUTTER, AND/OR SIDEWALK DAMAGED DURING CONSTRUCTION.
2. EXISTING UTILITIES SHOWN ON PLANS WERE OBTAINED FROM AS-BUILT PLAN RESEARCH. CONTRACTOR SHALL VERIFY EXACT LOCATION OF EXISTING UTILITIES IN FIELD PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO PROVIDE ACCESS TO DRIVEWAYS AND WALKWAY ENTRANCES DURING CONSTRUCTION.
4. FOR CIVIL IMPROVEMENTS AT THIS LOCATION SEE IMPROVEMENT PLAN SHEET C-28.
5. FOR TRACK, OCS, AND SIGNAL DEMOLITION PLANS, SEE TRACK, OCS, AND SIGNAL PLANS, RESPECTIVELY.
6. PROTECT MTS OCS POLES AND OVERHEAD WIRES.

LEGEND:

- CLEAR AND GRUB
- REMOVE AND DISPOSE OF EXISTING PAVEMENT & BASE
- REMOVE AND DISPOSE OF EXISTING CURB, GUTTER & BASE
- REMOVE AND DISPOSE OF EXISTING SIDEWALK
- SAWCUT EXISTING PAVEMENT
- LIMITS OF WORK
- PROPOSED R/W
- IMPACTED SOIL AREA

NO.	DATE	REVISIONS	BY	CHK	APRV
0	03/2013	CONFORMED			
1	11/2016	AS-BUILT	VS	PB	BD

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10620 Treena Street Suite 200
San Diego, CA 92131
Tel: (858) 451-6100 Fax: (858) 451-2846
www.us.bureauveritas.com

REGISTERED PROFESSIONAL ENGINEER SHARON L. HUMPHREYS No. 69945 Exp. 12/31/14 CIVIL STATE OF CALIFORNIA

		DATE
DESIGNED BY	SJH	06/12
DRAWN BY	SJH	06/12
CHECKED BY	WG	06/12
PRJ. ENG.	SH	06/12

SANDAG

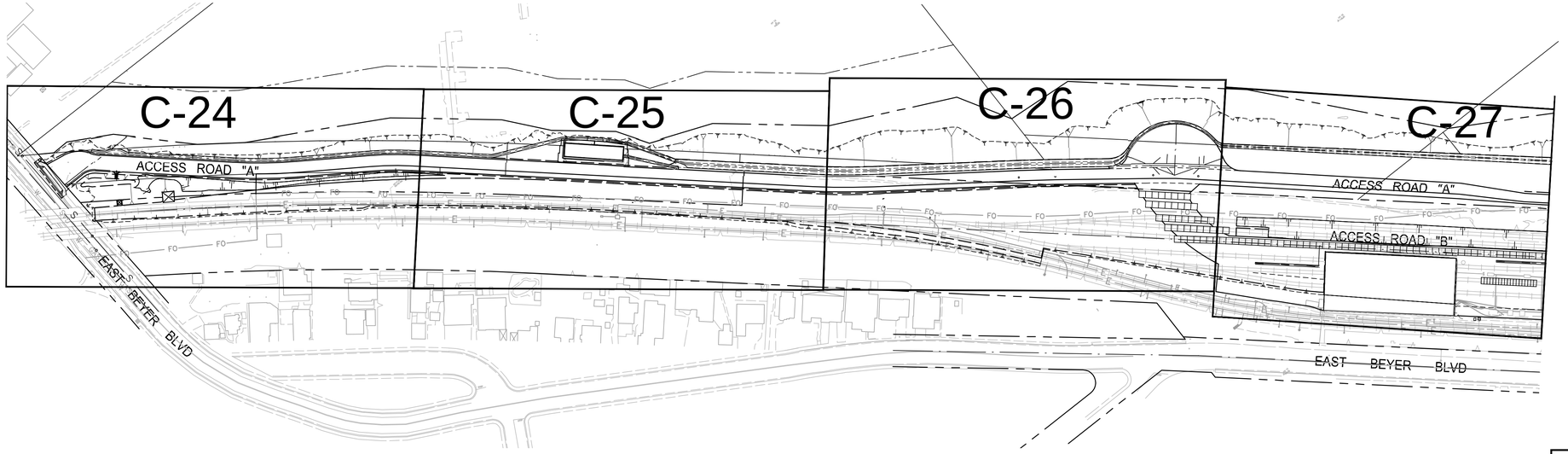
SAN YSIDRO YARD IMPROVEMENT PROJECT

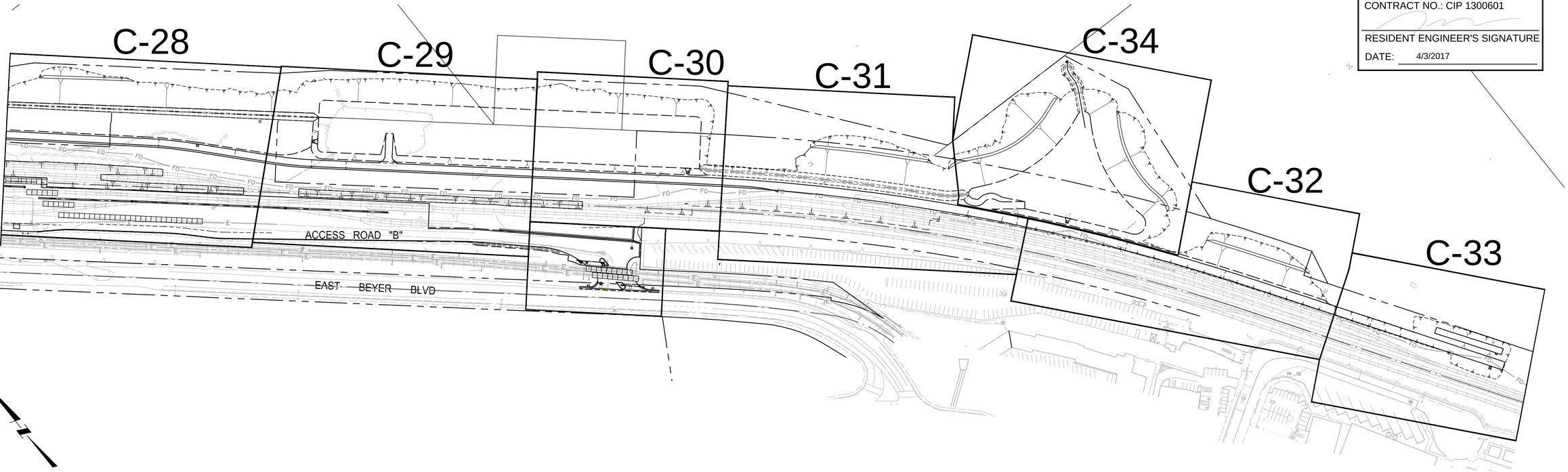
CIVIL DEMOLITION PLAN,
ACCESS ROAD "A",
STA 24+50 TO STA 29+60

SCALE	
AS SHOWN	
CONTRACT NO.	
CIP 1300601	
DRAWING NO. C-16	SHEET NO. 16

CONFORMED
MARCH 2013

Drawing name: P:\17102 San Ysidro Final Design\Cadd\01_Sheets\Final Submittal\C16 - DEMOLITION PLAN.dwg Check E May 17, 2013 11:16am by: stmccarthy





AS-BUILT
CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE

DATE: 4/3/2017

GRAPHIC SCALE
100 0 100 200
1"=100'

NO.	DATE	REVISIONS	BY	CHK	APRV
0	03/2013	CONFORMED			
2	11/21/16	AS-BUILT	VS	PB	BD

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San Diego, CA 92131
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www.us.bureauveritas.com

REGISTERED PROFESSIONAL ENGINEER
SHARON L. HUMPHREYS
No. 60846
Exp. 12/31/14
CIVIL
STATE OF CALIFORNIA

		DATE
DESIGNED BY	SJH	06/12
DRAWN BY	SJH	06/12
CHECKED BY	WG	06/12
PRJ. ENG.	SH	06/12

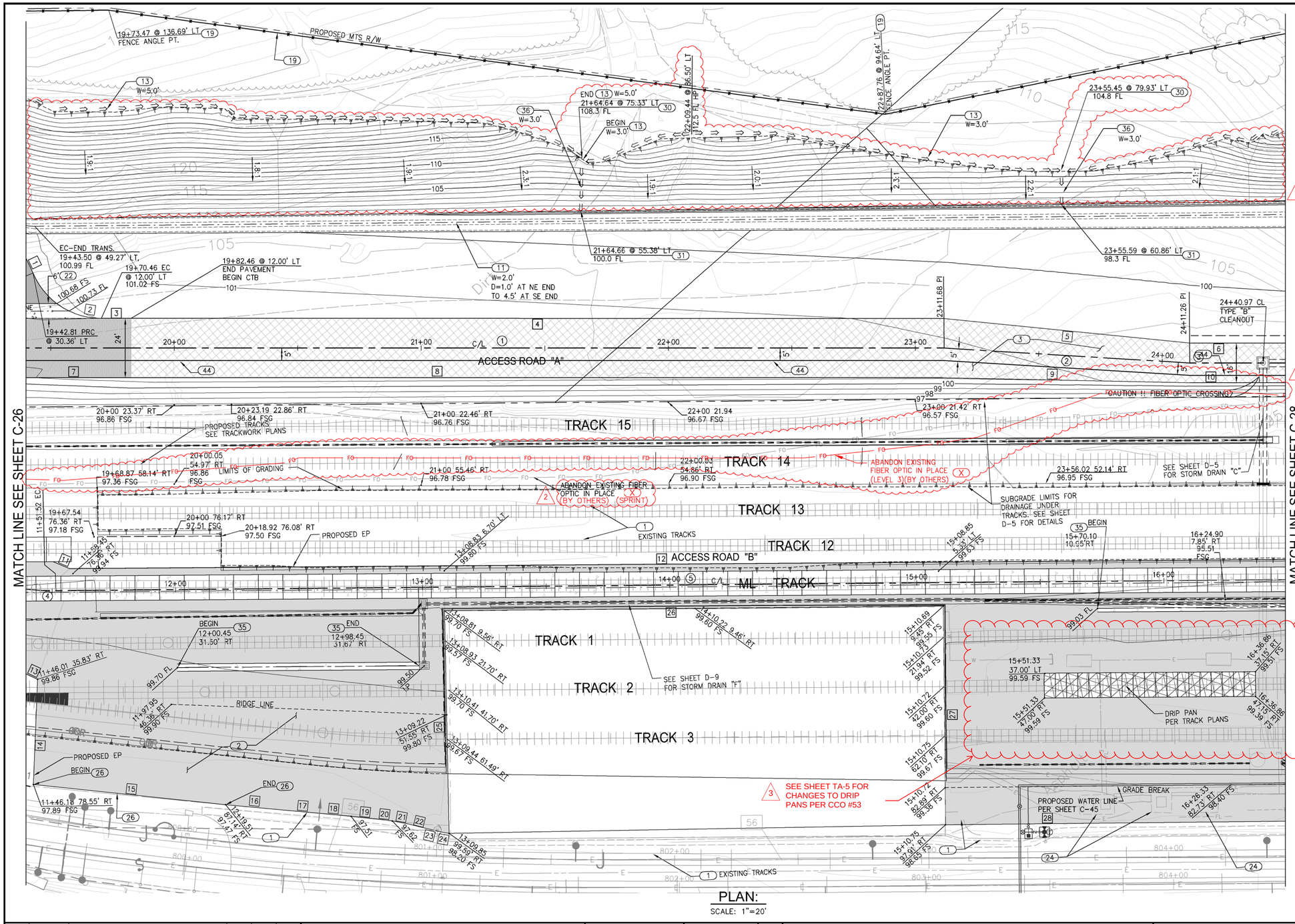
SANDAG

SAN YSIDRO YARD IMPROVEMENT PROJECT

CIVIL IMPROVEMENT PLANS, KEY MAP

SCALE	AS SHOWN
CONTRACT NO.	CIP 1300601
DRAWING NO.	C-23
SHEET NO.	23

CONFORMED MARCH 2013



PLAN:
SCALE: 1"=20'

CENTERLINE DATA				
NO.	DELTA/BEARING	RADIUS	LENGTH	REMARK
1	N 48°02'16" W	---	371.68'	CENTERLINE
2	N 44°35'01" W	---	99.58'	CENTERLINE
3	N 48°02'16" W	---	38.74'	CENTERLINE
4	7°21'45"	94.00'	12.08'	CENTERLINE
5	N 48°33'47" W	---	497.79'	CENTERLINE

EDGE OF ROAD				
NO.	DELTA/BEARING	RADIUS	LENGTH	REMARK
1	4°43'33"	80.00'	6.60'	EP
2	67°10'23"	30.00'	35.17'	EP
3	N 48°02'16" W	---	12.00'	EP
4	N 48°02'16" W	---	329.19'	EDGE OF ~~CTB~~ AB
5	N 42°19'21" W	---	100.45'	EDGE OF ~~CTB~~ AB
6	N 48°02'16" W	---	38.22'	EDGE OF ~~CTB~~ AB
7	N 48°02'16" W	---	42.46'	EP
8	N 48°02'16" W	---	328.50'	EDGE OF ~~CTB~~ AB
9	N 46°53'37" W	---	100.15'	EDGE OF ~~CTB~~ AB
10	N 48°02'16" W	---	38.72'	EDGE OF ~~CTB~~ AB
11	3°10'46"	129.70'	7.20'	EP
12	N 48°28'05" W	---	492.20'	EP
13	0°56'41"	309.75'	5.11'	EP
14	N 44°14'55" E	---	42.62'	EP
15	N 42°03'20" W	---	78.30'	6" TYPE A AC BERM
16	N 42°40'28" W	---	22.91'	EP
17	N 42°58'35" W	---	16.94'	EP
18	N 42°42'04" W	---	11.12'	EP
19	N 41°52'14" W	---	10.24'	EP
20	N 40°48'22" W	---	6.50'	EP
21	N 37°33'55" W	---	6.48'	EP
22	N 34°01'52" W	---	8.69'	EP
23	N 34°55'17" W	---	5.67'	EP
24	N 38°24'26" W	---	2.73'	EP
25	N 40°48'57" E	---	90.06'	EP
26	N 48°35'12" W	---	201.90'	EP
27	N 41°24'48" E	---	88.47'	EP
28	N 48°37'13" W	---	137.66'	EP

(X) FIBER TO BE REMOVED, CONDUIT TO BE ABANDONED AND LEFT IN PLACE. MANHOLES TO BE SLURRY BACKFILLED

CONSTRUCTION NOTES:

1. PROTECT IN PLACE
2. CONSTRUCT 4" A.C. OVER 11" ~~CTB~~ CL II AB RFI NO. 18
3. CONSTRUCT 13" CTB
11. CONSTRUCT CONCRETE DRAINAGE CHANNEL PER S.D.R.S.D. D-70
13. CONSTRUCT CONCRETE BROW DITCH TYPE B PER S.D.R.S.D. D-75
19. CONSTRUCT 8'-0" HIGH CHAINLINK FENCE PER C.T.S.P. A85 W/ BARBED WIRE POST TOP PER C.T.S.P. A85A
22. CONSTRUCT GUTTER (W/O SPANDRELS) PER S.D.R.S.D. G-12 (WIDTH=6')
24. PROTECT EXISTING TANKS IN PLACE. ADJUST MANHOLE TO GRADE
26. CONSTRUCT 6" A.C. BERM TYPE A PER S.D.R.S.D. G-5
30. CONSTRUCT DITCH JUNCTION PER DETAIL 1 SHEET C-41
31. CONSTRUCT DITCH TO CHANNEL CONNECTION PER DETAIL 1 SHEET C-42
32. CONSTRUCT CONCRETE WALL TYPE B PER S.D.R.S.D. C-9
35. CONSTRUCT 3.0' WIDE VALLEY GUTTER PER DETAIL 5 SHEET C-41
36. CONSTRUCT CONCRETE OVER SLOPE DRAIN DITCH TYPE D PER S.D.R.S.D. D-75
44. CONSTRUCT SPRINT AND LEVEL 3 JOINT TRENCH FOR FIBER OPTIC CABLE PER DETAIL 8 SHEET C-41.

NO.	DATE	REVISIONS	BY	CHK	APRV
0	10/2013	CONFORMED	SM	MB	MB
1	04/17/14	CCO-5 – SHEET 10 OF 16	PB	EW	EW
2	09/04/14	CCO-7 – SHEET 5 OF 13	PB	BD	BD
3	11/21/16	AS-BUILT	VS	PB	BD

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10620 Treena Street Suite 170
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www.us.bureauveritas.com

REGISTERED PROFESSIONAL ENGINEER — MONTE L. BOWERS — No. 28493 — Exp. 03/31/14 — CIVIL — STATE OF CALIFORNIA

		DATE
DESIGNED BY	SJH	06/12
DRAWN BY	SJH	06/12
CHECKED BY	WG	06/12
PRJ. ENG.	SH	06/12

SANDAG

SAN YSIDRO YARD IMPROVEMENT PROJECT

ACCESS ROAD "A" IMPROVEMENTS, GRADING AND FENCING
STA.19+45 TO STA. 24+50

SCALE	AS SHOWN
CONTRACT NO.	CIP 1300601
DRAWING NO.	C-27
SHEET NO.	27

CONFORMED OCTOBER 2013

REGISTERED PROFESSIONAL ENGINEER — BRITTANY G. CUNA — No. 68721 — Exp. 09/30/15 — CIVIL — STATE OF CALIFORNIA

Drawing name: \\TYLI.COM\Files\Ushita3\SanDiego\Legacy\prj_file\1075\1085 - SANDAG On-Call\1085.02 - San Ysidro Yard Improvements\Construction\Conc\27 - GRADING AND IMPROVEMENT PLANS.dwg Check E... Sep 22, 2014 12:38pm by: lmohamed

AS-BUILT

CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE

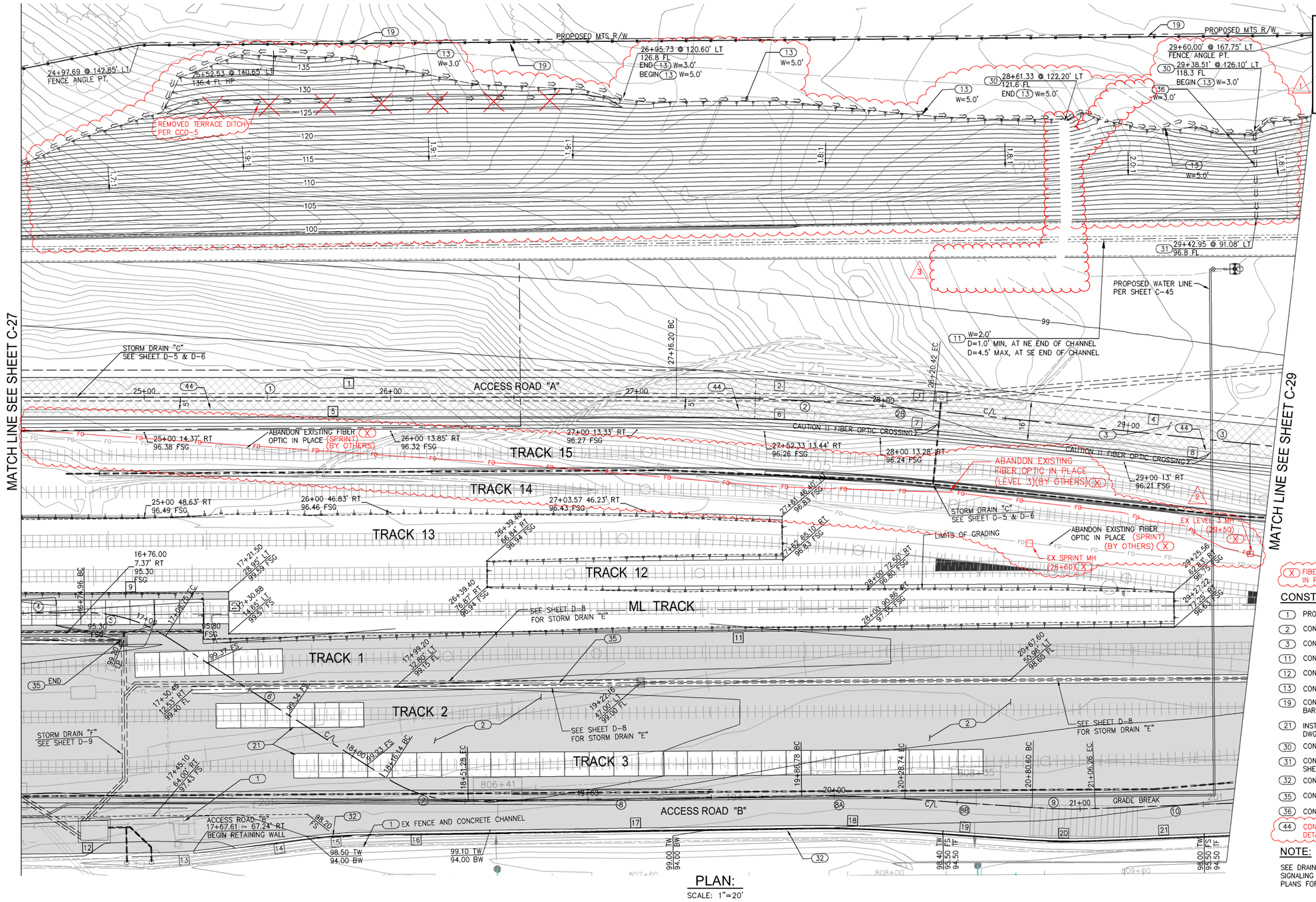
DATE: 4/3/2017

REGISTERED PROFESSIONAL ENGINEER — BRITTANY G. PLUMB — No. 68721 — Exp. 06/30/15 — CIVIL — STATE OF CALIFORNIA

GRAPHIC SCALE

20 0 20 40

1"=20'



PLAN:

SCALE: 1"=20'

CENTERLINE DATA

NO.	DELTA/BEARING	RADIUS	LENGTH	REMARK
1	N 48°02'16" W	---	266.21'	CENTERLINE
2	4°48'06"	1000.00'	83.80'	CENTERLINE
2B	1°10'13"	1000.00'	20.42'	CENTERLINE
3	N 42°03'58" W	---	139.57'	CENTERLINE
4	N 48°33'47" W	---	25.66'	CENTERLINE
5	33°13'03"	60.00'	34.79'	CENTERLINE
6	N 15°20'44" W	---	106.39'	CENTERLINE
7	33°33'29"	60.00'	35.14'	CENTERLINE
8	N 48°54'13" W	---	135.50'	CENTERLINE
8A	4°48'32"	500.00'	41.96'	CENTERLINE
8B	N 44°05'41" W	---	51.86'	CENTERLINE
9	6°10'37"	238.00'	25.66'	CENTERLINE
10	N 50°16'18" W	---	56.16'	CENTERLINE

EDGE OF ROAD DATA

NO.	DELTA/BEARING	RADIUS	LENGTH	REMARK
1	N 48°02'16" W	---	266.20'	EDGE OF CTB AB
2	4°48'06"	1008.00'	84.47'	EDGE OF CTB AB
3	1°10'13"	1008.00'	20.59'	EDGE OF CTB AB
4	N 42°03'58" W	---	139.57'	EDGE OF CTB AB
5	N 48°02'16" W	---	266.20'	EDGE OF CTB AB
6	4°48'06"	992.00'	83.13'	EDGE OF CTB AB
7	1°10'13"	992.00'	20.26'	EDGE OF CTB AB
8	N 42°03'58" W	---	139.57'	EDGE OF CTB AB
9	N 48°28'05" W	---	84.17'	EP
10	N 41°31'55" E	---	17.10'	EP
11	N 48°28'05" W	---	416.21'	EP
12	N 48°37'13" W	---	53.93'	EP
13	6°53'21"	200.00'	24.05'	EP
14	N 55°30'34" W	---	38.44'	EP
15	6°36'21"	200.00'	23.06'	EP
16	N 48°54'13" W	---	42.64'	EP
17	N 48°54'13" W	---	135.50'	EP
18	4°48'32"	488.00'	40.96'	EP
19	N 44°05'41" W	---	51.85'	EP
20	6°10'37"	250.00'	26.95'	EP
21	N 50°16'18" W	---	54.33'	EP

RFI No. 18

(X) FIBER TO BE REMOVED. CONDUIT TO BE ABANDONED AND LEFT IN PLACE. MANHOLES TO BE SLURRY BACKFILLED

CONSTRUCTION NOTES:

(1) PROTECT IN PLACE
(2) CONSTRUCT 4" A.C. OVER 11" CTB ~~CTB~~ CL II AB RFI NO. 18
(3) CONSTRUCT 13" CTB
(11) CONSTRUCT CONCRETE DRAINAGE CHANNEL PER S.D.R.S.D. D-70
(12) CONSTRUCT CONCRETE TERRACE DITCH TYPE D PER S.D.R.S.D. D-75
(13) CONSTRUCT CONCRETE BROW DITCH TYPE B PER S.D.R.S.D. D-75
(19) CONSTRUCT 8'-0" HIGH CHAINLINK FENCE PER C.T.S.P. A85 W/ BARBED WIRE POST TOP PER C.T.S.D. A85A
(21) INSTALL PRECAST CONCRETE CROSSING PANELS PER BNSF DWG 2000300 & DWG 2000302
(30) CONSTRUCT DITCH JUNCTION PER DETAIL 1 SHEET C-41
(31) CONSTRUCT DITCH TO CHANNEL CONNECTION PER DETAIL 1 SHEET C-42
(32) CONSTRUCT CONCRETE WALL TYPE B PER S.D.R.S.D. C-9
(35) CONSTRUCT 3.0' WIDE VALLEY GUTTER PER DETAIL 5 SHEET C-41
(36) CONSTRUCT CONCRETE OVER SLOPE DRAIN DITCH TYPE D PER S.D.R.S.D. D-75
(44) CONSTRUCT SPRINT AND LEVEL 3 JOINT TRENCH FOR FIBER OPTIC CABLE PER DETAIL 8 SHEET C-41.

NOTE:

SEE DRAINAGE PLANS, TRACKWORK PLANS, SIGNALING PLANS AND OVERHEAD CATENARY SYSTEM PLANS FOR ALL OTHER IMPROVEMENTS.

LEGEND

SEE SHEET C-3

NO.	DATE	REVISIONS	BY	CHK	APRV
0	10/2013	CONFORMED	SM	MB	MB
1	04/17/14	CCO-5 – SHEET 11 OF 16	PB	EW	EW
2	09/04/14	CCO-7 – SHEET 6 OF 13	PB	BD	BD
3	11/21/16	AS-BUILT	VS	PB	BD

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REGISTERED PROFESSIONAL ENGINEER — MONTE L. BOWERS — C 26193 — Exp. 03/31/14 — CIVIL — STATE OF CALIFORNIA

DESIGNED BY SJH	DATE 06/12
DRAWN BY SJH	06/12
CHECKED BY WG	06/12
PRJ. ENG. SH	06/12

SANDAG

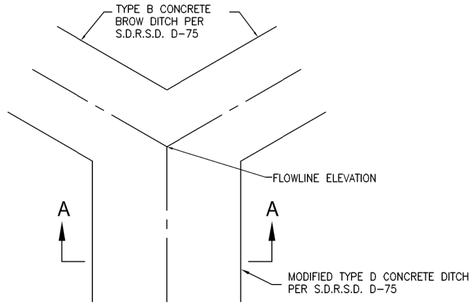
SAN YSIDRO YARD IMPROVEMENT PROJECT

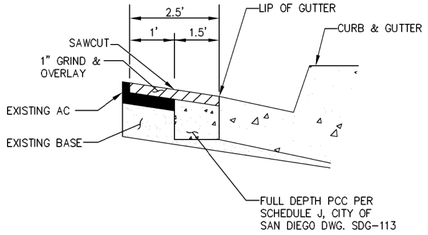
ACCESS ROAD "A" IMPROVEMENTS, GRADING AND FENCING STA 24+50 TO STA 29+60

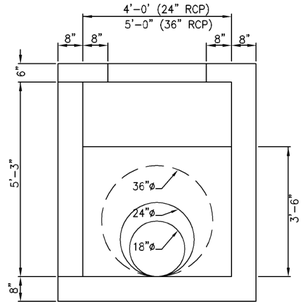
SCALE	
AS SHOWN	
CONTRACT NO. CIP 1300601	
DRAWING NO. C-28	SHEET NO. 28

CONFORMED OCTOBER 2013

Drawing name: P:\10795\1085 - SANDAG On-Call\1085.02 - San Ysidro Yard Improvements\Construction\Construction Changes\CCO7\4-Grading & Improvement\C28 - GRADING AND IMPROVEMENT PLANS.dwg Check E Sep 22, 2014 3:07pm by: lmohamed

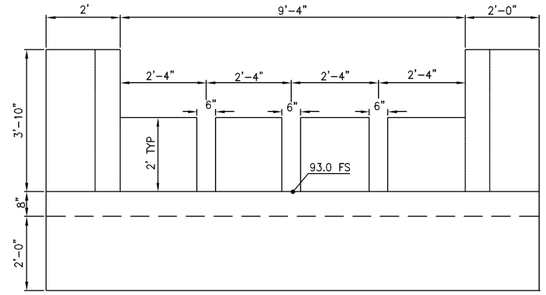


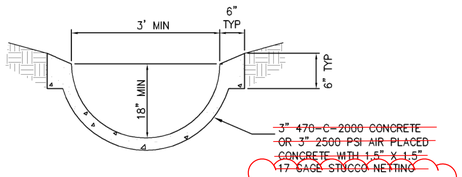




SECTION B-B
NOT TO SCALE

AS-BUILT
CONTRACT NO.: CIP 1300601
RESIDENT ENGINEER'S SIGNATURE
DATE: 4/3/2017





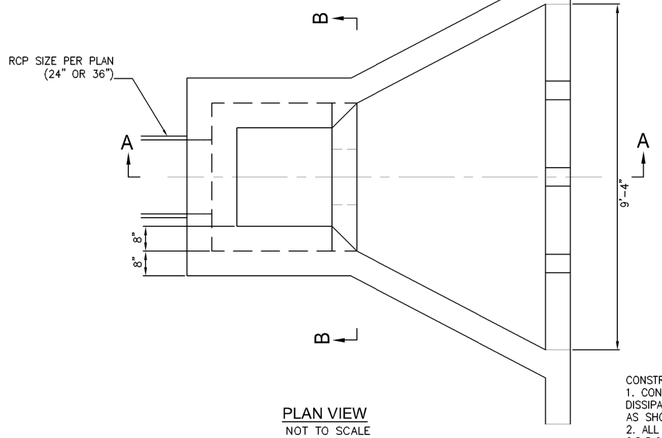
SECTION A-A
NOT TO SCALE

3" 4500 PSI Concrete with
6" x 6" 10 Gage Wire Mesh

DITCH JUNCTION DETAIL 1/41
NOT TO SCALE

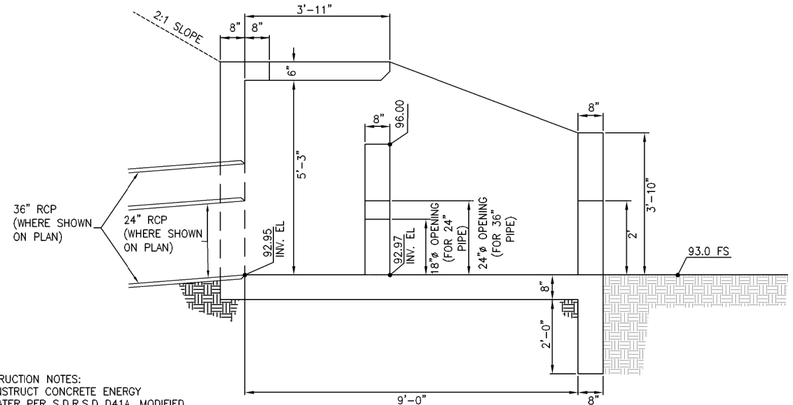
RFI No. 33 & 34 (3)

PAVEMENT GRIND/OVERLAY DETAIL 2/41
NOT TO SCALE



PLAN VIEW
NOT TO SCALE

SECTION C-C
NOT TO SCALE



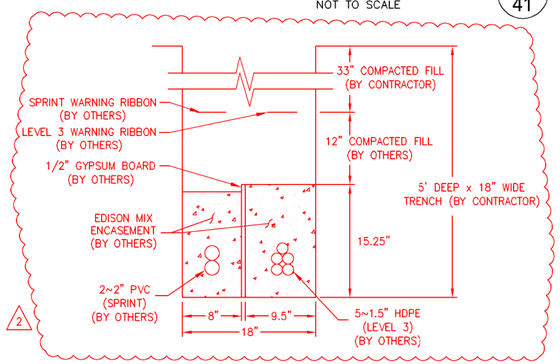
CONSTRUCTION NOTES:
1. CONSTRUCT CONCRETE ENERGY DISSIPATER PER S.D.R.S.D D41A, MODIFIED AS SHOWN.
2. ALL REINFORCEMENT SHALL CONFORM TO S.D.R.S.D. D-42

SANDAG
Issued For Construction
By: DV Date: 09/18/2014
This Plan Sheet supersedes the all previous similarly titled Plan Sheets

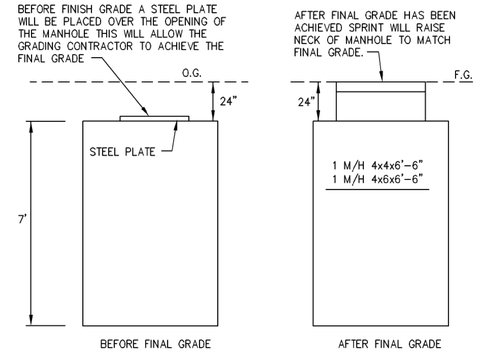
PAVEMENT CUTOFF WALL 4/41
NOT TO SCALE

VALLEY GUTTER 5/41
NOT TO SCALE

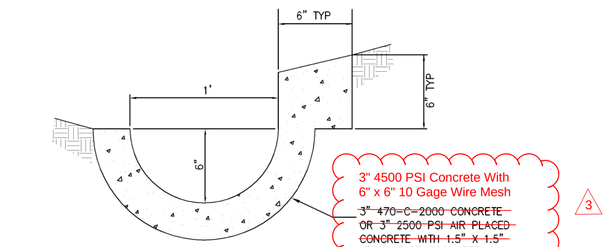
DETENTION BASIN INLET 3/41
NOT TO SCALE



FIBER OPTIC TRENCH 8/41
NOT TO SCALE



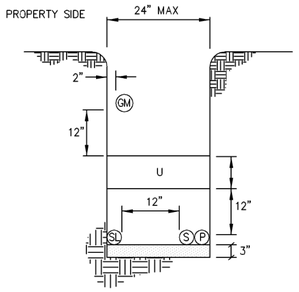
FIBER OPTIC MANHOLE DETAIL 9/41
NOT TO SCALE



3

MODIFIED TYPE 'B' DITCH 6/41
NOT TO SCALE

RFI No. 33 & 34



JOINT TRENCH LOCATIONS 7/41
NOT TO SCALE

	LEGEND	MINIMUM COVER
GM	GAS MAIN	30"
GS	GAS SERVICE	30"
P	PRIMARY ELECT	42"
S	SECONDARY ELECT	30"
ES	ELECT SERVICE	30"
ME	MULTI ELECT (P,S OR ES IN SPACERS) CONC ENCASED	30"
SL	STREET LIGHT (NOT SERIES)	30"
U	CATV – CATV	24"

2

REGISTERED PROFESSIONAL ENGINEER
BETHANY G. DUNN
No. 68721
Exp. 06/30/15
CIVIL
STATE OF CALIFORNIA

NO.	DATE	REVISIONS	BY	CHK	APRV
0	10/2013	CONFORMED	SM	MB	MB
2	09/04/14	CCO-7 – SHEET 13 OF 13	PB		
3	11/21/16	AS-BUILT	VS	PB	BD

BUREAU VERITAS 1828

Bureau Veritas North America, Inc.
10620 Treena Street Suite 170
San Diego, CA 92131
Tel: (858) 451-6100 Fax: (858) 451-2846
www.us.bureauveritas.com

REGISTERED PROFESSIONAL ENGINEER
MONTE L. BOWERS
No. 29139
Exp. 03/31/14
CIVIL
STATE OF CALIFORNIA

		DATE
DESIGNED BY	SJH	06/12
DRAWN BY	SJH	06/12
CHECKED BY	WG	06/12
PRJ. ENG.	SH	06/12

SANDAG

SAN YSIDRO YARD IMPROVEMENT PROJECT

CONSTRUCTION DETAILS

SCALE	AS SHOWN
CONTRACT NO.	CIP 1300601
DRAWING NO.	C-41
SHEET NO.	41

CONFORMED
OCTOBER 2013

Drawing name: P:\1075\1085 – SANDAG On-Call\1085.02 – San Ysidro Yard Improvements\Construction Changes\CO37\C41 – DETAILS – Standard41 – DETAILS.dwg Layout: Sep 22, 2014 3:10pm by: lmohamed

WATER LINE DATA

NO.	DELTA/BEARING	RADIUS	LENGTH	REMARKS
1	N 41°45'02" E	---	11.13'	8" PVC DR 18
2	N 48°14'58" W	---	[illegible]5.12'	8" PVC DR 18
3	N 41°31'07" E	---	[illegible].84'	8" PVC DR 18
4	N 48°28'53" W	---	116.75	8" PVC DR 18
5	N 75°02'[illegible] W	---	11.19'	8" PVC DR 18
6	N 48°28'53" W	---	465.56'	8" PVC DR 18
7	N 41°31'07" E	---	213.53'	8" PVC DR 18

WATER LINE CONSTRUCTION NOTES:

1. INSTALL 8" KENNEDY GATE VALVE C566/F-5072 OR APPROVED EQUAL WITH GATE WELL CAP PER S.D.R.S.D. WV-01.
2. INSTALL FIRE HYDRANT WITH BREAK OFF CHECK VALVE PER S.D.R.S.D. WF-02 AND PROTECTION POSTS PER S.D.R.S.D. WM-04. PROTECTION POST CONFIGURATION SHALL BE PER PLAN.
3. INSTALL 2" AUTOMATIC COMBINATION AIR RELEASE & AIR/VACUUM PER S.D.R.S.D. WA-02 WITH PROTECTION POST PER S.D.R.S.D. WM-04.
4. ALL PVC PIPE JOINTS AND FITTING JOINTS SHALL BE CONSTRUCTED WITH PV-LOK SERIES PWPR PVC FITTING RESTRAINTS OR APPROVED EQUAL.
5. ALL PVC PIPE LAID IN APPROVED CASING SHALL BE PLACED ON SKIDS. CONTRACTOR SHALL SUBMIT SKID DESIGN AND OBTAIN WRITTEN APPROVAL PRIOR TO SKID ACQUISITION. PIPE IN CASING SHALL NOT REST ON FITTING RESTRAINT OR PIPE BELL.
6. CONTRACTOR TO REMOVE AND SALVAGE EXISTING FIRE HYDRANT AND PLACE IN SALVAGE AREA ON SITE EAST OF PROPOSED TRACKS.
7. CONTRACTOR TO PRESSURE GROUT EXISTING WATER MAIN IN PLACE AFTER CONSTRUCTION OF PROPOSED WATER MAIN AND REMOVE AND SALVAGE OF EXISTING FIRE HYDRANT.
8. 90 DEGREE ANGLE
9. 45 DEGREE ANGLE
10. END CAP
11. CONNECTION SLEEVE

NO.	DATE	REVISIONS	BY	CHK	APRV
0	03/2013	CONFORMED			
1	06/07/16	CCO #15.1 SHEET 3 OF 3			
2	11/21/16	AS-BUILT	VS	PB	BD

Bureau Veritas North America, Inc.
10620 Treena Street Suite 200
San Diego, CA 92131
Tel: (858) 451-6100 Fax: (858) 451-2846
www.us.bureauveritas.com

REGISTERED PROFESSIONAL ENGINEER SHARON L. HUMPHREYS No. 60946 Exp. 12/31/14 CIVIL STATE OF CALIFORNIA

		DATE
DESIGNED BY	SJH	06/12
DRAWN BY	SJH	06/12
CHECKED BY	WG	06/12
PRJ. ENG.	SH	06/12

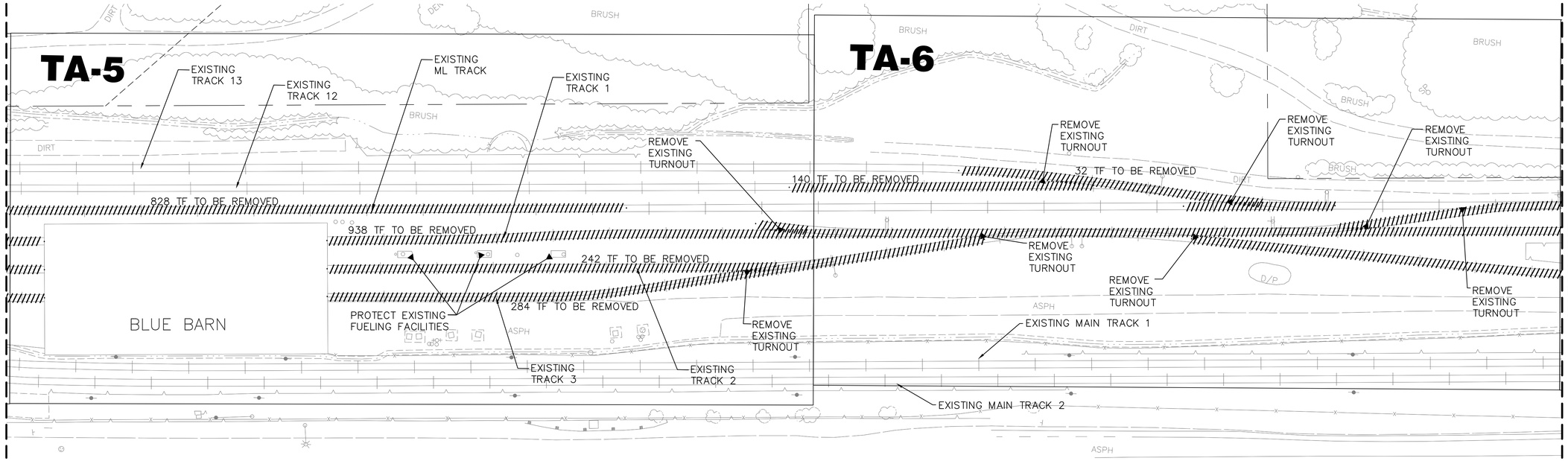
SANDAG

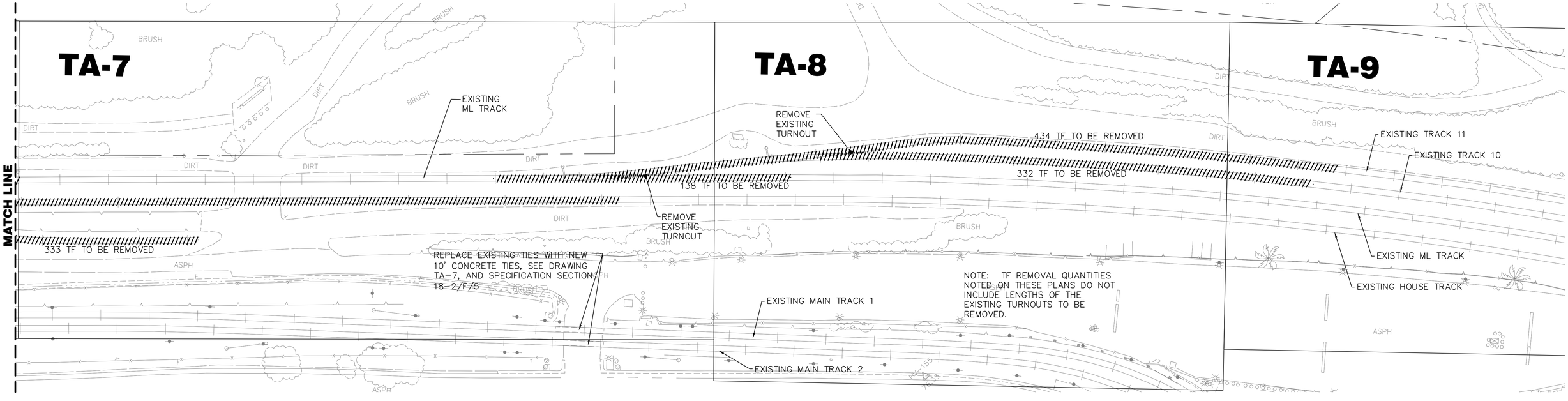
SAN YSIDRO YARD IMPROVEMENT PROJECT

WATER LINE PLAN AND PROFILE

SCALE: AS SHOWN
CONTRACT NO. CIP 1300601
DRAWING NO. C-46 SHEET NO. 46

CONFORMED
MARCH 2013





NOTES

1. SEE TA-1 THROUGH TA-10 FOR LOCATION OF TRACKWORK.
2. SEE SHEETS TC-1 TO TC-3 FOR COORDINATES, BEARINGS, LENGTHS AND OTHER GEOMETRIC DESIGN INFORMATION.
3. FOR ALL OTHER REMOVALS SEE CONTRACT DRAWINGS C-11 THROUGH C-22.

AS-BUILT
CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE

DATE: 4/3/2017

NO.	DATE	REVISIONS	BY	CHK	APRV
1	11/21/16	AS-BUILT	VS	PB	BD
0	10/28/13	CONFORMED PLANS	SL	EW	BD

T·Y·LIN INTERNATIONAL
404 Camino del Rio South, Suite 700
San Diego, CA 92108
Tel. 619.692.1920

REGISTERED PROFESSIONAL ENGINEER — Leslie W. Hopper — No. 43993 — Exp. 6-30-13 — CIVIL — STATE OF CALIFORNIA

		DATE
DESIGNED BY	TM:□□ □	10/25/12
DRAWN BY	□ □M:□□	10/25/12
CHECKED BY	□□N	10/25/12
PRJ. ENG.	□□	10/25/12

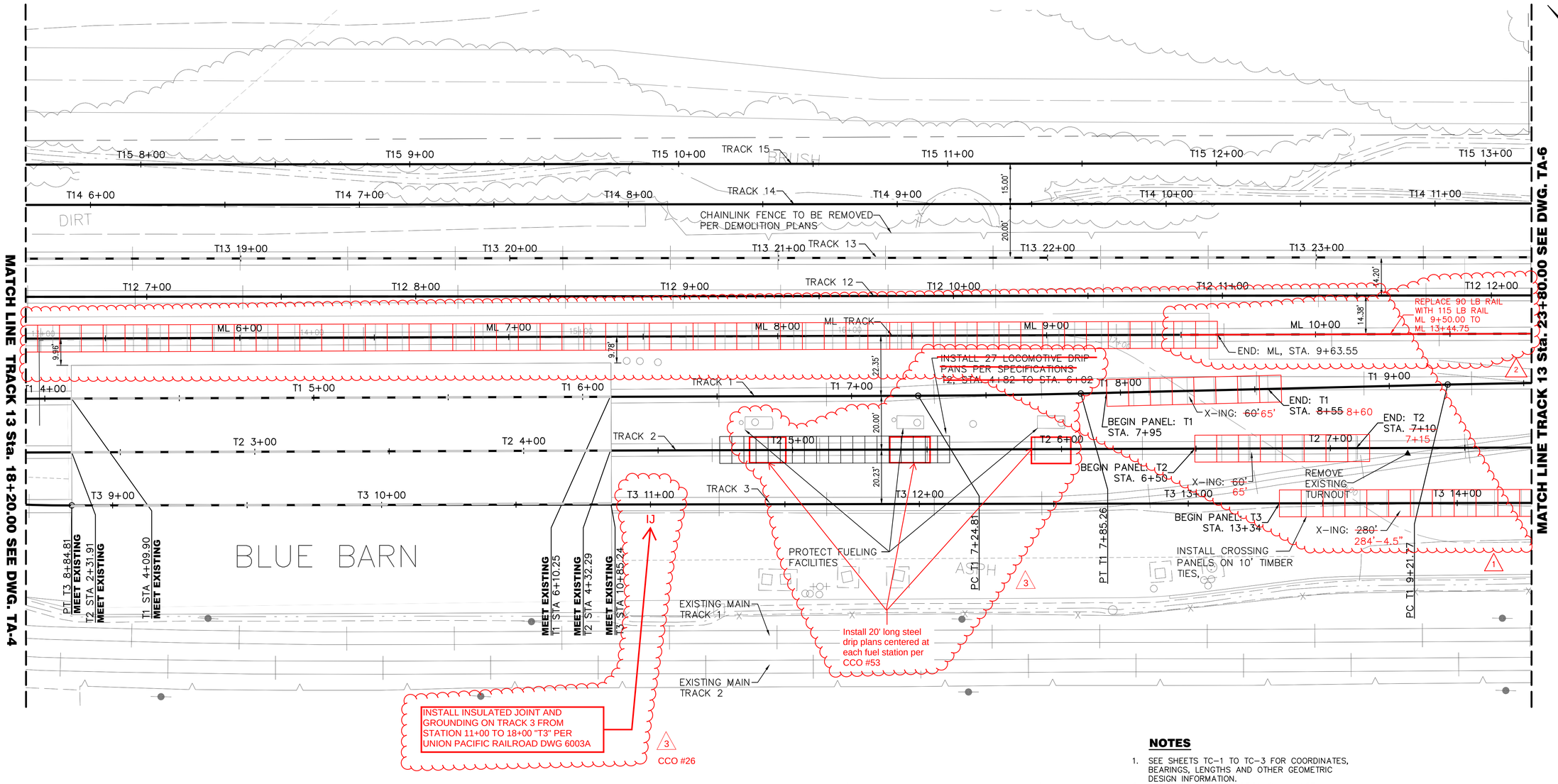
SANDAG

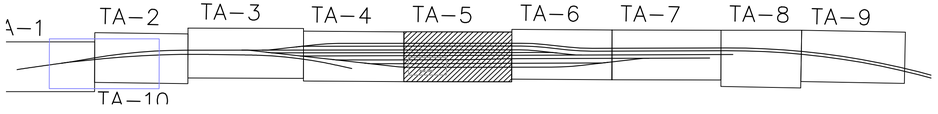
SAN YSIDRO YARD IMPROVEMENT PROJECT

TRACK REMOVAL PLAN
(SHEET 2 OF 2)

SCALE N.T.S.
CONTRACT NO. □□□□□□□□□□
DRAWING NO. T-7
SHEET NO. 92

Drawing name: P:\701085\CAD_701085\Civil 3D\SHEETS\701085-TRACK REMOVAL PLAN.dwg 2 OF 2 Mar 26, 2013 1:33pm by: mcervos





AS-BUILT

CONTRACT NO.: CIP 1300601

RESIDENT ENGINEER'S SIGNATURE

DATE: 4/3/2017

NOTES

1. SEE SHEETS TC-1 TO TC-3 FOR COORDINATES, BEARINGS, LENGTHS AND OTHER GEOMETRIC DESIGN INFORMATION.
2. TRACKWORK CONSTRUCTION SHALL INSTALL 115#RE RAIL PER SPECIFICATIONS.
3. EXISTING OBSTRUCTIONS SHOWN ON THE PLANS SHALL BE REMOVED PRIOR TO THE COMMENCEMENT OF TRACKWORK. SEE CONTRACT DRAWINGS C-11 THROUGH C-22.
4. FOR GRADING, DRAINAGE, AND UTILITIES SEE DRAWINGS C-23 TO C-34, AND D-1 TO D-12.
5. FOR SURVEY CONTROLS MONUMENTS, SEE DRAWING C-4.
6. FOR PROPOSED CONSTRUCTION SEQUENCE, SEE CONTRACT DRAWINGS CS-1 THROUGH CS-19, CONSTRUCTION STAGING PLANS.
7. SIGNALS, SIGNAL HOUSING, AND INSULATED JOINTS ON THESE PLANS ARE PER THE SIGNAL PLANS. FOR EXACT LOCATIONS SEE THE SIGNAL DRAWINGS SA-0 THROUGH SM-13.

HORIZONTAL SCALE

20' 0 20' 40'

1"=20'

NO.	DATE	REVISIONS	BY	CHK	APRV
2	07/27/15	CCO-40 - SHEET 2 OF 12	BM	PB	BD
1	04/29/15	CCO-39 - SHEET □□ □□	BM	PB	BD
0	10/28/13	CONFORMED PLANS	SL	EW	BD
3	11/21/16	AS-BUILT	VS	PB	BD

T·Y·LIN INTERNATIONAL
404 Camino del Rio South, Suite 700
San Diego, CA 92108
Tel. 619.692.1920

Professional Engineer — Leslie W. Hoover — No. 43994 — Exp. 6-30-13 — Civil — State of California

DESIGNED BY	TM□□ □	DATE 10/25/12
DRAWN BY	□ □□M□□	10/25/12
CHECKED BY	□□N	10/25/12
PRJ. ENG.	□□	10/25/12

SANDAG

SAN YSIDRO YARD IMPROVEMENT PROJECT

TRACK PLAN

STA T13 18+20.00 TO STA T13 23+80.00

SCALE □S:S□□□N

CONTRACT NO. □□□□□□□□□□

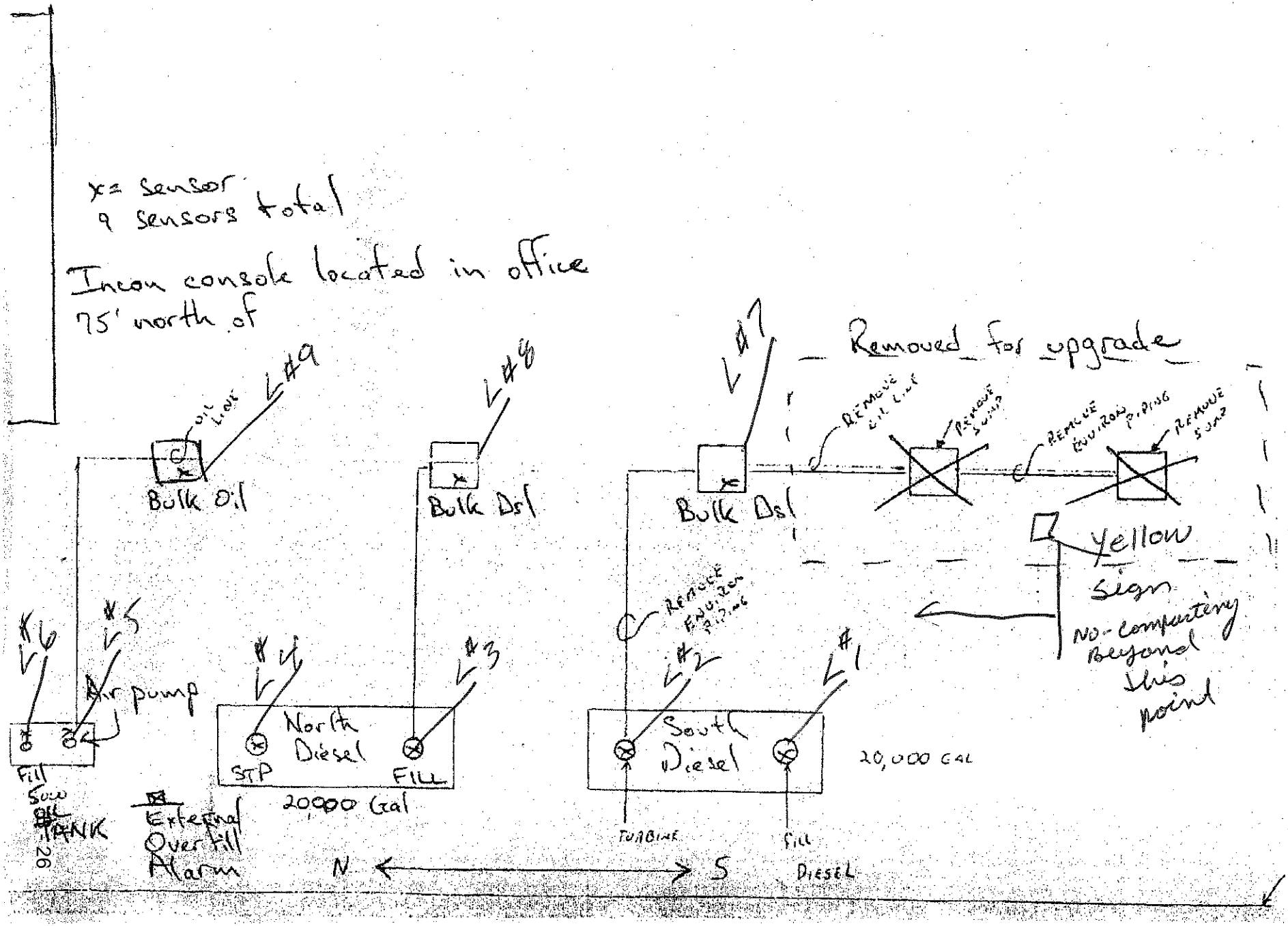
DRAWING NO. TA-5

SHEET NO. 97

S.D. Imperial Valley Railroad
San Ysidro

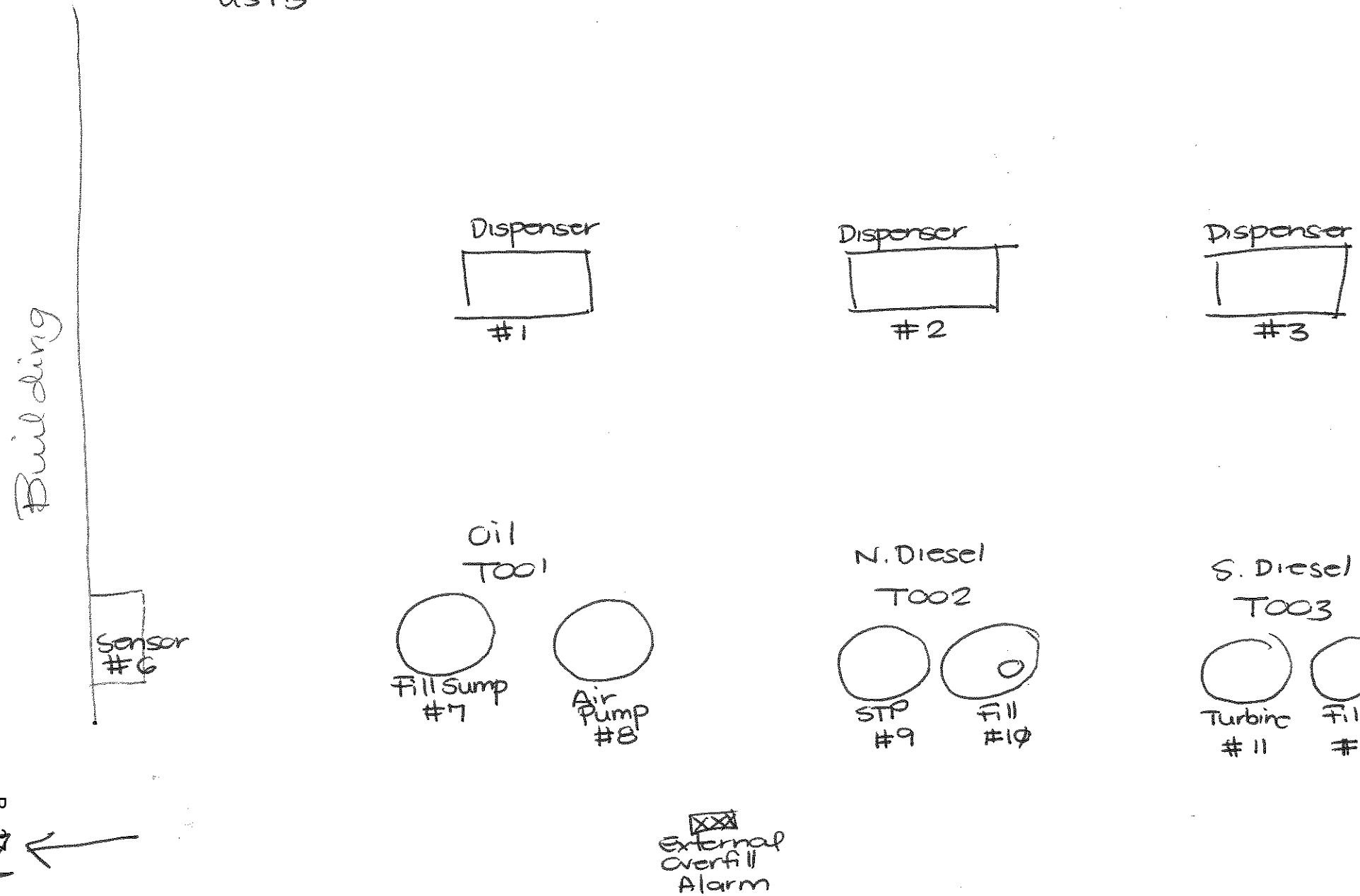
x = sensor
9 sensors total

Incon console located in office 75' north of



SD & IV RR

Incon console located in office 75' North of USTs



B-27

BID FORM
Blue Barn UST Closure IFB
PWL443.0-25

#	Item Description	UOM	Quanti	Total
1	Mobilization	LS	1	$15,450.00
2	Demobilization	LS	1	$2,875.00
3	General Conditions	LS	1	$19,227.00
4	Permitting	LS	1	$16,458.00
5	Soil Testing	LS	1	$24,466.00
6	Three (3) Tank Closure in Place	LS	1	$94,767.00
7	UST Appurtenance (Pump Station, Secondary Containment, Piping, etc.) Demo and Disposal	LS	1	$38,150.00
8	Secondary Containment, Pump Island, and Manhole Pad Paving	LS	1	$39,159.00
	Total Basis for Award			**$250,552.00**

This all-inclusive pricing must include the costs for the bid bond, performance & payment bonds, and insurance. MTS will not pay additional costs, or separate costs for these.

Subcontractors (If no subcontractor bidder shall indicate "Not Applicable" and return with the bid packet)							Any time there is a change to a Subcontractor resubmit this attachment. Any change to these forms after bid submittal must be made in accordance with Public Contract Code sections 4100 et seq., as applicable, and as permitted by MTS.						
Company Name	**Type of DBE**	**% of Work**	**DIR Number**	**Dollar Value**	**Description of Work**	**Point of Contact First Name**	**Point of Contact Last Name**	**Email**	**Phone Number**	**Street Address**	**City**	**State**	**Zip**
Kirk Paving, Inc.	SB & SLBE	9.18%	1000002341	$23,008	Paving	Jon	Kirk	info@kirkpaving.us	(619) 928-9958	8722 Winter Gardens Blvd	Lakeside	CA	92040
Nieto and Sons Trucking, Inc.	SB	5.89%	1000015003	$14,760	Cleaning Tank	Dave	Nieto	dave@nietoandsons.com	(714) 990-6855	PO Box 760	Yorba Linda	CA	92885

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 16

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Employee Recognition Platform – Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to:

1) Execute MTS Doc No. G2982.0-25 (in substantially the same format as Attachment A), with Awardco, Inc., to provide Employee Recognition Platform software in the estimated amount of $277,193.00 for up to six (6) years;

2) Exercise the option years, at the CEOs discretion; and

3) Transfer funds from MTS departmental budgets to fund MTS's Awardco funding account, which will be used to pay the actual cost of awards selected and redeemed by employees through the platform.

Budget Impact

The total cost of these services is estimated not to exceed $1,477,193.00 ($733,356.00 for three (3) base years and $743,837.00 for three (3) 1-year options). The project will be funded by the Human Resources (HR) Department Operating Budget account 711010 – 571170 as reflected below.

Description	Amount
Recognition Platform Year 1 + Implementation	$46,452.00
Recognition Platform Year 2	$43,452.00
Recognition Platform Year 3	$43,452.00
Recognition Platform Year 4 (Option Year 1)	$45,628.00
Recognition Platform Year 5 (Option Year 2)	$47,906.00
Recognition Platform Year 6 (Option Year 3)	$50,303.00
Subtotal	$277,193.00

Adjustable Award Funds* Year 1	$200,000.00
Adjustable Award Funds* Year 2	$200,000.00
Adjustable Award Funds* Year 3	$200,000.00
Adjustable Award Funds* Year 4 (Option Year 1)	$200,000.00
Adjustable Award Funds* Year 5 (Option Year 2)	$200,000.00
Adjustable Award Funds* Year 6 (Option Year 3)	$200,000.00
Subtotal	$1,200,000.00
Total	$1,477,193.00
*Adjustable award funds will be based on CEO discretion and are subject to change based on budget available.	

DISCUSSION:

MTS is seeking Board approval to purchase an award and recognition software platform to modernize and streamline administration of the programs used to reward and recognize its workforce of approximately 1,700 employees. The platform will initially manage existing programs such as recognition for years of service, safety achievements, and retirement gifts, and will later be expanded to include new programs such as peer-to-peer recognition and rewards for exceptional performance.

A key benefit of the proposed platform is its flexibility in tailoring rewards to be meaningful for each recipient. For example, whereas in the past an employee might have received a shirt and a pin for a particular achievement, the new system would allow the awardee to choose from a wide range of items of equal value, such as traditional plaques or pins, MTS-branded merchandise, or products from internet marketplaces such as Amazon.

In addition to administering traditional awards, the Awardco platform can facilitate spot awards, peer-to-peer recognition, and awards for exceptional performance. The system uses a points-based currency that can be redeemed for a wide variety of items, from traditional plaques and pins to MTS-branded merchandise or products from major online retailers, providing greater flexibility and personalization for each recipient. Points-based recognition systems are becoming standard in many organizations and are supported by research indicating that more frequent, lower-value recognition produces a greater and more sustained positive impact on employee morale than infrequent, higher-value awards. The platform’s flexibility increases the likelihood that recognition feels meaningful to each recipient, while also simplifying program administration, ensuring consistency across departments, and providing transparent reporting for participation tracking and tax compliance.

Board approval is being requested for funding of the software purchase, which will be separate from the cost of awards. When employees redeem their points, the value of those awards will be deducted from a funding account established by MTS for this purpose. There are no pass-through costs; MTS will pay only the actual cost of the item selected by the employee. In the initial phase, where existing programs are incorporated into the software, the funding account will be supported through existing HR and operating department budgets, which already include line items for these programs.

This purchase represents the first step in revamping MTS’s rewards and recognition programs. Following implementation, HR will collaborate with union partners and department leadership to

refresh and improve these programs to further support employee engagement, performance, and retention. Consistent with the authority to determine compensation delegated by the Board to the CEO, the CEO will approve any changes or additions to award programs, within the limits of the Board-approved MTS budget.

Procurement Summary

On January 23, 2025, MTS issued a Request for Proposal (RFP) for Employee Recognition Platform Services. A total of three (3) proposals were received on the due date of March 6, 2025, from the following firms:

#	Proposer Name	Disadvantage Business Enterprise (DBE) or other Certifications
1	Awardco, Inc.	None
2	Motivosity	None
3	MTM Recognition Corp.	None

All proposals were deemed responsive and responsible and were evaluated by a committee consisting of representatives from the Finance, HR and Information Technology (IT) departments. The proposals were scored based on the following evaluation criteria:

Evaluation Criteria	Total Possible Points
Qualifications of the Firm or Individual	15
Staffing, Organization, and Management Plan	20
Work Plan	35
Cost and Price	30
Total (Maximum possible points)	**100**

The following table illustrates the initial scores and ranking of each firm:

Proposer Name	Technical Score	Cost Score	Total Score (Maximum 100)	Ranking
MTM Recognition Corp.	35.6	30.0	65.6	1
Motivosity	47.1	12.6	59.7	2
Awardco, Inc.	37.7	13.2	50.9	3

On April 30, 2025, Requests for Clarifications were sent to all firms after the evaluation panel's initial review with responses due no later than May 7, 2025. MTM Recognition was asked to submit an updated Cost Pricing Form as part of the Request for Clarifications to include pricing for all the work described in the Scope of Work section and to provide a total all-inclusive cost due to ambiguity regarding the Cost of Points on their initial Cost Proposal Form. MTM Recognition did not respond to this request and was disqualified from the remainder of the evaluation process resulting in changes to the cost scores as follows:

Proposer Name	Technical Score	Cost Score	Total Score (Maximum 100)	Ranking
Motivosity	47.1	28.7	75.8	1
Awardco, Inc.	37.7	30.0	67.7	2

The evaluation committee invited the two (2) Proposers who were within the competitive range for oral presentations and interviews: Awardco, Inc. and Motivosity. Interviews were held on

May 28, 2025, wherein the Proposers were asked to make presentations on their firm's services and provide clarifications on their proposal to MTS. After the presentations, the evaluation panel rescored the remaining firms as follows:

Proposer Name	Technical Score	Cost Score	Total Score (Maximum 100)	Ranking
Awardco, Inc.	50.8	30.0	80.8	1
Motivosity	46.7	28.7	75.4	2

On June 3, 2025, revised cost proposals were requested from the two firms with a due date of June 10, 2025. As a result of the revised cost proposals the evaluation scores were adjusted as follows:

Proposer Name	Technical Score	Cost Score	Total Score (Maximum 100)	Ranking
Awardco, Inc.	50.8	30.0	80.8	1
Motivosity	46.7	26.5	73.2	2

Based on the objectives of this procurement, consideration of the evaluation criteria and Awardco, Inc.'s technical and cost proposals, the evaluation committee determined that Awardco, Inc. presented the best overall value to MTS.

Therefore, staff recommend that the Board of Directors authorize the CEO to:

1) Execute MTS Doc No. G2982.0-25 (in substantially the same format as Attachment A), with Awardco, Inc. to provide Employee Recognition Platform services in the estimated amount of $277,193.00 for up to six (6) years;

2) Exercise the option years, at the CEOs discretion; and

3) Transfer funds from MTS departmental budgets to fund MTS's Awardco funding account, which will be used to pay the actual cost of awards selected and redeemed by employees through the platform.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachment: A. Draft Agreement MTS Doc. No. G2982.0-25

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. G2982.0-25

EMPLOYEE RECOGNITION PLATFORM

THIS AGREEMENT is entered into this _____ day of _____, 2025 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: Awardco, Inc.

Address: 2080 W 400 N

Lindon (City) UT (State) 84042 (Zip)

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

Email: taylor.hyde@awardco.com

Telephone: (385) 250-3737

Authorized person to sign contracts: Taylor Hyde (Name) VP, Sales (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 a three (3) year base period with three (3) 1-year options, exercisable at the Party's discretion, for a total of six (6) years. Base period shall be effective December 1, 2025 through November 30, 2028 and option years shall be effective December 1, 2028 through November 30, 2031, if exercised by MTS.

Payment terms shall be net 30 days from invoice date. The total cost of this contract is estimated not to exceed $733,356.00 for the base years and $743,837.00 for the option years, for a contract total estimated not to exceed $1,477,193.00 without the express written consent of MTS.

Description	Amount
Recognition Platform Year 1 + Implementation	$46,452.00
Recognition Platform Year 2	$43,452.00
Recognition Platform Year 3	$43,452.00
Recognition Platform Year 4 (Option Year 1)	$45,628.00
Recognition Platform Year 5 (Option Year 2)	$47,906.00
Recognition Platform Year 6 (Option Year 3)	$50,303.00
Subtotal	$277,193.00

Metropolitan Transit System

Adjustable Award Funds* Year 1	$200,000.00
Adjustable Award Funds* Year 2	$200,000.00
Adjustable Award Funds* Year 3	$200,000.00
Adjustable Award Funds* Year 4 (Option Year 1)	$200,000.00
Adjustable Award Funds* Year 5 (Option Year 2)	$200,000.00
Adjustable Award Funds* Year 6 (Option Year 3)	$200,000.00
Subtotal	$1,200,000.00
Total	$1,477,193.00
*Adjustable award funds will be based on CEO discretion and are subject to change based on budget available.	

The Parties agree to incorporate in full the Awardco SaaS Services Rider, attached hereto as **Attachment I** to this Standard Agreement which sets forth critical terms applicable to Contractor's Services. In the event of a conflict between the terms of this Agreement and the Rider, the terms of the Rider control with respect to the provision of Awardco's Services.

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

EXHIBIT A

SCOPE OF WORK

1. SCOPE OF WORK/TECHNICAL SPECIFICATIONS

1.1. BACKGROUND

San Diego Metropolitan Transit System (MTS) and its operating divisions maintains a workforce of approximately 1,700 transportation employees. MTS is exploring new methods to recognize employees throughout their employment by providing a high quality and effective corporate engagement and recognition platform. MTS requires a license cloud-based software platform to facilitate employee engagement, recognition, celebration, and collaboration. MTS and the Contractor will work in conjunction with one another throughout the term of the agreement.

Proposer shall propose on all components and services listed in the scope of work and certify that it is capable of successfully meeting the specifications and requirements.

1.2. ENGAGEMENT AND INCLUSION

1. The engagement and recognition platform should include a news feed/social wall, group/team pages, peer-to-peer recognition, manager-to-employee recognition, service award milestones, and special recognitions.
2. The multi-media platform must be accessible from desktop computers, laptops, tablets, and smartphones.
3. Other functionalities:
    i. Ability to schedule posts in advance to congratulate a colleague on a service anniversary or to wish a happy birthday.
    ii. Provide specified management employees with an allotment of points or monetary incentives monthly to distribute to their team via recognition posts.
    iii. Receive by message and display on each user profile an anniversary milestone badge or icon, as applicable.
    iv. Support personal life events like having a baby, wedding, new home, etc.
    v. Support work events like new employee referral program, welcoming new employees, congratulating an employee on their promotion, retirement, etc.
    vi. Download posts as Portable Document Format (PDF) files.
    vii. Share trending posts to Agency-wide Social Wall. React to a post and comment on the post.
    viii. Incentivize user participation through gamification, such as, using points or incentives to encourage engagement.

1.3. RECOGNITION ONLINE STOREFRONT

1. The platform must provide an online storefront of high-quality products for employees to choose from. This can be a combination of physical goods and/or electronic gift cards and gift certificates.
2. Ability for MTS to approve recognition items and review and exclude inappropriate items from being purchased via the platform. MTS also prefers ability to customize gifts with Agency logo and/or incorporating designs provided and approved by the Agency.
3. Ability for MTS to add items to the online storefront from existing inventory or outside acquisition.
4. Items to be available to be redeemed with points or monetary incentives.

5. Other functionalities:
   i. Option for the employee to redeem a global gift card/e-gift.
   ii. Option for MTS to send a gift to someone who might not be in the system (e.g., a new hire, employee who may have just departed the Agency).
   iii. Option for MTS to incentivize participation through non-monetary means.
   iv. Option for MTS to set up points in a physical gift card with unique promotion codes with scratch off film to indicate if it has been used.

1.4. AUTOMATED CONGRATULATORY LETTERS/CERTIFICATES

1. System should provide an override option to customize service date outside of hire date.
2. Send automated reminders to designated management team members ahead of service milestones.
3. In addition to Years of Service milestone awards, the Contractor's software ideally will include automations to issue personalized congratulatory letters to employees who are being recognized for personal and professional milestones; the template should allow managers and peers to personalize the message based on the occasion.
4. To encourage recognition, Contractor to work with MTS to design certificates of appreciation with MTS's logo, employee name, and signature spaces; MTS will approve the final design of all certificates. This should be a tool that can be sent with or without monetary value/points.

1.5. ORDERING AND DELIVERY

1. Provide a secure electronic data interchange of employee information throughout the purchasing process.
2. Provide order fulfillment services in a timely manner (i.e., shipping and handling). Contractor shall fulfil order requests in a 2–4-week period or earlier from the day requested.
3. MTS employees should be able to order physical items to be sent to their home address on file; employee may provide alternate address.
4. Contractor's customer service representative will respond to and resolve any problems directly with the employee. Contractor shall handle all logistical components for returns and exchanges. Prior to user purchasing the item, Contractor should inform the user of its return policy and procedures, including any restocking fees.

1.6. BUDGETING, PRICING, AND PAYMENT

1. Price of items available in the online storefront must include delivery and handling. Pricing for services is to include all supervision as needed, all parts, equipment and materials, start-up fees, labor, mileage, and any other expenses needed to complete the services required. MTS will reject shipments sent Cash on delivery or freight collect.
2. Contractor shall provide to MTS a quarterly cost analysis report showing the number of points redeemed, the average cost of goods purchased, and all other costs incurred.

1.7. ADDITIONAL SERVICES

1. Contractor to propose a project delivery schedule and provide MTS with monthly/quarterly reports highlighting key program metrics such as culture trends and values, budget, order

fulfillment, usage, and engagement (leaderboards), and opportunities for improvements. Ideally, Contractor can host this data in a dashboard.

2. Provide education (e.g., webinars, virtual workshops) on how to navigate the system.
   i. Contractor shall provide an administrator and user trainer for the core team prior to implementation.
   ii. Contractor shall provide end-user virtual training or learning center available after implementation.
3. Provide a dedicated customer service representative. The representative must be available as needed to aid in resolving any implementation issues or problems which may occur.
4. Contractor shall provide necessary training for MTS staff to ensure that training will be fully adequate in scope and consistent throughout the contract term.

1.8. TECHNICAL REQUIREMENTS/INTEGRATION

1. System shall integrate or have a SmartConnect platform with ADP Vantage HCM.
2. System shall support Microsoft 365 (e.g., Office, Teams, and SharePoint).
3. System shall support Application Programming Interface (API) integration (e.g., REST, SOAP).
4. System shall be capable of inbound, outbound, and bi-directional data integration (e.g., JSON, XML).
5. System shall be capable of uploading/extracting data in various forms (e.g., XML, CSV).

1.9. 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.

Payment terms shall be net 30 days from invoice date.

Contractors must also indicate if any of the invoiced amount(s) 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 the *Prompt Progress Payments* section of the Standard Conditions.

1.10. CONTRACTOR'S INFORMATION SECURITY RESPONSIBILITIES

MTS has established the following responsibilities to ensure the security of vendor operations in accordance with MTS policies, standards, and SOPs. The following procedures outline the expectations for Contractor and any subcontractors:

A. Contractor Lists: Contractor and any subcontractors must provide an up-to-date list of all staff working on the contract. This list should be promptly updated and submitted to MTS whenever there are staff changes.

B. Incident Reporting: Contractor and subcontractors agree to promptly report any security incidents or breaches involving their systems or access to the MTS network. Detailed incident response procedures should be provided, and cooperation in investigations, including the provision of necessary logs and evidence, is expected.

C. Change Management: Contractor and subcontracted personnel must adhere to all applicable MTS change control processes and procedures.

D. Patch Management: Contractor and subcontractors agree to promptly apply security patches and updates to their systems and software used to perform services in this contract.

E. Data Protection and Privacy: The vendor must protect MTS data in accordance with applicable laws and regulations, including those related to data privacy. Appropriate safeguards should be implemented to ensure the confidentiality, integrity, and availability of MTS data.

F. Remote Access and Forms: Remote access must be uniquely identifiable, and password management should comply with MTS password standards' reserves the right to determine the applicable virtual private network and encryption technologies used to access their systems and network. Remote access forms must be updated and submitted yearly or upon request by MTS.

G. Contractor Termination: Upon departure of a contractor from MTS for any reason, Contractor or subcontractors must ensure that all sensitive information is collected and returned to MTS or destroyed within the timeframe specified in the original contract terms.

H. Auditing and Compliance: Contractor or subcontractor are required to comply with all applicable MTS security Policies, Standards and SOP's. Contractor and subcontractor must comply with MTS when conducting an audit or risk assessment based on contractual obligations and applicable security policy's, standard and SOP's set by MTS.

I. Disclosure and Sub-Contractor Security: If the vendor engages subcontractors or third-party service providers, they must ensure that these entities adhere to the same vendor information security obligations outlined in this contract. The vendor is responsible for the security practices of their subcontractors and should perform due diligence in selecting and monitoring them.

1.11. [NOT APPLICABLE] BUY AMERICA

1.12. [NOT APPLICABLE] SAFETY DATA SHEETS (SDS)

1.13. [NOT APPLICABLE] NO RIGHT TO POST SIGNS

1.14. [NOT APPLICABLE] REPLACEMENT PARTS

1.15. [NOT APPLICABLE] DELIVERY AND ACCEPTANCE

1.16. [NOT APPLICABLE] EXPEDITING

1.17. [NOT APPLICABLE] ACQUISITION OF ROLLING STOCK

EXHIBIT B

COST PRICING FORM

MTS REVISED COST PRICING FORM

MTS DOC NO. G2982.0-25 - EMPLOYEE RECOGNITION PLATFORM

Instructions: Please complete the form below by filling in the Organization Name, Unit Price, and Extended Price for each item. Please Estimate Unit Price Costs per employee and utilize the Additional Fees section if applicable. Costs shall be total all-inclusive, including, but not limited to, transporting a vehicle to and from MTS, travel, insurance, etc. No additional costs are allowed.

Organization Name:	Awardco, Inc.

Description	Estimated Employees	Unit Price (Per Employee)	Company Swag Store Unit Price (Per Employee)	Total Unit Price with Company Swag Store	Extended Price
Recognition Platform Year 1	1,700	$23.80	$1.76	$25.56	$43,452
Recognition Platform Year 2	1,700	$23.80	$1.76	$25.56	$43,452
Recognition Platform Year 3	1,700	$23.80	$1.76	$25.56	$43,452
Recognition Platform Year 4 (Option Year 1)	1,700	$24.99	$1.85	$26.84	$45,628
Recognition Platform Year 5 (Option Year 2)	1,700	$26.24	$1.94	$28.18	$47,906
Recognition Platform Year 6 (Option Year 3)	1,700	$27.55	$2.04	$29.59	$50,303

Additional Fees - please specify below (If Applicable)

Description	Extended Price
One-time Implementation Fee	$3,000
OPTIONAL External Recognition Feature (program that allows riders & customers to recognize drivers & employees)	$3.25 per user per year
We can confirm that everything that was covered during our presentation & interview is included with the pricing propsed	
Overall Total (Basis of Award)	**$277,193 ($24,444 Discount through first 3 years)**

*Sales tax to be calculated by MTS.
* Cost/pricing shall be fixed for the entire project.
* Proposer accepts responsibility for accuracy and presentation of the proposal. MTS is not responsible for finding, correcting, or seeking clarification regarding ambiguities or errors in the offer.
* This offer shall remain firm for minimum 90 days from the quote due date.
*The estimates described and displayed on this pricing form is for bidding purposes only. They represent what MTS anticipates as a requirement, but MTS does not guarantee this quantity. The actual quantity ordered may be more or less than what is anticipated on the cost form, and it is dictated by MTS's actual requirements and the available funding at the time each order is initiated.

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 17

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Bus Furniture Installation, Maintenance, and Advertising Services – Contract Award

RECOMMENDATION:

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

1) Authorize the Chief Executive Officer (CEO) to execute MTS Doc. G3112.0-26 (in substantially the same format as Attachment A), with Clear Channel Outdoor, LLC (Clear Channel), to provide bus shelter installation, maintenance, and advertising services for ten (10) base years with five (5) 1-year options;

2) Authorize the CEO to execute MTS Doc. G3113.0-26 (in substantially the same format as Attachment B) with BriceHouse Outdoor, Inc. (BriceHouse) to provide bus bench installation, maintenance, and advertising services for ten (10) base years with five (5) 1-year options; and

3) Exercise the option years at the CEO's discretion.

Budget Impact

Both contracts are revenue-generating. Staff estimate the revenue for the fifteen (15) years to be $23,784,838.00 for bus shelter advertising and $6,805,000.00 for bus bench advertising. MTS's revenue is based on a percentage split of the advertising on bus benches and bus shelters as shown below:

Service	MTS Revenue Share	Contractor Revenue Share
Bus Shelter Advertising Services	30%-45%	55%-70%
Bus Bench Advertising Services	36%-38% and Minimum Annual Guarantee (MAG)	62%-66%

DISCUSSION:

Bus furniture refers to the agency's approximately 1,600 current bus benches, 500 current bus shelters, and up to an additional 300 bus shelters and 350 bus benches that MTS plans to install between 2025 and 2029.

The bus furniture program supports an important element of the riding experience for transit riders. Some top requests received from riders include more bus shelters, more places to sit, and better shade. Based on this feedback, MTS is on a path to providing more high-quality furniture and increasing the amount of furniture available to riders. In addition, the bus furniture program generates advertising revenue to support itself and other aspects of the bus operation.

On July 18, 2024 (Agenda Item (AI) 7), the MTS Board authorized a contract (MTS Doc. No. B0763.0-24) with Tolar Manufacturing (Tolar) to manufacture and deliver bus shelters for a five (5) year period. Shortly thereafter, on October 17, 2024 (AI 17), the MTS Board authorized a contract (MTS Doc. No. B0772.0-24) with Tolar to manufacture and deliver bus benches for a five (5) year period.

With the manufacturing pipeline in place, MTS staff then turned its focus to executing long-term contracts for the installation, maintenance, and advertising for the shelter and bench furniture programs.

Currently, MTS has two (2) different contractors for installation, maintenance, and advertising sales for bus benches (expiring October 31, 2025) and bus shelters (expiring December 31, 2028).

MTS offered proposers the opportunity to submit proposals on the expiring contracts (existing benches and existing shelters) as well as the new bus shelter inventory that the agency expected to have fully installed by 2028. To increase competition, Proposers were given the opportunity to submit for one (1) or more categories. MTS had the flexibility to award one (1) or more contracts from this solicitation.

Category 1: Shelters – Bus shelter portfolio, which includes installation, maintenance, and advertising services for new yet-to-be-installed shelters (immediate) and then take over the responsibility for existing shelters in 2028 when the current contract expires.

Inventory Responsibility and Contract Timing:

- Immediate: Install up to 300 new solar bus shelters over a five (5)-year period – Ten (10) base years with five (5) one-year options.
- January 1, 2029: Maintain approximately 500 existing shelters from the contract expiring on December 31, 2028, for a total of approximately 800 shelters in the inventory. Included in the existing shelters are 59 digital shelters with 90 faces. MTS was also able to negotiate an increase in more bus furniture as needed in the system – Seven (7) base years with five (5) one-year options.

Category 2: Benches – Bus bench portfolio for installation, maintenance, and advertising services.

Inventory Responsibility and Contract Timing:

- July 1, 2025: Maintain approximately 1,600 existing benches, and install and maintain 350 new benches – Ten (10) base years with five (5) one-year options

On February 18, 2025, MTS issued a Request for Proposal (RFP) for Bus Furniture Installation, Maintenance, and Advertising Services on PlanetBids. The RFP was broken down into the two (2) categories discussed above (Category 1 – Bus Shelters and Category 2 – Bus Benches). Proposers were able to submit for one (1) or two (2) categories. MTS received a total of three (3) proposals as follows:

Category 1- Bus Shelters	
Proposer	**Firm Certification**
Clear Channel Outdoor, Inc.	N/A

Category 2- Bus Benches	
Proposer	**Firm Certification**
BriceHouse Outdoor, Inc.	N/A
Creative Outdoor Advertising of America	N/A

All proposals were deemed responsive and responsible and were evaluated by a committee comprised of representatives from the MTS Marketing, Finance, Planning, and Bus Departments. The proposals were evaluated in the following:

1.	Qualifications of the Firm or Individual	10%
2.	Staffing, Organization, and Management Plan	20%
3.	Work Plan	30%
4.	Revenue Payment/Financial Benefit	40%
		100%

CATEGORY 1 – BUS SHELTERS

CATEGORY 1 – BUS SHELTERS			
PROPOSER	**TOTAL AVG TECH SCORE**	**TOTAL AVG REVENUE SCORE**	**TOTAL AVG SCORE (TOTAL POINTS POSSIBLE: 100)**
Clear Channel Outdoor, Inc.	46.20	20.00	66.20

Based on the initial scores and information gained during the interviews, Clear Channel remained within the competitive range for Category 1 – Bus Shelters. MTS entered negotiations with Clear Channel. After final negotiations, both MTS and Clear Channel agreed on the following:

- Gross advertising sales, less than or equal to $6,000,000.00, will have a revenue share of 30% paid to MTS. Sales commission will not be netted against revenue.

- Gross advertising sales greater than $6,000,000.00 will have a revenue share of 45% paid to MTS on the incremental revenue greater than $6,000,000.00. Sales commission will not be netted against revenue.
- No Minimum Annual Guarantee (MAG)
- The cost of the shelter installations will be deducted from the revenue share payments to MTS until the total cost of the shelter installations is fully recouped by CCO. This cost can be audited. New shelter installations include only new static ad and non-ad shelter installations. It excludes digital shelter/kiosk installation costs.
- MTS agreed to split excess costs under the 'Cleaning and Repair' category for costs above and beyond the estimation provided in the Expense and Revenue Assumption details. Digital shelter maintenance/repair costs and any other costs will not be eligible for expense sharing and will not count toward meeting the threshold. Clear Channel would deduct 50% of excess costs from the revenue share paid to MTS. A reasonable audit process would be determined. (CCO does not expect this clause to come into effect but wishes to protect against any significant unforeseen operating cost increases.)

At the end of negotiations and after receiving Clear Channel's revised revenue proposal, the evaluation team rescored as follows:

CATEGORY 1 – BUS SHELTERS			
PROPOSER	**TOTAL AVG TECH SCORE**	**TOTAL AVG REVENUE SCORE**	**TOTAL AVG SCORE (TOTAL POINTS POSSIBLE: 100)**
Clear Channel Outdoor, Inc.	46.20	22.40	68.60

CATEGORY 2 – BUS BENCHES

CATEGORY 2 – BUS BENCHES			
PROPOSER	**TOTAL AVG TECH SCORE**	**TOTAL AVG REVENUE SCORE**	**TOTAL AVG SCORE (TOTAL POINTS POSSIBLE: 100)**
BriceHouse Outdoor, Inc.	47.40	32.00	79.40
Creative Outdoor Advertising of America	37.40	40.00	77.40

As a result of the initial review, MTS invited all three (3) firms to participate in the interview process on May 22, 2025. During the interview process, MTS staff learned more about each firm's cost/revenue assumptions, proposed staffing plans, and maintenance work plans. After the interviews, staff requested a Best and Final Offer (BAFO) from BriceHouse and Creative Outdoor Advertising of America for Category 2 – Bus Benches. Both firms provided updated revenue terms and were scored as follows:

CATEGORY 2 – BUS BENCHES			
PROPOSER	**TOTAL AVG TECH SCORE**	**TOTAL AVG REVENUE SCORE**	**TOTAL AVG SCORE (TOTAL POINTS POSSIBLE: 100)**
BriceHouse Outdoor, Inc.	50.20	32.00	82.20
Creative Outdoor Advertising of America	33.20	40.00	73.20

For Category 2 – Bus Benches, BriceHouse provided the best overall value to MTS because of its strong maintenance and cleaning program, previous experience working with MTS, familiarity with the local advertising market, and competitive revenue share proposal.

Therefore, staff recommends that the MTS Board of Directors:

1) Authorize the CEO to execute MTS Doc. G3112.0-26 (in substantially the same format as Attachment A) with Clear Channel to provide bus shelter installation, maintenance, and advertising services for ten (10) base years with five (5) 1-year options;
2) Authorize the CEO to execute MTS Doc. G3113.0-26 (in substantially the same format as Attachment B) with BriceHouse to provide bus bench installation, maintenance, and advertising services for ten (10) base years with five (5) 1-year options; and

3) Exercise the option years at the CEO's discretion

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachments: A. Draft MTS Doc. G3112.0-26
B. Draft MTS Doc. G3113.0-26
C. Scope of Work
D. Revenue Proposal – G3112.0-26
E. Revenue Proposal – G3113.0-26

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. G3112.0-26

BUS SHELTER INSTALLATION, MAINTENANCE, AND ADVERTISING SERVICES

THIS AGREEMENT is entered into this _____ day of _____, 2025 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: Clear Channel Outdoor, LLC

Address: 19320 Harborgate Way

Torrance CA 90501
City State Zip

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

Email: gregmcgrath@clearchannel.com

Telephone: 310-755-7209

Authorized person to sign contracts Greg McGrath (Name) Regional President, California (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).

The contract term is for ten (10) base years with five (5) 1-year options, exercisable at MTS's sole discretion, for a total of fifteen (15) years. Base period shall be effective October 1, 2025 through September 30, 2035 and option years shall be effective October 1, 2035 through September 30, 2040, if exercised by MTS.
The total revenue for this contract is estimated at $10,169,233 for the base period and $13,615,605 for the option years for a total of $23,784,838.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	CLEAR CHANNEL OUTDOOR, LLC
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. G3113.0-26

BUS BENCH INSTALLATION, MAINTENANCE, AND ADVERTISING SERVICES

THIS AGREEMENT is entered into this _____ day of _____, 2025 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: BriceHouse Outdoor, Inc. Address: 2550 Fifth Avenue, Suite 600

San Diego (City) CA (State) 92103 (Zip)

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

Email: grsaunders@bricehouse.com

Telephone: 619-523-4800

Authorized person to sign contracts George R. Saunders (Name) 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).

The contract term is for ten (10) base years with five (5) 1-year options, exercisable at MTS's sole discretion, for a total of fifteen (15) years. Base period shall be effective October 1, 2025 through September 30, 2035 and Option years shall be effective October 1, 2035 through September 30, 2040, if exercised by MTS.

The total revenue for this contract is estimated at $4,180,000 for the base period and $2,625,000 for the option years for a total of $6,805,000.

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

SCOPE OF WORK/TECHNICAL SPECIFICATIONS

5.1. GENERAL OVERVIEW

The San Diego Metropolitan Transit System, hereinafter referred to as "MTS," is soliciting proposals from qualified parties for the installation, maintenance and advertising sales for the agency's revenue-producing bus furniture.

Bus furniture refers to the agency's approximately 1,600 current bus benches, 500 current bus shelters, and up to 300 additional bus shelters and 350 additional bus benches MTS plans to install between 2025 and 2029.

Currently MTS has two different contractors for installation, maintenance and advertising sales for bus benches (expiring April 30, 2025) and bus shelters (expiring December 31, 2028). Once these two contracts expire, MTS will combine and expand the bus shelter inventory by up to 300 additional units and the bus bench inventory by up to 350 additional units into a single Bus Furniture installation, maintenance and advertising contract.

MTS is offering proposers the opportunity to submit proposals on the expiring contracts as well as the new inventory the agency expected to have fully installed by 2028. Proposers are able to submit for one (1) or more categories. MTS may award one or more contracts from this solicitation.

Category 1: Shelters – Propose on shelter portfolio which includes installation, maintenance and advertising services for new yet-to-be installed shelters (immediate) and then take over the responsibility for existing shelters in 2028 when the current contract expires.

Inventory Responsibility and Contract Timing:

- Immediate: Install up to 300 new solar bus shelters over a five (5)-year period – Ten (10) base years with five (5) one-year options

- January 1, 2029: Maintain approximately 500 existing shelters from the contract expiring on December 31, 2028, for a total of approximately 800 shelters in the inventory. Included in the existing shelters are fifty-nine (59) digital shelters with ninety (90) faces. MTS would also like to negotiate an increase in more bus furniture as needed in the system – Seven (7) base years with five (5) one-year options

Category 2: Benches – Propose on entire bus bench portfolio for installation, maintenance and advertising services.
Inventory Responsibility and Contract Timing:

- July 1, 2025: Maintain approximately 1,600 existing benches, and install and maintain 350 new benches – Ten (10) base years with five (5) one-year options

In 2024 MTS hired Tolar to manufacture new shelters and benches. Manufacturing costs should not be considered part of this request for proposals.

As part of the response to the RFP, proposers must include the following in a supplemental document:

- The annual maintenance and repair cost proposal
- Per unit installation cost per shelter
- Per unit installation cost per bench
- Per unit removal and installation costs associated with the replacement of shelters
- Per unit removal and installation costs associated with the replacement of benches
- Advertising revenue share proposal for MTS and overall projections shall be submitted in ATT 1
    - Revenue share proposal should include a minimum annual guarantee and revenue percentage share for any revenue generate above and beyond the minimum annual guarantee

Bus furniture will be a central part of the transit amenities program for MTS located in the public right of way within select cities within the MTS service territory. Bus furniture shall be of the highest of standards, improve and maintain safe pedestrian through ways, and comply with all Americans with Disability Act requirements.

This contract will not be subject to prevailing wage requirements.

5.2. MTS BACKGROUND

MTS operates more than 95 fixed routes in the greater San Diego area. There are about 255,000 trips taken each day aboard MTS buses and Trolleys. Approximately 50% percent of these trips are on buses. The vast majority of MTS services are within the urban core of San Diego County.

MTS currently has, or is in negotiations for, Memorandums of Understanding to locate furniture in the City of San Diego, National City, La Mesa, Santee, Imperial Beach, the County of San Diego, El Cajon, Chula Vista, and Lemon Grove. These agreements allow the placement of transit amenities in the public rights of way in their respective jurisdictions.

- ATT 5 provides a sample of an MOU for reference only.
- ATT 3 shows the number of benches with and without advertising in each city.

The Memorandums of Understanding require bus furniture inventory to be a minimum of 75% advertising. Currently, approximately ninety (90%) percent of the Bus Furniture inventory is located in the City of San Diego. It is estimated that the number of bus shelter locations will increase by approximately 60% and the number of bus benches by 20% by 2028 as the program expands in other cities.

Areas served by MTS include a wide variety of climates and weather conditions. MTS requests proposers provide maintenance methods that will best maintain the structural integrity of the bus furniture over a 20-year life and minimize their maintenance costs for all areas. These areas include the beach communities of La Jolla, Pacific Beach, Mission Beach, Ocean Beach, Coronado and Imperial Beach where fog and sea salt air are prevalent, and the inland communities of Santee and La Mesa where extreme heat and wind are common. A Regional Transit Map of the MTS service territory is included as ATT 8.

5.3. GENERAL OBJECTIVES

A. Install, replace, remove and maintain all MTS bus furniture.
- MTS will own all shelters and benches in this contract.
- Contractor shall maintain shelters and benches, sell advertising, and pay compensation to MTS for advertising revenue. A list of shelters and benches, including locations, is included in ATT 3 and 4.
- Existing furniture shall be repaired and/or replaced in a timely fashion according to a schedule specified by the responder.
- The proposer's replacement schedule will be evaluated
- Installation of new and replacement furniture (benches and shelters combined) shall be provided by the contractor at an annual rate of up to 150 units per year. Should this number exceed, MTS will be responsible for the additional installations.

B. Maintain all bus furniture to the highest standards. Maintenance schedules will be evaluated

C. Sell advertising on furniture to maximize revenue. Proposers' revenue-sharing proposal will be evaluated.
- Shelter advertising shall be in the form of traditional 4’ x 6’ posters. Included in the existing shelters are fifty-nine (59) digital shelters with ninety (90) faces
- Proposers should be able to demonstrate technical capability to maintain and update content either in-house or through a subcontractor. Proposer would be responsible for continued maintenance of digital shelter inventory – continued repair and maintenance
- Bench advertising shall in the form of traditional 7x2-foot posters

D. Enhance advertising opportunities to maximize revenue for MTS. This includes replacing static advertising kiosks with digital displays that also allow MTS to communicate passenger updates and general MTS marketing messages as well as to maximize advertising revenue.
- MTS is willing to expand the digital shelter inventory further than the existing 60 locations. Proposals should outline any digital expansions ideas in the proposal. Any expansion plans would need to be approved by MTS prior to implementation.

E. Provide to MTS space within the bus shelters to post passenger information. This is typically done a minimum of three times a year (January, June, and September).

F. Provide to MTS unsold space for MTS-specific advertising.

G. It is anticipated that the contractor will establish a local office to handle all aspects of bus furniture contracts, including maintenance and advertising sales.

5.4. SCOPE OF WORK: BUS FURNITURE

A. MAINTENANCE SERVICE REQUIREMENTS

During the contract period, MTS expects the contractor will provide the following services using its own assets and resources. MTS will not provide equipment nor the supplies to the contractor for maintenance purposes unless otherwise specifically approved by MTS.

Examples of consumable materials MTS is responsible to replace can include but not be limited to:

- Shelters: Batteries, Electronic Control Modules (ECMs), MTS windscreen decals, trash cans, solar panels.
- Benches: Top bars, screws for top bars.

Materials routinely replaced by the contractor can include but not be limited to:

- Shelters: Ad poster glass, map schedule glass, wiring and harnesses, trash can liners and locks.
- Benches: Non-anchored bench seat wooden slats, wooden advertising bench back, bench anchors.

Below are the estimated weights of the bus furniture:

- Bus Shelters:
  - 13ft ad - 1100 lbs.
  - 13ft non-ad - 850 lbs.
  - 17ft ad - 1300 lbs.
  - 17ft non-ad - 1000 lbs.

- Bus Benches:
  - Ad bench - 375 lbs.
  - Non-ad bench - 400 lbs.

1.1 Furniture Cleaning and Replacement

Bus Furniture shall be maintained in a “like new” condition throughout the life of this contract and such maintenance service shall include, but not be limited to, refurbishing, reconditioning, and replacing worn or damaged bus furniture.

1.1.1 Shelter cleaning will be performed a minimum of twice a week at all locations. A specified number of stops, up to 30% of all locations, will require cleaning 3-4 times per week. Any solar panels should be cleaned to the point where they can continually be functional through the course of the contract (minimum of one time per year). See ATT 31 for solar bus shelter troubleshooting manual.

1.1.2 Bench cleaning will be performed a minimum of one time per month for urban and suburban areas. In rural areas, bench cleaning can be less frequent but should still have rotating scheduled cleanings as part of the furniture maintenance program.

1.1.3 Common Area Platform Sweeping: all common area platforms, to include all cement floor surface so that after sweeping the platforms

that area is free of spills, trash, visible litter, dust and debris. No dirt shall be left in corners, or behind walls (where applicable).

1.1.4 Disinfectants and Chemical solutions: disinfectants used to clean surface area and to remove stickers, gum and graffiti should be environmentally friendly and should not damage the surface.

1.1.5 Trash Removal: All bus shelter trash containers shall be emptied and wiped down with disinfectant. Plastic trash liners shall be replaced with properly fitted liners. The contractor is responsible for trash removal for each service location and its transport to an authorized disposal site.

1.1.6 High Power Pressure Wash: On a monthly basis, or more often as needed, the contractor shall be responsible for removing caked mud, stains, dirt and other debris from all bus shelter grounds, structures, and MTS site property by power washing each station, including but not limited to platform, walls, curbs, structure, seats, trash bins, wind screen panels, canopy panels, and display sign kiosks. **NOTE:** Plexiglass Acrylic advertising kiosk viewing panels are not to be power washed.

1.1.6.1 Water pressure and temperature for all power washing shall not exceed 1000 psi and 135 degrees Fahrenheit.

1.1.6.2 Contractor will be responsible for operating in accordance with the San Diego Municipal Code 43.03 Wash Water Regulations for mobile businesses, see the following link for best practices and guidelines: mobilebusinessbrochure.pdf (sandiego.gov)

1.1.7 Graffiti Removal: The contractor shall remove all graffiti, no later than 24 hours after vandalism is reported or identified, from all surfaces located within the bus stop area. These surfaces include, but are not limited to: bus shelters, bus benches, canopies, advertising kiosks, trash containers, windscreens, ceiling panels, seating, pedestrian rails, walls, frames, signs, and light poles. A visible inspection of these surfaces on an ongoing basis shall be part of the contractor's normal duties.

1.1.8 Daily Log: The contractor shall maintain a daily log for each bus stop certifying scheduled services were performed. The daily log shall include a check list of scheduled duties and the date and time services were performed. In addition, the daily log shall include space for reporting site discrepancies that were found during the site inspection. The discrepancies report shall include, at a minimum, vandalism, graffiti found and removed, burnt out light fixtures, etc. Broken and unserviceable equipment shall be reported to MTS upon discovery and included in the daily log. The daily log shall be provided on a monthly basis along with the monthly compensation.

1.1.9 Furniture Replacement: Bus furniture shall be repaired or replaced within forty-eight (48) hours of notification to MTS and contractor of any damage, vandalism or graffiti found on or around any benches or shelters. If the damage or vandalism is an emergency, offensive or hazardous nature, or if the furniture is destroyed, the contractor will repair, replace or remove the same within twenty-four (24) hours.

1.2 Electrical Maintenance

1.2.1 At bus shelter locations, contractor will be responsible for replacement of bulbs, LED lighting, or LED light-ropes; verification of levels of lighting; and if solar powered, the maintenance of panels and batteries; the maintenance and adjustment of light timers, or photoelectric sensors as needed to maintain a fully lighted passenger waiting area.

1.2.2 At bus shelter locations, on an annual basis the contractor will be responsible for inspecting the integrity/condition of electrical wiring, operation of lamps, ballast, and conduit and pull boxes. In addition, contractor will confirm ground resistance test at 25 OHMS or less at each station on all station structures (including, but not limited to, shelters, free standing ad panels, electrified bus stop poles and other powered equipment or amenity) and report their results to MTS. A sample electrical inspection report can be found in Attachment D. Contractor must have the ability to turn off all electrically powered station amenities if resistance tests results exceed maximum permissible limits.

1.2.3 Ensure there are no exposed electrical wires. Secure or repair any that may be found.

1.2.4 Check bonding of circuit breakers box to shelter frame and advertising shelter frame.

1.2.5 Check bond supply neutral circuit breaker box or ballasts.

1.2.6 Manually test operation of circuit breaker/disconnect switch and inspect for integrity/condition.

1.2.7. Document all the results of all electrical tests and report the same to MTS. ATT 9 has a sample inspection form for reporting purposes.

1.3. Paint and Hardware

1.3.1. The testing for loose or missing bolts and mountings and their repair or reinstallation; remount loose amenities; replace if missing.

1.3.2. Replace ad and public information display glass and/or Plexiglas as a result of natural wear and tear, vandalism, etchings, graffiti or other damage regardless of its origin.

1.3.3 MTS will conduct ongoing field checks for these facilities by way of its Bus Operators, Supervisors, and Contract Management Staff. Reports on all findings that require specific attention per the details of this contract will be provided to the contractor through a work order to be submitted via email.

1.4. Emergency Services

1.4.1. Contractor shall provide a telephone number which will be answered 24 hours per day in the event MTS representatives must contact the contractor to request emergency repairs.

1.4.2. Contractor will respond to all emergency removal requests within three (3) hours of the request.

1.4.3. Contractor is responsible for emergency removal, containment and disposal of biohazard debris (as applicable). MTS will not be held liable for any improperly handled or disposed biohazard materials.

1.4.4. Contractor will respond and complete all related tasks within three (3) hours of notification by MTS staff unless approved otherwise in writing by MTS. The contractor will also take the necessary steps to sanitize contaminated sites.

1.5. Installation Service Requirements

MTS plans to purchase up to 300 new bus shelters and 350 benches in the first five years of this contract. The following is a general description of the furniture that MTS plans to purchase. This description can be used to help determine installation and maintenance costs as required in this document. All furniture specifications are listed in ATT 6.

If the weight or location of the option being proposed requires heavy machinery to install, the contractor must provide and include how this procedure would take place and what additional machinery is required to perform the final installation. Contractor will not be required to pay for any concrete work as part of installation. MTS will provide the work.

The contractor will be responsible for conducting a solar lighting analysis after each shelter installation to ensure the lighting is in acceptable working condition.

1.6. Removal of Existing Bus Furniture and Installation of New shelters, Relocation and New Installations

Currently MTS has approximately 500 shelters and 1,600 benches in its inventory. Shelters weigh approximately 1,000 to 1,300 lbs. each and benches weigh approximately 375 to 400 lbs each. With a few exceptions, all of these shelters and benches will be kept in their current locations. MTS will also be purchasing 300 additional solar-powered shelters and 350

benches. The existing furniture will be of a similar design to the new furniture.

MTS may also indicate where existing shelters and benches shall be removed but replaced by an alternative close-by location. These locations are expected to be approximately 100 shelters and 100-200 bench locations over the base term of the contract. For each option year there are expected to be approximately 20 shelters and 20-40 bench locations that may need to be removed/replaced.

MTS will also provide direction to the contractor to install furniture at new locations unrelated to locations of existing furniture.

In all cases, the contractor shall be responsible for the removal and disposal of furniture and, where necessary, repair sidewalk conditions.

Upon contract award, MTS will provide a priority list of furniture locations for installation, and any that need to be replaced or relocated.

Should MTS desire to install additional shelters and benches beyond the inventory listed in this contract, the contractor and MTS will mutually agree upon cost share terms for the additionally inventory and amend the contract accordingly.

1.7. Permits

1.7.1. The contractor shall be solely responsible for identifying the need for and obtaining permits necessary for the removal and/or installation of furniture.

1.8. Location Drawings

1.8.1. For all furniture relocations and new furniture locations, the contractor shall provide to MTS location drawings containing a representation of the proposed site covering the area from the property line to the curb and provide all necessary dimensions, including setbacks from curb, and distance from behind the shelters to the edge of sidewalks. The drawings should also identify adjacent buildings.

1.9 Installation Requirements

1.9.1. Contractor shall be required to remove and install new furniture within 30 days of receipt of the necessary permits. MTS expects new shelters to be manufactured at a rate of no fewer than 50 units every year over the first five years of the contract, and new benches of no fewer than 70 units every year, over the first five years of the contract.

1.10. Shelter Lighting

1.10.1. The contractor shall install and maintain appropriate lighting at shelters locations. The appropriate lighting is five (5) foot candles.

1.10.2. Most shelters will rely on solar panels for power. Eletrical power is not needed as MTS will be using solar panels. Some shelters may need electricity for appropriate lighting. All electrical service lines in the shelter site shall be underground, and shall originate from a point-of-service designed by MTS or SDG&E. Solar or electrical service at each shelter must be maintained in working order at all times by the contractor.

B. MITIGATION OF ADVERSE ENVIRONMENTAL EFFECTS

Should adverse environmental effects arise from the performance of this contract, the Contractor agrees to take all reasonable steps to minimize such effects pursuant to 49 U.S.C. app. § 1610, other applicable statutes, and the procedures set forth in 23 C.F.R. Part 771 and 49 C.F.R. Part 622.

C. UNAUTHORIZED WORK

Any services not required by the terms of the Contract that are performed without written authority from MTS will be considered as unauthorized and at the sole expense of the Contractor.
Services so performed will not be paid for and no extension in the period of performance shall be granted on account thereof.

D. INSPECTION OF SERVICES AND ACCEPTANCE

1.1. MTS' Right to Inspect

1.1.1 MTS reserves the right to inspect all and every part of the services at any time during the performance and after completion, as it may see fit.

1.1.2 If the services or any part thereof have not been performed in accordance with the Contract, the contractor will be notified, in writing, that such services are rejected.

1.1.3 MTS is not under obligation to hold any inspections. However, neither the inspection of the services, nor the lack thereof, shall relieve the contractor of its responsibility for performing and providing the services in accordance with the terms of this Contract.

1.2. Corrective Action Required

1.2.1 Contractor shall take the necessary corrective action to assure compliance with the terms of the contract and all other legal requirements.

1.2.2 Such corrective actions shall be implemented expediently. Time is of the essence.

1.3. Notice of Final Acceptance

1.3.1 Contractor's fulfillment of this contract shall be accepted only after MTS or its designated representative has given written notice of final acceptance.

1.3.2 Payment, whether in whole or in part, shall not be construed to be acceptance of services.

E. PRODUCT LIABILITY

In the absence of specific manufacturer warranties for items installed or applied in the provision of maintenance and repair services by the contractor, the contractor shall assume responsibility for the safe and proper performance of such items.

F. MODIFICATIONS TO THE SCOPE OF WORK

1.1 MTS may, from time to time, make changes to the scope of work under the Contract, through a Contract amendment process.

1.2 Any amendment issued shall not modify the overall purpose of the Contract.

1.3 At any time during the term of the Contract, MTS may order Additional Services to be performed by the contractor by an amendment signed by the Chief Executive Officer.

1.3.1 Additional Services are defined as those services that were not contained in the original scope of work and are determined by MTS to be necessary, and where a reasonable relationship to the services originally required exists.

1.3.2 Contractor shall not be entitled to make any changes in the services or perform any Additional Services unless so authorized, in advance, by a written amendment signed by the MTS Chief Executive Officer.

1.3.3 Contractor and MTS hereby agree and acknowledge that execution of any future amendment constitutes mutual accord and satisfaction as to the work covered thereby. Contractor specifically waives and releases any and all claims; rights or interest; including, but not limited to, those for impact; disruption; loss efficiency; "ripple"; other extraordinary; or consequential costs, arising directly or indirectly out of the work described in the amendment except as specifically included herein.

1.4 Authorization of Additional Work

1.4.1 Authorization to make changes to the Scope of Work under the Contract shall be completed through a written amendment.

1.4.2 For the purposes of this contract, temporary work ordered for special occasions that is not meant to affect the overall purpose and intent of this contract will be issued by MTS under a separate contract or purchase order, whichever applies. Any such additional work will be under the terms and conditions of that contract or purchase order but may reference portions of this contract.

1.5 Price Adjustments

1.5.1 Any change in the contract that causes an increase or decrease in cost to MTS, or the time required for the performance of the contract, must be approved as prescribed herein. An equitable adjustment in the compensation and schedule will be made as may be necessary.

1.5.2 Contractor shall be liable for all costs resulting from, or for satisfactorily correcting, any and all unauthorized changes not properly ordered by written modifications.

1.5.3 Except as otherwise expressly provided in the Contract, when costs are a factor in any determination of a contract price adjustment, such costs shall be in accordance with the applicable cost principles of Subpart 31.2 of the Federal Acquisition Regulations (FAR) in effect at the onset of the Contract.

G. CONTRACT OPTION YEARS AND ADDITIONAL SERVICES

MTS will have the unilateral right in the contract by which, for a specified time, it may purchase additional services under the resultant contract, or may elect to extend the term of the contract. MTS may exercise its options individually, all at once, or not at all.

1.1 Should the MTS decide to exercise its options the conditions below will apply:

1.1.1 Any options that were requested by MTS and/or contained in the contractor's original proposal must have been evaluated prior to contract award.

1.1.2 Contractor, at the time MTS determines the need to exercise any options, must have been performing under the Contract to the MTS' satisfaction, with no reported defaults or recorded complaints arising out of poor performance.

1.1.3 Since contractor's proposed pricing for the option years and additional services are considered in evaluating the contractor's

original proposal and form the basis for awarding the contract, Contractor shall be bound by the proposal pricing for additional services and/or option years, unless otherwise provided for in the resultant Agreement.

1.2 MTS will provide a minimum of thirty (30) days' written notice to the contractor of MTS' intent to exercise any option terms in the contract. MTS may issue its notice of intent to exercise any option at any time during the contract term. The minimum time for the written notice may be waived by mutual agreement.

H. INADEQUATE SERVICES

The rights and remedies of MTS provided herein are not exclusive and are in addition to any other rights and remedies provided under the contract or by law.

1.1 Should the contractor fail, neglect, or refuse to perform all of the requirements in this contract, its amendments, modifications, and accepted portions of the contractor's proposal in the time and manner required which will be ten days from a notice to cure date, MTS will have the right to take any combination, or all, of the following actions without limitation to MTS' other rights:

1.1.1 Terminate the contractor for contractor default.

1.1.2 Cancel any portions of the contract and affect any remedy MTS deems
necessary to fulfill the requirements of the canceled portions of the contract.

1.1.3 Procure such services necessary to meet the contract requirements at the contractor’s expense.

I. DELAYS IN CONTRACT PERFORMANCE

1.1 Extension of time

1.1.1 MTS shall grant an extension of time based on the following circumstances that are beyond the control of the contractor and subject to MTS approval, but only if such circumstances directly cause delays related to the performance of the contract:

a. An act or neglect of MTS
b. An act or neglect of a third party
c. Separate Contractor employed by MTS
d. Changes ordered in the work
e. Labor dispute
f. Fire
g. Unusual delay in deliveries
h. Unavoidable casualties
i. Other causes beyond Contractor's control

j. Delay authorized by MTS pending arbitration
k. Other causes which MTS determines may justify delay.

1.1.2 Any extension in time based on the preceding, for completion of the work, shall be extended by change order for a period commensurate with such delay.

1.1.3 Any extension in time will not extend the gross duration of the contract but is only for the period of performance window that is within the duration of the contract.

2.1 No Damage for Delays

2.2.1 Contractor hereby expressly acknowledges and agrees that Contractor waives any and all claims, and/or rights, for damages or relief from MTS for any delays in prosecution and completion of the work as a result of any action or inaction of MTS with the following exceptions:

a) MTS caused the delay and it was so long in duration or was of such a nature, that it was not within the contemplation of the parties when the contract was awarded
b) MTS deliberately intended to delay Contractor
c) MTS acted in bad faith

2.2.2 Contractor shall not be subject to any claim for liquidated damages by MTS for the period of delay, which meets those conditions.

3.1 Obligation to Work

3.3.1 Contractors, in the event of any dispute or controversy with MTS over any matter whatsoever, shall not cause any delay or cessation in or of contractor’s work, but shall proceed under the contract with the performance of the work required thereby.

3.3.2 Contractor shall include in their documents, with any and all levels of tier subcontractors, the following:

3.3.3 Subcontractor, in the event of any dispute or controversy with Contractor or any other Subcontractor over any matter whatsoever, shall not cause any delay or cessation in or for subcontract's work or the work of any other subcontract or of Contractor but shall proceed under that subcontract agreement with the performance of the work required thereby.

4.1 Suspension of Work by MTS

4.4.1 MTS may, without cause, order Contractor, in writing, to suspend, delay, or interrupt the work in whole or in part for such period of time as MTS may determine.

4.4.2 An adjustment shall be made for increases in the cost of performance of the contract, including profit on the increased cost of performance caused by suspension, delay or interruption.

4.4.3 No adjustment shall be made to the extent that:
a) Performance is, was or would have been so suspended, delayed or interrupted by another cause for which contractor is responsible;
b) Force Majeure;
c) An equitable adjustment was made under another provision of this contract.

4.4.4 Adjustments made in the cost of performance may have a mutually agreed fixed or percentage fee. Any such petitions for adjustments are subject to audit, Federal Cost Principles, and any other provision of this contract.

J. MANAGEMENT REPORTS

1.2 Maintenance Schedule as described in section 5.4

1.3 Monthly Advertising Sales Report

1.3.1 Gross dollar sales per bench and shelter location

1.3.2 Commissions per bench and shelter location

1.3.3 Net revenue to MTS per bench and shelter location

1.3.4 Cumulative total dollars for above category for all benches and shelters on a year-to-date basis.

5.5 OWNERSHIP

All permanent and semi-permanent installations on MTS property will be the sole property of MTS at the conclusion of the contract term.

5.6 TRANSIT FURNITURE PRIORITY

The placement of bus shelters will take priority over the placement of bus benches at any given location. MTS will not permit both a transit shelter and bus bench at the same location without the prior written approval of MTS.

5.7 SPECIAL INTEREST AND/OR DEVELOPER BENCHES

MTS retains the right to permit special interest, ornamental and/or developer furniture to be installed in its jurisdiction. This furniture would be installed at locations where San Diego County, community group, or developer is required by San Diego County to place furniture at the site. Special interest and/or developer furniture will be constructed, owned, and maintained by the respective owners and are not part of this agreement.

5.8 LICENSES AND PERMITS

Contractor shall be properly licensed in accordance with all local, State, and Federal laws and local ordinances. Also, it is the responsibility of the Contractor to acquire encroachment or other permits and easements or licenses from private property owners, if required, to install Bus Furniture upon public streets and other places within San Diego County. MTS makes no representations that San Diego County will issue any necessary encroachment permits. The current process for placement of benches on public rights-of-way does not require permits, but there is no guarantee that this will continue over the course of the agreement.

The contractor is solely responsible for obtaining any and all permits or licenses and payment of all fees, which are not or may hereafter by required.

5.9 CONTRACT TERM

This contract is for up to a 10-year period (5-year base with five 1-year options, exercisable at MTS' sole discretion). Proposers are required to submit its revenue payment proposal for all ten (10) years, or its proposal may be deemed non-responsive.

Base Term

Contract Year One (1):	July 1, 2025 – June 30, 2026
Contract Year Two (2):	July 1, 2026 - June 30, 2027
Contract Year Three (3):	July 1, 2027 - June 30, 2028
Contract Year Four (4):	July 1, 2028 - June 30, 2029
Contract Year Five (5):	July 1, 2029 – June 30, 2030
Contract Year Six (6):	July 1, 2030 – June 30, 2031
Contract Year Six (7):	July 1, 2031 – June 30, 2032
Contract Year Six (8):	July 1, 2032 – June 30, 2033
Contract Year Six (9):	July 1, 2033 – June 30, 2034
Contract Year Six (10):	July 1, 2034 – June 30, 2035

Option Periods

Option Year One (1):	July 1, 2035 - June 30, 2036
Option Year Two (2):	July 1, 2036 - June 30, 2037
Option Year Three (3):	July 1, 2037 - June 30, 2038
Option Year Four (4):	July 1, 2038 - June 30, 2039
Option Year Five (5):	July 1, 2039 - June 30, 2040

5.10. REVENUE PAYMENT

The contractor shall pay MTS the amount owed based on the mutually agreed upon proposed rate stated in the final agreement on the fifth (5^{th}) day of each month. Should the contract be terminated between months, the last payment shall be prorated on a daily basis.

Payment shall be made in the form of one (1) commission check made payable to MTS. All revenue payments shall be mailed to:

San Diego Metropolitan Transit System (MTS)
Attn: Accounting Department

1255 Imperial Avenue, Suite 1000
San Diego, CA 92101
ap@sdmts.com

Late Revenue Payment Fee
Payments shall be due on the 5th day following each calendar month. Payments received more than 30 days after the due date shall incur interest at the rate of five percent (5%). Payments received more than 60 days late may be grounds for MTS to terminate this Agreement for cause.

5.11. REPORTS

The Contractor shall submit a report with each monthly payment documenting the basis of and verifying the accuracy of the Contractor's payment. At a minimum, the report shall detail the number and location of bus furniture assets and the total advertising revenues for the previous month. Reports shall be submitted in Microsoft Word or Excel format. See Section 5.4.11 – Management Reports.

5.12. ADVERTISING POLICY

Contractor must comply with MTS Board Policy 21 - MTS REVENUE-GENERATING DISPLAY ADVERTISING, CONCESSIONS, AND MERCHANDISE (ATT 6).

5.13. REPAIR, REMOVAL, AND REPLACEMENT

The Contractor shall be responsible for the installation and maintenance of MTS-owned Bus Furniture immediately upon contract execution, or per a mutually agreed upon transition plan in the final agreement as expiring contracts are acquired in 2025 and 2028, and the installation of new MTS-owned bus shelters immediately upon availability, or per a mutually agreed upon transition plan in the final agreement.

During the length of the contract, Contractor shall also be responsible for the relocation of furniture at the direction of MTS.

The contractor shall be liable, at its own expense, to maintain all bus furniture in a "like new" condition. The contractor shall repair or remove and replace furniture from MTS inventory within twenty-four (24) hours of verbal or written notification. The contractor shall maintain all advertising copy, advertisements, and display materials in a clean, safe, and attractive condition. The contractor must provide the necessary personnel to ensure proper maintenance of bus furniture and advertising displays.

Contractors shall also conduct regular testing for loose or missing bolts and mountings and their repair or reinstallation; remount loose amenities; replace if missing. MTS will conduct ongoing field checks for these facilities by way of its Bus Operators, Supervisors, and Contract Management staff. Reports on all findings that require specific attention per the details of this contract will be provided to the Contractor through a work order to be submitted via email or fax.

5.14. ADA COMPLIANCE

The Contractor shall be required to comply with all provisions of the American with Disabilities Act (ADA) and its implementing regulations. In general, all benches placed by the Contractor shall be located no closer than 36" from the sidewalk curb unless the design, site characteristics, MTS and/or the ADA regulations require a greater setback

distance and a minimum of a 36” (48” desirable) clear space be available to the rear of the bench. It is permissible for a bench to be located at the rear of the sidewalk in order for the required clear space to be obtained between the curb and bench. Also, it is required that the placement of the first bench be a minimum of six feet (6’) parallel from the bus stop pole in order for deployment of the bus wheelchair lift. Notwithstanding the foregoing, a bench shall not be located in such a manner as to become an obstruction to pedestrian travel, impede access to the bench or bus by wheelchair patrons, or otherwise create a safety hazard. Placement of benches shall conform with MTS and all applicable local, state, and federal requirements and/or regulations.

5.15. COMPLIANCE WITH THE TRANSIT AMENITIES POLICY

MTS’ Transit Amenities Policy recognizes the power and potential of amenities at transit stations and stops to drive new ridership and improve the quality of service for existing riders. As addressing climate change drives the need for public transportation to accommodate a growing percentage of trips, simultaneous factors such as warming weather, equity considerations, and an aging population necessitate amenities that will attract and provide comfort for MTS passengers. The contractor shall be responsible for ensuring all advertising, installation and maintenance of MTS bus furniture complies with the Transit Amenities Policy, which can be found in ATT 9

5.16. EMERGENCY SERVICES

Contractor shall provide a telephone number(s) which will be answered twenty-four (24) hours per day, seven (7) days per week in the event MTS representative(s) must contact the Contractor to request emergency services. The contractor will respond to all emergency removal requests within three (3) hours of the request. Emergency removal, containment, and disposal of biohazard debris (as applicable). Contractor will respond and complete all related tasks within three (3) hours of notification by MTS staff unless approved otherwise in writing by MTS. The Contractor will also take the necessary steps to sanitize contaminated sites.

5.17. [NOT APPLICABLE] BUY AMERICA

5.18. [NOT APPLICABLE] SAFETY DATA SHEETS (SDS)

5.19. [NOT APPLICABLE] NO RIGHT TO POST SIGNS

5.20. [NOT APPLICABLE] REPLACEMENT PARTS

5.21. [NOT APPLICABLE] DELIVERY AND ACCEPTANCE

5.22. [NOT APPLICABLE] EXPEDITING

5.23. [NOT APPLICABLE] ACQUISITION OF ROLLING STOCK

Category 1 - Bus Shelter - Revenue Proposal

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Total
Gross Revenue (from Bid)	$ 35,427	$ 97,650	$ 153,090	$ 212,310	$ 5,436,541	$ 5,708,368	$ 5,993,786	$ 6,293,475	$ 6,608,149	$ 6,938,557	$ 7,285,484	$ 7,649,759	$ 8,032,246	$ 8,433,859	$ 8,855,552	$ 77,734,253
Revenue to be shared at 30%	35,427	97,650	153,090	212,310	5,436,541	5,708,368	5,993,786	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	$ 65,637,172
Revenue to be shared at 45%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 293,475	$ 608,149	$ 938,557	$ 1,285,484	$ 1,649,759	$ 2,032,246	$ 2,433,859	$ 2,855,552	$ 12,097,081
MTS Share (%)	0%	0%	0%	0%	8%	30%	30%	31%	31%	32%	33%	33%	34%	34%	35%	31%
MTS Share ($)	$ 10,628	$ 29,295	$ 45,927	$ 63,693	$ 1,630,962	$ 1,712,510	$ 1,798,136	$ 1,932,064	$ 2,073,667	$ 2,222,351	$ 2,378,468	$ 2,542,392	$ 2,714,511	$ 2,895,237	$ 3,084,998	$ 25,134,838
Shelter install deduction	$ (10,628)	$ (29,295)	$ (45,927)	$ (63,693)	$ (1,200,457)											
Cummulative Recouped	$ (10,628)	$ (39,923)	$ (85,850)	$ (149,543)	$ (1,350,000)											
Adjusted MTS Share	$ -	$ -	$ -	$ -	$ 430,505	$ 1,712,510	$ 1,798,136	$ 1,932,064	$ 2,073,667	$ 2,222,351	$ 2,378,468	$ 2,542,392	$ 2,714,511	$ 2,895,237	$ 3,084,998	$ 23,784,838
Proposer Share (%)	100%	100%	100%	100%	92%	70%	70%	69%	69%	68%	67%	67%	66%	66%	65%	69%
Proposer Share ($)	$ 35,427	$ 97,650	$ 153,090	$ 212,310	$ 5,006,036	$ 3,995,858	$ 4,195,650	$ 4,361,411	$ 4,534,482	$ 4,716,206	$ 4,907,016	$ 5,107,367	$ 5,317,735	$ 5,538,622	$ 5,770,554	$ 53,949,415

Category 2 - Bus Benches - Revenue Proposal

BASE YEAR ONE (JULY 1, 2025 THROUGH JUNE 30, 2026)	
Commission of Gross Advertising Sales	36%
AND	
Minimual Annual Guarantee (MAG)	$375,000.00

BASE YEAR TWO (JULY 1, 2026 THROUGH JUNE 30, 2027)	
Commission of Gross Advertising Sales	36%
AND	
Minimual Annual Guarantee (MAG)	$380,000.00

BASE YEAR THREE (JULY 1, 2027 THROUGH JUNE 30, 2028)	
Commission of Gross Advertising Sales	36%
AND	
Minimual Annual Guarantee (MAG)	$400,000.00

BASE YEAR FOUR (JULY 1, 2028 THROUGH JUNE 30, 2029)	
Commission of Gross Advertising Sales	36%
AND	
Minimual Annual Guarantee (MAG)	$400,000.00

BASE YEAR FIVE (JULY 1, 2029 THROUGH JUNE 30, 2030)	
Commission of Gross Advertising Sales	36%
AND	
Minimual Annual Guarantee (MAG)	$400,000.00

BASE YEAR SIX (JULY 1, 2030 THROUGH JUNE 30, 2031)	
Commission of Gross Advertising Sales	36%
AND	
Minimual Annual Guarantee (MAG)	$425,000.00

BASE YEAR SEVEN (JULY 1, 2031 THROUGH JUNE 30, 2032)	
Commission of Gross Advertising Sales	36%
AND	
Minimual Annual Guarantee (MAG)	$425,000.00

BASE YEAR EIGHT (JULY 1, 2032 THROUGH JUNE 30, 2033)	
Commission of Gross Advertising Sales	36%
AND	
Minimual Annual Guarantee (MAG)	$450,000.00

BASE YEAR NINE (JULY 1, 2033 THROUGH JUNE 30, 2034)	
Commission of Gross Advertising Sales	36%
AND	
Minimual Annual Guarantee (MAG)	$450,000.00

BASE YEAR TEN (JULY 1, 2034 THROUGH JUNE 30, 2035)	
Commission of Gross Advertising Sales	36%
AND	
Minimual Annual Guarantee (MAG)	$475,000.00

OPTION YEAR ONE (JULY 1, 2035 THROUGH JUNE 30, 2036)	
Commission of Gross Advertising Sales	38%
AND	
Minimual Annual Guarantee (MAG)	$500,000.00

OPTION YEAR TWO (JULY 1, 2036 THROUGH JUNE 30, 2037)	
Commission of Gross Advertising Sales	38%
AND	
Minimual Annual Guarantee (MAG)	$500,000.00

OPTION YEAR THREE (JULY 1, 2037 THROUGH JUNE 30, 2038)	
Commission of Gross Advertising Sales	38%
AND	
Minimual Annual Guarantee (MAG)	$525,000.00

OPTION YEAR FOUR (JULY 1, 2038 THROUGH JUNE 30, 2039)	
Commission of Gross Advertising Sales	38%
AND	
Minimual Annual Guarantee (MAG)	$550,000.00

OPTION YEAR FIVE (JULY 1, 2039 THROUGH JUNE 30, 2040)	
Commission of Gross Advertising Sales	38%
AND	
Minimual Annual Guarantee (MAG)	$550,000.00

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 18

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Public Announcement (PA) System Survey – Orange, Green, and UC San Diego Blue Line – Work Order

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute Work Order WOA355-AE-53 under MTS Doc No. PWL355.0-22 (in substantially the same format as Attachment A) with Psomas, in the amount of $281,090.96 to provide survey services for the Orange, Green, and UC San Diego Blue Line PA System Survey.

Budget Impact

The total cost of this contract is estimated to be $281,090.96. The project will be funded by the MTS Capital Improvement Program (CIP) account 2008127501 PA System – Orange Line, 2008127701 PA System – Green Line, and 2008127601 PA System – Blue Line.

DISCUSSION:

The existing PA Systems on the Orange, Green, and UC San Diego Blue lines are at least 15 years old. The purpose of the project is to upgrade the trolley station PA systems to match the current PA system installed for the Mid-Coast project in 2021. The specific components to be replaced include the IP7 audio interfaces, speakers, amplifiers, cabling, and conduits (if needed). To determine the full scope of the replacement project, a detailed assessment of the current PA system is needed to identify which components of the current system are working, which require upgrades for compatibility, and whether the wiring is sufficient.

In addition, an analysis of alternate PA system technology is desired. The Mid-Coast extension added nine (9) passenger stations to its current 56 stations, totaling 65 stations on the trolley network. In addition to investing in PA system upgrades for the trolley system, MTS would like to understand the costs and advantages of alternate PA systems and technologies on the market. For an alternative system or technology to be viable, it must be compatible with the newly installed 2021 equipment, as that equipment cannot be replaced within the next ten (10) years due to grant funding restrictions.

Under the proposed work order, Psomas will provide survey services for the existing PA System. The scope of services under this work order will focus on creating a single line diagram, compiling an existing conditions assessment report, and an analysis of alternative PA system technologies.

On June 16, 2025, MTS issued a Request for Proposals (RFP) for Survey Services from firms with expertise in a variety of Architecture & Engineering design and related consulting services. MTS received four (4) proposals.

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 July 14, 2025, the selection committee evaluated the initial proposals and scored as follows:

Ranking	Proposer Name	Firm Certification	Total Score
1.	Psomas	N/A	93.99
2.	Pacific Railway Enterprise, Inc.	Women-Owned Business Enterprise (WBE), Small Business (SB)	91.33
3.	HDR Engineering, Inc.	N/A	90.67
4.	Mott Macdonald Group, Inc.	N/A	87.00

After an evaluation of the proposal, the evaluation panel determined that Psomas was the most qualified firm and best met the requirements outlined in the RFP, with a final score of 93.99 points out of a maximum of 100 points.

The evaluation panel then reviewed Psomas' initial price proposal in the amount of $484,295.60. After carefully reviewing each task and associated costs, MTS issued a counteroffer. Through the Record of Negotiation with Psomas, MTS asked Psomas to reduce their level of effort across specific classifications after discovering what project managers felt were redundancies. Psomas submitted an updated proposal in the amount of $281,090,96. Staff determined the contract price to be fair and reasonable. For the project, Psomas will utilize the following subcontractor:

Subcontractor Name	Firm Certification	Value of Services
Hatch Associates Consultants, Inc.	N/A	$271,824.06

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Work Order WOA355-AE-53 under MTS Doc No. PWL355.0-22 (in substantially the same format as Attachment A) with Psomas, in the amount of $281,090.96 to provide survey services for the Orange, Green, and UC San Diego Blue Line PA System Survey.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachments: A. Draft Work Order MTS Doc. No. WOA355-AE-53

Metropolitan Transit System

September 11, 2025

MTS Doc. No. PWL355.0-22
Work Order No. WOA355-AE-53

Mrs. Sarah Curran
Vice President/Principal
Psomas
401 B. Street, Suite 1600
San Diego, CA 92101

Dear Mrs. Curran:

Subject: MTS DOC. NO. PWL355.0-22, WORK ORDER WOA355-AE-53, GENERAL ENGINEERING SERVICES FOR PA SYSTEM SURVEY – ORANGE, BLUE, AND GREEN LINES

This letter shall serve as our agreement for Work Order WOA355-AE-53 to MTS Doc. No. PWL355.0-22, for professional services under the General Engineering Consultant Agreement, as further described below.

SCOPE OF SERVICES

Provide survey services for the Orange, Blue, and Green Line Public Announcement (PA) System. 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 six (6) months from the date of the Notice to Proceed.

PAYMENT

Payment shall be based on actual costs in the amount not to exceed $281,090.96 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:

_____
Mrs. Sarah Curran, Vice President/Principal
Psomas

Date:_____

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

PA System Survey – OL, BL, and GL

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

Proposal WOA355-AE-53 | 06.20.2025

PSOMAS

PSOMAS

Balancing the Natural and Built Environment

June 20, 2025

Tyler Woller, Contract Officer` *Submitted via PlanetBids*
San Diego Metropolitan Transit System
1255 Imperial Avenue, Suite 1000
San Diego, CA 92101

Subject: Proposal for the A&E Master Agreement Award | PA System Survey – OL, BL, and GL – WOAXXXX-AE-53

Dear Mr. Woller:

The Public Address (PA) System Survey for the Orange, Blue, and Green Trolley Lines Project will modernize and upgrade the public address systems at 56 trolley stations to meet the standards of the Mid-Coast extension PA system. In doing so, it will provide a consistent experience for passengers across all lines, enhance communication and safety and provide a system that can adapt to future needs. Our core team, featuring Psomas and Hatch, looks forward to applying our experience in upgrading the VMS systems for the same trolley lines to the PA System Project. Coupled with Hatch's extensive experience providing PA system upgrades for other transit agencies, our experience working together as a team and existing knowledge of each station will allow us to deliver thorough preliminary design options both on time and within budget.

Our proposal will remain valid for 90 days from the submittal due date of June 20, 2025. We also acknowledged receipt of Addendum #1, dated 6/2/2025. We look forward to partnering with MTS to advance its commitment to passenger safety, operational reliability, and future-ready transit infrastructure. Thank you for your consideration of our proposal.

Respectfully,

PSOMAS

Sarah Curran, PE
Vice President/Contract and Task Order Manager

401 B St, Suite 1600
Wells Fargo Plaza
San Diego, CA 92101

Tel 619.691.2800
www.Psomas.com

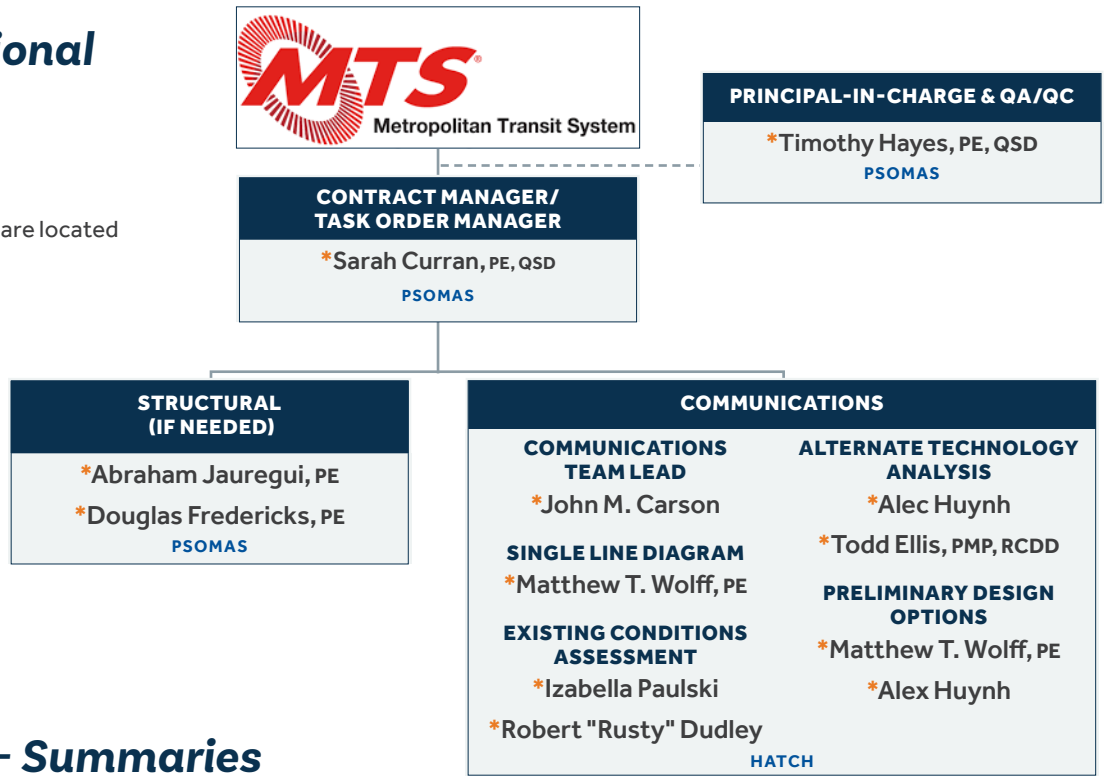
1 Project Team

Project Team

Firm	Role on Project
Psomas	▸ Contract/Task Order Management ▸ Quality Control ▸ Structural
Hatch	▸ Communications Design ▸ Existing Conditions Assessment, Technology Analysis, and Preliminary Design Options ▸ Mid-Coast Single Line Diagram Development

Organizational Chart

*** Key Staff**
Resumes of Key Staff are located in Appendix A



Key Team - Summaries

Sarah Curran, PE, QSD

Contract Manager/Task Order Manager – Psomas

- San Diego MTS, Design Services for Orange/ Blue/Green Lines Variable Message Sign Installation Project
- San Diego MTS, Design Services for Beyer Blvd Pathway
- San Diego MTS, CPD Modular Building Replacement Planning and Lighting Study and Phase 1 - Program Validation
- San Diego MTS, General Engineering Services for Signal Upgrade - SICAS7 & H&K Design
- San Diego MTS, Right of Entry Plan Reviews

Education
2002/BS/Civil Engineering/University of Vermont, Cum Laude

Registration
2006/CA/Professional Engineer/Civil/69620

Years Experience: 23

Time Commitment: 15%

Profile: Sarah has 23 years of civil engineering experience, including planning and designing public works, transit, and educational facilities. Her diverse project experience and client base are supported by her ability to identify and commit needed resources to projects requiring a wide range of expertise. ***Role:*** As Contract Manager/Task Order Manager, Sarah will work closely with the MTS Project Manager to manage the project contract elements and maintain the project schedule.

Key Team - Summaries (Continued)

Timothy Hayes, PE, QSD

Principal-in-Charge & QA/QC – Psomas

- Broadway Streetscape Improvement
- Potrero Canyon Bicycle and Pedestrian Bridge
- San Diego MTS On-Call
- Lincoln Multimodal Improvements

Education
1992/BS/Civil Engineering/California Polytechnic State University, San Luis Obispo

Registration
1997/CA/Professional Engineer/Civil/58986

Years Experience: 32

Time Commitment: 15%

Profile: Timothy has 32 years of experience and is adept at problem-solving and building consensus as an Engineering Manager of time-sensitive projects. His experience includes the planning and design of infrastructure and transportation improvements, including work on numerous planning strategies; preliminary design reports; and final plans, specifications, and estimates (PS&Es) for transit agencies throughout California. **Role:** As Principal-in-Charge, Tim will provide project management assistance and oversight, leveraging his years of experience and expertise in transportation engineering and planning.

John M. Carson

Communications Team Lead – Hatch

- Chicago Transit Authority, System-Wide Training and Control Center Operations Support
- Northern Illinois Regional Commuter Rail Corporation, Southwest Service Operating District Fiber Optic Backbone Design
- Tren Urbano, Communications System Assessment
- Chicago Transit Authority, Cermak-McCormick Place Station (Green Line)

Education
1993/BS/Electrical Engineering/Illinois Institute of Technology

Years Experience: 26

Time Commitment: 50%

Profile: John has more than 26 years of experience in transportation communication systems and Intelligent Transportation Systems (ITS) and offers expertise in designing fiber optic, copper, and wireless systems for data, voice, and video applications. His experience covers all project elements, including project management, design, fieldwork, budgets, report preparation, and CADD, and all project phases, from conceptual design to project close-out. **Role:** John will serve as the team leader for the overall communications elements including the single line diagram, existing conditions assessment, technology analysis and preliminary design options development.

Izabella Paulski

Existing Conditions Assessment Task Lead – Hatch

- TransLink Operations Control Centre 2, CAD Implementor and Communications Designer
- TriMet Passenger Elevator Access Device Project, CAD Implementor and Designer.
- Massachusetts Bay Transportation Authority, South Coast Rail Project, Owner's Communications Consultant
- San Bernardino County Transportation Authority, Ontario International Airport Tunnel Connector, Communications Designer and CAD support

Education
2022/BS/Computer Science, Minor in Mathematics/Elmhurst University

Years Experience: 2

Time Commitment: 50%

Profile: Izabella has experience as a software engineer, working with Java, C#, and C++. At Zebra Technologies, she led an innovation project and was promoted to Engineer Technician, focusing on firmware and application testing. She joined Hatch as a Junior Rail Systems Engineer, working on electrical engineering and network architecture projects.
Role: Isabella will lead the survey and development of the existing conditions report as part of Task 2.

Key Team - Summaries (Continued)

Matthew T. Wolff, PE

Single Line Diagram and Prelimary Design Options Tasks Lead - Hatch

- San Diego MTS, Design Services for Orange/ Blue/Green Lines Variable Message Sign Installation Project
- Central Puget Sound Regional Transit Authority, Downtown Redmond Link Extension
- Los Angeles County Metropolitan Transportation Authority, K-Line Extension

Education
1997/BS/Electrical Engineering/Iowa State University

Years Experience: 27

Time Commitment: 20%

Profile: Matthew has over 27 years of experience in communications systems engineering, specializing in IT, security/ surveillance, and PA audio systems. He has designed and overseen integrated applications across various networks, including voice, streaming audio/video, broadband data, SCADA, ITS, and electronic security systems. His expertise includes IP networks, fiber optic and copper cable infrastructure, CCTV, access control, public address/paging systems, and telephony. ***Role:*** Matthew will be responsible for preparing the Mid-Coast PA Single Line diagram and Preliminary Design Options.

Robert "Rusty" Dudley

Existing Conditions Assessment Task Support - Hatch

- San Diego MTS, Design Services for Orange/ Blue/Green Lines Variable Message Sign Installation Project
- Caltrans, JPB - Railroad Bus Ops

Education
1998/BS/Computer Science/California State Polytechnic University, Pomona

Years Experience: 26

Time Commitment: 10%

Profile: Robert "Rusty" is a Senior Rail Systems Program Manager and Back Office System Consultant with over twenty years of experience in commuter railroads. He has managed engineering teams for rail system projects, including PTC implementation and back-office integration. Rusty has worked as a client, contractor, and consultant, bringing a comprehensive understanding of his roles. He is an expert in rail dispatch operations and back-office systems, covering the entire system life cycle. His expertise includes servers, databases, communication protocols, and graphical interfaces, with experience in commuter and light rail environments using modern technologies like PTC, SCADA, and virtualization. ***Role:*** Rusty will support Izabella with the survey and development of the existing conditions report as part of Task 2.

Alec Huynh

Alternate Technology Task Lead/ Preliminary Design Options Support- Hatch

- San Diego MTS,Design Services for Orange/ Blue/Green Lines Variable Message Sign Installation Project
- Los Angeles County Metropolitan Transportation Authority, Airport Metro Connector Transit Station/96th Street Station
- Los Angeles County Metropolitan Transportation Authority, K-Line Extension
- Sacramento Regional Transit, Downtown Riverfront Streetcar

Education
2022/BS/Electrical Engineering/Marquette University

Years Experience: 3

Time Commitment: 50%

Profile: Alec is a junior electrical engineer with experience in communications and IT system design, focusing on rail transit and trolley bus communications systems, including SCADA, wireless and fiber optic networks, and CCTV systems. He also has experience with Positive Train Control radio technology. ***Role:*** Alec will prepare the analysis of alternate PA system technology and support Matthew in the development of preliminary design options.

Key Team - Summaries (Continued)

Todd Ellis, PMP, RCDD

Alternate Technology Task Support – Hatch

- Confidential Cybersecurity Analyses, Northeast Corridor and West Coast Commuter Railroads
- Translink, Operations Maintenance Facility 4
- Massachusetts Bay Transportation Authority, Owner's Communications Consultant

Education

1997/BS/Business Administration/North Carolina Wesleyan College

Years Experience: 41

Time Commitment: 20%

Profile: Todd Ellis is a seasoned professional in the utility and transportation sectors, known for his expertise in managing large-scale projects and designing communication-centric systems. He holds patents for distributed street light control and energy management, and has authored 20 articles on related topics. Todd is recognized for his strategic planning and innovative thinking. **Role:** Todd will work with Alec to prepare the analysis of alternate PA system technology.

Abraham Jauregui, PE

Structures Task Lead - Psomas

- San Diego MTS, Design Services for Orange/ Blue/Green Lines Variable Message Sign Installation Project
- San Diego MTS, Right of Entry Plan Reviews
- City of Coronado, Star Park Sculpture
- Sacramento Regional Transit, Light Rail Transit Station Platform Modifications
- Laguna Niguel, Crown Valley Parkway Westbound Widening

Education

2014/MS/Structural & Earthquake Engineering/ San Francisco State University, San Francisco

2011/AS/Civil Engineering/Universidad Autónoma de Baja California, Mexicali, Baja California, México

Registration

2021/CA/Professional Engineer/Civil/93205

Years Experience: 14

Time Commitment: 8%

Profile: Abraham has 14 years of professional experience in public works design and construction. He has assisted with development and design services on several transportation projects, including bridges, retaining walls, sound walls, street improvements, utility relocations, pedestrian/bicycle facilities, and pavement rehabilitation. Abraham is well versed in providing thorough surveys and analysis for projects similar to the PA Systems Survey Project. **Role:** As Structures Task Lead, Abraham will provide any structural review needed to support the survey and preliminary design options.

Douglas Fredericks, PE

Structures Technical Expert - Psomas

- San Diego MTS, Design Services for Orange/ Blue/Green Lines Variable Message Sign Installation Project
- City of Coronado, Star Park Sculpture
- General Services Administration, Otay Mesa Land Port of Entry
- City of Santa Clarita, Via Princessa Park Triple Cell Railroad Culver
- Sacramento Regional Transit, Lirght Rail Transit Station Platform Modifications

Education

1991/MS/Civil Engineering/University of California, Davis

1990/BS/Civil Engineering with Minor in English/California State University, Chico

Registration

1993/CA/Professional Engineer/Civil/50863

Years Experience: 34

Time Commitment: 5%

Profile: Doug has over 34 years of experience in structure design and project management. He has led the planning, layout, type selection, and final design for a wide variety of transportation structures, including new construction, widening, and rehabilitation projects. He has also performed studies to evaluate the condition of existing structures and has designed retaining walls, sound walls, water-holding tanks, and drainage facilities. **Role:** Doug will work closely with Abraham to oversee and provide technical oversight of any structural review needed to support the survey and preliminary design options.

2 Project Team Capabilities

Management, Coordination, and Scheduling Abilities

This initial phase of the PA System Upgrades will be a focused effort, requiring attention to detail, knowledge of available technologies, and close collaboration with MTS to identify the specific components and upgrades needed to provide a PA system for all trolley lines consistent with the Mid-Coast project. Psomas has assembled a proven management team that can identify and focus on the project elements that are critical at this stage to build a sound foundation for future design stages.

Leading this effort is experienced Contract/Task Order Manager, Sarah Curran. She will provide oversight of the project team, be responsible for meeting the established budget and schedule, and maintain the team's focus on the initial tasks at hand.

At the Project outset, Psomas and Hatch will further develop the work plan and schedule provided in Section 4, share them with the team and MTS project manager, and monitor throughout the course of the project. The team will conduct regular internal meetings prior to check-ins with the MTS project manager to coordinate, resolve questions, and maintain communication, momentum, and the project schedule. Meeting minutes will be prepared, identifying and documenting needed information, decisions, and work in progress toward each outreach meeting and submittal milestone.

The detailed work plan, schedule and regular meetings will contribute to successfully delivering a viable preliminary design for the MTS PA system upgrade within the 6-month project schedule provided in Section 4.

Ongoing Projects, Commitments, and Priorities

We have provided a table on the following page indicating our proposed team's ongoing projects and commitments. It should be noted that the listed projects are in various phases of development, many of which are winding down. While the provided table has been developed for key staff, Psomas and Hatch have robust teams to support the production behind the scenes. As the Contract Manager, Sarah will make sure adequate resources are available to support the project throughout its duration.

Quality Assurance and Quality Control

The quality of a project relies on a thorough understanding of the contract deliverables, seamless communication between a highly qualified team, and a series of checks and balances prior to each deliverable milestone. As QA/QC Manager, Tim Hayes, will perform independent checks well before each milestone deliverable. Prior to each submittal to MTS, Sarah will review the deliverables to confirm Tim's comments have been incorporated. In addition, Sarah will schedule a page turn with the MTS Project Manager after each submittal to gather and document real-time feedback.

Cost Management

A pivotal tool Psomas utilizes for efficient management and cost control is the Project-At-A-Glance project management dashboard. This proprietary software offers real-time access to job costing and scheduling, accessible both on desktops and remotely. Through this online resource, managers and staff benefit from continually updated data, including task breakdowns with time and expense reporting. The dashboard also provides convenient links to current and past invoices, allowing seamless financial tracking. Additionally, it grants instant access to essential documents such as master contracts and task order details.

In addition, similar to other ongoing tasks, Psomas will work closely with project subconsultants to request timely invoices for incorporation into the overall invoice for MTS. Project status updates will be included with each invoice to make sure the rate of billing is in line with the project's progress. This will be the responsibility of Sarah and her supporting Project Administrator.

Project Personnel	Contract Role	Client/Agency	Project Name	CMT.
Sarah Curran, PE, QSD	Contract Manager/ Task Order Manager	San Diego MTS City of Coronado San Diego Unified School District(Sub to tBP) US General Services Administration (Sub to Gruen)	A&E As-Needed Services Engineering As-Needed Whittier K-12 Alternative School Modernization Calexico West Land Port of Entry	15% 10% 20% 10%
Timothy Hayes, PE, QSD	Principal-in-Charge & QA/QC	City of Los Angeles San Diego MTS Sacramento RTD Sacramento RTD	Lincoln Blvd. Multimodal A&E AS-Needed Services Downtown/Riverfront Streetcar GESS (On-Call) Bus/Light Rail Maintenance Facilities	10% 10% 5% 10%
John Carson	PA System Survey Lead	City of Chicago City of Chicago City of Chicago City of Chicago	CTA RPM Modernization CTA TACCO CTA BCD Traction Power Substation Metra Backup Data Center Metra Milwaukee District Fiber Backbone	15% 15% 5% 5% 5%
Izabella Paulski	PA System Survey Support	City of Vancouver City of Portland City of Ontario City of Boston	TransLink OCC2 TriMet Passenger Elevator Access ONT Tunnel Connector MBTA support	15% 05% 15% 10%
Matthew Wolff, PE	PA System Survey Support	SBCTA LACMTA (LA Metro) Sound Transit Greater Dayton RTA Sacramento Regional Transit	Ontario Airport Tunnel Connector K-Line Torrance Extension Downtown Redmond Link Extension TPSS SCADA and Comms Upgrade Downtown Riverfront	50% 25% 10% 5% 10%
Rusty Dudley	PA System Survey Support	San Diego MTS Caltrain LA Metro	Trolley VMS Replacement Back Office System Support New ROC/BOC	10% 35% 35%
Alec Huynh	PA System Survey Support	LACMTA LACMTA SACRT	AMC Project Support K-Line Extension to Torrance Sacramento Streetcar Extension	50% 25% 10%
Todd Ellis, PMP, RCDD	PA System Survey Support	WMATA Connecticut DOT DART	8000 Series comms/cybersecurity Vehicle comms/cybersecurity CBTC communications design	25% 25% 30%
Abraham Jauregui, PE	Structural Engineering	San Diego MTS Sacramento Regional Transit City of Santa Ana	BRT Variable Message Signs Horn Station Rehabilitation Santiago Creek Bridge Assessment	20% 15% 10%
Douglas Fredericks, PE	Structural Engineering Lead	Sacramento Regional Transit KSG Consulting Engineers City of San Diego	Train & Technology Refresh Harbor Blvd 12 KV Switchgear Stations Bridge Waterlines GJ 952 10%	20% 10% 10%

3 Project Understanding/Approach

Demonstrated Knowledge and Abilities

The PA System Survey Project will identify needed upgrades to the Public Address (PA) Systems on the Orange, Green, and Blue Line to match the current PA system installed for the Mid-Coast project. While this initial task order is focused on the preliminary assessment and design, the team we have assembled understands the design needs for the life of the project development. Our proven approach is represented by the proposed team's experience delivering on the Variable Message Sign (VMS) replacement project for the same trolley lines, as well as the other projects listed below.

Variable Message Signs Replacements for the Orange, Blue, and Green Trolley Lines

San Diego Metropolitan Transit System/San Diego, CA - Psomas

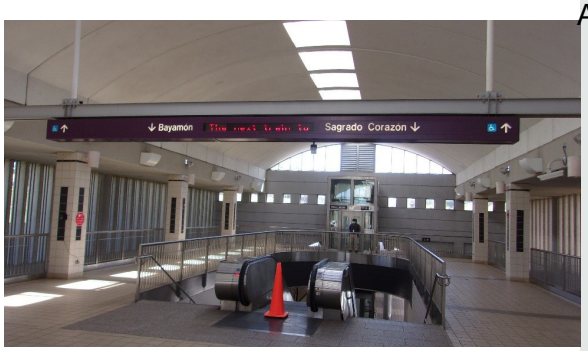
Psomas and Hatch provided engineering services to the San Diego Metropolitan Transit System (MTS) under Psomas' current on-call contract, which included the planning and design for Variable Message Signs (VMS) replacements on the Orange, Blue, and Green Trolley Lines. The initiative to replace outdated VMS was designed to improve the quality of real-time customer communication across the trolley systems. The new, state-of-the-art signs from Global Display Solutions (GDS) offer greater reliability and efficiency, ensuring uniformity across both networks. This uniformity simplifies maintenance and repairs and improves the travel experience for riders.

The team's scope of work included developing plans, specifications, and estimates for the structural, power, and network upgrades required along each route to support the new signs. Prior to developing the drawings, Psomas and Hatch reviewed available record information, conducted site surveys, and prepared alternatives for more complex conditions to review with MTS. Additionally, the team is providing design services during construction.

RELEVANCE TO THIS PROJECT

- San Diego MTS Project
- Psomas/Hatch Team
- San Diego MTS Trolley Line Station (surveys and designs)

Tren Urbano Rail Communication Systems Assessment



Puerto Rico Highway & Transportation Authority (PRHTA)/San Juan, PR - Hatch

Since 1996, Hatch has worked to develop rapid rail service in San Juan, Puerto Rico, starting with 10.7 miles of mainline trackage and expanding over 20 years. In 2022, Hatch assessed Tren Urbano's rail communication systems, surveying and evaluating vital subsystems like VMS, telephones, CCTV, SCADA, fire and intrusion detection, public address, and fiber optic transmission. They reviewed code requirements and standards, created a work plan, and provided comprehensive reports with findings and upgrade recommendations.

HATCH AREAS OF EXPERTISE

- Field survey and assessment
- Understanding of existing communication subsystems
- Engineering analyses
- Communication systems detailed design
- Report production
- Project management
- Technology recommendations
- Expertise in communications, IT, and security technologies
- Cost analyses and estimates

System-Wide Training and Control Center Facility Development Technology Support (TACCO)

Chicago Transit Authority (CTA)/Chicago, IL - Hatch

The TACCO Development will create a new campus-style building to relocate Control Center functions and consolidate training facilities, replacing CTA's current Control Center. The project includes:

- **Control Center:** Three-story secured structure with server/ communication room and control theater.
- **Training Office:** Three-story building with classrooms, training rooms, and offices.
- **Training High Bay:** Single-story space for bus/rail maintenance, safety, warehouse, and operations training.
- **Site Development:** Includes a new radio tower for bus and rail communications.

Technology subsystems needing upgrades include IP Telephony, CCTV, PA, SCADA, Train Tracking, Two-Way Radio, Radio Console, Voice Recording, Event Management, PC Workstation imaging, Systems Integration, Testing, and Cyber Security. Hatch is supporting CTA in receiving, verifying, modifying, and commissioning these systems.

HATCH AREAS OF EXPERTISE

- IP Telephony / Voice-Over-IP (VOIP)
- CCTV Video Management System (VMS)
- Public Address System (PA/PIS)
- SCADA System
- Train Tracking System
- Two-Way Radio System
- Radio Console System
- Voice Recording System
- Event Management System
- PC Workstation imaging
- Systems Integration and Testing
- Cyber Security

Project Understanding and Approach

1. Introduction

This project involves upgrading the existing public address (PA) system on the Orange, Green, and Blue Line trolley systems to align with the PA system installed for the Mid-Coast project in 2021. Since the current system is 15 years old, the upgrade will enhance audio clarity, system reliability, accessibility compliance, and integration with other communication systems.

The upgraded PA system will support both live and pre-recorded announcements and will be fully compatible with central control and onboard systems, matching the Mid-Coast Extension PA system. Due to grant restrictions, the Mid-Coast PA system cannot be replaced within the next 10 years. Additionally, a comparative analysis of alternative PA systems and emerging technologies will be provided to MTS, outlining their costs and advantages.

2. Methodology / Approach

TASK 1 – MID-COAST PA SINGLE LINE DIAGRAM (IF NEEDED)

The team will gather available as-built drawings and technical specifications for both the existing PA system slated for replacement on the Orange, Green, and Blue Line trolley system, as well as the Mid-Coast Extension PA system installed in 2021. This approach will support the development of a Mid-Coast PA single-line diagram, if required.

TASK 2 – EXISTING CONDITIONS REPORT

To keep the project on schedule, we will begin a comprehensive site assessment of the existing PA system infrastructure at all fifty-six (56) trolley stations. This assessment will cover critical components, including audio interfaces, amplifiers, speakers, control units, cabling, and conduits.

Each evaluation will be systematically recorded using a standardized form, allowing for an organized and consistent inspection process. This approach will facilitate thorough documentation of all current conditions, as well as findings and recommendations necessary for upgrading the stations to meet Mid-Coast extension standards.

TASK 3 – PA SYSTEM ALTERNATIVES ANALYSIS

The team's review of as-built drawings, technical specifications, and comprehensive site assessments will serve as the foundation for a comparative analysis with the Mid-Coast PA system. This analysis will evaluate the costs and benefits of various "off-the-shelf" PA system options while ensuring compatibility with the 2021 installation. Findings from the review, including assessments of alternative system feasibility, will be compiled into a technical memorandum or report and submitted to MTS.

The team brings extensive experience in public address system design for rail transit agencies across the country, utilizing products from leading vendors currently used by MTS, including AtlasIED, Digital Acoustics, Crown, and Bogen. This expertise facilitates seamless integration with existing infrastructure while optimizing performance and reliability.

TASK 4 – PRELIMINARY DESIGN OPTIONS FOR MTS PA SYSTEM UPGRADE.

The team brings extensive, hands-on experience designing public address systems for rail transit agencies across the country, leveraging products from leading vendors currently used by MTS, including AtlasIED, Digital Acoustics, Crown, and Bogen. As part of our approach to developing preliminary design options, we initiated Task 2 with a comprehensive infrastructure assessment across all fifty-six (56) locations to document existing conditions and identify opportunities for seamless system integration. Building on this foundation, Task 3 focused on a detailed evaluation of Public Address (PA) system alternatives, equipping us with the data and insights necessary to develop targeted, practical preliminary design options for the MTS PA system upgrade.

Innovative Approach and Internal Measures for Timely Completion

To ensure the timely completion of Tasks 1 through 4, we utilized tools such as SharePoint and Bluebeam. Our internal SharePoint site is structured to organize all task-related documents, providing team members with 24/7 access. Bluebeam supports document reviews by enabling internal quality control, with all comments electronically recorded and archived for historical reference.

4 Schedule

Schedule Approach

Our team is committed to meeting MTS's six-month timeline. We have built a project schedule that includes the critical steps for each milestone, which will be used as a foundational tool for tracking progress with the design team and MTS throughout the project.

Our experience on the VMS replacement project included collecting as-built information and performing surveys of many of the same trolley stations. This will allow our team to "come in running " when initiating the site survey and assessing the existing conditions.

We maintain quality control through regular page turns and peer reviews, so corrections are made promptly and deliverables are accepted without delays. If unexpected issues arise, we can assign specialists or shift tasks to keep the project moving. Our proven track record demonstrates that we deliver clear, buildable documents that meet client standards, resulting in fewer revisions and a faster close-out.

PA System Survey - OL, BL and GL

TASK	START	DUE
Task 1 - Single Line Diagram (NTP + 2 months)	9/12/25	11/12/25
NTP (assumed)/Project Kickoff	9/12/25	9/12/25
Gather and Review As builts	9/19/25	10/3/25
Develop Single Line Diagram (Draft)	10/3/25	10/17/25
MTS Review	10/17/25	10/31/25
Develop Single Line Diagram (Final)	10/31/25	11/12/25
Task 2 - Existing Conditions Assessment (NTP + 2 months)	9/12/25	11/12/25
Gather and Review As Builts/Schedule Site Visits and Flagging	9/19/25	10/3/25
Site Survey	10/3/25	10/24/25
Existing Conditions Report Draft)	10/10/25	10/31/25
Review Draft with MTS (Page Turn)	10/31/25	10/31/25
Existing Conditions Report (Final)	10/31/25	11/12/25
Task 3 - Alternate technology analysis (NTP + 4 months)	11/12/25	1/12/26
PA System Alternative Analysis (Draft)	11/12/25	12/10/25
MTS Review	12/10/25	12/24/25
PA System Alternative Analysis (Final)	12/24/25	1/12/26
Task 4 - Preliminary Design Options (NTP + 6 months)	1/12/26	3/14/26
Prepare Draft Prelimiinary Design	1/12/26	2/9/26
MTS Review	2/9/26	2/23/26
Prepare Final Preliminary Design	2/23/26	3/12/26

Local Resources

Our San Diego-based Psomas team is familiar with MTS's site access procedures, which help us mobilize quickly and keep the project on schedule. By using local staff and support from Hatch's nearby office in Los Angeles (Izabella Paulski, as an example), we endeavor to respond rapidly to project needs, handle field assessments at all 56 trolley stations, and maintain steady communication with MTS and stakeholders. Our strong local presence lets us add personnel as needed, cut down on travel time, and maximize on-site productivity. This combination of regional support and a national perspective —shaped by our extensive experience implementing public address systems for a wide range of agencies across the country— helps us deliver efficient, quality results and stay on track with the MTS schedule.

5 DBE Subcontractor Utilization Plan

Psomas has a general philosophy of promoting diversity within our corporate culture and with our teaming partners. We have historically practiced retaining disadvantaged businesses for previous projects where applicable and include a bench of DBE-approved firms under our current MTS On-Call for Architecture and Engineering Services. However, concerning this project for the PA System Survey, the Psomas team will not include a DBE firm, given the specialty of the project relative to the On-Call team.

A Appendix - Resumes

SARAH K. CURRAN, PE, QSD

Contract Manager/Task Order Manager – Psomas

REGISTRATION

2006/CA/Professional Engineer/Civil/69620

EDUCATION

2002/BS/Civil Engineering/ University of Vermont, Cum Laude

CERTIFICATIONS

Qualified SWPPP Developer/California Stormwater Quality Association/69620

PROFESSIONAL AFFILIATIONS

California's Coalition for Adequate School Housing (CASH)

ACE Mentor Program

Design-Build Institute of America

EXPERIENCE

With Psomas for 10 years; with other firms for 13 years

Sarah has 23 years of civil engineering experience including consulting for public works, transit, and educational facilities. Her diverse project experience and client base is supported by her ability to identify and commit needed resources to projects requiring a wide range of expertise. As Contract Manager and Task Order Manager, Sarah will work closely with the MTS Project Manager and Emma Harrison, Assistant Task Order Manager, to manage the project contract elements, build consensus among the project team and stakeholders, and maintain the project schedule.

Experience

MTS Copley Park Division Planning and Lighting Study – San Diego, CA: As Contract Manager, provided oversight of surveying, engineering and project management services to support the overall planning study. The study provided alternatives for the replacement of the existing modular building to a location outside of the old Miramar South Landfill. The study considered existing site constraints, operational impacts, and programmatic space requirements. A conceptual site lighting plan study and photometric analysis were also prepared to understand alternatives for replacement or renovation of existing leaning light poles at the facility site.

MTS VMS Replacement Project – San Diego, CA: As Task Manager, managed the delivery of engineering services for the replacement of variable message signs across the Orange, Blue, and Green Trolley Lines. This involved coordinating site surveys at 41 stations and leading a multidisciplinary team to prepare plans, specifications and estimates, stakeholder communication, and timely deliverables in support of MTS's transit operations.

MTS Beyer Boulevard Pathway Beautification – San Diego, CA: As Contract Manager, oversaw contract administration and project delivery for conceptual improvements to enhance safety, connectivity, and community identity. Managed the contract scope, schedule, and budget, while coordinating with MTS, Casa Familiar, and the design team to prepare multiple alternatives to present to the community for refinements to incorporate into a final alternative including pathway upgrades, lighting, landscaping, and public art—supporting a safe, sustainable, and welcoming experience for local commuters and residents.

TIMOTHY HAYES, PE, QSD

Principal-in-Charge and
Quality Assurance/Quality Control – Psomas

REGISTRATION

1997/CA/Professional Engineer/Civil/58986

EDUCATION

1992/BS/Civil Engineering/California Polytechnic State University, San Luis Obispo

CERTIFICATIONS

Qualified SWPPP Developer/Stormwater Multiple Application and Report Tracking System/C58986

PROFESSIONAL AFFILIATIONS

Women's Transportation Seminar

American Council of Engineering Companies

American Public Works Association

American Society of Civil Engineers

EXPERIENCE

With Psomas for 20 years; with other firms for 12 years

Tim Hayes has 32 years of experience and is adept at problem-solving and building consensus as a Project Manager of time-sensitive projects. His experience includes the planning and design of infrastructure and transportation improvements, including work on numerous planning strategies; preliminary design reports; project reports; project study reports; and final plans, specifications, and estimates (PS&Es) for various agencies and municipalities throughout California.

Experience

Wilshire Boulevard Bus Rapid Transit (BRT) – Los Angeles, CA: Project Manager for the civil design, surveying and mapping, and right-of-way engineering of this award-winning project. The work generally consisted of civil engineering design of transit improvements along the Wilshire Corridor which included maintenance, retrofits, and improvements. The improvements included roadway and intersection improvements, structures, parking lots, signals and lighting, landscaping, drainage improvements, utility relocations, and water quality measures.

East San Fernando Valley Transit Corridor Project (LA Metro) – San Fernando Valley, CA: Senior Engineer on this project consisting of preliminary engineering and supporting the development of technical documents for design-build (D-B) procurement, D-B bid support and design services during construction. The East San Fernando Valley (ESFV) Light Rail Line is a 9.2 mile high capacity transit route connecting the Metro Orange Line in Van Nuys to the Metrolink Sylmar/San Fernando Station, one of the busiest thoroughfares in the San Fernando Valley, which includes 17 stations and an Operations and Maintenance facility through a mix of shared corridor with Union Pacific and Metrolink and street running guideway. Psomas provided utility engineering design, topographic surveying, and right of way engineering services for the Los Angeles County Metropolitan Transportation Authority on the ESFV Transit Corridor project, located in San Fernando Valley, Los Angeles County. Responsible for utility coordination and engineering design of various elements for this project.

Sacramento Regional Transit District General Engineering Support Services – Sacramento, CA: Contract Manager for the civil and transit design of their bus and light rail facilities. Psomas has held this contract for over fifteen years. The work generally consists of civil engineering design of transit facilities and light rail projects which include expansion, maintenance, and retrofits. Projects have included light rail extensions, expanding the bus maintenance facility, roadway improvements, structures, buildings, parking lots, signals and lighting, landscaping, drainage improvements, utility relocations, and water quality measures. Tim has been involved with this on-call contract since 2005.

JOHN M. CARSON

Communications Team Lead – Hatch

EDUCATION

1993/BS/Electrical Engineering/Illinois Institute of Technology

EXPERIENCE

With Hatch for 22 years; with other firms for 4 years

John has more than 26 years of experience in transportation communication systems and Intelligent Transportation Systems (ITS) and offers expertise in the design of fiber optic, copper, and wireless systems for data, voice, and video applications. His experience covers all project elements, including project management, design, field work, budgets, report preparation and CADD, and all project phases, from conceptual design to project close-out. John is currently Project Manager for the Metra Telecommunications contract, which includes design task for Kensington Yard PTC data center and Rock Island/Southwest Service Fiber Optic Backbone Design. He is also Project Manager for Metra Milwaukee North and Milwaukee West Fiber Optic Backbone Design projects.

Experience

Chicago Transit Authority, System Wide Training and Control Center Operations Support – Chicago, IL: Senior Consultant responsible for design documents to route CTA fiber into the new Control Center and review new Public Address System (PA/PIS).

Northern Illinois Regional Commuter Rail Corporation, Southwest Service Operating District Fiber Optic Backbone Design – Chicago, IL: Project Manager responsible for managing the design of a 50-mile single mode 288-strand fiber optic backbone cable from Manhattan Yard to 23rd Street station.

Tren Urbano, Communications System Assessment – San Juan, PR: Project Manager responsible for a systemwide assessment of the existing communications subsystem for each of the 16 rail transit stations and Operations Control Center. Assessments were performed for variable message signs, telephony, closed circuit television (CCTV) SCADA, fire and security alarms, public address and fiber optic carrier systems. Also responsible for the development of a rough order of magnitude (ROM) cost estimate for systemwide upgrade of the communications subsystems to include variable message signs, telephony, closed circuit television (CCTV) SCADA, fire and security alarms, public address and fiber optic carrier systems.

Chicago Transit Authority, Cermak-McCormick Place Station (Green Line), – Chicago, IL: Project Consultant. Responsible for station communication design of the following systems: Fare Control System, SONET, Fiber Optic Backbone, Copper Backbone, CCTV, Public Address Audio/Visual, SCADA, Telephones, Communication IP Network Hubs, Elevator Communications and Wireless Access Points. Responsible for communications submittal reviews and request for information responses during construction.

MATTHEW T. WOLFF, PE

Single Line Diagram - Hatch

EDUCATION

1997/BS/Electrical Engineering/Iowa State University

PROFESSIONAL AFFILIATIONS

Professional Electrical and Computer Engineer: California, Indiana, Maryland, Minnesota, New York, North Carolina, Ohio, Washington, Wisconsin

EXPERIENCE

With Hatch for 4 years; with other firms for 27 years

Matthew has over 27 years of experience in communications systems engineering, covering IT, security/surveillance, and PA audio systems. From central office and data center to field systems and elements, Matt has designed and overseen integrated applications such as voice, streaming audio, broadband data, streaming video, SCADA and control systems, electronic toll collection, intelligent transportation systems (ITS), two-way land mobile radio, and electronic security and surveillance systems over telecommunications networks, including carrier-level networks, enterprise networks, and private LAN/WAN networks. He has designed systems such as SCADA, CCTV, public address/paging, variable message signage, access control, telephony, and other specialized systems over IP networks. Matt's extensive experience in design and construction/installation support encompasses IP networks utilizing fiber optic and copper cable infrastructure, CCTV, access control, public address/paging systems, SCADA and control systems, and telephony.

Experience

MTS, Variable Message Sign Upgrade, Metropolitan Transit System – San Diego, CA: Lead Communications Systems Engineer for the design of communications and power connectivity for San Diego MTS Variable Message Sign (VMS) upgrade, which consists of 62 light rail stations and over 250 new high definition multicolor graphical LCD VMS displays. Direct design responsibility included development of design drawings, specifications, and cost estimates for connectivity to all new VMS displays and integration with the existing control center head end.

Central Puget Sound Regional Transit Authority, Downtown Redmond Link Extension – Seattle, WA: Lead Communications Systems Engineer. Design lead for communication systems for the Downtown Redmond Link Extension of the East Link Line, which includes design and construction support services for two new stations and a six-level parking garage along 3 miles of new track. Responsible for the design of the DRLE Communication Systems, which involved providing new station communication elements and subsystems, extending the existing fiber optic backbone and local area station networks, and integrating communications, traction power, and signal systems with the existing head-end systems.

Los Angeles County Metropolitan Transportation Authority, K-Line Extension – Los Angeles, CA: Lead Communications Systems Engineer for the LA Metro K-Line Extension to Redondo Beach and Torrance, which involves the design and construction support services of two new transit center stations along 4 miles of new track. Direct design responsibility for the KLET Communication Systems design encompasses providing new station communications elements and subsystems, extending the existing fiber optic backbone and local area station networks, and integrating communications, traction power, and signal systems with existing head-end systems.

IZABELLA PAULSKI

Existing Conditions Assessment Task Lead – Hatch

EDUCATION

2022/BS/Computer Science, Minor in Mathematics/Elmhurst University

EXPERIENCE

With Hatch for 1+ year; with other firms for 8 months

Izabella graduated from Elmhurst University in 2022 with a B.S. in Computer Science and a minor in Mathematics. She gained eight months of practical experience as a software engineer, developing applications and web projects using Java, C#, and C++. As an intern at Zebra Technologies, she led an innovation project, creating a new product from scratch and contributing to a full life-cycle application utility for RFID equipment. Promoted to Engineer Technician, she excelled in firmware and application testing, collaborating on new firmware implementation and developing printing applications. Izabella's diverse experience spans firmware and software engineering. In fall 2023, she joined Hatch as a Junior Rail Systems Engineer, working on electrical engineering and network architecture projects, including rail transit communication systems and Operations Control Centers.

Experience

TransLink Operations Control Centre 2, CAD Implementor and Communications Designer – Vancouver, BC, Canada: Junior Rail Systems Engineer. Collaborate on redesigning the data center for the proposed new changes. Update the system's infrastructure drawings and add new drawings as required: rack layouts, fiber/cable schedules, interconnection diagrams, specifications, and others. Designed redlines, implemented CAD, and aligned spreadsheets for schedules.

TriMet Passenger Elevator Access Device Project, CAD Implementor and Designer – Portland, OR: Junior Rail Systems Engineer. Implement CAD designs and collaborate on a design for a communications system.

Massachusetts Bay Transportation Authority, South Coast Rail Project, Owner's Communications Consultant – Boston, MA: Junior Rail Systems Engineer. Separate back-office system units to operate unilaterally. Create a back-office network diagram with tiered access layers. Witness testing onsite to verify proper procedures were followed and well-documented. Review data for Radio Signal Strength Indication (RSSI) tests for communication in different zones and discuss radio coverage.

Massachusetts Bay Transportation Authority, Owner's Communications Consultant – Boston, MA: Junior Rail Systems Engineer. Upgrading the MBTA Commuter Rail system with PTC according to regulations. Technical site visit to perform equipment surveys to prepare for the replacement of devices. Confirm power readings and cabling, as compared to the existing documents. Survey connection to the network, including electrical, optical, and wireless communication. Verify correct documentation. Review fiber and network documents during the design stage of project submittals.

ROBERT "RUSTY" DUDLEY

Existing Conditions Assessment Task Support - Hatch

EDUCATION

1998/BS/Computer Science/California State Polytechnic University, Pomona

EXPERIENCE

With Hatch for 2 years; with other firms for 24 years

Robert "Rusty" is a Senior Rail Systems Program Manager and Back Office System Consultant with over twenty years of experience supporting commuter railroads in expansions, new project designs, Positive Train Control (PTC) implementation, back-office integration, and many other system-related initiatives. Rusty has managed diverse engineering and technical teams responsible for developing and implementing various rail systems. He has worked as a client (Caltrain), contractor (ARINC), and consultant (Hatch), bringing this multi-faceted understanding of projects to all his responsibilities.

Rusty is a subject matter expert in all aspects of rail dispatch operations and back-office systems, having worked with railroads and transit agencies throughout the system life cycle. His expertise spans requirements gathering, design, implementation, testing, deployment, maintenance, and support. Throughout his career, he has served as a program manager, consultant, software engineer, and system administrator, while also providing on-call support. Rusty's knowledge of back-office systems encompasses servers, databases, communication protocols, and graphical interfaces for end users. He has experience in both commuter rail and light rail environments, utilizing modern technologies such as PTC, Supervisory Control and Data Acquisition (SCADA), and virtualization.

Experience

MTS, Variable Message Sign Upgrade – San Diego, CA: Project Manager overseeing the replacement of existing Daktronics variable message signs (VMS) at 52 train passenger stations with GDS Midas signs. He conducted a site survey focusing on the existing power and network connections to the signs at each station and produced a site survey report. He is currently preparing design documentation for the power and network connections to the new signs at each station. The design documentation for the project includes typical drawings and CSI-compliant technical specifications. These specifications outline testing requirements following installation to verify proper network connectivity and sign operation.

Caltrain, JPB - Railroad Bus Ops – San Carlos, CA: Senior Rail Systems Program Manager and Back Office System Consultant. Rusty acts as an extension of the Caltrain staff, overseeing contractors to facilitate the maintenance of all train control systems, including PTC. He manages new work directives and serves as the system administrator. Additionally, he helps implement cybersecurity policies at Caltrain to comply with Federal

ROBERT DUDLEY
(CONTINUED)

Railroad Administration (FRA) directives, oversees the Caltrain VxRail back-office virtual environment, and provides on-call support. As part of the Caltrain Peninsula Corridor Electrification Project (PCEP), Rusty led a project to develop a new Supervisory Control and Data Acquisition (SCADA) back-office system for operating electric trains.

- On the ROCS EEPS Project, Rusty oversaw all efforts, including developing requirements and work directives to incorporate an Enhanced Employee Protection System (EEPS) into the dispatch system. This critical modification prevents track block protections from being released while employees are working on the tracks and verify that track block protections cannot be released until the employees send a text message back to the dispatch system confirming their work is complete.
- On the Virtualization Initiative, Rusty supported the Caltrain project to convert back-office servers running on individual physical hardware to virtual machines running on a new virtual environment. This allows Caltrain to decommission individual servers to reduce power consumption in the data centers. Initiative provided flexibility with managing systems and permitted the ability to run parts of the systems in the cloud.

ALEC HUYNH,

Alternate Technology Task Lead/Preliminary Design Options Task – Hatch

EDUCATION

2022/BS/Electrical Engineering/Marquette University

EXPERIENCE

With Hatch for 3 years

Alec Huynh is an intermediate electrical engineer with 3 years of experience in rail and trolley bus communication systems. Alec works closely with clients, vendors, and contractors, and has delivered RFP preparation, designs, and construction support. Project work includes security systems, SCADA, wireless and fiber optic networks, passenger information systems, and positive train control (PTC). Alec has leadership experience managing field resources and schedules to support testing and commissioning.

Experience

MTS, Variable Message Sign Upgrade – San Diego, CA: Communication Systems Designer. Developed VMS design for Orange and Blue Line stations. Responsible for design drawings, CAD, and specifications. Design included data and power connections, station plan views, and wiring details. Project scope entailed 62 light rail stations and over 250 new high-definition multicolor graphical LCD VMS displays.

Los Angeles County Metropolitan Transportation Authority, Airport Metro Connector Transit Station/96th Street Station – Los Angeles, CA: Low Voltage Sub Lead. Leading small team to support construction on-site by tracking contractor activity, low voltage device installations, LFAT, and construction roadblocks. Developed and maintaining master spreadsheet for low voltage progress to communicate with Metro leadership, project management, and contractors. Technologies include CCTV, Access Control, passenger information systems, SCADA, fire alarm, telephones, and radio. Project scope includes construction of large interconnect station for LAX People Mover and LACMTA K-Line.

Los Angeles County Metropolitan Transportation Authority, K-Line Extension – Los Angeles, CA: Communications Systems Designer. Involves design and construction support services of two new transit center stations along 4 miles of new track. Designing outside cable plant plans, fiber network plans, and several communication subsystems including passenger information systems, security systems, telephony, and SCADA.

Sacramento Regional Transit, Downtown Riverfront Streetcar – Sacramento, CA: Communication Systems Designer. Designed fiber, fiber schedules, and conduit layouts for streetcar extension. Design responsibility of communication systems design, including new backbone and local area station networks, conduit design, and head end modifications to integrate new elements with existing systems. The scope of the project involved a one mile track extension and 5 new stations.

TODD ELLIS, PMP, RCDD

Alternate Technology Task Support – Hatch

EDUCATION

1997/BS/Business Administration/North Carolina Wesleyan College

PROFESSIONAL AFFILIATIONS

Project Management Professional (PMP)/#580180

Registered Communications Distribution Designer (RCDD)/#375065

EXPERIENCE

With Hatch for 3 years; with other firms for 38 years

Todd Ellis is an accomplished professional in the utility and transportation industry, possessing business-savvy and technical expertise in program management for large-scale projects ranging from $1M to $3B. He has design experience with a wide variety of communication-centric systems and exhibits out-of-the-box critical thinking, strategic planning, and business planning skills. Todd holds patents for distributed street light control and distributed energy management. Additionally, he is the author of 20 periodical articles and presentations on communication, transportation, and utility topics.

Experience

Confidential Cybersecurity Analyses, Northeast Corridor and West Coast Commuter Railroads – **Various Locations, *United States:***

- Analysis of onboard systems for a Northeast Corridor commuter railroad in the U.S. revealed significant issues that required the manufacturer to evaluate their compliance with IEC-62443 standards. The manufacturer was instructed to reassess the use of specific subsystems and their connectivity to those systems on the vehicle.
- Analysis of cybersecurity concepts for a Northeast Corridor U.S. commuter railroad revealed that wayside fiber optic networks had been passively penetrated, allowing an attacker to intercept vital signal data traffic. A list of risk mitigation actions was provided to the client.
- Analysis of Wi-Fi coverage and security for a maintenance facility serving a commuter railroad in the Northeast Corridor of the US and yard. Work efforts found unsecured Wi-Fi networks on railcars consisting of half of the 273 devices found along their right-of-way, and a quarter of this number which were not owned by the railroad. A list of risk mitigation actions were provided to the client.
- Cybersecurity analysis and procedure development for a commuter railroad on the US West Coast. Due to TSA requirements, each railroad must document procedures to prevent cybersecurity incidents. This ongoing effort involves creating documentation and overseeing the implementation of methods and procedures.
- Developed in-depth employee training for cybersecurity concepts for industrial control systems.

TODD R. ELLIS, PMP, RCDD (CONTINUED)

Operations Maintenance Facility 4 (OMS4), Translink – Vancouver, BC, Canada: Lead Design Engineer for a new greenfield 5-building maintenance facility. The systems for the facility include two separate networks utilizing fiber optics and Ethernet for two different operating companies, CCTV covering the entire facility with 24/7/30-day video recording, access control, a Wayside Monitoring System (WMS), and SCADA subsystems. It also features two separate multi-building Distributed Antenna Systems (DAS) for 400 and 700 MHz applications, Wi-Fi 6 multi-building design, and a perimeter fence intrusion system design.

Owner's Communications Consultant, Massachusetts Bay Transportation Authority (MBTA) – Boston, MA: Oversight role for the railroad's northside line's PTC redesign following a signaling conversion to ATC. Tasks have included reviewing the manufacturer/integrator's submittals, witnessing in-field on-rail and wayside testing, and reviewing the manufacturer/integrator's test labs.

ABRAHAM JAUREGUI, PE

Structures Task Lead – Psomas

REGISTRATION

2021/CA/Professional Engineer/Civil/93205

EDUCATION

2014/MS/Structural & Earthquake Engineering/ San Francisco State University, San Francisco

2011/AS/Civil Engineering/ Universidad Autónoma de Baja California, Mexicali, Baja California, México

SKILLS

Spanish

CAD (Microstation & AutoCAD), SketchUp

Microsoft Works

Structural Analysis & Design

EXPERIENCE

With Psomas for 4 years; with other firms for 10 years

Abraham has 14 years of professional experience in public works design and construction. He has assisted with the development and design services on several transportation projects, including bridges, retaining walls, sound walls, street improvements, utility relocations, pedestrian/ bicycle facilities, and pavement rehabilitation. He is familiar with California Department of Transportation (Caltrans), the U.S. Army Corps of Engineers, and various city standards.

Experience

Variable Messaging Sign Replacements – San Diego, CA: Lead engineer for replacing variable messaging signs on the Orange, Blue, Copper, and Green Lines of the San Diego MTS. Prepared site survey reports documenting all installations, performed visual structural inspections of supports and attachments, recorded as-built dimensions, analyzed existing structures, and designed new supports and attachments.

Vehicle Messaging Sign Structural Assessment – Sacramento, CA: Structures engineer for cataloging, field assessments, and structural analysis of existing vehicle messaging sign structural supports. Analyzed structures and foundations for expected loading considering current structural conditions. Determined the maximum sign size and weight for the client's system of signs.

Light Rail Transit Station Platform Modifications – Sacramento, CA: Structures engineer for reconfiguring multiple station platforms for new low-floor vehicles. Redesigned platforms, ramps, sign supports, PA system supports, handrails, and other critical station appurtenances.

La Canada-Flintridge I-215 Sound Wall Improvements Phase 3 – La Canada Flintridge, CA: Bridge Engineer for the structural design of a non-standard sound wall segment supported by cast-in-drilled-hole piles to span over an unknown utility discovered during construction. Abraham verified the adequacy of a sound wall section determined to have pile lengths lower than the Caltrans Standard plans. This verification saved the client from having to install additional piles, which would have been a significant cost. These analyses required strong knowledge of Caltrans standards and the use of non-linear soil-structure interaction software.

Crown Valley Parkway Westbound Widening – Laguna Niguel, CA: Lead Bridge Engineer for the widening of the Crown Valley Parkway. Abraham provided structural calculations and final detailing for widening the Crown Valley Parkway Overhead at the Southern California Regional Rail Authority tracks. Verified geometry, loading conditions, and design, including seismic loading and deep shaft analysis. Applied knowledge of Caltrans standards and design procedures.

DOUGLAS FREDERICKS, PE

Structures Technical Expert – Psomas

REGISTRATION

1993/CA/Professional Engineer/Civil/50863

EDUCATION

1991/MS/Civil Engineering/ University of California, Davis

1990/BS/Civil Engineering with Minor in English/ California State University, Chico

PROFESSIONAL AFFILIATIONS

Past President - South Natomas Transportation Management Association

APWA Government Advocacy Committee (California Chapters)

Sacramento Metropolitan Chamber of Commerce Transportation Committee Chair and Cap-To-Cap Team Leader

EXPERIENCE

With Psomas for 10 years; with other firms for 24 years

Doug is a registered civil engineer with over 34 years of experience in transit structures and systems design. He has led the planning, layout, type selection, and final design for a wide variety of transportation structures, including new construction, widening, and rehabilitation projects. He has also performed studies to evaluate the condition of existing structures, and has designed retaining walls, sound walls, water-holding tanks, and drainage facilities.

Experience

Vehicle Messaging Sign Structural Assessment – Sacramento, CA: Project lead for cataloging, field assessments, and structural analysis of existing vehicle messaging sign structural supports. Analyzed structures and foundations for expected loading considering current structural conditions. Determined the maximum sign size and weight for the client's system of signs.

Light Rail Transit Station Platform Modifications – Sacramento, CA: Project structures lead for reconfiguring multiple station platforms for new low-floor vehicles. Redesigned platforms, ramps, sign supports, PA system supports, handrails, and other critical station appurtenances.

Program Management – British Columbia, Canada: Developed criteria for a three-level seismic design approach for the Evergreen Line Rapid Transit system for the Ministry of Transportation and Infrastructure. Studied damage levels for various return periods including a serviceability event, an intermediate level repairable event, and a life safety event.

Via Princessa Park Triple Cell Railroad Culvert – Santa Clarita, CA: Structural Engineer for developing the Via Princessa Park Master Plan and related access studies. This project will include three multi-purpose fields, field lighting shade components, optional play structure and an educational component. Studies include a Measure W Feasibility Study, bank lining, pedestrian and vehicle access, and a creek crossing solution.

Otay Mesa Land Port of Entry Expansion and Modernization – Otay Mesa, CA: Senior Structures Engineer for the $137 million modernization and expansion of the Otay Mesa Land Port of Entry, the busiest commercial port in California. The project includes the expansion of pedestrian-processing facilities, construction of new buildings, new surface and structured parking, and improvements to commercial vehicle circulation by expanding the commercial truck inspection areas onto an adjacent 10-acre site. Psomas provided a wide variety of engineering services, including traffic, pavement design, infrastructure, stormwater management, multi-agency coordination and permitting services.

Work Order Estimate Summary

MTS Doc. No. PWL355.0-22
Work Order No. WOA355-AE-53
Attachment: A

Work Order Title: PA System Survey – Orange, Blue and Green Lines

Project No: TBD

Table 1 - Cost Codes Summary (Costs & Hours)

Item	Cost Codes	Cost Codes Description	Total Costs
1		Single Line Diagram	$41,343.00
2		Existing Conditions Assessment	$90,620.30
3		Analysis of Alternate PA System Technology	$48,288.60
4		Preliminary Design Options for Replacement of Components	$61,805.20
5		Project Management and Coordination	$39,033.86
		Totals =	**$281,090.96**

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

Item	TASKS/WBS	TASKS/WBS Description	Labor Hrs	Total Costs
1	Task 1	Single Line Diagram	150.0	$41,343.00
2	Task 2	Existing Conditions Assessment	395.0	$90,620.30
3	Task 3	Analysis of Alternate PA System Technology	190.0	$48,288.60
4	Task 4	Preliminary Design Options for Replacement of Components	260.0	$61,805.20
5	Task 5	Project Management and Coordination	157.0	$39,033.86
		Totals =	**1,152.0**	**$281,090.96**

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

(If Applicable, Select				Consultant	Labor Hrs	Total Costs
DBE	DVBE	SBE	Other			
				Psomas	49.0	$9,266.90
				Hatch	1,103.0	$271,824.06
				Totals =	**1,152.0**	**$281,090.96**

Work Order Estimate Summary

Consultant/Subconsultant: **Psomas/Psomas**

Total Hours = **49**

Total Costs = **$9,266.90**

Work Order Title: **PA System Survey – Orange, Blue and Green Lines**

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Admin - 3	CADD Senior	Contract Manager	Engineer - 2	Engineer - 3	Engineer - Principal	Engineer - Senior	Task Manager	Technical Expert		Total Hours	Totals
				$ 112.10	$ 139.73	$ 188.56	$ 160.41	$ 209.08	$ 263.06	$ 251.13	$ 233.15	$ 299.49	$ -		
1	**Task 1**	**Single Line Diagram**													
		Subtotals (Hours) =	N/A												
		Subtotals (Costs) =													
2	**Task 2**	**Existing Conditions Assessment**													
		Subtotals (Hours) =	N/A												
		Subtotals (Costs) =													
3	**Task 3**	**Analysis of Alternate PA System Technology**													
		Subtotals (Hours) =	N/A												
		Subtotals (Costs) =													
4	**Task 4**	**Preliminary Design Options for Replacement of Components**													
		Subtotals (Hours) =	N/A												
		Subtotals (Costs) =													
5	**Task 5**	**Project Management and Coordination**													
	invoicing, scheduling, progress reports, and admin			24					10					34	$5,321.00
	MTS/Stakeholder Coordination								15					20	$3,945.90
		Subtotals (Hours) =	N/A	24					25					54	$9,266.90
		Subtotals (Costs) =		$2,690.40					$6,576.50					**49**	**$9,266.90**
	Totals (Summary) =													**49**	**$9,266.90**
	Total (Hours) =		N/A	24					25					54	
	Total (Costs) =			$2,690.40					$6,576.50						
	Percentage of Total (Hours) =		N/A	49%					51%					100%	
	Percentage of Total (Costs) =			29%					71%						100%

Work Order Estimate Summary

Total Hours = **1,103**

Total Costs = **$271,824.06**

Consultant/Subconsultant: **Hatch Associates Consultants, Inc.**

Work Order Title: **PA System Survey – Orange, Blue and Green Lines**

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Planner - Senior	Matt Wolff - Technician Senior	Robert Dudley - Technician Senior	Alec Huynh - Technician 3	Izabella Paulski - Technician 3	John Carson - Technician Senior	Todd Ellis - Engineer Principal				Total Hours	Totals
			$ -		$ 275.62	$ 275.62	$ 177.06	$ 177.06	$ 275.62	$ 322.62	$ -	$ -	$ -		
1	**Task 1**	**Single Line Diagram**													
	Develop Single Line Diagram(s)				80				70					150	$41,343.00
		Subtotals (Hours) =	N/A		80				70					150	$41,343.00
		Subtotals (Costs) =			$22,049.60				$19,293.40					**150**	**$41,343.00**
1	**Task 2**	**Existing Conditions Assessment**													
	Site Survey 56 Trolley Stations		$8,854.40					110	48					158	$41,560.76
	Document Finding (56 Trolley Stations)							42	18					60	$12,397.68
	Document Photos (56 Trolley Stations)							42	18					60	$12,397.68
	Comprehensive Report and Recommendation							81	36					117	$24,264.18
		Subtotals (Hours) =	N/A					275	120					395	$90,620.30
		Subtotals (Costs) =	$8,854.40					$48,691.50	$33,074.40					**395**	**$90,620.30**
1	**Task 3**	**Analysis of Alternate PA System Technology**													
	Research alternate “off the shelf” PA system technology						15		13	13				41	$10,433.02
	Develop comparative analysis with the Mid-Coast system technology						15		13	13				41	$10,433.02
	Analyze the potential costs and benefits of different systems considered						15		13	13				41	$10,433.02
	Create technical memo or report of findings						25		21	21				67	$16,989.54
		Subtotals (Hours) =	N/A				70		60	60				190	$48,288.60
		Subtotals (Costs) =					$12,394.20		$16,537.20	$19,357.20				**190**	**$48,288.60**
2	**Task 4**	**Preliminary Design Options for Replacement of Components**													
	Develop preliminary design options				100		100		60					260	$61,805.20
		Subtotals (Hours) =	N/A		100		100		60					260	$61,805.20
		Subtotals (Costs) =			$27,562.00		$17,706.00		$16,537.20					**260**	**$61,805.20**
3	**Task 5**	**Project Management and Coordination**													
	invoicing, scheduling, progress reports, and admin								44					44	$12,127.28
	MTS/Stakeholder Coordination								64					64	$17,639.68
		Subtotals (Hours) =	N/A						108					108	$29,766.96
		Subtotals (Costs) =							$29,766.96					**108**	**$29,766.96**
	Totals (Summary) =													**1,103**	**$271,824.06**
	Total (Hours) =		N/A	180	170	275	418	60						558	
	Total (Costs) =		$8,854.40	$49,611.60	$30,100.20	$48,691.50	$115,209.16	$19,357.20							$271,824.06
	Percentage of Total (Hours) =		N/A	16%	15%	25%	38%	5%						100%	
	Percentage of Total (Costs) =		3%	18%	11%	18%	42%	7%							100%

Work Order Estimate Summary

Consultant/ Subconsultant: **Hatch Associates Consultants, Inc.**

Work Order Title: **PA System Survey – Orange, Blue and Green Lines**

TASKS/WBS (1-5)

ODC Item	Description	Unit	Unit Cost	Task 1		Task 2		Task 3		Task 4		Task 5	
				Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	Travel - Mileage	1.0	$0.70			1,952	$1,366.40						
2	Hotel	1.0	$240.00			20	$4,800.00						
3	Per Diem - Meals (1st/Last Day)	1.0	$64.50			8	$516.00						
4	Per Diem - Meals	1.0	$86.00			12	$1,032.00						
5	Travel - Rental Car	1.0	$57.00			20	$1,140.00						
				Subtotal =		Subtotal =	**$8,854.40**	Subtotal =		Subtotal =		Subtotal =	

TASKS/WBS (6-10)

ODC Item	Description											Totals	
		Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	Travel - Mileage											**1,952**	**$1,366.40**
2	Hotel											**20**	**$4,800.00**
3	Per Diem - Meals (1st/Last Day)											**8**	**$516.00**
4	Per Diem - Meals											**12**	**$1,032.00**
5	Travel - Rental Car											**20**	**$1,140.00**
6													
7													
8													
9													
10													
		Subtotal =		Subtotal =		Subtotal =		Subtotal =		Subtotal =		**Totals =**	**$8,854.40**

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/25

Agenda Item No. 19

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Investment Report – Quarter Ending June 30, 2025

INFORMATIONAL ONLY

Budget Impact

None.

DISCUSSION:

Attachment A comprises a report of the San Diego Metropolitan Transit System (MTS) investments as of June 30, 2025. The combined total of all investments has increased quarter to quarter from $465.8M to $471.7M. This $5.8M increase is primarily attributable to $59.4M in Senate Bill (SB) 125 Formula-Based Transit and Intercity Rail Capital Program (TIRCP) and Zero-Emission Transit Capital Program funding, partially offset by $39.3 million in capital expenditures, as well as normal timing differences between other payments and receipts for both capital and operations.

The first column provides details about investments restricted for Capital Improvement Projects (CIP), SB 125 funded operations and PRONTO Stored Value.

The second column, unrestricted investments, reports on 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 June 30, 2025

San Diego Metropolitan Transit System
Investment Report
June 30, 2025

Institution / Issuer	Function	Investment Type	Restricted	Unrestricted	Total	Avg. Rate of Return		Benchmark
J.P. Morgan Chase	Operating Funds	Depository Bank	-	36,639,943	36,639,943	2.06%	*	0.440% WSJ Money Market
U.S. Bank - Retention Trust Account	Restricted for Capital Support	Depository Bank	1,880,804	-	1,880,804	N/A	**	-
American Business Bank - Retention Trust Account	Restricted for Capital Support	Depository Bank	53,949		53,949			
Local Agency Investment Fund (LAIF)	Restricted (Stored Value)	Investment Pool	9,569,526	-	9,569,526	4.269%		4.284% S&P US T-Bill 0-3 Mth Index
San Diego County Treasurer's Office	State Grant Funds	Investment Pool	217,274,635	1,849,004	219,123,639	3.780%		4.284% S&P US T-Bill 0-3 Mth Index
Subtotal: Restricted for Capital Support / Stored Value			**228,778,914**	**1,849,004**	**230,627,918**			
Local Agency Investment Fund (LAIF)	Investment of Surplus Funds	Investment Pool	-	66,705,848	66,705,848	4.269%		4.284% S&P US T-Bill 0-3 Mth Index
San Diego County Treasurer's Office	Investment of Surplus Funds	Investment Pool	-	137,688,912	137,688,912	3.780%		4.284% S&P US T-Bill 0-3 Mth Index
Subtotal: Investment Surplus Funds			-	**204,394,760**	**204,394,760**			
Grand Total Cash and Investments			**$ 228,778,914**	**$ 242,883,707**	**$ 471,662,621**			

*-The 2.06% is an annual percentage yield on the average daily balance that exceeds $3.5 million
** - Per trust agreements, interest earned on retention accounts are allocated to trust beneficiaries (contractors)

31-Mar	465,828,524.00	**0.17**	

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/25

Agenda Item No. 20

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Light Rail Vehicle (LRV) 5027 Structural and Body Repair Services - 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. L1701.0-25 (in substantially the same format as Attachment A), with Siemens Mobility, Inc., for the provision of LRV 5027 Structural and Body Repair Services, for fourteen (14) months, in the amount of $1,997,346.52.

Budget Impact

The total contract is estimated to be $1,997,346.52. The project will be funded by the San Diego Trolley, Inc. (SDTI) - Risk-Recovery Budget account 930016-130300. The table below reflects the firm-fixed costs for the duration of the contract:

Tasks	Total Amount
Project Management	$379,214.21
Engineering	$147,507.25
Quality Insurance	$140,330.22
Labor	$783,884.47
Transportation	$65,254.51
Materials *(inclusive of CA Sales Tax)*	$481,155.86
Grand Total	**$1,997,346.52**

DISCUSSION:

MTS requires the services of an experienced and qualified firm to provide structural and body refurbishment services to LRV 5027, which sustained extensive damage. On November 5, 2024, A vehicle collided with LRV 5027 at the L Street grade crossing in Chula Vista, impacting the Right-Hand (RH) side of the A-Car at the low-floor center sidewall area. This resulted in the derailment of the LRV center and trailing trucks.

Repairs to LRV 5027 are beyond the resources of MTS's in-house LRV maintenance department. Therefore, MTS sought a third-party contractor to do this work. MTS Policy No. 52, Procurement of Goods and Services, requires a formal competitive process for procurement and service contracts over $150,000.00. On May 31, 2025, MTS notified thirteen (13) prospective vendors with a Request for Proposal (RFP). On July 1, 2025, MTS received two (2) proposals back from Carlos Guzman (CG, Inc.), a Disadvantaged Business Enterprise (DBE), and one from Siemens Mobility, Inc.

Proposer	Firm Certification
Carlos Guzman Inc.	DBE
Siemens Mobility, Inc.	N/A

An evaluation committee consisting of representatives from Finance, LRV Maintenance, and Facilities departments met on July 14, 2025, and scored the proposal based on the following evaluation criteria:

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

The table below represents the initial scores and rankings:

Proposer Name	Initial Cost	Technical Score	Cost Score	Total Score (Maximum total score: 100)	Ranking
Siemens Mobility, Inc.	$2,065,788.38	65.00	25.00	90.00	1
CG, Inc.	$2,109,980.00	62.67	24.48	87.15	2

Both firms were deemed to be within the competitive range. After the initial evaluations, the committee requested a Best and Final Offer (BAFO) from both proposers on July 21, 2025. The table below represents the final scores and rankings:

Proposer Name	BAFO	Technical Score	Cost Score	Total Score (Maximum total score: 100)	Ranking
Siemens Mobility, Inc.	$1,997,346.52	65.00	23.53	88.53	1
CG, Inc.	$1,880,077.45	62.67	25.00	87.67	2

MTS has deemed Siemens Mobility, Inc. to be the highest-ranked proposer. In addition, the MTS evaluation panel was satisfied with the past performance and quality of work that Siemens Mobility, Inc. provided to MTS under MTS Contract Nos. L1647.0-23 (SD8 Power Axle Overhaul) and L1681.0-24 (Emergency Drive Unit Repairs). Based on the MTS Independent Cost Estimate (ICE) of $2,259,295.00, past purchase history, and a cost/price analysis, Siemens Mobility, Inc.'s offer was determined to be fair and reasonable.

Therefore, staff recommend that the MTS Board of Directors provide a contingent authorization for the CEO to execute MTS Doc. No. L1701.0-25 (in substantially the same format as Attachments A), with Siemens Mobility, Inc., for fourteen (14) months in the amount of $1,997,346.52.

/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. L1701.0-25
B. Scope of Work
C. Cost Proposal Form

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. L1701.0-25

LIGHT RAIL VEHICLE (LRV) 5027 STRUCTURAN AND BODY REPAIR SERVICES

THIS AGREEMENT is entered into this _____ day of ____ 2025 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 or CS":

Name: Siemens Mobility, Inc.

Address: 5301 Price Ave

McClellan Park, (City) CA (State) 95652 (Zip)

Form of Business: Corporation

Email: james_evans@siemens.com

Telephone: (916) 346-8360

Authorized person to sign contracts: James Evans (Name) Accident Repair Manager (Title)

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

The contract term is for up to fourteen (14) months effective approximately from October 1, 2025 through December 1, 2026.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $1,997,346.52 without the express written consent of MTS.

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

SCOPE OF WORK/TECHNICAL SPECIFICATIONS

5.1. GENERAL OVERVIEW

This Scope of Work (SOW) outlines the necessary repairs for Light Rail Vehicle (LRV) 5027, which sustained extensive damage due to a collision while operating at permitted speed at L Street grade crossing in Chula Vista, impacting on the right-hand (RH) side of the A-Car at the low floor center sidewall and resulting derailment of the LRV center and trailing trucks. This document defines the required repairs, including structural restoration, component replacement, and verification testing to ensure the vehicle is restored to service-ready condition. This SOW outlines dames as they are now to MTS at the current time. Potential proposers are encouraged to conduct their own independent assessment and verification of damages to provide an appropriate proposal for repair. This SOW serves as the basis for soliciting bids for the repair work required for LRV 5027. Proposers are required to submit detailed proposals outlining their qualifications, reference, approach, cost proposal and timeline for completion.

5.2. STRUCTUAL REPAIRS

- Mechanically straighten the low floor frame to restore deformed areas to their original position.
- Repair or Replace the A car articulation portal.
- Repair or Replace the A car A side sidewall where required.
- Repair/rebuild the passenger door 12 lower rear corner to original design.
- Repair or Replace A car end portal corner post
- Repair the C-Car B side articulation portal and end portal post and associated cladding
- Restore the B-Car rear lifting pad by cutting and welding on a new pad.
- Replace all damaged skirt piston rod brackets by cutting and welding new components.
- Restore C car left lifting pad to original configuration
- Straighten C cars A side window frame

5.3. COMPONENT REPLACEMENTS

- Replace or repair damaged RH side center sidewall assembly, including:
    - Rear ADA ramp door 2 and door 12
    - Passenger doors and door control units doors 1.2.12
    - Interior liners and seats attached to the center sidewall
- Repair or Replace A side cladding as needed
- Replace door control units, door operators, and door leaves. Doors 1,2,12
- Replace C-Car LH side vertical and horizontal cladding panels as needed
- Replace all broken windows on the A,B and C cars.
- Replace the damaged truck skirts and all bent hinges.
- Replace or rebuild C-Car stop and plate below the damaged corner post area.
- Replace B-Car cable clamps, triangular attaching brackets, and electrical box guard assembly.
- Replace 1 Damaged Kingpin assembly (A-Car)
- Replacement of damaged Articulation Bellows.
- Replace both Articulation Bearings in C-Car
- Repair or replace upper roof shrouds as needed.

- Replace 2 upper pitching Joint links (upper articulation) on both sides of C car as well as replacement of upper links and associated hardware.
- Replace damaged door system components including Door operators, wiring, sensors, Door Controllers, ramps and door panels as needed.
- Replace the subfloor, flooring tiles, insulation and undercar panels in the A-Car Low floor section as needed.

5.4. NON-DESTRUCTIVE TESTING AND INSPECTION

- Alternating Current Field Measurement (ACFM) non-destructive testing or other means or Non-Destructive Testing (NDT) shall be used on all repaired and new weld seams to verify structural integrity. Any means other than ACFM shall be sent to the MTS project manager for approval prior to testing.
- Evaluate structural damage beneath cladding after removal to determine the necessity of additional repairs.
- Repair or replace the HVAC cover and roof shroud bracket.
- Final dimensions shall be confirmed against the original design. The method of verification shall be submitted to MTS project manager for review and approval.

5.5. COSMETIC AND SURFACE REPAIRS

- Repair minor non-structural damage, including blending and smoothing rough metal surfaces.
- Touch up protective coatings on areas where damage has caused paint chipping or exposure.
- Repair or replace corrugated angled cladding strips as needed.
- Upon completion, the interior and exterior painted surfaces shall be refinished to match OEM paint standards.
- Reinstall interior and exterior panels, mounding, trim, seats, handrails, push buttons and other appliances as needed.

5.6. TRANSPORTATION REQUIREMENTS

The successful bidder shall be responsible for arranging and covering the cost of transport for LRV 5027 from its current location in San Diego to the contractor's repair facility. Upon completion of all repairs, the bidder shall also arrange and cover the cost of return transport of the vehicle back to San Diego. The vehicle shall be transported by road and the vehicle must be wrapped in protective sheeting to protect the finish while in transport. Proper handling procedures must be followed to ensure the safety and integrity of the LRV during transit.

5.7. DELIVERABLES

- Submission of a detailed repair plan outlining methodologies and timelines.
- Documentation of all inspections, including pre- and post-repair assessments.
- Certification of ACFM testing results confirming structural integrity post-repair.
- Warranty and compliance documentation for all replaced components.

5.8. COMPLETION TIMELINE

All repair work shall be completed within 14 months from the contract award date. Any deviations from this schedule must be communicated and approved in advance. Upon NTP, a kickoff meeting will be held to determine appropriate hold and inspection points for the project.

5.9. ACCEPTANCE CRITERIA

- All repairs must comply with manufacturer specifications and regulatory requirements.
- Structural integrity must be verified through non-destructive testing.
- Vehicle components must function properly and pass operational testing before reintroduction into service.
- All welds must pass ACFM non-destructive testing to confirm no cracks or defects are present.
- Cosmetic repairs, including surface refinishing and protective coating touch-ups, must meet industry standards.
- Exterior painted surfaces must meet an Orange Peel level of 8-10.
- Upon completion, the interior and exterior painted surfaces shall be refinished to match OEM paint standards.
- Transport and the handling of the vehicle must not result in any additional damage.
- Final acceptance will be granted upon successful completion of an inspection by MTS engineering and maintenance representatives.

5.10. CONTRACTOR REQUIREMENTS

- Contractor must have a minimum of ten (10) years of experience in LRV repair and structural restoration.

- Contractor must have access to necessary tooling, equipment, and materials for all required work.

- **Certifications & Trainings**
  - Welders must be certified in accordance with **AWS D1.1 (Structural Welding Code-Steel)** and/or **AWS D1.3 (Structural Welding Code-Sheet Steel)** as applicable to the repair work.
  - All welding personnel must have completed formal training in welding procedures, safety standards, and the proper handling of rail vehicle materials.
  - A minimum of **five (5) years of experience** performing structural welding repairs on rail vehicles, transit vehicles, or similar heavy equipment.
  - Proven experience in **repairing and restoring major structural damage** in compliance with Federal Transit Administration (FTA) and American Public Transportation Association (APTA) guidelines.
  - Ability to interpret **engineering drawings, welding procedures, and repair specifications** specific to rail vehicle structures.

- **Inspection & Quality Standards**
  - Welders must follow **industry-standard nondestructive testing (NDT) procedures**, including, but not limited to, **ultrasonic testing (UT), magnetic particle testing (MT), and dye penetrant testing (PT)**, to ensure weld integrity.
  - All welding work shall conform to the latest **ANSI/AWS, APTA**, **and FTA regulations**.

- The Contractor must provide documentation of previous **successful structural weld repairs** for verification of compliance with industry standards.

- **Documentation & Certification Submittals**
  - Prior to commencing work, the Contractor musts submit welder qualification records, including:
    - AWS Certification records
    - Documented work history and references
    - Proof of completion of safety training courses

5.11. WARRANTY

Contractor shall provide a minimum 1year warranty on all materials and workmanship related to the repairs performed. A 10 year warranty shall be provided for structural repair materials and workmanship performed directly related to the repairs performed and a 10-year warranty on all paint and refinishing materials and workmanship related to the work performed.

5.12. 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.

Payment terms shall be net 30 days from invoice date.

Contractors must also indicate if any of the invoiced amount(s) 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 the *Prompt Progress Payments* section of the Standard Conditions.

5.13. [NOT APPLICABLE] HEWLETT PACKARD ENTERPRISE (HPE) MINIMUM REQUIREMENTS

5.14. [NOT APPLICABLE] CISCO MINIMUM REQUIREMENTS

5.15. [NOT APPLICABLE] CONTRACTOR'S INFORMATION SECURITY RESPONSIBILITIES

5.16. [NOT APPLICABLE] BUY AMERICA

5.10.1. [NOT APPLICABLE] CONSTRUCTION MATERIALS

5.10.2. [NOT APPLICABLE] MANUFACTURED PRODUCT

5.10.3. [NOT APPLICABLE] ROLLING STOCK

5.10.4. [NOT APPLICABLE] IRON OR STEEL

5.17. SAFETY DATA SHEETS (SDS)

Upon award, Contractors shall email the SDS for materials/ chemicals that will be used or stored at the construction site during the duration of the project, attention Ngan Nguyen, MTS Environmental Health and Safety Specialist at Ngan.Nguyen@sdmts.com for review or comment if needed. The Contractor shall notify the MTS Environmental Health and Safety Specialist if there are changes or updates to the SDS during the term of the contract to ensure the MTS recordkeeping is kept updated throughout the contract.

5.18. NO RIGHT TO POST SIGNS

The Contractor shall not post or otherwise affix signs, decals or other media on MTS property or equipment, except as required to maintain safety during the course of repair or maintenance work. No permanent signs, decals, or other media may be installed without MTS's express written permission.

5.19. [NOT APPLICABLE] REPLACEMENT PARTS

5.20. [NOT APPLICABLE] DELIVERY AND ACCEPTANCE

5.21. [NOT APPLICABLE] EXPEDITING

5.22. [NOT APPLICABLE] ACQUISITION OF ROLLING STOCK

MTS COST FORM
LRV VEHICLE #5027 STRUCTURAL AND BODY REPAIR SERVICE RFP
MTS DOC. NO. L1701.0-25

#	TASK	DESCRIPTION	COST (Lump Sum)
1	Project Management	All project management and adminstrative costs associated with this project.	$379,214.21
2	Engineering	All engineering costs associated with inspection and repair.	$147,507.25
3	Quality Assurance	All costs associated with quality assurance. To include, but not limited to include, all inspection and NDT costs.	$140,330.22
4	Labor	All labor costs - disassemble, repair and reassemble.	$783,884.47
5	Transportation	All costs associated with loading and transport of LRV 5027 from MTS facility to Contractor facility and return.	$65,254.51
6	Materials	All costs associated with providing materials for this project (see attached Contractors Materials page).	$481,155.86
		GRAND TOTAL	$1,997,346.52

Note: Costs are firm-fixed for the duration of the contract. PLEASE INCLUDE A SEPARATE SHEET EXPLAINING YOUR CALCULATIONS FOR EACH TASK.

MTS COST FORM
LRV VEHICLE #5027 STRUCTURAL AND BODY REPAIR SERVICE RFP
MTS DOC. NO. L1701.0-25

#	TASK	DESCRIPTION	Calculation Explanation	Value (Excl. Sales Tax), USD	Sales Tax Amount , USD	Total Value (Incl. Sales Tax), USD
1	**Project Management**	All project management and adminstrative costs associated with this project.	**Project Manager**: 1/3 FTE/month **Commercial Project Manager**: 1/4 FTE/month **Procurement & Order Management**: 25 hrs/month **Logistics Management**: 75 hrs (total) **Scheduling Management**: 15 hrs/month **Business travel**: Includes 2 PM site visits during vehicle shipment to/from San Diego	$379,214.21	$0.00	$379,214.21
2	**Engineering**	All engineering costs associated with inspection and repair.	The estimate includes the combined efforts of the **Engineering Project Manager, Industrial Engineer, and Mechanic/Structural Engineer**. **Design Phase**: 430 planned hrs **Production Phase**: 360 planned hrs	$147,507.25	$0.00	$147,507.25
3	**Quality Assurance**	All costs associated with quality assurance. To include, but not limited to include, all inspection and NDT costs.	**Quality Management and Assurance Activities** **Inspection Efforts**: 400 hours allocated to incoming, in-process, and final inspections to ensure compliance with quality standards. **Ongoing Support**: 30 hours per month dedicated to continuous quality oversight and project support.	$140,330.22	$0.00	$140,330.22
4	**Labor**	All labor costs - disassemble, repair and reassemble.	**Subcontractor Costs**: Structural welding services provided by LEVAC **Siemens Internal Costs**: **Siemens internal hours (approx. 2100h)**, including: Production and painting hrs Expert house hrs **Business travel** for expert house personnel to and from San Diego for vehicle shipments	$783,884.47	$0.00	$783,884.47
5	**Transportation**	All costs associated with loading and transport of LRV 5027 from MTS facility to Contractor facility and return.	**Logistics**: Vehicle wrapping Truck shipment of LRV to and from San Diego	$65,254.51	$0.00	$65,254.51
6	**Materials**	All costs associated with proviing materials for this project (see attached Contractors Materials page).	Priced according to the provided **MTS LIST OF MATERIALS**	$446,548.36	$34,607.50	$481,155.86
			GRAND TOTAL	$1,962,739.02	$34,607.50	$1,997,346.52

MTS LIST OF MATERIALS

Materials BOM - Contractor supplied	Siemens Part Number (if known)	Quantity	UOM	Description
ASSY,SIDEWALL,LOWFLOOR,CENTER		**2**	**PC**	**ASSY,DOORPOST,LFLR**
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2816600	2	PC	BOW,DOORPOST,LFLR
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2830500	2	PC	SHEET,DOORPOST,LFLR,LH
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2830600	2	PC	SHEET,DOORPOST,LFLR,RH
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2392500	2	PC	WEB,DOORPOST
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2392600	2	PC	WEB,DOORPOST 2X78X468.4
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C3196900	2	PC	WEB,DOORPOST
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C3197100	2	PC	WEB,DOORPOST
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2393000	2	PC	WEB,DOOR-POST, 2X78X513
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2392000	8	PC	CAGE,DOOR-POST, 2X64X186
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2393200	2	PC	WEB,DOOR-POST, 22X78X505.
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2391700	2	PC	CAP,DOOR-POST
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2827400	2	PC	RIP DOORPOST
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C3197000	2	PC	WEB,DOORPOST
ASSY,SIDEWALL,LOWFLOOR,CENTER		**1**	**PC**	**WINDOW POST,UPPER,SIDEWALL,LOW FLOOR**
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2385800	1	PC	U-PROFILE,WINDOWPOST,HIGHFLOOR
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2515800	1	PC	BOW,WINDOWPOST,UPPER,LOWFLOOR
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2708800	1	PC	ANGLE,SIDEWALL,LOWFLOOR
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2383900	1	PC	U-PROFILE,SIDEWALL,CENTER, 0.7X447.5
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2709000	1	PC	CROSSGIRDER,WINDOW,SIDEWALL,CE CENTER
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2709800	1	PC	PROFILE,SIDEWALL,CENTER
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2709600	1	PC	PROFILE,SIDEWALL,CENTER
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2709900	1	PC	PROFILE,SIDEWALL,CENTER
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2709700	1	PC	PROFILE,SIDEWALL,CENTER
ASSY,SIDEWALL,LOWFLOOR,CENTER		**6**	**PC**	**BOSS**
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2388600	6	PC	BOSS 25X15
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2368400	6	PC	BOSS,COPPER,PLATE, 2X24X24
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2708700	1	PC	U-PROFILE,SIDEWALL,CENTER
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2709400	1	PC	PROFILE,SIDEWALL,CENTER
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2708900	1	PC	CROSSGIRDER,WINDOW,SIDEWALL, CENTER
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2562200	2	PC	PLATE,SIDEWALL
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2709500	1	PC	PROFILE,SIDEWALL,CENTER

Materials BOM - Contractor supplied	Siemens Part Number (if known)	Quantity	UOM	Description
ASSY,SIDEWALL,LOWFLOOR,CENTER		**1**	**PC**	**WINDOW POST,LOWER,SIDEWALL,LOW FLOOR**
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2515900	1	PC	U-PROFILE,WINDOWPOST,LOWER,LOW FLOOR
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2516000	1	PC	BOW,WINDOWPOST,LOWER,LOWFLOOR
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2523500	2	PC	GUSSET,CROSS GIRDER,WINDOW
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2523600	2	PC	GUSSET,CROSS GIRDER,VERTICAL
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2523700	1	PC	GUSSET,CROSS GIRDER,SHORT
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2394700	1	PC	CAP,SIDEWALL,HIGH-FLOOR,
ASSY,SIDEWALL,LOWFLOOR,CENTER	RS:C2559900	4	PC	GUSSET,WINDOW
INSTL,CLADDING,A/B CAR	**RS:C2703908**	**1**	**PC**	**CLADDING,H-FL,MID ASSY,RH**
INSTL,CLADDING,A/B CAR	RS:C2231200	1	PC	PULTRUSION 3
INSTL,CLADDING,A/B CAR	RS:C2233700	2	PC	ENDCAP,STRAIT
INSTL,CLADDING,A/B CAR	RS:C2233800	6	PC	ENDCAP,ANGLED
INSTL,CLADDING,A/B CAR		6	PC	DP810, 3M, ACRYLIC, 2PART, ADHESIVE L...
INSTL,CLADDING,A/B CAR	RS:C2744200	1	PC	PLATE,SIGNAL,TURN
INSTL,CLADDING,A/B CAR		1	FT	TAPE,VHB,1.1MMX25MM,ACRYLIC
INSTL,CLADDING,A/B CAR	**RS:C2764401**	**2**	**PC**	**CLADDING,L-FL,MID ASSY**
INSTL,CLADDING,A/B CAR	RS:C2231200	2	PC	PULTRUSION 3
INSTL,CLADDING,A/B CAR	RS:C2233800	4	PC	ENDCAP,ANGLED
INSTL,CLADDING,A/B CAR		2	PC	DP810, 3M, ACRYLIC, 2PART, ADHESIVE L...
INSTL,CLADDING,A/B CAR	**RS:C2764501**	**2**	**PC**	**CLADDING,L-FL,LWR**
INSTL,CLADDING,A/B CAR	RS:C2231300	2	PC	PULTRUSION 4
INSTL,CLADDING,A/B CAR	**RS:C2866804**	**1**	**PC**	**CLADDING,HI-FL,LOWER,RH**
INSTL,CLADDING,A/B CAR	RS:C2231300	1	PC	PULTRUSION 4
INSTL,LINING,INTERIOR,SIDEWALL	RS:A4272801	2	PC	LINING,INTR SIDEWALL,LOW FLOOR LEFT
INSTL,LINING,INTERIOR,SIDEWALL	RS:A9309301	32	FT	EDGE SEAL, 26,9X14 SILICONE
INSTL,LINING,INTERIOR,SIDEWALL	RS:A4273300	2	PC	ANGLE,SIDEWALL,LOW FLOOR
INSTL,LINING,INTERIOR,SIDEWALL	RS:A0704306	65	PC	NUT,U-TYPE,SELF RETAINING,M5,Z N PL S...
INSTL,LINING,INTERIOR,SIDEWALL	RS:A0766100	65	PC	WASHER,FL FNDR,M5,DIN9021B,ZN
INSTL,LINING,INTERIOR,SIDEWALL	RS:A0712705	65	PC	WASHER,SPR LK,M5,DIN127B,ZN
INSTL,LINING,INTERIOR,SIDEWALL	RS:A0778300	265	FT	STRIP,FASTENING,RECLOSABLE,DUA L LOCK...
INSTL,LINING,INTERIOR,SIDEWALL		40	FT	TAPE,FOAM,ADH,1/8"X1",CLOSED C ELL NE...
King Pin	A2V00397239244	1	PC	bogie pivot compl.
King Pin	A2V00397248176	1	PC	Swivel ring painted
King Pin	A2V00397239151	1	PC	Bush

Materials BOM - Contractor supplied	Siemens Part Number (if known)	Quantity	UOM	Description
King Pin	A2V00397240711	1	PC	Pivot bearing
King Pin	A2V00397240713	1	PC	Pivot
King Pin	A2V00397240714	1	PC	Flange plate
King Pin	A2V00397239805	1	PC	BOLT
King Pin	A2V00370027222	1	PC	SLOT.CASTLE NUT DIN935-M36-8-A2C
King Pin	A2V00397239939	1	PC	Wear Ring, painted
King Pin		1	PC	SPLIT PIN ISO1234-6,3x63-ST-A3C
King Pin		4	PC	Hexagon head screw
King Pin		4	PC	Hexagon nut
King Pin		4	PC	Load washer SCHNORR HS
King Pin		1	KG	NBU 30 PTM STABURAGS MOUNTING PASTE 3...
King Pin	A2V00370069475	1	PC	SEAL V-RING V-45A 11.5203.0045
RH Side Interior Door Liners	RS:A4612503	1	PC	COVER, DOOR POST, EMERG DOOR, RELEASE, ADA PUSH BUTTON
RH Side Interior Door Liners	RS:A4612102	2	PC	LINER, DOOR POST, RH
RH Side Interior Door Liners	RS:A4322001	2	PC	EXTRUSION, DOOR POST, LH
RH Side Interior Door Liners	RS:A4612401	1	PC	COVER, DOOR POST, CUT OUT SWITCH
RH Side Interior Door Liners	RS:A4612301	1	PC	LINER, DOOR POST, PIU
RH Side Interior Door Liners	RS:A4322002	1	PC	EXTRUSION, DOOR POST, RH
RH Side Interior Door Liners	RS:A4612501	1	PC	COVER, DOOR POST, EMERG DOOR RELEASE, CREW KEY
RH Side Interior Door Liners	RS:A4612402	1	PC	COVER, DOOR POST, CUT OUT SWITCH, HIGH FLOOR
RH Side Interior Door Liners	RS:A4612202	1	PC	LINER, DOOR POST, HIGH FLOOR, RH
RH Side Interior Door Liners	RS:A4613502	1	PC	EXTRUSION, DOOR POST, HIGH FLOOR, RH
Articulated Joint (Lower)	A2V00109419236	2	PC	ARTICULATION BEARING
Articulated Joint (Lower)	A2V00109419237	2	PC	COVER COMPLETE
Articulated Joint (Lower)		4	PC	FITTING,GREASE,M10X1,90 DEG,SS
Articulated Joint (Lower)		20	PC	PIN,SPRING,DIN1481,25X32,A2-70
Articulated Joint (Lower)		32	PC	SCREW,SCH,LWHD,M12X30,DIN7984,SST
Articulated Joint (Lower)		6	PC	SCREW,SCH,FLH,M12X20,DIN7991,SST
Articulated Joint (Lower)		32	PC	WASHER,M12-19.5,DIN25201,A4
Articulated Joint (Lower)	A2V00109419251	8	PC	PLATE, DAMPER, BL5 X 45 X 36, DIN1016, 1.4301
Articulated Joint (Lower)		16	PC	BOLT, MACHINE, HEX HD, M8 X 20, ISO4017, A2-70

Materials BOM - Contractor supplied	Siemens Part Number (if known)	Quantity	UOM	Description
Articulated Joint (Lower)	02H-1902-001	4	PC	DAMPER, 541-893, PAINTED RAL 7011, CYL BEARING, 25MM BORE (KONI PN 02H-1902-001)
Articulated Joint (Lower)	RS:A3513300	8	PC	BOLT, DAMPER, 25MM DIA
Underside U channels	RS:C2333400	3	PC	U-PROFILE,SUBFLOOR,SHEETS,BL2X 57X690...
Underside U channels	RS:C2728900	1	PC	U-PROFILE,SUBFLOOR,SHEET,1020
Underside U channels	RS:C2728800	2	PC	U-PROFILE,SUBFLOOR,SHEET,1515
Underside U channels	RS:C2729200	2	PC	U-PROFILE,SUBFLOOR,SHEET,330
Underside U channels	RS:C2693000	1	PC	U-PROFILE,SUBFLOOR,SHEETS
Underside U channels	RS:A0701800	39	PC	WASHER,FL FNDR,M8,DIN9021B,SST
Underside U channels		39	PC	NUT,LOCK,M8,DIN985,SST
Underside U channels	RS:C2334000	18	PC	DISTANCE,WASHER,SUBFLOOR,RD25X 8,POLY...
Electric Box guard	RS:A8719200	4	PC	ISOLATOR, TWO-PIECE MOUNT,M12
Electric Box guard	RS:A8818001	1	PC	MOUNT,CAGE,GUARD,EHU,LH
Electric Box guard	RS:A8818002	1	PC	MOUNT,CAGE,GUARD,EHU,RH
Electric Box guard	RS:A8817900	1	PC	CAGE,GUARD,EHU
Electric Box guard		8	PC	WASHER,FL,M12,DIN125A,SST
Electric Box guard		4	PC	WASHER,SPR LK,M12,DIN127B,SST
Electric Box guard		4	PC	NUT,HEX,M12,DIN934,SST
Electric Box guard		4	PC	SCREW,HEX HD,M12X90,DIN933,SST
Electric Box guard		4	PC	WASHER,FL FNDR,M10,DIN9021B,SS T
Electric Box guard		5	PC	WASHER,SPR LK,M10,DIN127B,SST
Electric Box guard		4	PC	NUT,HEX,M10,DIN934,SST
Clamp Bracket	RS:A4279700	1	PC	BRACKET,CABLE CLAMP,LEFT SIDE, ASSY
Clamp Bracket	RS:A7814300	1	PC	CLAMP,TRUCK CABLE
Clamp Bracket	RS:A4381400	1	PC	BRACKET,CABLE CLAMP
Clamp Bracket	RS:A4668700	1	PC	BRACKET,CLEAT,COUPLER, AND BRAKE HOSE
Clamp Bracket	RS:A2638800	7	PC	PIN,T-HANDLE,POSITIVE LOCKING, DIA8X1...
Clamp Bracket	RS:A7821200	1	PC	CLAMP,CABLES,2 HOLE,NEOPRENE
Clamp Bracket	RS:A7821400	1	PC	PLATE,CLAMP,CABLES
Clamp Bracket	RS:A4669000	1	PC	STRIP,RUB,CLEAT,POWER TRUCK
Bellows retaining edge	RS:C2822701	1	PC	ASSY,MOUNTING,FRAME,BELLOWS
Bellows retaining edge	RS:C2822600	2	PC	PLATE,BELLOW,EXTENSION
Lift pad	RS:C2344900	1	PC	LIFTING,PLATE, 4X171X178
Belly Pan Studs		20	PC	STUD WELD M8 X 30MM RD SST ISO 13918 A 6

Materials BOM - Contractor supplied	Siemens Part Number (if known)	Quantity	UOM	Description
Belly Pan Studs		20	PC	STUD WELD M8 X 25MM RD SST ISO 13918 C 23
Skirt Brackets	RS:A5314900	2	PC	BRACKET, SKIRT, GAS SPRING, RIGHT REAR, NO. 2
Bellows Frame C car	4150056200	1	PC	FRAME, INNER, LT (HUBNR PN 04150056200)
Bellows Frame C car	4150056100	1	PC	FRAME, INNER, RT (HUBNR PN 04150056100)
Bellows Frame C car	SSP-06-07	32	PC	RIVET, PROTRUDING HD, 3/16-INCH X 0.64 INCH GRIP, SST/ST (AVDEL PN SSP-06-07)
Bellows Kit	14159979500	1	PC	BELLOW, KIT, ARTCLN (HUBNR PN 14159979500)
Window Lining	RS:A8631701	1	PC	LINING, INTERIOR, SIDEWALL, C-CAR
Cladding	RS:C2764200	2	PC	CLADDING, UPPER, C-CAR
Cladding	RS:C2764300	2	PC	CLADDING, MID, C-CAR
Cladding	RS:C2765100	4	PC	CLADDING, PANEL, C-CAR
Windows		12	PC	ADH, BOSTIK-FINDLEY, HARD, BLACK
Windows	RS:A2043600	16	PC	SPACER, FLOOR, 10 X 30 X 10MM, DUROMETER 50
Windows	RS:A2043700	2	PC	SPACER, FLOOR, 10 X 30 X 6MM, DUROMETER 50
Windows		4	PC	ADHESIVE, LOCTITE, 5019H, INSTANT (SUPER GLUE), 500GR
Roof Shroud Bracket	RS:A4940200	1	PC	BRACKET, SHROUD, LG
Roof Shroud Bracket		4	PC	NUT, HEX, SELF-LOCKING, M8, DIN985, SST
Roof Shroud Bracket		4	PC	WASHER, FLAT, FENDER, M8, DIN9021B, SST
Roof Shroud Bracket	RS:A4944200	2	PC	STUD PLATE ASSY, SHROUDS
Upper Pitching Joint Link	4159970900	2	PC	CONNECTING TUBE ASSY (HUBNR PN 04159970900)
Upper Pitching Joint Link	4430194100	8	PC	BOLT, MACHINE, HEX HD, M12 X 80, DIN931, DACROMET (HUBNR PN 04430194100)
Upper Pitching Joint Link	4430182700	8	PC	WASHER, M12-19.5, DIN25201, A4 (HUBNR PN 04430182700)
Upper Pitching Joint Link	4430194511	8	PC	PIN, SLOTTED SPRING, 16 X 50, ISO13337, ST, DACROMET (HUBNR PN 04430194511)
Truck Skirt		10	PC	HINGE, SKIRT, 3 INCH X 4 INCH X 1/4 PIN
Cladding - A-Car LH	RS:C2765001	1	PC	CLADDING PANEL MID A/B-CAR
Cladding - A-Car LH	RS:C2704107	2	PC	CLADDING ARTCLN,MID,LH
Cladding - A-Car LH	RS:C2764601	1	PC	CLADDING,END,LOWER,LH
Cladding (Door Pultrusion)	RS:C2705301	3	PC	PULTRUSION,DOOR,INNER ASSY,LH
Cladding (Door Pultrusion)	RS:C2705302	3	PC	PULTRUSION,DOOR,INNER ASSY,RH

Materials BOM - Contractor supplied	Siemens Part Number (if known)	Quantity	UOM	Description
Cladding (Door Pultrusion)	RS:C2705401	3	PC	PULTRUSION,DOOR,OUTER ASSY,LH
Cladding (Door Pultrusion)	RS:C2705402	3	PC	PULTRUSION,DOOR,OUTER ASSY,RH
Floor panels Low floor Area	RS:A4533300	1	PC	PNL,FLOOR,LOW FLOOR,FRONT DOOR
Floor panels Low floor Area	RS:A4280500	2	PC	PANEL,FLOOR,THRESHOLD
Floor panels Low floor Area	RS:A4539300	1	PC	PANEL,FLOOR,LOW FLOOR,MID
Floor panels Low floor Area	RS:A4281500	2	PC	PANEL, FLOOR, #14
Floor panels Low floor Area	RS:A4539400	1	PC	PANEL,FLOOR,#15
Floor panels Low floor Area	RS:A1400000	60	PC	SPACER,FLOOR,10X30X1MM,RUBBER, F&S NE...
Floor panels Low floor Area	RS:A1400100	200	PC	SPACER,FLOOR,10X30X2MM,RUBBER, F&S NE...
Floor panels Low floor Area	RS:A0253600	350	PC	SPACER,FLOOR,10X30X4MM,RUBBER, F&S NE...
Floor panels Low floor Area		1	PC	5019H LOCTITE, ADHESIVE, INSTANT (SUP...
Floor panels Low floor Area		30	EA	CP 25WB+ 3M SEALANT FIRE BARRIER 20OZ
Floor panels Low floor Area		36	ML	560, 3M, SEALANT,ADHESIVE, POLYURETHA...
Floor panels Low floor Area		2	GAL	01160 3M MAR-GLASS FILLER, REINFORCED...
Floor panels Low floor Area	RS:A4308500	4	PC	PANEL,FLOOR,RAMP TRIM
Floor panels Low floor Area	RS:A1927200	11	PC	PLUG,BUTTON FLUSH,13/16"
Floor panels Low floor Area	RS:A2043700	60	PC	SPACER,FLOOR,10X30X6MM,RUBBER, 50 DUR...
Floor panels Low floor Area	RS:A2043600	20	PC	SPACER,FLOOR,10X30X10MM,RUBBER 50 DUR...
Floor lining Low floor area	RS:A5044300	22	PC	LINING,FLOOR TILE,1MX1MX3.5MM THK,DRU...
Floor lining Low floor area	RS:A5044500	2	PC	TRIM,NOSING,SLATE GREY ,2500MM,8.2FT
Floor lining Low floor area	RS:A5023300	5	PC	FLOORSEAL,NORA,COLD WELD, ART928-0749
Floor lining Low floor area	RS:A7853300	1	PC	TRIM,ARTICULATION
Floor lining Low floor area		24	PC	ADHESIVE,70-03FR,BOSTIK,20OZ, WHITE
Floor lining Low floor area	RS:A3341900	1	FT	TREAD,GRIP,12",BLACK
THERMAL INSULATION Low floor	RS:A8767200	1	PC	KIT,UNDERFRAME,ASSY
THERMAL INSULATION Low floor		6	PC	ADHESIVE,70-03FR,BOSTIK,20OZ, WHITE
THERMAL INSULATION Low floor	RS:A1927200	15	PC	PLUG,BUTTON FLUSH,13/16"
THERMAL INSULATION Low floor		30	FOZ	3M 3000 WT FIRESTOP SEALANT, 10.1 FL ...
BELLY PANS Low floor	RS:C2722600	2	PC	SHEET,SUBFLOOR,U/F,LOWFLOOR
BELLY PANS Low floor	RS:C2722800	2	PC	SHEET,SUBFLOOR,MID-PORTAL
BELLY PANS Low floor	RS:C2722900	1	PC	SHEET,SUBFLOOR,MID SECTION

Materials BOM - Contractor supplied	Siemens Part Number (if known)	Quantity	UOM	Description
BELLY PANS Low floor	RS:C2758201	2	PC	ASSY,SUBFLOOR,U/F,LOWFLOOR
BELLY PANS Low floor	RS:C3149600	1	PC	SHEET,SUBFLOOR,ARTICULATION
BELLY PANS Low floor		18	PC	DISTANCE,WASHER,SUBFLOOR,RD25X 8,POLY...
BELLY PANS Low floor	RS:C2695700	8	PC	SPACER,TAPERED,BELLY PAN
BELLY PANS Low floor	RS:C2695800	2	PC	SPACER,LONG,BELLY PAN
BELLY PANS Low floor	RS:C2695600	2	PC	SPACER,MID,BELLY PAN
BELLY PANS Low floor		138	PC	NUT,LOCK,M8,DIN985,SST
BELLY PANS Low floor		138	PC	WASHER,FL FNDR,M8,DIN9021B,SST
BELLY PANS Low floor		16	PC	PIN,COTTER,DIA 3.2X32,DIN94,SS T
BELLY PANS Low floor		16	PC	WASHER,FL FNDR,M4,DIN9021B,SST
BELLY PANS Low floor		48	PC	3M 3000 WT FIRESTOP SEALANT, 10.1 FL ...
PAINTING,EXTERIOR, A/B-CAR		2	GAL	L6049EB DUPONT RED BASECOAT POLYURETH...
PAINTING,EXTERIOR, A/B-CAR		2	GAL	L000IEB DUPONT BLACK BASECOAT POLYURE...
PAINTING,EXTERIOR, A/B-CAR		2	GAL	15309S DUPONT ACTIVATOR HIGH SOLIDS
PAINTING,EXTERIOR, A/B-CAR		3	GAL	AXALTA,IMRON,CLEARCOAT,8831S
PAINTING,EXTERIOR, A/B-CAR		4	QT	389S DUPONT ACCELERATOR,MASTER INT
PAINTING,EXTERIOR, A/B-CAR		2	GAL	V3921S DUPONT CLEANER SURFACE LOW VOC...
PAINTING,EXTERIOR, A/B-CAR		1	PC	THINNER,LE1075S,AXALTA
PAINTING,EXTERIOR, A/B-CAR		2	GAL	PRIMER CORLAR 2.1 PR-P-ANSI 70 GRAY ...
PAINTING,EXTERIOR, A/B-CAR		2	GAL	Hardener Corlar 2.1 PR-P Activator
PAINTING,EXTERIOR, A/B-CAR		1	GAL	Thinner Imron 1333 EXEMPT thinner
Pultrusions/cladding	RS:C2764501	2	PC	CLADDING,L-FL,LWR
Pultrusions/cladding	RS:A4245300	2	PC	PANEL,CLADDING,#2
Pultrusions/cladding	RS:A4245200	2	PC	PANEL,CLADDING,#1
Pultrusions/cladding	RS:A4253002	1	PC	PANEL,CLADDING,RAMP,RH
Pultrusions/cladding	RS:A2587400	2	PC	INSULATION,FELT,3"X24"X48",6 P CF
Pultrusions/cladding		80	PC	WASHER,FL FNDR,M5X20MM OD,SST
Pultrusions/cladding		80	PC	RIVET,LARGE FLANGE,3/16"X.575" X.251-...
Pultrusions/cladding		8	PC	RIVET,POP,5/32X.43,SST
Pultrusions/cladding		10	PC	RIVET,PROT HEAD,3/16",.626"-.7 50" GR...
C Car paint		4	GAL	L6049EB DUPONT RED BASECOAT POLYURETH...
C Car paint		2	GAL	15309S DUPONT ACTIVATOR HIGH SOLIDS
C Car paint		2	GAL	AXALTA,IMRON,CLEARCOAT,8831S

Materials BOM - Contractor supplied	Siemens Part Number (if known)	Quantity	UOM	Description
C Car paint		4	QT	389S DUPONT ACCELERATOR,MASTER INT
C Car paint		2	GAL	V3921S DUPONT CLEANER SURFACE LOW VOC...
C Car paint		1	PC	THINNER,LE1075S,AXALTA

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 21

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 11, 2025

SUBJECT:

Cloud Permitting Software – Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to:

1) Execute MTS Doc. No. G2902.0-24 (in substantially the same format as Attachment A) with GeoCivix, LLC (GeoCivix) to provide Cloud Permitting Software in the amount of $343,250.00 for a contract period of one (1) year implementation with three (3) base years and two (2) 1-year options service period; and

2) Exercise the option years of the agreement at the CEO's discretion.

Budget Impact

The total cost of this contract is estimated to be $343,250.00 (Attachment C). This project will be funded by Land Management and For-Hire Vehicle Administration (FHVA) Operations Budgets. The project costs for this contract award are summarized below:

Cost Center – GL Account	Amount
791010 – 571250 – Land Management	$299,000.00
761018 - 571250 – For Hire Vehicle (FHV)	$44,250.00
Total	**$343,250.00**

DISCUSSION:

MTS's Capital Projects Right-of-Way (ROW) department receives an average of 19 new permit requests per month and issues an average of 12 permits per month. Based on the continually growing backlog, MTS has identified deficiencies with the current Plan Review Acceptance (PRA) and Permit Issuance processes. MTS's FHVA has a similarly inefficient manual process for its permit applications and was included as part of this solicitation.

The current process lacks a technological tool to assist with application intake data and streamlining/automating the permit and PRA processes once the application is in the system. The current procedures are cumbersome and inefficient, consisting of manual data entry by

MTS ROW team of applicant information, forwarding materials for review by email and sharing large drawing files via SharePoint, tracking design review comments in excel spreadsheets, per permit number, and updating a master excel spreadsheet multiple times per week to understand the status of each active plan review or permit application. Each permit application is reviewed by internal MTS stakeholders and by external MTS contractors and permit applicants.

MTS ROW and FHVA staff solicited a cloud-based electronic plan and review permitting solution that addressed current inefficiencies in their processes. The goal of the solicitation was to find an application that is future-proof, scalable, flexible, and cost-efficient. It is critical to MTS that the selected solution is scalable and flexible to adapt efficiently to changes in ROW requirements and technology. This includes ever-changing cloud environments and government compliance.

This application is a critical need to replace the outdated, manual ROW and FHVA process with a solution that has the capability of meeting contemporary objectives but also keeping pace with rapidly evolving technology systems in transit. The goal is to have a solution that, by design, is more secure and agile for implementing technological advancements, providing exceptional system resilience, and meeting the needs of today and the future growth of MTS.

This project will add value to ROW, FHVA, and the public. For ROW and FHVA, the system will streamline operations, improve data accuracy, and reduce administrative burdens, enabling staff to focus on higher-value tasks and strategic priorities. Customers and the public will benefit from greater transparency, faster processing times, and more reliable access to information and services. Ultimately, this investment not only enhances internal efficiency but also strengthens the quality-of-service delivery to stakeholders and the community.

On December 2, 2024, MTS issued a Request for Proposal (RFP) for Cloud-based Permitting Software. A total of 10 proposals were received on the due date of February 20, 2025.

Proposer Name	Firm Certification	Total 6 Years
MTS – Independent Cost Estimate (ICE)		$ 279,791.78
Tyler Technologies, Inc.	N/A	$ 1,794,111.00
StackNexus, Inc.	N/A	$ 1,782,823.35
MaintStar, Inc.	N/A	$ 1,114,101.01
Think AI Consulting Corporation	Small Business (Micro) (SB); Minority Business Enterprise(MBE)	$ 1,051,730.00
Visionary Integration Professionals, LLC	MBE; Women Business Enterprise (WBE)	$ 963,270.55
Speridian Technologies, LLC	N/A	$ 847,917.29
TruePoint Solutions	N/A	$ 825,625.25
OpenGov, Inc.	N/A	$ 675,844.00
Aithent Inc	N/A	$ 654,864.96
GeoCivix, LLC	N/A	$ 334,250.00

All proposals were evaluated by a committee consisting of representatives from Information Technology (IT), Capital Projects – ROW, Operations, Finance, and FHVA departments. The proposals were scored based on the following evaluation criteria:

Staffing, Organization, and Management Plan	15%
Work Plan	15%
Ability to Meet Objectives	25%
Cost and Price	30%
	100%

The following table illustrates the initial scores and ranking of each firm:

Proposer Name	Technical Score	Cost Score	Total Score (Maximum 100)	Ranking
GeoCivix	51.60	26.40	78.00	1
StackNexus	51.80	13.20	65.00	2
OpenGov	41.80	20.40	62.20	3
MaintStar	45.40	15.60	61.00	4
Visionary Integration	43.90	15.00	58.90	5
Tyler Technologies	44.40	13.20	57.60	6
TruePoint	38.80	18.60	57.40	7
Speridan	41.10	16.20	57.30	8
Aithent	33.90	15.60	49.50	9
Think AI	28.50	12.00	40.50	10

The evaluation committee invited four (4) proposers who were within the competitive range for a software demonstration and interview: GeoCivix, StackNexus, OpenGov, and MaintStar. Interviews were held on May 21, 2025, and May 29, 2025, wherein the proposers were asked to provide a demonstration of their software solution and provide clarification on their proposals to MTS. After the presentations, the committee re-scored the proposers as follows:

Proposer Name	Technical Score	Cost Score	Total Score	Ranking
GeoCivix	59.30	26.40	85.70	1
OpenGov	43.80	20.40	64.20	2
StackNexus	46.20	13.20	59.40	3
MaintStar	34.90	15.60	50.50	4

After the interviews, the committee decided to narrow the competitive range and continue negotiations solely with GeoCivix. The committee requested a revised proposal including additional questions, clarifications, and scope adjustments, as well as a request for a cost reduction to the FHVA implementation. GeoCivix provided a revised proposal by the due date of July 3, 2025, that included a modest reduction in costs as requested. The committee elected to make no change to the previous score based on the revised proposal.

Proposer Name	Total Contract Cost	Technical Score	Cost Score	Total Score	Ranking
GeoCivix	$313,250.00	59.30	26.40	85.70	1

Following discussion of the revised proposal responses, the committee requested a second revised proposal for some adjustments to the licensing, a new Payment Card Industry (PCI) compliance requirement, removal of data migration scope, and additional questions and clarifications. GeoCivix provided a second revised proposal by the extended deadline of August 4, 2025, which reduced the cost proposal and added options to meet MTS's PCI compliance

requirements. The committee did not wish to make any changes to the evaluation score relating to the responses in the second-revised proposal.

Proposer Name	Total Contract Cost	Technical Score	Cost Score	Total Score	Ranking
GeoCivix	$283,250.00	59.30	26.40	85.70	1

The committee decided to provide clarifications on the PCI compliance option MTS required and requested a Best and Final Offer (BAFO) from GeoCivix. The firm replied with their BAFO by the due date of August 13, 2025. The evaluation committee determined that the BAFO was acceptable and chose to move forward with the recommendation award. The committee again decided that the changes did not warrant a modification to the already strong score, so the final score was as follows:

Proposer Name	Total Contract Cost	Technical Score	Cost Score	Total Score	Ranking
GeoCivix	$343,250.00	59.30	26.40	85.70	1

GeoCivix proposed a cloud-based permitting software solution that met all the objectives of the scope provided by MTS. The GeoCivix proposal will create the desired efficiencies in the current MTS workflows to free up resources to better meet the application demand and give real time status for both internal and external users. Staff also intend to explore the possibility of increasing base application fees, which have remained static for many years, to help defray the costs associated with this enhancement to the permitting process.

This competitively bid procurement with 10 responsive proposals established a market rate for MTS scope of work between $334,250.00 and $1,794,11.00. The average initial offer being $1,004,453.74. Staff also obtained recent pricing from two (2) other agencies with similar products from GeoCivix. This revealed that the offer made to MTS by GeoCivix is consistent with the pricing offered to other public agencies. The ICE was based on a Request for Information (RFI) performed in 2023. That RFI scope did not include data migration or PCI requirements. When comparing the ICE to the second revised proposal, which is the most closely related offer to the ICE basis, the ICE is within 2% of that offer. The PCI compliance portion of the costs is supported by MTS' recent experience ensuring our existing payment channels are compliant. MTS received similar cost information from our third-party PCI compliance auditor for similar services. Based on all the information above, the final negotiated offer from GeoCivix of $343,250.00 is deemed fair and reasonable.

Purchasing this software as an off-the-shelf Software as a Service (SaaS) solution is far more cost-effective than pursuing in-house development. MTS's current solution for FHVA, TaxiAdmin—an internally developed program from the early 2000s that no longer receives software or maintenance updates—would require replacement to meet current business needs. Building a comparable system in-house to replace just TaxiAdmin is estimated to take 14 to 18 months, with approximately 20 hours per week of dedicated software development time, equating to $73,200.00 to $93,600.00 in direct costs. This figure does not account for the additional time and resources required from other business areas for planning, design, testing, and implementation, nor the ongoing expenses of maintenance, upgrades, and system support. Furthermore, such an approach would demand significant staff resources across IT, project management, and end-user departments, diverting personnel from higher-priority strategic initiatives. In contrast, adopting an established SaaS solution provides immediate access to a proven, fully supported, and regularly updated platform at a fraction of the cost, risk, and effort.

Based on the objectives of this procurement, consideration of the evaluation criteria, and GeoCivix's technical and cost proposal, the evaluation committee determined that GeoCivix presented the best overall value to MTS.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to:

1) Execute MTS Doc. No. G2902.0-24 (in substantially the same format as Attachment A) with GeoCivix to provide Cloud Permitting Software in the amount of $343,250.00 for a contract period of one (1) year implementation with three (3) base years and two (2) 1-year options service period; and

2) Exercise the option years of the agreement at the CEO's discretion.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachments: A. Draft Agreement G2902.0-24
B. Scope of Work
C. GeoCivix Proposal
D. Cost Proposal Form

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. G2902.0-24

CLOUD PERMITTING SOFTWARE

THIS AGREEMENT is entered into this _____ day of _____, 2025 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: GeoCivix, LLC

Address: 9420 E. Golf Links Rd, Suite 108, #296

Tucson (City) AZ (State) 85732 (Zip)

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

Email: jace.coleman@geocivix.com

Telephone: (844) 848-8667

Authorized person to sign contracts: Jace Coleman (Name) CEO - CTO (Title)

The Contractor agrees to provide services with goods 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), Forms (Exhibit D), and Policy 44C Travel Guidelines for Contractors (Exhibit E).

In the event of a conflict in terms between any of the attachments hereto, the order of precedence is as follows:

Exhibit A – Scope of Work
Exhibit B – Cost Proposal
Exhibit C – Standard Services Agreement, including Standard Conditions
Exhibit F – GeoCivix Master Service Agreement

The contract term is for up to four (4) base years (one (1) implementation year and three (3) base licensing years) and two (2) 1-year option years, exercisable at MTS's sole discretion, for a total of 6 years. Base period shall be effective October 1, 2025 through September 30, 2029 and option years shall be effective October 1, 2029 through September 30, 2031, if exercised by MTS.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $213,450.00 for the base years and $129,800.00 for the option years, for a contract total not to exceed $343,250.00 without the express written consent of MTS.

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

1. SCOPE OF WORK/TECHNICAL SPECIFICATIONS

5.1. INTRODUCTION

Contractor to provide a cloud-based electronic plan review and permit issuance software solution to manage the Permit and Plan Review Acceptance (PRA) processes. The contract term shall be for one (1) implementation year with three (3) year base licensing period with two (2) 1-year options, exercisable at MTS' sole discretion.

5.2. BACKGROUND

MTS' Capital Projects Right-of-Way (ROW) department receives an average of 19 new permit requests per month and issues an average of 12 permits per month. Based on the continually growing backlog, MTS has identified deficiencies with the current Plan Review Acceptance (PRA) and Permit Issuance processes.

The current process lacks a technological tool to assist with application intake data and streamlining/automating the Permit and PRA processes once the application is in the system. The current procedures are cumbersome and inefficient, consisting of manual data entry by MTS ROW team of applicant information, forwarding materials for review by email and sharing large drawing files via SharePoint, tracking design review comments in excel spreadsheets, per permit number, and updating a master excel spreadsheet multiple times per week to understand the status of each active plan review or permit application. Each permit application is reviewed by internal MTS stakeholders and by external MTS contractors and permit applicants.

5.3. SCOPE OF WORK

Contractor will provide a cloud-based electronic plan and review solution that will address current inefficiencies in the PRA process. The application is future-proof, scalable, and cost efficient. It is critical to MTS that the solution is scalable and flexible to adapt efficiently to changes in ROW requirements and technology. This includes ever changing cloud environments and government compliance.

This application is a critical need to replace the outdated, manual ROW process with a solution that has the capability of meeting contemporary objectives but also keeping pace with rapidly evolving technology systems in transit. The goal is to have a solution which, by design, is more secure and agile for implementing technological advancements, providing exceptional system resilience, and meeting the needs of todays and the future growth of MTS.

5.3.1. STATEMENT OF OBJECTIVES (SOO)

Contractor meets the SOO matrix that lists all the software application desired functionality provided by MTS during the solicitation.

5.3.2. USER ROLES AND LICENSING FORECAST

The following table provides an overview of MTS' current process roles, total number of users in the role and functional descriptions of each role.

Role	Amount	Function
ROW Permit Manager	2	Manages and performs tasks from the beginning to the end of the permitting process. Creates

		reports, provides status updates, searches historical permits, sends updates
System Administrator	1	Performs advanced configurations and assists in troubleshooting and escalations
External Permittee	Unlimited	Accesses external facing site and submits requests, receives approvals, receives denials, receives comments, responds to comments, receives permits.
Engineering Review Consultant	2	Reviews engineering diagrams and plans and makes comments or adjustments as directed by the permit manager
Rail Department Manager	5	Provides comments, approvals and denials
Bus Department Manager	2	Provides comments, approvals and denials
Real Estate Department Manager	1	Provides comments, approvals and denials
Capital Projects Department Manager	1	Provides comments, approvals and denials
Legal Department Manager	1	Provides comments, approvals and denials
IT Department Manager	1	Provides comments, approvals and denials
Finance Department Manager	1	Provides comments, approvals and denials
Marketing Department Manager	1	Provides comments, approvals and denials
Planning & Scheduling Department Manager	4	Provides comments, approvals and denials

5.3.3. PROJECT IMPLEMENTATION

The implementation plan shall include start and end dates for each phase, milestone, deliverable, timeframe, and detailed task. The following major project components shall be addressed:

1) Software configuration modifications
2) Software provisioning Integration with other internal MTS systems
3) Project implementation which includes the following phases:
   - Phase One - Application Software and Interface Integration
   - Phase Two - Testing Cycle
   - Phase Three - Training
   - Phase Four - Start Up (including standby support during first 14 days)
   - Phase Five - Cut-Over to New System
   - Phase Six - System Maintenance Services (Updates, Patches, Release Timing)

Baseline Project Schedule & Payment Milestone Breakdown

Project Phase	Milestone	Expected Timeline	Expected Days	Payment Amount
Implementation Phase	Project Kickoff & Onboarding	NLT 10 days after NTP	10	$0.00
	Project Meeting	1 days following project KO and onboarding	1	$3,375.00
	Software Implementation Complete (Tenant Live)	60 days following Project Meeting	90	$3,375.00
	Training Complete	30 days following application setup	30	$3,375.00
	UAT 1 Complete	60 Days following training	60	$3,375.00
	UAT Revisions Complete	30 Days following UAT 1	30	$3,375.00
	UAT 2 Complete	60 Days following UAT 1 Revisions	60	$3,375.00
	UAT 2 Revisions Complete	30 Days following UAT 2	30	$3,375.00
	Go-Live including AOC/Responsibility Matrix Complete	30 Days following UAT 2 Revisions	30	$3,375.00
	Final Acceptance & QA Complete	15 Days following Go-Live	15	$6,750.00
1	Year 1 Subscription Dues (15 Days after Go-Live)	15 Days following Go-Live	365	Recurring Software Fees $49,900.00
2	Year 2 Subscription Dues and updated AOC/Responsibility Matrix	365 Days	365	Recurring Software Fees $49,900.00 Other direct cost with $15,000 Not to Exceed (NTE)
3	Year 3 Subscription Dues	365 Days	365	Recurring Software Fees $49,900.00

	and updated AOC/Responsibility Matrix			Other direct cost with $15,000 NTE
Optional 1	Optional Year 4 Subscription Dues and updated AOC/Responsibility Matrix	365 Days	365	Recurring Software Fees $49,900.00 Other direct cost with $15,000 NTE
Optional 2	Optional Year 5 Subscription Dues and updated AOC/Responsibility Matrix	365 Days	365	Recurring Software Fees $49,900.00 Other direct cost with $15,000 NTE

The following project deliverables and/or milestone shall be included in the implementation plan:

- Monthly project implementation plan updates
- Bi-weekly project status reports
- Successful hardware installation if applicable
- Software customization and configuration to meet all MTS requirements
- Fully functional integration with internal MTS systems
- Fully functional integration with systems external to MTS
- Testing cycle completed and approved by MTS
- Training testing results in acceptable use of cloud solution by all key personnel groups and individuals as defined in 5.3.2 User Roles and Licensing Forecast
- Evaluation and acceptance testing of all cloud solution elements (including payment processor redirect integration) and reporting functionalities
- Payment Card Industry Data Security Standard (PCI DSS) Attestation of Compliance (AOC) and responsibility matrix produced by a certified Qualified Security Assessor (QSA) received prior to go-live
- User training manual and other documentation
- Tested and accepted disaster recovery plan
- Plan update will be issued to the MTS Project Manager (PM) on a monthly basis

5.3.3.1 DESIGN

Contractor will develop and provide configuration designs and documentation for the system prior to implementation. All designs must receive approval from the MTS PM before implementation of the finalized design, incorporating quality assurance and go-live milestones. Design will be submitted to the MTS PM for inclusion in the operational closeout package. Initial designs will also be incorporated into the training detailed in section 5.3.5.

5.3.3.2 INSTALLATION AND CONFIGURATION

Contractor will perform all installation and configuration of proposed system in accordance with 5.3.3 project implementation plan. Contractor will partner with MTS resources to finalize designs and receive approval for configuration and setup.

5.3.3.3 SYSTEM INTEGRATION

Contractor system shall integrate with all IT systems outlined in scope of work and statement of objectives.

5.3.3.4 TESTING

Contractor will develop and deliver unique system testing plans for MTS PM approval prior to training. System testing plan should incorporate the key elements of system functionality to be discussed during training. System testing will be conducted over two user acceptance testing phases and remediation phases.

Contractor shall maintain a shared bug or issues log with the MTS PM for testing discrepancies and immediately repair logged issues. Following repair of all issues from initial testing phases, the next testing phase may begin. Each testing phase will require MTS PM approval and shall include a training update slide with issues corrected from the previous phase.

5.3.3.5 ACCEPTANCE

MTS will establish a clear and structured process with the Contractor for the acceptance of goods and services to ensure alignment with the scope of work and statement of objectives. This process will include defined criteria for evaluating the performance and compliance of delivered goods and services against contractual requirements. Upon delivery, the Contractor will facilitate a thorough review process, during which the MTS PM will assess performance using predefined metrics, benchmarks, and quality standards agreed upon during the contract initiation phase.

To confirm acceptance, the Contractor will document performance evaluations, address any identified deficiencies, and provide a timeline for corrective actions if necessary. Once all performance requirements are met, the MTS PM will provide formal written sign-off, signifying successful completion and acceptance of the goods or services. This structured acceptance process ensures transparency, accountability, and high-quality deliverables throughout the contract lifecycle.

5.3.4. BUSINESS CONTINUITY AND DISASTER RECOVERY PLAN

Contractor will have and detail organization’s contingency and/or business continuity plan for unexpected events. Unexpected events can include, but are not limited to, natural disasters, emergencies, or employee job actions.

5.3.5. TRAINING

Contractor will provide virtual training options during the project implementation, tailored to the specific training phase and the roles outlined in section 5.3.2. Training should be designed to support the unique responsibilities of each role and ensure a comprehensive understanding of the system. In addition to initial training, the contractor will provide a robust repository of documentation, including user guides, quick reference guides, self-

help articles, and other resources accessible throughout the lifecycle of the product. Yearly training options must be included to address system upgrades, procedural changes, and enhancements, with these sessions recorded for ongoing use, particularly for onboarding new hires. The contractor will also provide training materials and resources on a publicly accessible platform to guide external users on how to interact with the system. This ensures both internal and external users have access to necessary training and resources at all times.

5.3.6. SERVICE LEVEL AGREEMENT (SLA) AND SUPPORT SERVICES

The Contractor shall have a well-defined and comprehensive support services framework to ensure reliable service delivery. The Contractor shall provide a support system capable of addressing and resolving issues effectively and efficiently. This system must include an established error reporting process to quickly and efficiently resolve application issues. The error reporting process shall outline methods for prioritizing and categorizing different classes of errors and include measures for addressing each based-on severity and impact. This process shall also include the timeframe for the initial response, a detailed plan for resolution, and regular updates to MTS on issue status, next steps, and resolution plans. Updates must be provided at consistent intervals, and the response plan shall specify any necessary steps to be taken by MTS staff to support error resolution.

The Contractor shall define and adhere to timelines for initial responses, actions to be taken during the first response phase, and communication practices for updates and resolutions. The Contractor shall specify the obligations of MTS staff during outages, errors, or other service disruptions, ensuring smooth coordination in the resolution process. Additionally, the Contractor shall maintain an established escalation process, including internal and external protocols, to ensure timely and effective resolution of escalated issues.

As part of the SLA, the Contractor shall commit to a minimum monthly uptime percentage and provide this key performance indicator information to MTS staff as needed. Scheduled maintenance, including a description of the maintenance activities and the expected downtime period, must be communicated to the MTS PM at least two business days in advance. If the minimum uptime percentage is not met, excluding scheduled maintenance, the Contractor shall provide service credits to MTS.

This comprehensive support services framework will ensure the Contractor delivers reliable, transparent, and responsive support services to meet the needs of the contract.

5.3.7. OPTIONAL FOR-HIRE VEHICLE ADMINISTRATION (FHVA) SCOPE OF WORK

Contractor will provide the option of integrating additional FHVA workflows and customizations for their general administrative database and Permit Issuance (PI) processes. If exercised by MTS, this option will be integrated into the base project integration timeline and ongoing service expectations.

Background

FHVA receives an average of 12 new permit and 20 company and vehicle update information requests per month. Depending on market conditions, the average number of requests may increase or decrease substantially.

FHVA currently utilizes two software database programs to record and maintain a for-hire vehicle company business, insurance, payment, fleet vehicle, and other related information. One of those programs called TaxiAdmin was developed internally by MTS IT department in the early 2000s and has since stopped receiving software and maintenance updates. TaxiAdmin remains in operation, and FHVA staff utilizes it as its central permit records database. TaxiAdmin also extracts filtered information into a spreadsheet format to compile requests for public records. Until recently, the MTS Finance department granted FHVA limited use of SAP to create new company (customer) accounts, record the information mentioned above, and create invoices for application and annual renewal payments.

Due to the discontinued software update support for TaxiAdmin and the recent removal of FHVA staff access to SAP by the MTS Finance department, FHVA faces significant challenges in maintaining and updating its central permit records database. This has led to a pressing need for an electronic database to consolidate our current needs and provide enhanced features.

The current process, lacking a technological tool to assist with application intake data, required documentation, and streamlining/automating the Permit issuance and data update processes once the application is in the system, can be cumbersome and inefficient. It involves manual data entry by FHVA staff, in-person meetings with applicants for application and document review, and manual tracking to understand the status of each permit application. It cannot also record supplemental information such as court citations, written warnings issued to drivers, and vehicle safety reports. This highlights the need for an enhanced electronic database to streamline these processes, maintain record data, and improve efficiency.

FHVA Requirements

- The system should provide approximately 7 internal user licenses with the ability to rapidly scale for an unlimited number of external users.
- The system should provide approximately 13 custom workflows to support business process.
- The system should provide approximately 10 form customizations to support business process.
- The system should include basic setup workflow options that allow MTS FHVA staff to determine internal and external stakeholder review requirements.
- The System should communicate receipts of payment automatically to customers and FHVA.
- System should provide integrations to support invoicing requirements to support FHVA business operations through SAP.

5.4. 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. Backup documentation for actual costs of the reimbursement of QSA produced documents should be included with invoice. MTS will not pay on packing slips, receiving documents, delivery documents, or other similar documents. Invoices must be submitted for payment.

Payment terms shall be net 30 days from invoice date.

Contractors must also indicate if any of the invoiced amount(s) 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 the *Prompt Progress Payments* section of the Standard Conditions.

5.5. [NOT APPLICABLE] HEWLETT PACKARD ENTERPRISE (HPE) MINIMUM REQUIREMENTS

5.6. [NOT APPLICABLE] CISCO MINIMUM REQUIREMENTS

5.7. CONTRACTOR'S INFORMATION SECURITY RESPONSIBILITIES

MTS has established the following responsibilities to ensure the security of vendor operations in accordance with MTS policies, standards, and SOPs. The following procedures outline the expectations for Contractor and any subcontractors:

A. Contractor Lists: Contractor and any subcontractors must provide an up-to-date list of all staff working on the contract. This list should be promptly updated and submitted to MTS whenever there are staff changes.

B. ID and Security Clearances: Contractor and subcontractor onsite technicians must be issued MTS security badges/key cards. These badges/key cards should be visibly displayed at all times while on MTS premises.

C. Incident Reporting: Contractor and subcontractors agree to promptly report any security incidents or breaches involving their systems or access to the MTS network. Detailed incident response procedures should be provided, and cooperation in investigations, including the provision of necessary logs and evidence, is expected.

D. Change Management: Contractor and subcontracted personnel must adhere to all applicable MTS change control processes and procedures.

E. Patch Management: Contractor and subcontractors agree to promptly apply security patches and updates to their systems and software used to perform services in this contract.

F. Data Protection and Privacy: The vendor must protect MTS data in accordance with applicable laws and regulations, including those related to data privacy. Appropriate safeguards should be implemented to ensure the confidentiality, integrity, and availability of MTS data.

G. Remote Access and Forms: Remote access must be uniquely identifiable, and password management should comply with MTS password standards' reserves the right to determine the applicable virtual private network and encryption technologies used to access their systems and network. Remote access forms must be updated and submitted yearly or upon request by MTS.

H. Contractor Termination: Upon departure of a contractor from MTS for any reason, Contractor or subcontractors must ensure that all sensitive information is collected and returned to MTS or destroyed within the timeframe specified in the original contract terms.

I. Keycard and Security Access: Upon termination of the contract or at the request of MTS, Contractor and subcontractors must surrender all MTS-issued identification badges, access cards, equipment, and supplies immediately. Equipment and supplies retained by Contractor

or subcontractors must be documented and authorized by the MTS contract POC or their designee.

J. Auditing and Compliance: Contractor or subcontractor are required to comply with all applicable MTS security Policies, Standards and SOP's. Contractor and subcontractor must comply with MTS when conducting an audit or risk assessment based on contractual obligations and applicable security policy's, standard and SOP's set by MTS.

K. Disclosure and Sub-Contractor Security: If the vendor engages subcontractors or third-party service providers, they must ensure that these entities adhere to the same vendor information security obligations outlined in this contract. The vendor is responsible for the security practices of their subcontractors and should perform due diligence in selecting and monitoring them.

L. Training and Awareness: Contractor and subcontractors agree to provide security awareness training to individuals who have access to the MTS network or systems. The training should cover topics such as security policies, data handling, and incident response procedures. If training cannot be provided by Contractor or subcontracted staff then MTS provided training must be competed on initial access and yearly refresher training.

5.8. [NOT APPLICABLE] BUY AMERICA

5.8.1. [NOT APPLICABLE] CONSTRUCTION MATERIALS

5.8.2. [NOT APPLICABLE] MANUFACTURED PRODUCT

5.8.3. [NOT APPLICABLE] ROLLING STOCK

5.8.4. [NOT APPLICABLE] CONSTRUCTION MATERIALS

5.9. [NOT APPLICABLE] SAFETY DATA SHEETS (SDS)

5.10. NO RIGHT TO POST SIGNS

The Contractor shall not post or otherwise affix signs, decals or other media on MTS property or equipment, except as required to maintain safety during the course of repair or maintenance work. No permanent signs, decals, or other media may be installed without MTS's express written permission.

5.11. [NOT APPLICABLE] REPLACEMENT PARTS

5.12. [NOT APPLICABLE] DELIVERY AND ACCEPTANCE

5.13. [NOT APPLICABLE] EXPEDITING

5.14. [NOT APPLICABLE] ACQUISITION OF ROLLING STOCK

5.15. AS-NEEDED MODIFICATIONS

MTS may request modifications beyond the original scope on an as-needed basis to meet new objectives that arise throughout the contract period. MTS will include guidelines for submitting modification responses, specifying required documentation and designated points of contact. Once a request is submitted, the Contractor will conduct a detailed assessment to evaluate feasibility, cost, and potential impacts. The evaluation process will include estimated timeframes for both assessment and formal approval to ensure timely decision-making.

Approved modifications will be implemented following a structured approach that outlines specific tasks, timelines, and dependencies. A transparent pricing structure will be provided, detailing cost components and any variables that may influence final pricing. Additionally, the Contractor will commit to clear communication, offering regular updates on the status of requested modifications and providing post-implementation reporting to verify successful completion and functionality. This approach ensures that all modifications align with MTS objectives and are executed efficiently, cost-effectively, and transparently.

5.16. PAYMENT TIMELINE

The payment amount and timeline will directly correspond to the milestones outlined in Section 5.3.3, “Baseline Project Milestones and Payment Schedule Breakdown.” Payments will only be released upon the successful completion of all obligations related to Contractor testing and quality assurance, as specified in Section 5.3.3.6 ACCEPTANCE. All deliverables must meet the performance standards and objectives outlined in scope of work. This ensures that payments are tied to the verified fulfillment of contractual requirements, maintaining accountability and alignment with MTS objectives.

5.17. NETWORK ACCESS MEMORANDUM OF UNDERSTANDING (MOU)

Contractor agrees to follow the MTS network access process. A formal MOU document will be incorporated into the resultant contract to ensure a clear acceptance of MTS network access policy and adherence to procedures.

GeoCivix

Proposal For:

San Diego Metropolitan Transit System – Cloud Permitting Software MTS DOC.NO.G2902.2-24

Prepared For:

San Diego Metropolitan Transit System
Justin Plaetzler, Procurement Officer
1255 Imperial Ave, Suite 1000
San Diego, CA 92101

Executive Summary

The San Diego Metropolitan Transit System has expressed an exciting opportunity for improvement through the implementation of a modern and easy to use cloud permitting system. A system that will serve to position MTS as an innovative and customer-centric community, streamline processes, and bring great efficiencies to the MTS through the automation of routine administrative tasks. Through this process MTS can expect to reduce turnaround times, improve tracking and reporting capabilities, increase customer satisfaction, and meet both current and future strategic goals.

GeoCivix: Purpose-Built for Metro Transit System

GeoCivix was designed to meet the unique challenges municipalities face and is configured to match your existing business processes. This results in a system that closely resembles MTS's established processes, making it intuitive for both staff and the public alike, as it closely follows the workflows they have come to know and rely upon. Our platform offers intuitive workflows, robust integrations, and a proven track record of delivering measurable results. MTS's objectives align perfectly with the capabilities of GeoCivix, making it the ideal partner for this transformation.

How GeoCivix Aligns with MTS's Needs

- **Simplifying Workflows**: GeoCivix automates routine administrative tasks, such as fee calculations, notifications, and document generation, while enabling concurrent reviews and approvals.
- **Empowering Citizens and Contractors**: A user-friendly public portal streamlines application submissions, fee payments, and status tracking—all accessible on mobile devices.
- **GIS Integration**: Seamlessly integrates with MTS's ArcGIS system for parcel-based workflows, ensuring accurate data management and property-specific tracking.
- **Supporting Paperless Operations**: Reduces reliance on paper while accommodating exceptions, minimizing rekeying, and enabling digital plan reviews.
- **Enhancing Field Operations**: Field staff can perform inspections directly from mobile devices, with real-time updates, photo attachments, and automated reporting.
- **Improving Transparency**: Robust reporting tools and dashboards provide clear visibility into performance metrics and compliance status.
- **Reduce Paper Requirements** – The selected solution will dramatically reduce paper requirements by transitioning the organization towards a paperless workflow while providing a path for paper-based exceptions where needed. Efficiencies will be realized through eliminating the need to rekey data, improved organization and tracking, concurrent reviews, and workflow automation.

Benefits of the GeoCivix Platform

- **Proven Solution**: GeoCivix is a mature, feature-rich platform that has been refined through years of real-world use.
- **Customizable and Scalable**: Configures to align with MTS's existing business processes and integrations, ensuring a system that reflects familiar workflows and enhances efficiency without requiring major adjustments.
- **Customer-Centric Design**: Developed with user feedback at its core, ensuring simplicity and efficiency for staff and residents alike.

Expected Outcomes for MTS

- Streamlined workflows and faster turnaround times for permitting and inspections.
- Improved efficiency through automation, reducing administrative overhead.
- Enhanced citizen satisfaction with transparent and accessible processes.
- Alignment with sustainability goals through reduced paper usage.
- Improved data accuracy and seamless integration with existing systems.

GeoCivix is excited to partner with San Diego Metro Transit System on this important initiative. By implementing our platform, MTS will position itself as a leader in municipal innovation, delivering modern services that meet the needs of today's residents and businesses. We look forward to working together to achieve these goals.

Company Profile

"It's refreshing working with an organization that actually understands what it is that we do."

Micah, Planning Director
Spring Hill, Tennessee

GeoCivix

Business Information

GeoCivix is an owner-operated LLC licensed in the state of Arizona, with a strong commitment to deliver exceptional software solutions and services. We operate independently without any parent or subsidiary companies, allowing us to maintain a focused and dedicated approach to our clients' needs. Our strategic partnerships with industry leaders, including Amazon Web Services (AWS), Bluebeam, and Authorize.net, enable us to provide robust, secure, and integrated solutions that enhance the value we deliver to our clients.

GeoCivix collaborates closely with our wholly owned sister company, idtPlans LLC, to provide industry-leading service, support, and enterprise software as a service. Although GeoCivix is a relatively new entity, established within the last four years, our team is composed entirely of experienced professionals who have transitioned from idtPlans. These are the same trusted experts our clients have relied on for over 20 years, bringing extensive knowledge of the public sector and a deep understanding of our clients' unique challenges and requirements.

Primary Representative

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Company Information - GeoCivix

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w: GeoCivix.com

Legal Name: GeoCivix, LLC
State of Incorporation: Arizona
Established: 2021
Years in Business: 2
AZ Business License: 23255602
FEIN: 87-2015805

Company Information - idtPlans

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f: (520) 319-1430
e: sales@idtPlans.com
w: idtPlans.com

Legal Name: idtPlans, LLC
State of Incorporation: Arizona
Established: 2005
Years in Business: 18
AZ Business License: L12303837
FEIN: 20-4068821
DUNS: 08-082-6425

Conflicts of Interest

There are no known conflicts of interest, pending or current litigation relating to the performance of requested surveying services in which GeoCivix is a party to. GeoCivix and idtPlans are not currently and have not historically been investigated or had an adverse determination by any legal or administrative body.

Qualifications & Experience

GeoCivix stands as a trusted leader in providing innovative, tailored solutions for jurisdictions across the United States, backed by over 20 years of specialized experience. Our deep expertise in public sector workflows—including plan review, permitting, inspections, and code compliance—uniquely positions us to deliver solutions that not only meet but exceed the specific needs of our clients. Our team is composed of industry experts who have firsthand experience in both public and private sectors, ensuring that we understand the intricacies of your operations from every angle.

From our early days as pioneers in electronic plan review to our current status as a preferred partner for over 130 jurisdictions, GeoCivix has consistently demonstrated an unwavering commitment to excellence. Our proven track record includes a 98% client retention rate, reflecting the high level of satisfaction and trust our clients place in us. We don't just implement software; we deliver comprehensive, results-driven solutions that are customized to your workflows, enabling your team to operate with enhanced efficiency and confidence.

Our approach is rooted in collaboration and partnership. We invest the time to thoroughly understand your processes and pain points, allowing us to configure our platform to mirror your existing workflows while also integrating industry best practices. This ensures a smooth transition to our system, minimizing disruption and maximizing impact. With GeoCivix, your staff won't need to adapt to a generic solution—we bring the technology to you, tailored precisely to fit your needs.

What sets GeoCivix apart is not just our technology, but our deep commitment to your success. We pride ourselves on our hands-on approach; we never outsource implementation or support, ensuring you work directly with our knowledgeable team every step of the way. This direct engagement allows us to provide the most relevant, up-to-date solutions and fosters a strong partnership that extends beyond implementation. Our clients consistently highlight our exceptional customer service, accessibility, and the sense of assurance that comes from working with a team that truly understands their needs.

GeoCivix's reputation for reliability, innovation, and client-centric solutions is backed by over two decades of continuous improvement driven by client feedback. Our platform is not just a tool; it's a dynamic, evolving solution that grows with you, adapting to meet the changing demands of your jurisdiction. We have helped countless organizations reduce review times, streamline administrative processes, and achieve significant cost savings—all while improving the overall experience for both staff and constituents.

Choosing GeoCivix means choosing a partner with a proven history of success, unmatched expertise, and a dedication to delivering real, measurable results. We are committed to helping you achieve your operational goals and look forward to the opportunity to bring our experience, passion, and proven solutions to your project.

The GeoCivix Difference

Deep Industry Expertise and Tailored Solutions

With over 20 years of industry experience, GeoCivix understands that no two organizations operate the same way. Our seasoned team takes the time to dive deep into your existing workflows, modeling the system to reflect your unique processes. We're not just replicating what you do—we're also looking for opportunities to enhance efficiency and effectiveness based on our extensive knowledge and best practices. Our goal is to provide a system that feels familiar to your staff while introducing meaningful improvements that drive your operations forward.

Simplifying Processes and Enhancing Visibility

GeoCivix is designed to simplify complex processes, enhance visibility, and deliver an exceptional user experience. Our intuitive platform streamlines your daily operations, reducing the time and effort required to manage tasks. We centralize information, making it easily accessible and actionable for all users, regardless of their technical proficiency. By providing a clear, comprehensive view of your workflows and data, we empower your team to make informed decisions quickly and confidently, resulting in improved productivity and a smoother overall experience.

Automation of Routine Tasks

GeoCivix takes efficiency to the next level with our powerful workflow engine that automates routine tasks, freeing up your team to focus on what matters most. Whether it's sending email notifications, creating documents, issuing task reminders, or assigning team members, our automation capabilities ensure that the right actions are taken at the right time with minimal manual intervention. This not only speeds up processes but also reduces the risk of errors, ensuring that your operations run smoothly and consistently.

Trusted Reputation and Client Testimonials

Our reputation is built on trust, reliability, and the consistent delivery of outstanding results. With an industry-leading client retention rate of 98% and over 80% of new business coming from peer referrals, our track record speaks for itself. We value our clients' feedback and strive to exceed their expectations in every project. We encourage you to connect with our references—they are our best advocates and can provide real-world insights into their success with GeoCivix. Our clients' stories are a testament to the quality of our solutions and the strength of our commitment to your success.

Exceptional Customer Support

At GeoCivix, our commitment to customer support is unparalleled. We don't just offer support; we become an extension of your team. From the first interaction through implementation and beyond, our dedicated support professionals are with you every step of the way. Our proactive approach ensures that your questions are answered promptly, and any challenges are met with solutions. We're not satisfied until you are, and our team's dedication to service excellence is a key reason why our clients choose to stay with us year after year.

Solution Description

"The City of Winston-Salem, NC was able to reduce operating costs both internally and externally for our customers by implementing digital plan review processes that decreased review cycle times and eliminated manual data entry in multiple systems used for permitting and property records."

Lee, IT Project Manager
Winston-Salem, North Carolina

Solution Description

The San Diego Metropolitan Transit System (MTS) has identified a key opportunity to enhance its operations through the implementation of a modern, cloud-based permitting system. Our solution is designed to support a wide range of permitting needs, including, entry permits, plan review, development permits, and numerous others. By streamlining these processes, our feature-rich system will provide seamless interaction for both internal MTS review teams and external stakeholders. With an intuitive and scalable framework, our solution ensures a future-proof approach to permitting that evolves alongside industry best practices, regulatory requirements, and technological advancements.

MTS ROW staff emphasized the need for a cloud-based electronic plan review solution to eliminate inefficiencies in the current PRA process. Our PRA system is built to be Unique for smaller teams, scalable, flexible, and cost-efficient, therefore, providing MTS with a secure, adaptable platform that meets today's needs while preparing for the future of transit operations.

Through the implementation of the GeoCivix system, the MTS can expect to:

- Reduce turnaround times
- Improve project tracking
- Interact with outside agencies for development review
- Increase customer satisfaction
- Position the MTS to meet current and future strategic goals.

GeoCivix understands that some of the key features of this system include, but are not limited to:

Highly Configurable – The preferred solution will be highly configurable, allowing the system to conform to the MTS's business rules without the need for programming or the MTS having to change existing business processes to conform to the software.

Intuitive Citizen Access Portal – Empower the public to submit applications and supporting documents, pay fees, check statuses, submit complaints, and request and view inspection results quickly and easily.

Electronic Permit Review – Provide reviewers with professional markup, measurement, and document comparison tools that improve performance and reduce the time required to review plans using Bluebeam Revu software designed for industry use.

Achieve Automation – Configure business process rules into system defined workflows, automating many routine tasks such as email correspondence, document generation, reminders, task assignments, fee calculations, and more.

Exceptional Service and Support – The preferred solution will provide prompt and professional service and support through a variety of convenient channels.

The GeoCivix solution is built to solve these challenges and meets or exceeds each of these requirements without exception.

Citizen Access

The Citizen Access module provides applicants a “one-stop shop” for all information related to their projects. Project owners fill out their applications, submit their documents, and pay fees using the online portal, available 24/7. Once an application is accepted for review, action buttons, color coded project dashboards, and dynamic updates keep the applicant apprised of their project — all without having to call or come into the office to get the information.

System features you can expect from GeoCivix include:

Intuitive Citizen Access Portal

The Citizen Access Portal provides an easy to use, centralized hub where applicants can submit applications, pay fees, track progress, resubmit, and get next steps.

Smart Applications

Applications are programmed with if/then logic to show fields or other information only when required, guiding the applicant to input the correct data for their project; ensuring the application is accurate and present.

Submittal Checklists

Each application can be tied to a submittal checklist, outlining the documents and other items required by the applicant to be considered a complete submittal. This streamlines the application process by letting applicants know up front what’s required.

Fee Payments

Systems enabled with eCommerce can use the application to auto-calculate complex fees and provide a simple user-interface for payment processing as part of the submittal process.

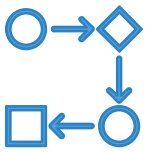
Big Picture Management

Applicants utilizing the portal may have multiple projects to manage across their organization. Using the Citizen Access portal, they can view their individual or company submittal information and track big picture information on statistics like project status and review times.

Electronic Plan Review

Electronic Plan Review significantly shortens the plan review process while reducing paper requirements by more than 90% in most cases. Once the submittal package is confirmed by the applicant, Plan Reviewers are instantly notified and may begin marking up and commenting on documents. With concurrent reviews and centralized commenting, communication of issues with the plans becomes streamlined, clear, and easy to acknowledge by Applicants.

System features you can expect from GeoCivix include:



Workflow Automation

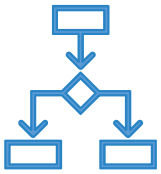
Workflows are applied to plan reviews, permits, and inspections. An extensive set of configuration settings control items such as notifications, primary assignments, plan routing, permissions, fee calculations, and more.

Plan Review Dashboard

Used by reviewers and administrators alike, the plan review dashboard can be customized to maximize efficiency. Custom views, at-a-glance reporting, and summary information helps the entire team work together.

Concurrent Review

Increase collaboration and consistency among departments with concurrent reviews and automatic version control. Teams will always have the most recent documents available and can share comments before they are sent to the applicant, minimizing conflicts and confusion.



Version Control

Automatic version control ensures that reviewers are always working on the correct document. Only the most recent version of a document is shown. At any point in time authorized users may click on the document version indicator to view all prior versions of a document along with the date/time stamp of the revision and the name of the author.

Comment Library

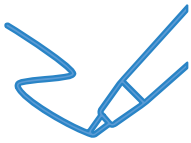
Save commonly used plan review or inspection comments for easy re-use. Streamline the review process by making them available to the entire organization, or just yourself.

Professional Plan Review Tools

Own your review with Bluebeam Revu software, designed for use by Architects, Engineers, and Contractors alike. Markups are saved to the plan set and added to the project comment letter automatically, removing duplicated efforts by staff, and shaving time off tedious administrative tasks.

Automate & Track Emails

Project contacts receive automatic email notifications, keeping them informed without administrative overhead. Customized email templates provide the flexibility to change the appearance and information presented. Throughout the project, emails are logged for future use.



Document Template Designer

Generate high quality permits, certificates, and letters quickly and easily. Documents are created using project specific information and indexed to an associated project, permit, or inspection with version control.

Reports

We're committed to providing key metrics and analytics in a way that's meaningful to you and your organization. We provide common reports out-of-the-box, as well as the ability to configure custom filters so you can create your own saved reports.

GIS-Centric Features

Our optional integration with ArcGIS leverages your existing investments in technology to auto-suggest and validate addresses and parcels. Pull location specific information into your applications such as floodplains, zoning districts and overlays.

Batch Stamp

Once a review is approved, simply select the documents that you would like to stamp and apply a customized stamp with one click. Transparent stamps are automatically applied to all pages in the same location and can include the author's name and date/time stamp.

Permit & Document Manager

With GeoCivix Permits, you can create, track, automate, and manage permits and other documents with ease. In addition to creating and tracking, we built tools to help you manage fees, violations, conditions of approval, and more—all in one location. And it's not just for permits either, use this module to create permits, certificates, tracked letters, and bonds.

System features you can expect from GeoCivix include:

Document Manager

Manage permits, certificates, and other tracked documents in one location. Track fees, notes, conditions, violations, contact information, and even corresponding inspections from the document manager.

Flexible Workflows

Issue permits and certificates when it makes sense. Tracked documents can be issued inside or outside of the standard workflow process, to best meet the needs of both the City and the end user.

Smart Assignments

Assign standard permits and certificates based on specific criteria, and the system will handle the rest. All permit information is stored within the project itself, creating one location for all records.

2-Click Creation

Permits, certificates and other documents can be created using information directly input from the applicant. Just two clicks and a fully populated permit is generated, with no edits needed.

Expiration Handling

Easily manage expirations through customized "expiration pending" notifications, sent to the internal team as well as the permit holder, allowing plenty of time to get through the renewal process before a document expires.

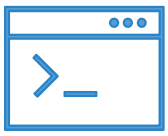
Inspections

GeoCivix Inspections extend the electronic plan review and permit application process to provide an end-to-end solution. Customized checklists, photo comments, and comment libraries help standardize inspections and ensure nothing is missed.

System features you can expect from GeoCivix include:

Inspection Scheduler

Our integrated inspection scheduler and citizen access portal allows Contractors and Owners to easily schedule, reschedule, or cancel inspections 24x7 from any computer, tablet, or smartphone.



Inspection Overview

Quickly spot bottlenecks, make re-assignments, view inspection reports, and much more. Inspectors have their own personalized dashboard that shows all upcoming inspections along with the project location and contact information.

Custom Inspection Checklists

Create or import your own checklists to standardize inspections. Include links to the online code manual so that a failed checklist item automatically provides a reference to the official documentation without having to type or use voice-to-text.

No Wi-Fi? No Problem.

Stop worrying about losing data when you're out in the field. idtPlans uses the latest HTML5 technology to provide offline functionality to inspectors; meaning the lack of Wi-Fi won't stop them from completing their work.

Photo Comments

Inspectors can quickly take pictures and attach them to an inspection comment using the built-in camera on their smartphone or tablet. Photos automatically upload to the inspection report and are document for future reference.

Automated Inspection Manager

Re-inspections and partial inspections are handled with automated processes, utilizing prompts to guide inspectors through each step. New inspections can be queued up for inspectors with just a few clicks.

Access & Security

At GeoCivix, security is not just a feature—it's a foundational pillar of our platform. We are dedicated to safeguarding your data with a comprehensive security framework that meets the highest industry standards, including full Payment Card Industry (PCI) compliance. This compliance ensures that all payment transactions are processed securely without redirection to third-party gateways, providing a streamlined and secure payment experience directly within our platform.

Key Security Features Include:

Advanced Data Protection

All data within GeoCivix is encrypted both in transit and at rest, ensuring that sensitive information is protected at every stage of its journey. We manage all security certificates and continuously monitor for vulnerabilities, applying updates and patches promptly to maintain a secure environment.

Granular Access Control

Our platform includes a robust access control system with over 900 individual permission types, allowing for precise control over who can view, edit, or manage data within your organization. Pre-configured roles and permission sets are available, and each can be fully customized to match your specific security requirements, ensuring that every user has access only to what they need.

Comprehensive Activity Logging

GeoCivix automatically logs all actions, milestones, and communications related to each project, creating a detailed audit trail that enhances accountability and transparency. This includes logging every email sent through the system, with clear records of any delivery issues, enabling your team to maintain a complete and organized history of interactions.

Secure Mobile Access Designed

with mobility in mind, GeoCivix adapts seamlessly to any device, providing full functionality whether accessed from a desktop, tablet, or smartphone. Field crews and contractors can securely perform their tasks, such as scheduling inspections or uploading photos, directly from the field, without compromising on security.

GeoCivix is committed to providing a secure, reliable, and user-friendly platform that protects your data and gives you confidence in every interaction. Our proactive approach to security ensures that your organization's information is in good hands, allowing you to focus on your core mission with peace of mind.

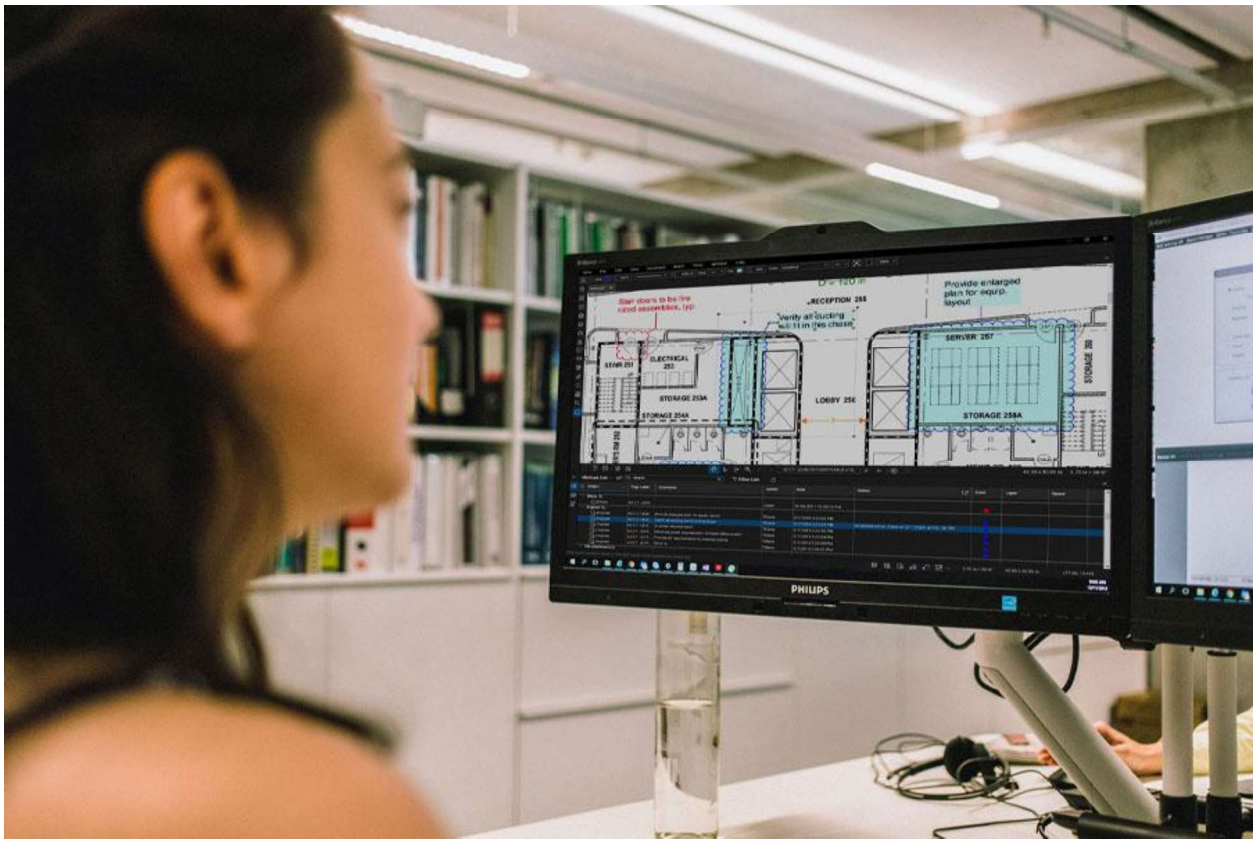
Bluebeam Revu

GeoCivix seamlessly integrates Bluebeam Revu, a powerful PDF markup tool tailored for Engineers, Architects, and Contractors. This integration allows users to effortlessly import project documents into Bluebeam Revu, where they can leverage an extensive suite of tools to conduct detailed reviews and markups with precision.

Key comments and annotations made within Bluebeam Revu are automatically synchronized with the open issues section of your GeoCivix project page, eliminating the need for duplicate data entry and significantly streamlining the review process. This automated workflow not only saves time but also ensures that all feedback is centralized and easily accessible.

The integration also supports rapid scaling and measurement of documents, allowing users to apply preset scales or define custom scales using known distances to verify accuracy instantly. This feature enhances efficiency, especially when working with complex plans requiring precise measurements.

Additionally, the overlay capabilities in Bluebeam Revu empower reviewers to quickly compare submittals and identify changes between revisions. This visual comparison tool is invaluable for tracking corrections and understanding how a project integrates with broader site conditions, including utilities, contours, and other existing features. By providing a comprehensive view of project adjustments, GeoCivix and Bluebeam Revu together enhance the accuracy and effectiveness of the review process.



GeoCivix

Technical Requirements

"Everything you need is just a few clicks away. They system is very user friendly and self-explanatory."

Tim, Commercial Plans Examiner
Wake Forest, North Carolina

Scope of Work

Proposed Solution

GeoCivix proposes a comprehensive, cloud-based electronic plan review and permit issuance software solution tailored to meet the needs of MTS' Capital Projects Right-of-Way (ROW) department. Our solution is designed to streamline and automate the Permit and Plan Review Acceptance (PRA) process, addressing current inefficiencies while ensuring scalability, security, and compliance with evolving regulatory requirements.

System Capabilities

GeoCivix's platform is a robust, future-proof system that provides:

Online Application Intake & Submission: A user-friendly portal allowing applicants to submit permit requests digitally, reducing manual data entry and improving tracking efficiency.

Automated Workflow & Notifications: Configurable workflows that route applications to the appropriate internal and external reviewers, with automated alerts and reminders to enhance processing efficiency.

Integrated Plan Review Tools: A centralized, cloud-based document management system for real-time collaboration, markup, and version control, reducing the reliance on email and SharePoint for file sharing.

Permit Issuance & Tracking: A streamlined process for permit issuance, including digital approvals and automated updates, ensuring accurate record-keeping and easy retrieval.

Customizable Dashboards & Reporting: Real-time tracking and reporting tools to provide MTS ROW staff with insights into application statuses, review timelines, and overall system performance.

Security & Compliance: A secure, cloud-hosted environment that meets government security standards, ensuring data protection and long-term reliability.

Implementation Approach

GeoCivix follows a structured implementation methodology to ensure a seamless transition from MTS' existing manual processes to the new digital solution:

Discovery & Requirements Analysis: Engage with MTS stakeholders to refine requirements, workflows, and integration needs.

System Configuration & Customization: Tailor the platform to align with MTS' specific PRA processes and regulatory requirements.

Data Migration & Integration: Transition existing records from spreadsheets and SharePoint to the new system, integrating with relevant MTS platforms.

User Training & Support: Provide comprehensive training for staff and applicants, along with ongoing technical support and system enhancements.

Go-Live & Optimization: Deploy the system in a phased approach, ensuring smooth adoption and continuous performance monitoring.

GeoCivix's electronic plan review and permit issuance solution will replace MTS' outdated, manual ROW process with a scalable, secure, and efficient digital platform. By leveraging automation, real-time collaboration, and enhanced tracking capabilities, MTS will significantly reduce processing times, improve transparency, and enhance overall operational efficiency. Our solution ensures that MTS remains adaptable to future technological advancements while maintaining compliance with evolving transit industry standards.

As-Needed Modifications

GeoCivix recognizes the importance of adaptability in meeting evolving objectives throughout the contract period. We are committed to working closely with MTS to ensure requested modifications are assessed, implemented, and communicated with transparency and efficiency.

Assessment & Feasibility Review

Upon receiving a modification request, GeoCivix will conduct a thorough assessment to evaluate feasibility, cost implications, and potential impacts on existing system functionality. This evaluation will include:

- A structured feasibility analysis to determine technical and operational viability.
- A cost assessment detailing fixed and variable components.
- Estimated timeframes for both assessment completion and formal approval.

This structured approach ensures timely decision-making and alignment with MTS priorities.

Implementation & Execution

Approved modifications will be implemented using a phased approach that defines:

- **Specific tasks and deliverables** to maintain clarity and accountability.
- **Timelines and dependencies** to ensure alignment with ongoing operations.
- **A transparent pricing structure**, providing a detailed breakdown of cost components and influencing variables.

Communication & Reporting

GeoCivix is committed to maintaining clear and consistent communication throughout the modification process. We will provide:

- **Regular status updates** to designated MTS points of contact.
- **Post-implementation validation** to confirm functionality and successful deployment.
- **Comprehensive reporting**, ensuring all modifications meet MTS objectives effectively and cost-efficiently.

By leveraging our structured approach, proactive communication, and commitment to cost transparency, GeoCivix will ensure all requested modifications align with MTS goals and enhance system functionality seamlessly.

(Optional) For-Hire Vehicle Administration (FHVA) Integration Approach

GeoCivix is prepared to seamlessly integrate FHVA-specific workflows and customizations into our platform, addressing the pressing need for a modernized permit records database while enhancing efficiency and compliance. Our solution will consolidate FHVA's current permit processes into a centralized, electronic system that eliminates manual data entry, improves application tracking, and provides robust reporting capabilities.

Seamless System Integration & Scalability

GeoCivix's cloud-based platform is designed to accommodate FHVA's needs while ensuring scalability and flexibility:

- **Internal and External User Management:** Supports internal user licenses with the ability to scale for an unlimited number of FREE external users.
- **Custom Workflows & Forms:** Implements configurable workflows and custom forms aligned with FHVA's specific business processes, ensuring automation and efficiency.
- **Permit Management & Automation:** Automates application intake, required documentation submission, and permit issuance, reducing manual effort and improving processing time.
- **Review & Approval Configurations:** Enables FHVA staff to customize internal and external stakeholder review requirements for flexible workflow setup.

Advanced Payment Processing & SAP Integration

GeoCivix will integrate with FHVA's financial processes to ensure seamless invoicing and payment tracking:

- **Automated Payment Receipts:** Our system will automatically communicate payment confirmations to both customers and FHVA staff.

- **SAP Integration for Invoicing:** Supports direct integration with SAP, ensuring financial transactions, invoice creation, and payment tracking are streamlined and compliant with MTS financial processes.

Enhanced Data Management & Compliance

Our platform will modernize record-keeping and enhance operational oversight:

- **Consolidated Permit Records Database:** Replaces legacy systems like TaxiAdmin, centralizing data management for company registrations, insurance, vehicle information, and compliance tracking.
- **Comprehensive Tracking & Reporting:** Captures and records supplemental data, including **court citations, warnings, and vehicle safety reports**, ensuring complete historical documentation.
- **Automated Public Records Reporting:** Generates **real-time reports** from system-stored data, eliminating the need for manual spreadsheet extraction.

User Experience & Operational Efficiency

GeoCivix is committed to delivering a solution that streamlines FHVA's administrative workload:

- **Intuitive User Interface:** Designed for ease of use, minimizing training time for staff and external users.
- **Digital Application & Document Submission:** Eliminates in-person meetings by enabling applicants to submit forms, documents, and payments online.
- **Real-Time Application Tracking:** Provides FHVA staff and applicants with instant visibility into application statuses, review progress, and pending requirements.

Implementation & Support

If MTS exercises the FHVA integration option, GeoCivix will:

- **Align implementation with the base project timeline** to ensure minimal disruption.
- **Provide ongoing support** for system enhancements, updates, and user training.
- **Maintain compliance** with regulatory and reporting requirements while adapting to future FHVA needs.

By leveraging our robust permitting and workflow automation platform, GeoCivix will transform FHVA's administrative processes into an efficient, transparent, and fully digitized system, addressing current challenges while future-proofing operations.

GeoCivix

Implementation Methodology

"Staff was extremely accessible and helpful in implementing the software ahead of schedule and helped us respond to the challenges of an unforeseen public health crisis. And because of its flexibility and usability, staff has been able to create and adjust new applications on its own with ease and respond to the changing demands of online permitting and reviewing."

Mike, Deputy Director – Community Development
Vienna, Virginia

Business Process Mapping, Implementation Plan and Approach

Adopting a new system can often feel overwhelming, especially when those responsible for managing the configuration are already balancing full workloads. At GeoCivix, we simplify the implementation process by configuring our system to align seamlessly with your existing workflows. From day one, you'll benefit from a professionally configured system that mirrors the familiar processes your staff and applicants already know, ensuring a smooth transition and immediate usability.

Our implementation approach is grounded in a tiered deployment strategy, designed to maximize efficiency and minimize disruption. We begin by collaborating closely with your internal subject matter experts to fully define and quickly build out one of the less complex applications. This initial phase allows us to test and launch a functional component early in the process, setting the stage for success and fostering confidence among your team. Meanwhile, other applications and integrations are scoped, designed, and prepared in parallel, making optimal use of the available timeline.

Administrative training is strategically scheduled to occur just before the launch of each component, ensuring that staff retain the most relevant and up-to-date knowledge as they begin using the system. By starting with a simpler application, we demonstrate early wins, build enthusiasm, and provide your team with both front-end and back-end experience that will be invaluable when moving on to more complex workflows. This phased approach not only accelerates your return on investment but also helps compress the overall project timeline.

Guided by Project Management Institute (PMI) core principles, our dedicated Implementation Team partners with each department throughout the various phases of our proven implementation process. Our goal is to ensure that every step is clear, collaborative, and tailored to your organization's unique needs, paving the way for a successful deployment and long-term operational excellence.

Discovery & Business Process Review

Our knowledgeable and experienced implementation staff works with subject matter experts to collect application forms, communication templates, fee formulas, and document workflows for configuration. During this process our team will offer recommendations for improvement and provide guidance with industry best practices in order to configure an efficient and intuitive process.

This particular phase begins with a kick-off meeting with City staff to discuss project expectations regarding coordination, reporting, deliverables, and all relevant project information upon receipt of signed contract documents and issuance of a PO number.

Communication Management

Communication Management promotes project success by clearly defining, and subsequently meeting, the information needs of project stakeholders. Progress reports are maintained through a dynamic project tracker, which all stakeholders will be provided any time access. Updates are available on demand and can provide a quick

at-a-glance for end users regarding action items, remaining project hours, progress and more.

Schedule Management
A project schedule acts as the roadmap for any project, and as such greatly affects how the project will be executed. The schedule management will define the specific work packages that must be completed in order to complete each deliverable and will also outline activity sequencing and assign stakeholders to specific tasks.

Out of this process the following deliverables will be provided:

- Server Provisioning
- Portal Development
- Project Kick-Off Meeting
- Needs Assessment
- Business Review
- Project Scope
- Project Schedule (Work Breakdown Structure)
- Subject Matter Experts identified and engaged
- Action Items
  - City Staff
  - GeoCivix Staff

System Configuration

Your dedicated GeoCivix project team will create custom applications, document templates, and workflows for all review types outlined in your project scope. Subject matter experts perform user acceptance testing prior to approval and deployment of any deliverable. Any system integrations will be configured, tested, and released in conjunction with your approved project schedule.

Risk Management
We approach risk management through a comprehensive analysis of likely risks associated with the project. Your GeoCivix Implementation Manager will maintain a risk register, categorizing potential risks and providing a rating in terms of likelihood and the level of impact. For all risks, mitigation strategies and contingency plans will be discussed and implemented as needed. GeoCivix approaches risk management as a truly iterative process and as such, weaves this portion of the project into the larger project management process. In doing so, unresolved issues are addressed immediately, rather than set aside to grow and become major blocking issues later.

Quality Assurance
The Quality Assurance Plan will define what constitutes project quality and how that quality is analyzed and controlled. The QA Process defines the steps involved for User Acceptance Testing (UAT) at each milestone. Potential blocking issues will be noted as part of the Risk Register.

Change Management

Because all projects are dynamic in nature, a Change Management Plan becomes a necessity for overall project success. It establishes an orderly and effective procedure for tracking, reviewing, evaluating, and approval of all proposed changes to the Project Scope. This Plan ensures that changes to scope are tracked, risks are updated accordingly, and communications are up to date.

Out of this process the following deliverables will be provided:

- Application/Workflow Review
- Application/Workflow Construction
- Permit Review
- Permit Construction
- Inspection Review
- Inspection Construction
- Internal GeoCivix Testing
- City UAT Testing
- Preliminary System Training
- Technical Scoping Meetings (integrations)
- Action Items
  - City Staff
  - GeoCivix Staff

Training and Rollout Schedule

The GeoCivix Project Team ensures that all users have access to quality training, documentation, and support to perform the primary functions of the system unassisted. Standard training is provided in a virtual environment via webinar, onsite training plans are available upon request.

A go-live schedule will consist of a comprehensive training plan and tiered roll-out schedule, allowing for all end users to build on their existing level of confidence and feel more than prepared with the transition to the new plan review process. Communications and updates will be sent out regularly to ensure all parties are aware of changes before they occur.

Out of this process the following deliverables will be provided:

- Portal Training (including Bluebeam basics)
- Color-Coded Departmental Bluebeam Toolsets
- Training Guides
- Training Videos
- Go-Live/Launch Schedule

Go Live

For all go-live events, your organization will receive priority support status and real time assistance. Your dedicated implementation team will be standing by to quickly respond to user feedback and make minor adjustments in real time ensuring your immediate success.

Our go-live process generally consists of a soft launch period, wherein the application is live and available to the public either through invitation or individual preference. We recommend this period last a minimum of thirty (30) days. During this time, we will work with staff to acclimate them to the new electronic process and troubleshoot any issues that arise.

Post-Implementation Client Support & Ongoing Maintenance

Once implementation is completed, we recommend continuing with informal quarterly or semi-annual meetings with key stakeholders to outline any areas that can be improved. This is an opportunity to work with your dedicated Customer Success Manager to provide feedback and learn about new features that have been launched.

Project Team and Estimated Time Frames

Each client is connected with a dedicated project team. This team consists of an Implementation Manager, Customer Success Manager, Support team, and Development team. For all projects, the Implementation Manager will act as the primary project manager and coordinate with all team members based on need.

As previously noted, because our approach is iterative, each of the implementation phases may be at various stages of engagement throughout the project. As such, it is difficult to determine total time for each phase. For example, the initial application delivery time frame is significantly longer than the remaining applications. On average, our delivery time frame is about six (6) months. A sample schedule for the average six-month implementation schedule is included on the following page. A complete work breakdown structure and schedule will be provided with the finalized scope of work.

Project Plan

A sample project plan has been included in this document's appendices. Please note that until a finalized scope can be arrived at, all data provided herein is preliminary and subject to change.

Proposed Project Phases and Process

GeoCivix utilizes an iterative approach to our system construction. This allows a tiered system launch, benefiting the client in numerous ways:

- Change Management
    - Rolling out small batches of applications at one time allows internal team members to get comfortable with the new system and creates an environment that can gradually develop subject matter experts.

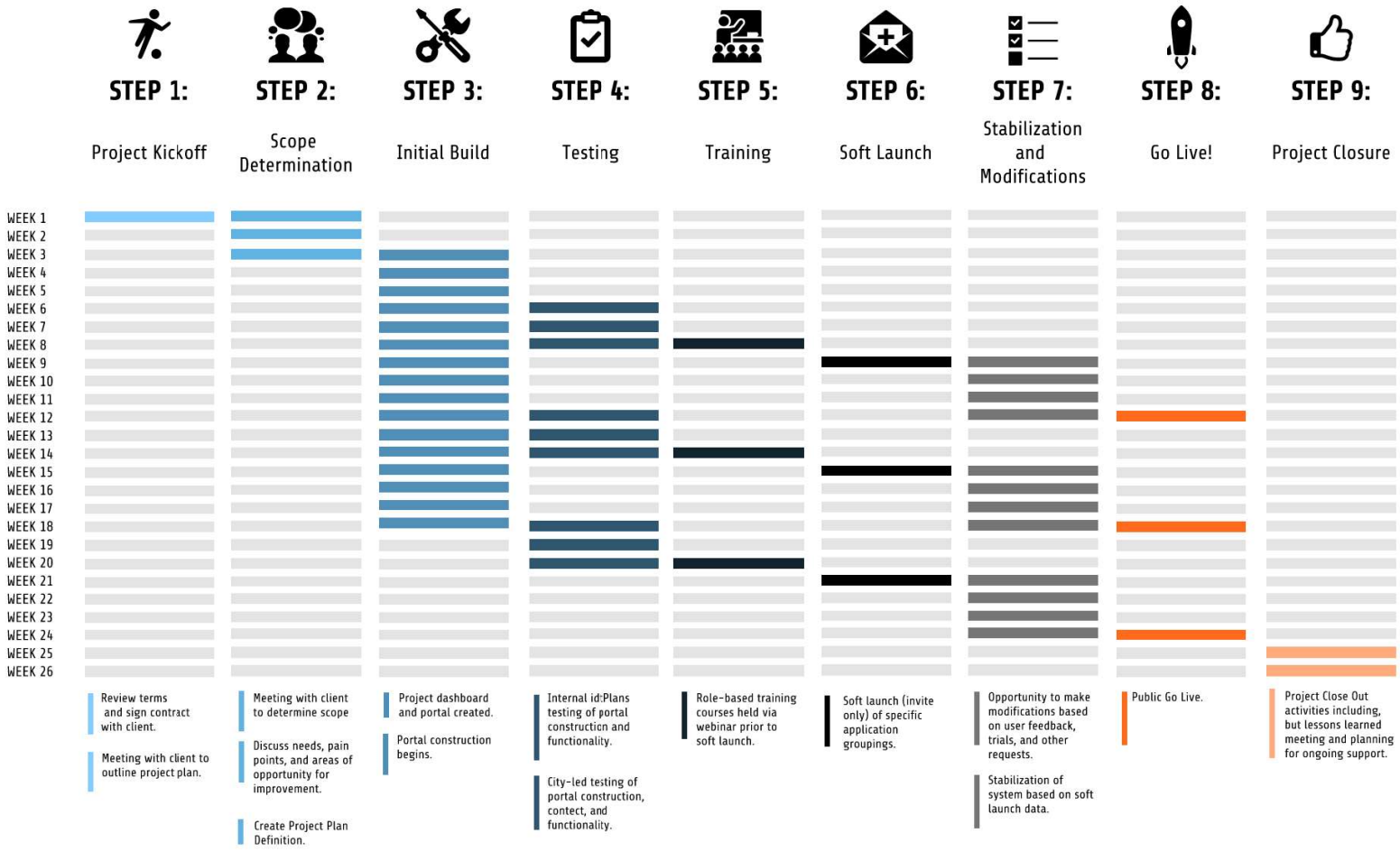
    - Longer soft launch periods allow the public to acclimate to the new process and choose how they will submit applications during the transition, giving them “control” of their project based upon their technology comfort level.
- System Stabilization
    - Soft launch periods allow for troubleshooting outside of the project team’s line of sight, which is a vital step in ensuring the average user can interact with the City’s system.
- Quicker Time to Production
    - Breaking processes into smaller groupings allows the city to roll out the program faster as we will not delay, or hold completed items back for one launch date.
- Reduced Risk at Go Live
    - An agile delivery model provides an unparalleled level of reduced risk in the event of any unforeseen circumstances at Go Live by allowing the City to quickly revert the processes for a smaller portion of your operational processes.

See the following page for a breakdown of project phases, noting that milestones and specific deliverables are noted in bold. The arrow on the right-hand side, indicates an iterative process for implementation. We regularly work with our client base in the event that a presentation or meeting with users outside of our stakeholder group is required.

Following the project phase outline, please find a sample 6-month implementation schedule, which is considered standard.

PROJECT TIMELINE

GeoCivix



Assumptions

Customer agrees to adhere to the project management plans provided herein and will assign a project team as outlined in the Project Management Approach section of this document. Upon review of this document, the assigned project team will sign off their agreement of its contents. A work breakdown structure with all deliverables and milestones will be provided based on the start date of the Kickoff Meeting.

GeoCivix agrees to provide all professional services outlined in the Project Scope provided at contract initiation. Additionally, the assigned Implementation Manager will be responsible for the timely and complete implementation of the EPR platform as outlined.

Both parties agree that any changes to the information contained within this Project Plan must be agreed upon by all parties.

Key Positions

The implementation process is one that is dynamic and oftentimes overlapping between departments and resources. As such, GeoCivix approaches the allocation of resources with the assumption that these hours may vary based on need and project status. Those in functional lead roles will spend the most hours engaging, testing, and working with the GeoCivix team, while team members such as the Project Manager or Communications Manager will spend more time coordinating resources on behalf of the Customer.

The Customer will identify team members to serve on their project team and will be responsible for the timely delivery of requested documents and other information to the Implementation Manager. Note that the project deliverables and milestones are dependent upon active participation by members of this team. Failure to respond to requests in a timely manner will result in delays in the overall project timeline.

The following table estimates the average hours per Customer role utilized for a standard implementation.

ROLE	COMMUNICATIONS	CONFIGURATION AND SETUP	TESTING	TRAINING	TOTAL
Executive Sponsor	5	0	0	5	**10**
Project Lead	25	25	10	10	**70**
Power User/Subject Matter Expe	0	25	20	5	**50**
IT Staff	0	10	10	5	**25**

Integration Strategy

"(GeoCivix) helps us coordinate directly with external review agencies in a timely and efficient manner. We use the email function to grant immediate access to the plans and allow their comments to be seen by all reviewing parties."

Lauren, Senior Planner
Brighton, Colorado

Integrations

With an open data policy, modern REST API, Webhooks, and experienced staff of integration experts, you'll be positioned to make the most of your GeoCivix investment from day one. We encourage secure and open data sharing data between applications and even provide many standard "Out of the Box" system integrations. We also know that each agency is different and has their own unique set of challenges. A key strength of GeoCivix lies in our experience and dedication to providing secure and seamless custom solutions.

ArcGIS Integration

Our standard ArcGIS integration leverages web service layers to enhance the application process by automatically suggesting and validating addresses and parcels before an application is submitted. This ensures that applicants are working with accurate, verified location data from the start. Once a valid location is identified, the system can automatically retrieve site-specific information such as floodplains, zoning districts, character overlays, and other relevant data.

GeoCivix also provides a clear, map-based view of each project's location, making it easy for users to visualize site details. This integration streamlines workflows by enabling automatic assignment of plan reviewers and inspectors based on project location, ensuring that tasks are efficiently distributed. Additionally, our geofencing feature adds an extra layer of control by preventing applicants from submitting projects outside of your jurisdiction, maintaining the integrity of your operational boundaries.

E-Commerce Integration

GeoCivix offers robust e-commerce integration that supports a variety of payment options, including credit cards and e-checks, ensuring a flexible and convenient payment experience for your users. Our platform is fully PCI compliant, adhering to the highest security standards to protect your financial transactions and sensitive data.

We currently support integration with leading payment processors, including:

- Authorize.net
- Clover
- Municipay
- NIC Colorado
- Payeezy
- Paymentus
- PayPal
- Point & Pay
- Square
- Custom

Our flexible architecture allows us to easily add new payment processors as needed, providing you with the adaptability to meet evolving payment preferences and requirements. Whether you're looking to streamline payment collections, reduce administrative burdens, or enhance the user experience, GeoCivix's e-commerce integration offers a secure and efficient solution tailored to your needs.

Single Sign-On Integration

GeoCivix supports Single Sign-On (SSO) integration using SAML 2.0, providing a secure and streamlined authentication process for your users. With our SSO integration, users can access the GeoCivix platform with their existing organizational credentials, eliminating the need for multiple usernames and passwords and enhancing overall security.

Our SAML 2.0-based integration ensures compatibility with a wide range of identity providers including MS Active Directory, Azure AD, Okta and more, allowing for seamless integration with your existing IT infrastructure. This not only simplifies user management for your IT team but also enhances the user experience by providing a convenient and secure way to access GeoCivix services.

By leveraging SSO, GeoCivix helps reduce the risk of unauthorized access, improves compliance, and supports your organization's security policies. Whether your users are logging in from within the office or remotely, our SSO integration ensures they have quick, secure, and reliable access to the tools they need.

REST API

GeoCivix offers a robust and secure API that enables seamless integration with your existing systems. Our API is designed using REST principles, which ensures compatibility with a broad range of modern web services, allowing for easy and scalable integrations. Developers can access detailed documentation that includes comprehensive endpoint descriptions, request and response formats, and sample code snippets, facilitating an efficient implementation process.

Security is a top priority for GeoCivix, and our API access is protected by OAuth 2.0, ensuring that only authorized users and applications can interact with your data. All communications through the API are encrypted using TLS protocols, safeguarding data in transit. The API provides versatile functionality, supporting various operations such as data retrieval, updates, and initiating actions within the GeoCivix platform, which allows you to tailor integrations to meet your specific needs.

GeoCivix is committed to supporting your integration efforts with dedicated assistance available for setup and troubleshooting. Whether you need basic integration help or advanced guidance for custom implementations, our team is prepared to ensure your API integration is smooth and effective.

Webhooks

GeoCivix’s webhooks provide a powerful solution for real-time event notifications, enabling your systems to respond immediately to changes within the GeoCivix platform. Webhooks push notifications to your defined endpoints when specific events occur, such as status updates, new data submissions, or task completions. This real-time communication ensures that your data and workflows remain synchronized without manual intervention.

Our webhooks are designed to be highly customizable, allowing you to define endpoints that align with your infrastructure and subscribe only to the events relevant to your operations. To enhance reliability, GeoCivix webhooks incorporate a retry logic that automatically reattempts delivery in the event of a failure, ensuring critical notifications are not lost due to temporary network issues or endpoint downtimes.

GeoCivix offers expert guidance to support your webhook configuration and optimization, from initial setup to fine-tuning specific event triggers. Our goal is to help you maximize the efficiency and effectiveness of your operational processes through the seamless integration of our webhook capabilities.

Data Migration Services

GeoCivix has a proven track record of successfully migrating data for organizations of all sizes, ensuring that your information is handled with the highest level of care and expertise. Our data migration process is designed to be thorough, efficient, and secure, with each step meticulously planned and executed by our experienced team. From initial data export and mapping to validation and user acceptance testing, we leave no detail unchecked. Our methodical approach minimizes risks and ensures data integrity, giving you peace of mind that your transition to GeoCivix will be smooth and reliable. With our team's extensive experience and commitment to quality, you can trust that your data is in safe hands throughout the entire migration journey.

Support

"We could not be happier with the ease and functionality of the system and the superior customer service we receive from GeoCivix staff."

Jean, Development Services Supervisor
Town of Apex, North Carolina

Support Plan & Ongoing Maintenance

Our success comes not just from intuitive software, but from our unparalleled level of experience and support. Clients get the assistance they need to be successful without having to be concerned about support cost overruns. All systems come with unlimited technical support that extends to **all users including applicants**.

Support Hours

- Standard support hours are conducted between the hours of 8:00 AM to 4:00 PM CST (excluding holidays).
- 24x7 toll free phone assistance is available for issues that are considered to have a severity of 1 (Critical).

Support Channels

The following support channels are made available to all system users.

- **Knowledge Base** – Use for quick answers to common questions.
- **Support Ticket** – Use to report an issue that is not critical in nature and can wait a few hours for a response.
- **Phone Support** – Use when immediate assistance is needed, and the issue is too complex to type out.
- **Context Sensitive Help –** Each web page contains context sensitive help. Simply hover over a help icon and a tooltip will provide on screen assistance.
- **On Screen User Guides –** On screen user guides are organized by role and action and include screen capture images for clarification.
- **PDF User Guides -** PDF user guides are based off of the onscreen user guides and are organized by role and action and include screen capture images for clarification.

Support Portal: https://support.GeoCivix.com

Applicant Support – We include unlimited support for applicants who are experiencing technical difficulties. Applicants are free to utilize the support channels listed above. In the event that an applicant has a business process question or a question regarding a particular question on an application, we will respectfully direct the applicant to contact the client directly for clarification.

Levels of Service

As part of our commitment to clients, we aim to provide 99.9% uptime. The GeoCivix SLA only includes unplanned downtime of severity level 1 (critical). Our 99.9% uptime commitment is equivalent to 43.8 minutes per month or 8.76 hours per year of unplanned downtime. It is the goal of GeoCivix to meet and exceed, when possible, the levels of services documented in the client's case management guidelines.

Severity	Definition	Response Time	Resolution Time
1 Critical	The issue causes the client to be unable to work or perform some significant portion of their job. The issue affects a large number of people. There is no acceptable workaround to the problem.	2 hours	Maximum of 24 hours
2 High	The issue causes the client to be unable to work or perform some significant portion of their job. The issue affects a large number of people. There is an acceptable and implemented workaround to the problem.	4 hours	Maximum of 5 business days
3 Medium	The issue causes the client to be unable to perform some small portion of their job, but they are still able to complete most other tasks. May also include questions and requests for information. There may or may not be an acceptable workaround to the problem.	8 hours or next business day	Maximum of 30 business days
4 Low	The issue causes the client to be unable to perform a minor portion of their job, but they are still able to complete most other tasks. The issue may only affect one or two clients. There is likely an acceptable workaround to the problem.	8 hours or next business day	Maximum of 90 business days

Planned Downtime

Planned downtime may be required to deploy new releases or system updates and maintenance. Planned downtime is always scheduled during off-peak hours and published in advance so that our customers may plan for the disruption in service. Planned downtime typically lasts anywhere from 10 minutes to one hour and is usually scheduled on Saturdays between 10:00AM – 6:00 AM Eastern Time. Planned downtime has historically occurred 6-8 times per year.

Unplanned Downtime

While every precaution is taken to avoid disruptions in service, unplanned downtime and service degradation can sometimes occur. Unplanned downtime is typically the result of a third-party service failure or unexpected complication with a new release under heavy load. In the event of a severe service disruption, we report the incident to our customers as quickly as possible and make every effort to resolve them as quickly as possible. If the disruption was caused by a new release, the release may be rolled back to the previous version until a permanent resolution can be tested and deployed during scheduled maintenance.

Upgrades and Maintenance

All GeoCivix systems come with free system upgrades and maintenance included. You'll never have to worry about purchasing upgrades, setting up development environments to test, or deploying security patches over the weekend. Our internal team of system administrators provide the managed services needed to ensure that each system is running at peak performance and always has the most up to date software.

Quality Assurance

Prior to deployment, all release candidates undergo thorough testing and risk assessment. Automated unit testing, regression testing, and quality assurance testing are utilized to provide a conservative and well-rounded approach to quality assurance. Feature upgrades with an assessed value of Very Low and critical security patches may be released as minor weekly releases. Any non-critical updates or updates with an assessed value above very low are accumulated for deployment as a major release.

Subscribe to Updates

Clients can opt-in to receive automatic notifications that summarize new features, scheduled maintenance, and product roadmap updates.

Staging Environment Access

Upon request, clients are granted access to our staging sandbox, allowing them to test new features, provide feedback, and train new users.

Update Frequency

Major updates are scheduled for release quarterly and are available for testing in the staging sandbox prior to deployment. Major releases are defined as non-critical system patches or any feature addition or modification that has an assessed risk higher than very low. Major releases typically require system downtime to deploy and are scheduled during off peak hours and published to clients.

Minor updates including bug fixes, security patches, and features with a very low risk assessment are applied on demand during off-peak hours.

Forward Compatibility

As a SaaS, we must be extremely disciplined in our approach to implementing new features, integrations, and customizations. New features are always added in the least disruptive way as possible, typically in the off position. Our goal is for new features or system modifications to be completely transparent to end users. As features become available, users who have opted into the system update blog will be notified and have the option of enabling them on an as-needed-basis. This ensures that daily operations are not affected by the release of a new feature or feature enhancements.

Integrations and Customizations

For any customizations or integrations that may be affected by a new release we work to identify any areas of risk and perform automated unit testing, regression testing, and quality assurance testing in Sandbox environment prior to notifying clients. For any integrations with external systems, we ask to have either continuous or on demand access to appropriate on-premises development environments to validate connectivity and functionality. Clients are notified prior to release if there are any risks with the deployment and are granted access to the staging sandbox for optional internal testing.

In order to provide forward compatibility and prevent disruptions in service communication is key. We ask that clients contact us prior to modifying any external production systems or data source that may affect service so that our internal development team can work to assess the level of risk and on some occasions schedule time to be available during deployment.

GeoCivix includes integration maintenance ensuring forward compatibility with new releases on the GeoCivix platform as well as consultant services with our development team to help identify and assess any areas of risk with updating or changing external systems.

GEOCIVIX MASTER SERVICE AGREEMENT

THIS AGREEMENT which consists of this Service Schedule, Standard Terms and Conditions, Project Plan Definition, and Service Level Agreement (together, this **Agreement**), each of which are incorporated by reference, is entered into as of the Effective Date (defined below) by and among GeoCivix, LLC, an Arizona limited liability company (**GeoCivix**), idtPlans, an Arizona limited liability company (**idtPlans**), and the entity identified in this Service Schedule (**Customer**).

WHEREAS, GeoCivix is a provider of Services and Technology, each as defined herein; and

WHEREAS, idtPlans, an affiliate of GeoCivix, has the right to license rights to access and use the idtPlans Technology as defined herein; and

WHEREAS, Customer desires to access and use the Services and the Technology (including the idtPlans Technology) in accordance with the terms and conditions hereof;

NOW, THEREFORE, in consideration of the foregoing, and in reliance on the mutual agreements contained herein, the parties agree as follows:

SERVICE SCHEDULE

Part I – Customer and Basic Services Details

Effective Date	The **Effective Date** shall be the same as the date of customer's signature on page 3 of this Service Schedule.	
Customer	[Name] [Address]	
Service Commencement Date	30 days after the date of the initial invoice	
Initial Term	1 year beginning on the Service Commencement Date	
Payment Frequency	Annually	
Extension Option(s)	Up to 4 one-year extensions	
Customer Accounts Payable Contact	**Name:**	**Role:**
	Telephone:	**Email:**
Customer Technical Contact to Send Bluebeam License and Keys to (if Applicable)	**Name:**	**Role:**
	Telephone:	**Email:**
Customer Purchase Order Number		

Part II – Price Plan and Service Description

Price valid until [DATE] and subject to acceptance of our standard terms and conditions.

One-Time Configuration/Training Costs (Year 1 Setup)				
	Item	**Qty**	**Cost**	**Total**
			Total:	**$0**
** Max 10 users per training course. Training performed remotely via screen sharing technology unless noted otherwise*				

Annual Hosting, Maintenance, and Support				
	Item	**Qty**	**Cost**	**Total**
			Total:	**$0**

Total Operating Cost		
	Total One Time Costs	**$0**
	Total Annual Costs	$0
	Total Operating Cost (Year 1):	**$0**
*see Standard Terms & Conditions section 12.3 regarding annual cost increases		

Optional Annual Extension(s) – Renewal Rates (Annual Hosting, Maintenance, and Support)	
Renewal Year 1	$0
Renewal Year 2	$0
Renewal Year 3	$0
Renewal Year 4	$0

Services Description

"**Services**" include consulting, configuration, training, ongoing support, and access to the Technology, which is accessible through the GeoCivix.com website and includes any updates or upgrades which may be generally released by GeoCivix to all customers from time to time. GeoCivix reserves the right to modify the Services from time to time; however, future modifications will not result in a diminution of the functionality or quality of the Services. Certain other new functionality may be offered in the future for an additional fee, and if Customer elects to purchase any of this new functionality it will be deemed to be part of the Services.

Services Specifications

Included in this Services are the following items:

Once deployed Customer may choose to use the portal as-is, self-configure the portal to meet expanding needs, or engage with GeoCivix for Professional Services. Professional Services in excess of the items listed above would require a separate SOW and purchase order (as described in Section 15 of the Standard Terms and Conditions).

Consulting and Training
GeoCivix will guide Customer through discovery, development, implementation, and deployment of the Technology, which may include one or more modules offered by GeoCivix. Training is provided in a virtual environment via webinar, unless otherwise noted in this document.

IN WITNESS WHEREOF, the parties have caused this Agreement to be duly executed below.

GEOCIVIX,
an Arizona limited liability company

By:_____
Name:_____
Title:_____
Date:_____

IDTPLANS,
an Arizona limited liability company

By:_____
Name:_____
Title:_____
Date:_____

CUSTOMER

By:_____
(Signature)
Name:_____
Title:_____
Date:_____

ADDRESS FOR NOTICES TO GEOCIVIX OR IDTPLANS:

9420 E. GOLF LINKS RD.
SUITE 108, #294
TUCSON, AZ 85730

STANDARD TERMS AND CONDITIONS

These Standard Terms and Conditions form a part of the Agreement between GeoCivix, idtPlans, and the Customer identified on the Service Schedule to which these Standard Terms and Conditions are attached and govern the Customer's use of the Services and the Technology.

1. Definitions

1.1 Services means the services described and specified on the applicable Service Schedule and any updates or upgrades to such services which may be generally released by GeoCivix to all customers from time to time.

1.2 Technology means all computer hardware, software, intellectual property, and other tangible equipment and intangible computer code necessary to deploy and serve the Services via the Site. The Technology includes in part but is not limited to the hardware, software, and computer code licensed by idtPlans (the **idtPlans Technology**).

1.3 Site means the GeoCivix.com website, including the Technology.

1.4 Affiliate means with respect to Customer, any parent or subsidiary corporation, and any corporation or other business entity controlling, controlled by or under common control with Customer, which agrees in writing to be bound by all the obligations of Customer hereunder.

1.5 Internet Data Centers means any of the facilities owned or controlled by GeoCivix and used by GeoCivix to provide the Services. These facilities house the Technology used for the provision of Services.

1.6 Customer Data means Customer's information or other data processed, stored, or transmitted by, in or through the Technology, including without limitation personal information relating to the Customer's personnel, customers, and prospective customers such that the identity of such persons is apparent or can reasonably be determined from such personal information.

1.8 Proprietary Rights means any and all rights, whether registered or unregistered, in and with respect to patents, copyrights, confidential information, know-how, trade secrets, moral rights, contract or licensing rights, confidential and proprietary information protected under contract or otherwise under law, trade names, domain names, trade dress, logos, animated characters, trademarks, service marks, and other similar rights or interests in intellectual or industrial property.

1.9 Basic User means any named user having permission to submit applications, upload documents, pay fees, view project status, request inspections, and view project related reports and documents. Frequently categorized as applicants, homeowners, citizens, and contractors, these users do not require a paid license.

1.10 Licensed User means any named user having any permission beyond that of a basic user. Frequently categorized as permit coordinators, plan reviewers, inspectors, department supervisors, and system administrators, these users do require a paid license. Named users include Customer's third-party consultants, outsourcers, contractors, and other service providers requiring elevated permissions over that of a Basic User.

1.11 Application Form means any online form filled out by an applicant at the time of submittal through the Site. This form is customizable and may be developed to match the existing paper forms in use by an organization. Data collected on these forms may be used to auto-fill document templates, email templates, or calculate fees. Application forms are often synonymous with permit applications; however, they could also include public record requests, general inquiries, or other various forms for collecting data etc.

1.12 Workflow means any programmatic representation of the business rules of a projects lifecycle and ties system events to specific actions. Workflow configuration settings allow system administrators to automate routine tasks and define how the system should behave throughout the plan review process for each type of project.

1.13 SLA means the GeoCivix Service Level Agreement, which is available at https://GeoCivix.com/service-level-agreement/.

1.14 Project Plan Definition means the Project Plan Definition attached hereto and incorporated herein by reference.

1.15 Service Commencement Date means the due date of the initial invoice, which is 30 days after the date of such invoice.

2. Subscription License Grant. Subject to the terms and conditions hereof, during the term hereof, GeoCivix and/or idtPlans (as applicable) hereby grant to Customer and its Affiliates only to the extent of Licensed Users and solely for Customer's internal business purposes a non-exclusive, non-transferable, worldwide right and license to access the Site and use the Services and the Technology. Customer personnel will indicate agreement by click-through to GeoCivix's standard End-User License Agreement (**EULA**) in the registration process for access and use of the idtPlans Technology; provided, however, that if there is any conflict or inconsistency between the EULA and this Agreement, the terms and conditions of this Agreement shall control. All rights not expressly granted to Customer herein are expressly reserved by GeoCivix and/or idtPlans, as applicable.

3. Use Restrictions. Customer covenants and agrees that its use of the Services and the Technology will be in a manner consistent with this Agreement and with all applicable laws and regulations, including trade secret, copyright, trademark, and export control laws. Without limiting the generality of the foregoing, Customer shall not, nor shall it permit or assist others (i) to abuse or fraudulently use the Services; (ii) to process or permit to be processed the data of any third party that is not expressly authorized herein to access and use the Services; and (iii) to attempt to copy, reverse-engineer, decompile, disassemble, create a derivative work from, or otherwise attempt to derive the source codes of any part of the Technology; or (iv) to access, alter, or destroy any information of any customer of GeoCivix and/or idtPlans by any fraudulent means or device, or attempt to do so. GeoCivix provides e-commerce integrations so that users may enter payment information into GeoCivix's e-commerce engine, which is a secure e-commerce platform. Under no circumstances may Customer, Licensed Users, applicants, or any other user bypass GeoCivix's secure implementation by creating a custom form that asks users to enter payment details or other personal identifying information in plain text for the purposes of billing outside of GeoCivix's e-commerce platform. **Any and all payment information, health information, or other personal identifying information that is entered by Customers, Licensed Users, applicants or other users outside of GeoCivix's e-commerce platform will be encrypted and stored to GeoCivix's database, could be visible to others, and is not PCI or HIPPA compliant.**

4. Security. Customer shall be solely responsible for acquiring and maintaining technology and procedures for maintaining the security of its link to the Internet. As part of the Services, GeoCivix shall implement reasonable security procedures consistent with industry standards to protect Customer Data from unauthorized access, including without limitation, maintaining a security program with an identified security official, security policies, access controls, firewalls, wireless and mobile device and storage security, virus scanning/protection software, anti-malware software, encryption of data in transport and storage including SSL certificates of 256 bit strength or greater (including backup data), network security intrusion protection systems, technical assessments (which have been acted upon), and Internet Data Centers housed in a secure location in the United States (the **Security Standard**). Provided that GeoCivix is in compliance with the data Security Standard, the parties agree that GeoCivix shall not, under any circumstances, be held responsible or liable for situations (i) where data or transmissions are accessed by third parties through illegal or illicit means, or (ii) where the data or transmissions are accessed through the exploitation of security gaps, weaknesses, or flaws unknown to GeoCivix at the time. GeoCivix will promptly report to Customer any unauthorized access to Customer Data promptly upon discovery by GeoCivix, and GeoCivix will use diligent efforts to promptly remedy any breach of security that permitted such unauthorized access. In the event notification to persons included in such Customer Data is required, Customer shall be solely responsible for any and all such notifications at its expense.

5. Business Continuity Plan/Disaster Recovery Program. GeoCivix shall establish and execute a business continuity plan that provides for continued operation in the event of a disaster or business interruption affecting GeoCivix. The business continuity plan shall provide that Internet Data Centers be configured consistent with prevailing industry standards for fireproofing, power and backup generation, structural integrity, seismic resistance, and resistance to other natural and

man-made disruptions. In addition, Internet Data Centers shall be secured against physical and electronic intrusion in a manner consistent with prevailing industry standards.

6. Set-Up of Services. On or before the Service Commencement Date specified in the Service Schedule, GeoCivix will have the idtPlans Technology provisioned, configured to default settings, and online for the Customer. Upon payment of the initial invoice, GeoCivix will turn over to the Customer everything necessary to access the idtPlans Technology, at which point the Customer may choose to use the portal as-is, self-configure the portal to meet its needs, or engage with GeoCivix for Professional Services as set forth in Section 15.

7. Access Codes for Services. GeoCivix will permit access to the Services only over the Internet using access codes assigned by GeoCivix. Access codes will be deemed the Confidential Information of both parties.

8. Technical Requirements for Services.

8.1 Capacities. The Services shall be rendered in a manner that will support the Licensed User requirements and other requirements provided in the applicable Service Schedule.

8.2 Scalability. The Services shall be scalable in a manner that allows the Services to meet any forecasted increase provided in the applicable Service Schedule. Customer acknowledges that increasing the Licensed User requirements and/or data storage requirements may lead to increases in the fees charged for the Services.

8.3 Internet Data Centers. The Services will be provided through Internet Data Centers that are configured consistent with prevailing industry standards for fireproofing, power and backup generation, structural integrity, seismic resistance, and resistance to other natural and man-made disruptions. In addition, the facility shall be secured against physical and electronic intrusion in a manner consistent with prevailing industry standards. GeoCivix may outsource its Internet Data Center operations to subcontractors; provided, however, that GeoCivix shall be responsible for the performance of such subcontractors, and GeoCivix shall be liable for any action or inaction by such subcontractors as if performed by GeoCivix.

8.4 Multiple Telecommunications Providers. Unless otherwise specified in the applicable Service Schedule, the facility shall be served by no less than two separate high-speed telecommunications providers and GeoCivix shall have the ability to switch between telecommunications providers to reduce outages.

9. Backups. At no additional charge to Customer, GeoCivix shall make daily incremental backups (the **Incremental Backup**) and weekly full backups (the **Full Backups**) of Customer Data archived with the idtPlans Technology. The prior day Incremental Backup and a copy of the weekly backup shall be stored off-site in a secure facility designed to store and maintain backups for emergency use.

10. Monitoring of Customer's Use. GeoCivix reserves the right to internally monitor Customer's usage of the Site and Services.

11. Special Requirements.

11.1 Operational Requirements. Customer shall be solely responsible for installation and maintenance of a supported web browser in order to access the system. Supported browsers include Internet Explorer (Current version -1) and current versions of Google Chrome, Mozilla Firefox, and Safari. Browsers must be capable of TLS 1.2 encryption or higher.

11.2 Customer's Requirements. Customer shall be solely responsible for providing the following materials at its cost and expense: all Internet access, hardware, browsers, and other software necessary to access and login to the Site.

12. Fees.

12.1 Annual Renewal Fees and Payment Terms. Annual renewal fees are payable within thirty (30) days of receipt of invoice, with the first payment to be received by GeoCivix no later than the Service Commencement Date. If

Customer exceeds the licensed limits of their contract, GeoCivix reserves the right to renegotiate pricing terms on subsequent years based on published pricing, unless otherwise agreed upon as set forth in Section 12.6.

12.2 Hourly Rates. Work that falls outside of the agreed upon project scope will be subject to an hourly rate. All work falling outside of project scope will be handled via a quote and/or change order document. Costs associated with Professional Services hours can be found on the GeoCivix Price Sheet (issued annually in July). Please contact your GeoCivix Account Manager for a copy of this document.

12.3 Fee Increases. GeoCivix may increase periodic annual renewal fees at any time after the Initial Term with sixty (60) days prior notice to Customer, but in no event shall fees be increased more than 10% over the preceding consecutive twelve (12) month period, unless otherwise agreed upon as set forth in Section 12.6.

12.4 Late Charges. If Customer does not make timely payment to GeoCivix of any amount payable hereunder, in addition to the remedies available to GeoCivix at law or equity, GeoCivix may collect interest on the sum then owing at the rate of 1.5% per month from the due date until payment by Customer; provided, however, that in no event shall the aggregate interest charges exceed the maximum rate of interest which could be charged under applicable law.

12.5 Overdue Payments. Customer acknowledges that continued access to the Services is contingent upon timely payment of all fees. If any amount owing by Customer under this Agreement for any Services is thirty (30) or more days overdue, GeoCivix reserves the right to suspend access to the Technology and/or the Services until payment is made in full. GeoCivix may also terminate this Agreement if payments are not resolved within forty-five (45) days of becoming overdue.

12.6 Optional Contract Extensions. GeoCivix and Customer may agree to establish Renewal Rates for Annual Hosting, Maintenance, and Support. Such Renewal Rates will be set forth in the Service Schedule and do not include additional licenses, integration or implementation services, training services, or additional services as described in Section 13. If GeoCivix and Customer agree to such Renewal Rates, Customer may extend the term of this Agreement in one-year increments not to exceed the number of Extension Options set forth in the Service Schedule. In order for Customer to exercise a one-year extension at the applicable Renewal Rate, GeoCivix will send a quote to Customer with the Renewal Rate 90 days prior to the expiration of the then-current annual term. Customer shall have 30 days to confirm its intent to renew by signing the quote. GeoCivix will then send an invoice 60 days prior to the expiration of the then-current term, and Customer must pay such invoice no later than 30 days prior to the end of the term. If Customer fails to timely sign the quote or fails to pay the invoice by the due date, this Agreement shall terminate at the end of the then-current term and the Customer will no longer be able to avail itself of the Renewal Rates. Customer will, however, be able to engage at GeoCivix's then-current market pricing for any subsequent services. This Agreement applies to the initial term and any/all renewal terms. All references to the term of this Agreement mean and refer to the initial term and any/all subsequent renewal terms.

13. Purchase of Additional Services. Customer may elect to purchase rights for additional Licensed Users and/or additional services by purchase order from time to time. Such additional purchases shall be governed by the terms and conditions of this Agreement. Customer agrees that, absent GeoCivix express written acceptance thereof, the terms and conditions contained in any Service Schedule or other document issued by Customer to GeoCivix for the additional purchases, shall not be binding on GeoCivix to the extent that such terms and conditions are additional to or inconsistent with those contained in this Agreement.

14. Technical Support, Training, and Consulting Services. During the term hereof, GeoCivix shall provide technical support in the form of responses to questions by email or telephone at no additional charge. If additional services are required for the proper use and operation of the Technology or if training or consulting services are requested, GeoCivix shall provide such services on a time and materials (**T&M**) basis; that is, (i) Customer shall pay GeoCivix for all the time spent performing such services (including all travel time), plus materials, taxes, and reimbursable expenses; and (ii) the rates for such services shall be GeoCivix then-current standard rates when such services are provided. Any monetary limit stated in an estimate

for T&M services shall be an estimate only for Customer's budgeting and GeoCivix resource scheduling purposes. If the limit is exceeded, GeoCivix will cooperate with Customer to provide continuing services on a T&M basis. GeoCivix shall invoice Customer monthly for T&M services. Charges shall be payable upon receipt of invoice by Customer. GeoCivix reserves the right to require a non-refundable fee and/or cost deposit prior to commencement of T&M services as well as a work order.

15. Professional Services. Customer may order professional services such as custom development (**Professional Services**) from GeoCivix by submitting a written request either by email or through an appropriate support channel. If Customer submits an order for Professional Services, such an order shall not be binding upon GeoCivix unless accepted by GeoCivix. Once an order for custom Professional Services has been accepted by GeoCivix, the parties will negotiate a mutually acceptable Statement of Work (**SOW**) for such custom Professional Services. Each SOW executed by the parties for custom Professional Services shall be subject to this Agreement. Any terms and conditions added or appended by Customer to any order submitted for Professional Services that are in addition to or inconsistent with these Terms will be deemed stricken from such order and will not be binding on GeoCivix. Unless noted otherwise on the SOW, on orders less than or equal to $2,500 in value, payment shall be due in full prior to commencement of work. Orders exceeding $2,500 in value shall be subject to a non-refundable deposit of fifty percent (50%) of the total fees due prior to commencement of work with the remaining fifty percent (50%) due upon completion. Purchased Professional Services (including training) are non-refundable, and any unused Professional Services (including training) will expire twenty-four (24) months from the date of purchase.

16. Services Deliverables. All project deliverables will adhere to generally accepted practices of both generally accepted software development standards as well as construction and code review best practices. Based upon specific goals outlined by the Customer, acceptance of the deliverables outlined in the agreed upon scope (provided in the Project Plan Definition and signed off by both GeoCivix and Customer) would be considered a successful deployment of a fully functional, fully hosted Electronic Plan Review (EPR) platform for use by Customer.

17. Project Schedules. Project schedules are provided as a guiding document as part of the Project Plan Definition and project tracking protocol. Schedules are subject to change without notice in the event of delayed information acquisition, testing delays, or modifications to scope (change orders).

18. Service Levels.

18.1 GeoCivix will provide the Services in accordance with the service levels set out in the SLA. In the event that GeoCivix fails to attain the requisite Monthly Uptime Percentage as provide for in the SLA, GeoCivix will issue service credits (**Service Credits**) to the Customer in accordance with the SLA, which Service Credits will be the sole remedy available for GeoCivix failure to meet the SLA.

18.2 Any Service Credits are subject to the exclusions and limitations listed in the SLA.

18.3 The Services are not intended to support or carry emergency or time-critical emails or communications to any providers of emergency services, and GeoCivix accepts no liability in respect of such emergency communications. GeoCivix recommends that the Customer maintains adequate backup copies of any content uploaded to the Site and exercise caution in uploading content of a confidential nature.

19. Technical Contacts. Customer shall designate one of its employees as its principal contact for communicating with GeoCivix regarding technical issues hereunder. Customer may change its technical contact from time to time by written notice to GeoCivix.

20. Proprietary Rights Ownership. Ownership of the Proprietary Rights embodied in the Services, Site, and Technology (except for the idtPlans Technology) shall remain exclusively vested in and be the sole and exclusive property of GeoCivix and its licensors. The GeoCivix.com domain name, product names and logos associated with the Services and the Technology (except for the idtPlans Technology) are trademarks of GeoCivix or third parties.

Ownership of the Proprietary Rights embodied in the idtPlans Technology shall remain exclusively vested in and be the sole and exclusive property of idtPlans and its licensors. The domain name, product names and logos associated with the idtPlans Technology are trademarks of idtPlans or third parties.

In addition, Customer hereby transfers and assigns to GeoCivix any rights Customer may have to any suggestions, ideas, enhancement requests, feedback, recommendations, or other information provided by Customer personnel relating to the Services or the Technology.

21. Customer Reference. Customer hereby grants to GeoCivix the express right to use Customer's entity name and logo in marketing, sales, financial, and public relations materials, and other communications solely to identify Customer as an GeoCivix customer. GeoCivix hereby grants to Customer the express right to use GeoCivix logo solely to identify GeoCivix as a provider of services to Customer. Other than as expressly stated herein, no party shall use another party's marks, codes, drawings, or specifications without the prior written permission of the party.

22. Mutual Exchange of Confidential Information. The parties anticipate that each may disclose confidential information to the other. Accordingly, the parties desire to establish in this section terms governing the use and protection of certain information one party (**Owner**) may disclose to the other party (**Recipient**).

22.1 Definition of Confidential Information. For purposes hereof, **Confidential Information** means (i) the terms and conditions hereof, (i) non-public aspects of the Site and the operation thereof, the Technology, and the Services and additional services provided by GeoCivix, and GeoCivix business and technical information, and data, (iii) Customer Data, and non-public aspects of Customer's technology, computer programs, and business and technical information, and data. In addition, Confidential Information includes information which, although not related to the Services or this Agreement, is nevertheless disclosed hereunder, and which, in any case, is disclosed by an Owner or its affiliate to Recipient in document or other tangible form bearing an appropriate legend indicating its confidential or proprietary nature, or which, if initially disclosed orally or visually is identified as confidential at the time of disclosure and a written summary hereof, is provided to Recipient within fifteen (15) days of the initial disclosure.

22.2 Restrictions on Use and Disclosure. Recipient may use Confidential Information of Owner only for the purposes of this Agreement and shall protect such Confidential Information from disclosure to others, using the same degree of care used to protect its own proprietary information of like importance, but in any case, using no less than a reasonable degree of care. Recipient may disclose Confidential Information received hereunder only as reasonably required to perform its obligations under this Agreement and only to its employees who have a need to know for such purposes and who are bound by signed, written agreements to protect the received Confidential Information from unauthorized use and disclosure.

22.3 Exclusions. The restrictions of this Agreement on use and disclosure of Confidential Information shall not apply to information that: (i) is in the possession or control of Recipient at the time of its disclosure hereunder; (ii) is, or becomes publicly known, through no wrongful act of Recipient; (iii) is received by Recipient from a third party free to disclose it without obligation to Owner, (iv) is independently developed by a party as evidenced by its written and dated records and without any breach of this Agreement; or (v) is the subject of a written permission to disclose provided by Owner. The Recipient may disclose Confidential Information of Owner pursuant to the requirements of a governmental agency or by operation of law, provided that such Recipient gives Owner written notice thereof as soon as practicable and reasonably cooperates with Owner to contest such disclosure.

22.4 Limitation of Liability for Data Security Breach. The provisions of this section are subject to the limitation on GeoCivix liability set forth in Section 4, but only to the extent that a breach of this section results from an unauthorized third party using illicit means to access the Services or Technology. A breach of this section that results from access to the Services or our Technology by current or former personnel or any subcontractors or providers, shall not be subject to the limitation on GeoCivix liability set forth in Section 4.

23. General Skills and Knowledge. Notwithstanding anything to the contrary in this Agreement, Customer agrees that GeoCivix is not prohibited from utilizing any skills or knowledge of a general nature acquired during the course of providing

the Services, including information publicly known or available or that could reasonably be acquired in similar work performed for another customer of GeoCivix.

24. Customer Representations and Warranties.

24.1 Customer represents and warrants that (i) the performance of its obligations and use of the Services (by Customer and its Licensed Users) will not violate any applicable laws, or regulations, including without limitation any and all laws and regulations regarding the transfer of personal information of residents of the European Union outside the European Union, or (ii) cause a breach of any agreements with any third parties or unreasonably interfere with the use by other GeoCivix customers of GeoCivix services.

24.2 Customer acknowledges that (i) GeoCivix does not monitor the content of the information passing through the Services for purposes of verifying accuracy or legal compliance, and (ii) Customer will use commercially reasonable efforts to ensure that the information it and its Licensed Users transmit thereby complies with all applicable laws and regulations, whether now in existence or hereafter enacted and in force.

24.3 In the event of any breach by Customer of any of the foregoing representations or warranties, in addition to any other remedies available at law or in equity, GeoCivix will have the right to suspend immediately any Services if deemed reasonably necessary by GeoCivix to prevent any harm to GeoCivix and its business. GeoCivix will provide notice to Customer and an opportunity to cure, if practicable, depending on the nature of the breach. Once cured, GeoCivix will promptly restore the Services.

25. Representations and Warranties. GeoCivix and idtPlans each represent and warrant that (i) it has the legal right to enter into this Agreement and perform its obligations hereunder, and (ii) the performance of its obligations and delivery of the Services to Customer will not violate any applicable laws or regulations of the United States or cause a breach of any agreements between GeoCivix, idtPlans, and any third parties. In the event of a breach by GeoCivix or idtPlans of the foregoing warranties, Customer's sole remedy is termination of this Agreement upon written notice to GeoCivix.

26. Limited Warranty. GeoCivix represents and warrants that the Services will: (i) conform to all material operational features as described in the applicable Service Schedule, and (ii) be free of errors and defects that materially affect the performance of such features (**Limited Warranty**), provided that Customer notifies idtPlans of any non-conformity, error, or defect. Customer's sole and exclusive remedy for breach of this Limited Warranty shall be the prompt correction of non-conforming Services at GeoCivix expense.

27. Warranty Disclaimers. EXCEPT FOR THE LIMITED WARRANTY PROVIDED ABOVE, NEITHER GEOCIVIX, IDTPLANS, NOR ANY OF ITS OR THEIR SUPPLIERS OR RESELLERS MAKES ANY WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, AND GEOCIVIX, IDTPLANS, AND ITS OR THEIR SUPPLIERS SPECIFICALLY DISCLAIM THE IMPLIED WARRANTIES OF TITLE, NON-INFRINGEMENT, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, SYSTEM INTEGRATION, AND DATA ACCURACY. SOME STATES DO NOT ALLOW DISCLAIMERS OF IMPLIED WARRANTIES, SO THE ABOVE LIMITATION MAY NOT APPLY. CUSTOMER ACKNOWLEDGES THAT NO REPRESENTATIONS OTHER THAN THOSE CONTAINED IN THIS AGREEMENT HAVE BEEN MADE RESPECTING THE SERVICE, AND THAT CUSTOMER HAS NOT RELIED ON ANY REPRESENTATION NOT EXPRESSLY SET OUT IN THIS AGREEMENT. GEOCIVIX DOES NOT WARRANT THAT THE SERVICES, TECHNOLOGY, OR SITE WILL MEET CUSTOMER'S REQUIREMENTS, THAT THE SERVICES, TECHNOLOGY, OR SITE WILL OPERATE IN THE COMBINATIONS WHICH CUSTOMER MAY SELECT FOR USE, OR THAT THE OPERATION OF THE SERVICES OR SITE WILL BE UNINTERRUPTED, OR ERROR-FREE. WE DO NOT WARRANT THAT THE SERVICES WILL BE UNINTERRUPTED, ERROR-FREE, OR 100% SECURE. FURTHER, CUSTOMER ACKNOWLEDGES AND AGREES THAT THAT GEOCIVIX HAS NO CONTROL OVER THE INTERNET, AND THAT GEOCIVIX IS NOT LIABLE FOR THE DISCONTINUANCE OF OPERATION OF ANY PORTION OF THE INTERNET OR POSSIBLE REGULATION OF THE INTERNET WHICH MIGHT RESTRICT OR PROHIBIT THE OPERATION OF THE SERVICES.

28. Disclaimer of Actions of Third Parties. GeoCivix does not and cannot control the flow of data to or from the Technology and other portions of the Internet. Such flow of data depends on the performance of Internet services provided or controlled by third parties. At times, actions, or inactions of such third parties can impair or disrupt customer's connections to the Internet (or portions thereof). Although GeoCivix will use commercially reasonable efforts to take all actions it deems appropriate to remedy and avoid such events, GeoCivix cannot guarantee that such events will not occur. GEOCIVIX

DISCLAIMS ANY AND ALL LIABILITY RESULTING FROM OR RELATED TO THE PERFORMANCE OR NON-PERFORMANCE OF INTERNET SERVICES PROVIDED OR CONTROLLED BY THIRD PARTIES WHICH ARE NOT GEOCIVIX SUBCONTRACTORS.

29. Intellectual Property Indemnity. Except for third party software (including without limitation open source software), either GeoCivix or idtPlans (the **Indemnifying Party**) will indemnify, defend and hold harmless Customer and its Affiliates from and against any lawsuit, liabilities, loss, cost or expense arising out of a third-party claim made against Customer that the Technology or Services infringe on any U.S. intellectual property right of a third party; provided, however, that the Indemnifying Party is notified in writing of such claim promptly after such claim is made upon Customer. The Indemnifying Party shall have the right to control any defense of the claim. In no event shall Customer settle any such claim without the Indemnifying Party's prior written approval. The Indemnifying Party shall have no liability or obligation if the claim arises from (i) any alteration or modification to the Technology or Services other than by the Indemnifying Party, (ii) any combination of the Technology or Services by Customer with other programs or data not furnished by the Indemnifying Party, or (iii) any use by Customer of the Technology or Services that is prohibited by this Agreement or otherwise outside the scope of use for which the Technology or Services are intended. For purposes of this Agreement, the Indemnifying Party will be GeoCivix except as to a claim related to the idtPlans Technology, in which case idtPlans will be the Indemnifying Party.

30. Options for Infringement Claims. If any party is enjoined from using the Technology, or if GeoCivix or idtPlans believe that the Technology may become the subject of a claim of intellectual property infringement, GeoCivix and/or idtPlans, at their option and expense, may: (i) procure the right for Customer to continue to use the Services; (ii) replace or modify the Technology so as to make it non-infringing; provided, however, that the Services continue to conform to the descriptions and/or specifications provided in the applicable Service Schedule; or (iii) terminate this Agreement, in which case GeoCivix shall refund to Customer any and all fees paid in advance by Customer for those Services or Technology not provided and provide, at Customer's request and free of charge, the Customer Data in a database document format. This section and the preceding section set forth the entire liability of GeoCivix and/or idtPlans to Customer for any infringement by the Technology or Services of any intellectual property right of any third party. Notwithstanding the foregoing, this section does not apply to third party software including without limitation open-source software.

31. Disclaimer of Incidental and Consequential Damages. EXCEPT FOR INDEMNITY OBLIGATIONS EXPRESSLY PROVIDED HEREIN AND ANY VIOLATION OF CONFIDENTIALITY OBLIGATIONS, IN NO EVENT SHALL ANY PARTY AND/OR ITS LICENSORS BE LIABLE TO ANYONE FOR ANY INDIRECT, PUNITIVE, SPECIAL, EXEMPLARY, INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING LOSS OF DATA AND/OR UNAUTHORIZED ACCESS OR ACQUISITION OF DATA, REVENUE, PROFITS, USE OR OTHER ECONOMIC ADVANTAGE) ARISING OUT OF, OR IN ANY WAY CONNECTED WITH THE SERVICES, INCLUDING WITHOUT LIMITATION THE USE OR INABILITY TO USE THE SERVICES, OR FOR ANY CONTENT OBTAINED FROM OR THROUGH THE SERVICES OR THIS SITE, ANY INTERRUPTION, INACCURACY, ERROR OR OMISSION, REGARDLESS OF CAUSE, EVEN IF THE PARTY FROM WHICH DAMAGES ARE BEING SOUGHT OR SUCH PARTY'S LICENSORS HAVE BEEN PREVIOUSLY ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

32. Liability Cap. Except for the indemnity and confidentiality obligations provided herein, GeoCivix's aggregate liability, if any, including liability arising out of contract, negligence, strict liability in tort or warranty, or otherwise, shall not exceed 25% of annual renewal fees payable by Customer for the one (1) billing period immediately preceding the claim for such liability.

33. Insurance Requirements. GeoCivix agrees to keep in full force and effect during the term of this Agreement: (i) comprehensive general liability insurance in an amount not less than one million dollars ($1 million) per occurrence for bodily injury and property damage, (ii) Automobile liability insurance properly safeguarding Contractor against liabilities for death, personal injury, and property damage arising out of the use of hired, non-owned automobiles in the aggregate amount of one million dollars ($1 million) and (iii) workers' compensation insurance in an amount not less than that required by applicable law. GeoCivix will cause its insurance provider(s) to name Customer as an additional insured and, upon request by Customer, deliver to Customer certificates of insurance which evidence the minimum levels of insurance set forth above and notify Customer in writing of the effective date thereof.

34. Term of Agreement. The initial term of this Agreement shall commence as of the Effective Date hereof and shall continue as described in the Service Schedule. The initial term hereof shall automatically renew for successive one (1) year terms unless GeoCivix or Customer notifies the other in writing not less than sixty (60) days prior to the expiration of the current term of its intention not to renew, or fails to timely sign a quote stating the Renewal Rate or make payment as described in Section 12.6. Both the initial term and any renewal terms are subject to earlier termination as otherwise provided herein. Either GeoCivix or Customer may choose not to renew this Agreement without cause for any reason.

35. Automatic Termination. Unless GeoCivix promptly after discovery of the relevant facts notifies Customer to the contrary in writing, this Agreement and all Service Schedules will terminate immediately without notice upon the institution of insolvency, bankruptcy, or similar proceedings by or against GeoCivix, any assignment or attempted assignment by GeoCivix for the benefit of creditors, or any appointment, or application for such appointment, of a receiver for GeoCivix.

36. Termination For Cause. If any party fails to comply with any of the material terms and conditions of this Agreement or Service Schedule, including without limitation the payment of any subscription license fee or reimbursement due and payable to GeoCivix under this Agreement, the non-defaulting party may terminate this Agreement and/or any or all Service Schedules and any and all license rights upon fifteen (15) days' written notice to the defaulting party specifying any such breach, unless within the period of such notice, all breaches specified therein shall have been remedied.

37. Termination by GeoCivix for End of Life. GeoCivix intends to continue to provide and support the Services for so long as Customer renews in accordance with the applicable Service Schedule; provided, however, if, GeoCivix determines in its sole discretion that it is no longer feasible to support the Services, GeoCivix may terminate this Agreement for end of life at any time by providing one hundred eighty (180) days written notice to Customer.

38. Return of Materials. Within ten (10) days of the expiration or termination of any license under any Service Schedule, Customer shall return to GeoCivix any materials provided by GeoCivix.

39. Transition Services. If Customer is current in all payments due to GeoCivix at the time of expiration or termination hereof, GeoCivix shall provide to Customer its Customer Data in a standard database document format readily available to GeoCivix at no additional charge. If Customer requests the Customer Data in a non-standard format, Customer shall pay to GeoCivix a reasonable fee for technical services as determined by GeoCivix.

40. Notices. Any notice or communication required or permitted to be given hereunder may be delivered by hand, deposited with an overnight courier, sent by email or facsimile (provided delivery is confirmed), or U.S. Mail (registered or certified only), return receipt requested, in each case to the address set forth on the initial page hereof or at such other addresses as shall be designated in writing by any party to another in accordance with this section. Such notice will be deemed to be given when received.

41. Continuing Obligations. The following obligations shall survive the expiration or termination hereof and the distribution grace period provided above: (i) any and all warranty disclaimers, limitations of liability and indemnities granted by any party herein, (iv) any covenant granted herein for the purpose of determining ownership of, or protecting, the Proprietary Rights, including without limitation, the Confidential Information of any party, or any remedy for breach thereof, and (v) the payment of taxes, duties, or any money to GeoCivix hereunder.

42. U.S. Government End-Users. The Technology and the idtPlans Technology incorporated therein, the Site, and the Services all consist of commercial items, as that term is defined in 48 C.F.R. 2.101 (Oct. 1995), consisting of commercial computer software and commercial computer software documentation, as such terms are used in 48 C.F.R. 12.212 (Sept. 1995). Consistent with 48 C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4 (June 1995), all U.S. Government end users of this site acquire only those rights set forth herein.

43. Miscellaneous. This Agreement will be governed by and construed in accordance with the laws of Customer's state of domicile. This Agreement may be modified only by a written agreement signed by the parties. The failure of any party to enforce at any time any of the provisions hereof shall not be a waiver of such provision, or any other provision, or of the right of such party thereafter to enforce any provision hereof. If any provision of this Agreement is declared invalid or unenforceable, such provision shall be deemed modified to the extent necessary and possible to render it valid and

enforceable. In any event, the unenforceability or invalidity of any provision shall not affect any other provision of this Agreement, and this Agreement shall continue in full force and effect, and be construed and enforced, as if such provision had not been included, or had been modified as above provided, as the case may be.

SOO Capital Projects Permitting Software

In the following sections place an X on one of the four options. Only one answer per question, no multi-select. Every question needs to be answered.

		Available Today (production ready)	On the Roadmap	Available through Third-Party Integration	Not feasible
1	**Fundamental Technical Objectives**				
1.1	The system should provide online data access and information entry capabilities to permitees	X			
1.2	The system should provide the capability to upload, store and review large submittal drawings	X			
1.3	The system should provide the capability to create, delete and modify existing workflows	X			
1.4	The system should provide the capability to track design review comments by permit or PRA number	X			
1.5	The system should provide a management utility for permit and PRA statuses	X			
1.6	The system should provide a reporting utility for permit and PRA statuses	X			
1.7	The system should provide cost accounting utilities and invoice tracking features for permitees	X			
1.8	The system should display similar instructions as compared to current MTS ROW Webpage	X			
1.9	The system should provide access to all supplementary documents required for ROW permitting	X			
1.10	The system should be account based	X			
1.11	The system should allow the upload of insurance data through common technical file formats	X			
1.12	The system should allow permitee to upload "other" documents that fit common technical file formats	X			
1.13	The system should be collaborative in nature	X			
1.14	The system should allow real time approval (Internal/External)	X			
1.15	The system should allow markup, measurement, overlay, secure stamping and commenting tools	X			
1.16	The system should allow use of tools described in 1.15 to be collaborative, embedded, integrated for real time use	X			
1.17	The system should allow use of tools described in 1.15 to be available for use by various (internal/external users) at the same time	X			
1.18	The system should integrate with existing MTS technology like SAP, M365, SQL, Azure, PowerBI, etc.	X			

1.19	The system should communicate insurance expiration warnings to stakeholders	X			
1.20	The system should maintain tracking and version control	X			
1.21	The system should maintain event log records and audit trails	X			
1.22	The system should maintain rollback capability	X			
1.23	The system should maintain an easily searchable database with full text search ability and filter ability	X			
1.24	The system should leverage Optical Character Recognition (OCR); data extraction of electronic document characters, digitally scanning or rendering plan sets.			X	
1.25	The system should leverage Metadata Support; automated metadata and tagging driven by an AI engine.				X
2	**Basic Setup**				
2.1	Setup should allow flexibility to create company specific named locations	X			
2.2	Setup should facilitate creation of new users and assignment of roles	X			
2.3	Setup should allow editing, deleting, and updating user information.	X			
2.4	System should also allow setting up basic user preferred configurations	X			
2.5	Setup should allow management of administrative tasks	X			
2.6	Setup should allow access and administrative views into permitee accounts	X			
2.7	Setup should allow for user workspace or dashboard to be customizable and configurable on the fly	X			
2.8	Setup should allow user workspace or dashboard to have various filter capabilities for easily parsing data	X			
2.9	Setup should allow MTS to configure business rules and workflows	X			
2.10	Setup should allow MTS to configure documentation for repetitive use	X			
2.11	Setup should indicate workflow acceptance and approval with green and red checkboxes	X			
2.12	Setup should include workflow option to indicate if real estate agreements are required	X			
2.13	Setup should include workflow options that allow MTS ROW staff to determine internal and external stakeholder review requirements	X			
2.14	Setup should allow MTS to configure detailed reporting of PRA status	X			
3	**User Management**				

3.1	System should allow the functionality to create, view, update and delete users.	X			
3.2	System should allow assignment of different roles to the system users.	X			
3.3	System employs user access control to prevent access to accounts	X			
3.4	System should allow users to login to the system after required authentication.	X			
3.5	System should be able to limit the user privileges based on the user role and assigned group in the application.	X			
3.6	A logged in user should be able to see his/her personal data and assigned role	X			
4	**Payments**				
4.1	System should accept online payments from Credit Cards	X			
4.2	System should accept online payments from Debit Cards	X			
4.3	System should accept online payments in other formats like Apple Pay, Google Pay, ACH, PayPal, Cash App, Venmo, Square, Zelle, etc.				X
4.4	System should communicate receipts of payment automatically to customer and ROW	X			
4.5	System should organize payments with database links to accounts for organized record keeping	X			
4.6	System should meet Payment Card Industry Data Security Standard (PCI-DSS)	X			
5	**Geo Location**				
5.1	System should provide capability to understand GEO tagging and file location data	X			
5.2	System should communicate to operator where an image was captured or the location data is pointing	X			
5.3	System should integrate with standard ArcGIS, Esri systems and GPS data	X			
5.4	System should offer store and forward technology for areas with limited reception	X			
6	**Mobile App and Web App Integration**				
6.1	Mobile Application should require authentication from a user before he/she can use the application.	X			
6.2	Mobile App should allow the users to add/update their profile information which may include Picture, Password and Signature. The signature provided in user profile section should later be displayed on different reports wherever applicable	X			

6.3	Mobile Application should show data in accordance with the role of the logged in user.	X			
6.4	Mobile app should have the capability to work in both Online and Offline modes, whereby online mode is defined as connectivity to the server is available for mobile app. On the other hand, offline mode is defined when server/internet connectivity is not available.	X			
6.5	Mobile app should allow technical support user to add, update and delete server information data.	X			
6.6	Mobile app should support multilingual operation. It should allow the user to select one of the desired language options.	X			
6.7	Mobile application should also show assets in geographical map mode where markers or icons shall indicate asset locations on the map.	X			
7	**Technical Management and Security**				
7.1	Data encryption for data in flight and for data at rest	X			
7.2	User and Entity Based Behavioral Analytics (UEBA)	X			
7.3	99.999% availability	X			
7.4	Disaster Recovery and data protection	X			
7.5	System health dashboard with real-time status on cloud infrastructure and application health down to the service level	X			
7.6	Mitigations for current OWASP Top ten (10) Web Application Security Risks	X			
7.7	Single Sign-On (SSO) using Azure Active Directory (AD) as the identity provide (IDP). Security Assertion Markup Language (SAML) 2.0 or OpenID Connect (OIDC) 1.0/OAuth 2.0. Additionally Azure AD provisioning via SCIM (System for Cross-Domain Identity Management)	X			
7.8	Self-service on demand user and security audits	X			
7.9	Cloud threat detection service with easy to read security logs and reports	X			
7.10	Security Information and Event Management (SIEM) integration	X			
7.11	Real time monitoring through Streaming Analytics	X			
7.12	Role based access control (RBAC) for users	X			
7.13	System will provide indefinite data retention	X			
7.14	System will provide secure file transfer of data as requested by SDMTS	X			
8	**Cloud-native ROW Application**				
8.1	The system is deployed and managed using Continuous Integration/Continuous Delivery pipelines (CI/CD)	X			

8.2	Separate Test, Training and Production cloud tenants/environments	X			
8.3	Self-service configuration management	X			
8.4	Change & Release Management	X			
8.5	Advanced release notice with release notes including new features and/or changes	X			
8.6	Product feature update and defect fix history	X			
8.7	Gated feature/change deployments with traffic control	X			
8.8	Cloud services will utilize a high availability service like Azure, GCP or AWS	X			
8.9	Offline capabilities, allowing the user to continue their work in a cached state that will automatically sync once their back online	X			
8.10	Offline capabilities, allowing users to use the application as intended without having access to network services	X			
9	**Business Intelligence Dashboards and Reporting**				
9.1	Integrates with or includes web-based business analytics and visualization tools that deliver dynamic reports and real-time dashboards of ROW data	X			
9.2	Integrate with SDMTS owned Microsoft Power BI and SQL Server Reporting environments	X			
9.3	Generating reports for the purpose of printing and/or exporting to PDF.	X			
9.4	Event and History that includes location history, logon and logoff times, etc.…	X			
9.5	Runs reports on permitee	X			
9.6	Runs reports on project location	X			
9.7	Runs reports on review type	X			
9.8	Runs reports on cancelled permits	X			
9.9	Runs reports permit expiration dates	X			
9.10	Runs report on action items	X			
9.11	Runs report on duration of initial application to issuance of permit	X			
9.12	Runs ad-hoc reports on underlying data sources	X			
9.13	The system will make our analytics data available for MTS use and access through a repository or data warehouse	X			
9.14	Historical GPS location information, the ability to playback or show locations of report creation	X			
10	**User Interface**				
10.1	Personalized Sticky graphical user interface (GUI)	X			
10.2	Multiscreen configuration, allowing users to easily multitask	X			
10.3	Responsive/flex/fluid application that adapts to any screen size	X			

10.4	Runs on a modern browser Chromium version 110 or higher for both Microsoft Edge and Google Chrome	X			
10.5	Progressive Web App (PWA) support providing a native application experience	X			
10.6	Active application handoff experience between clients (such as transition from workstation to mobile device or transition from console to laptop, etc.)	X			
10.7	Basic printing capabilities.	X			
10.8	Keyboard shortcut keys & customizability	X			
11	**Training and Documentation**				
11.1	User guides	X			
11.2	Curriculum and training materials (files, videos etc.),	X			
11.3	Onsite and virtual training options	X			
12	**Support**				
12.1	Dedicated Support staff including Help Desk with hotline to speak with someone immediately for critical issues	X			
12.2	Online Portal to manage service requests and other support related content	X			
12.3	Service request severity levels and the escalation process	X			
13	**Forms**				
13.1	The system meets all of the requirements to support attachment 1	X			
13.2	The system meets all of the requirements to support attachment 2	X			
13.3	The system meets all of the requirements to support attachment 3	X			
13.4	The system meets all of the requirements to support attachment 4	X			

Metropolitan Transit System

CLOUD PERMITTING SOFTWARE RFP - COST/PRICING FORM

MTS Doc. No. G2902.0-24

Proposer Name: GeoCivix

Description	Quantity	Unit of Measure	Unit Price	Total
Implementation				
1. ROW Implementation				
1.1 Custom Workflow Development	4	Workflow	$ 750.00	$ 3,000.00
1.2 Training	2	Lumpsum	$ 750.00	$ 1,500.00
1.3 Other (Permit Configuration)	2	Lumpsum	$ 250.00	$ 500.00
1.4 eCommerce Integration	1	Lumpsum	$ 10,000.00	$ 10,000.00
1.5 ArcGIS Integration	1	Lumpsum	$ 5,000.00	$ 5,000.00
1.6 Single Sign On Integration	1	Lumpsum	$ 2,000.00	$ 2,000.00
1.7 SAP Automated Custom Report Development	1	Lumpsum	$ 5,000.00	$ 5,000.00
			ROW Implementation Subtotal	$ 27,000.00
2. FHVA Implementation				
2.1 Custom Workflow Development (50% discount)	13	Workflow	$ 375.00	$ 4,875.00
2.2 Inspection Configuration (50% discount)	4	Lumpsum	$ 125.00	$ 500.00
2.3 Permit Configuration (50% discount)	5	Lumpsum	$ 125.00	$ 625.00
2.4 Training	1	Lumpsum	$ 750.00	$ 750.00
			FHVA Implementation Subtotal	$ 6,750.00
			Implementation Subtotal	**$ 33,750.00**
Licensing Year 1				
3. ROW Year 1				
3.1 Standard User Licensing Year 1	19	Users	$ 1,500.00	$ 28,500.00
3.2 Floating User License (pooled) Year 1	1	Group	$ 4,500.00	$ 4,500.00
3.3 Integration Maintenance Year 1	1	Lumpsum	$ 9,400.00	$ 9,400.00
3.4 QSA attested SAQ-D SP Year 1 (Not to Exceed)	1	NTE	$ -	$ -
			ROW Year 1 Subtotal	$ 42,400.00
4. FHVA Year 1				
4.1 Standard User Licensing Year 1	5	Users	$ 1,500.00	$ 7,500.00
			FHVA Year 1 Subtotal	$ 7,500.00
			Year 1 Subtotal	**$ 49,900.00**
Licensing Year 2				
5. ROW Year 2				
5.1 Standard User Licensing Year 2	19	Users	$ 1,500.00	$ 28,500.00
5.2 Floating User License (pooled) Year 2	1	Group	$ 4,500.00	$ 4,500.00
5.3 Integration Maintenance Year 2	1	Lumpsum	$ 9,400.00	$ 9,400.00
5.4 QSA attested SAQ-D SP Year 2 (Not to Exceed)	1	NTE	$ 15,000.00	$ 15,000.00
			ROW Year 2 Subtotal	$ 57,400.00
6. FHVA Year 2				
6.1 Standard User Licensing Year 2	5	Users	$ 1,500.00	$ 7,500.00
			FHVA Year 2 Subtotal	$ 7,500.00
			Year 2 Subtotal	**$ 64,900.00**

Licensing Year 3				
7. ROW Year 3				
7.1 Standard User Licensing Year 3	19	Users	$ 1,500.00	$ 28,500.00
7.2 Floating User License (pooled) Year 3	1	Group	$ 4,500.00	$ 4,500.00
7.3 Integration Maintenance Year 3	1	Lumpsum	$ 9,400.00	$ 9,400.00
7.4 QSA attested SAQ-D SP Year 3 (Not to Exceed)	1	NTE	$ 15,000.00	$ 15,000.00
			ROW Year 3 Subtotal	$ 57,400.00
8. FHVA Year 3				
8.1 Standard User Licensing Year 3	5	Users	$ 1,500.00	$ 7,500.00
			FHVA Year 3 Subtotal	$ 7,500.00
			Year 3 Subtotal	**$ 64,900.00**
			Base Years ROW Subtotal	$ 184,200.00
			Base Years FHVA Subtotal	$ 29,250.00
			Base Years Subtotal	**$ 213,450.00**
Licensing Year 4 (Option Year 1)				
9. ROW Year 4				
9.1 Standard User Licensing Year 4	19	Users	$ 1,500.00	$ 28,500.00
9.2 Floating User License (pooled) Year 4	1	Group	$ 4,500.00	$ 4,500.00
9.3 Integration Maintenance Year 4	1	Lumpsum	$ 9,400.00	$ 9,400.00
9.4 QSA attested SAQ-D SP Year 4 (Not to Exceed)	1	NTE	$ 15,000.00	$ 15,000.00
			ROW Year 4 Subtotal	$ 57,400.00
10. FHVA Year 4				
10.1 Standard User Licensing Year 4	5	Users	$ 1,500.00	$ 7,500.00
			FHVA Year 4 Subtotal	$ 7,500.00
			Year 4 Subtotal	**$ 64,900.00**
Licensing Year 5 (Option Year 2)				
11. ROW Year 5				
11.1 Standard User Licensing Year 5	19	Users	$ 1,500.00	$ 28,500.00
11.2 Floating User License (pooled) Year 5	1	Group	$ 4,500.00	$ 4,500.00
11.3 Integration Maintenance Year 5	1	Lumpsum	$ 9,400.00	$ 9,400.00
11.4 QSA attested SAQ-D SP Year 5 (Not to Exceed)	1	NTE	$ 15,000.00	$ 15,000.00
			ROW Year 5 Subtotal	$ 57,400.00
12. FHVA Year 5				
12.1 Standard User Licensing Year 5	5	Users	$ 1,500.00	$ 7,500.00
			FHVA Year 5 Subtotal	$ 7,500.00
			Year 5 Subtotal	**$ 64,900.00**
			Option Years ROW Subtotal	$ 114,800.00
			Option Years FHVA Subtotal	$ 15,000.00
			Option Years Subtotal	**$ 129,800.00**
			ROW Contract Total	$ 299,000.00
			FHVA Contract Total	$ 44,250.00
			Grand Total	**$ 343,250.00**

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 9/4/2025

Agenda Item No. 22

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
Board of Directors

September 11, 2025

SUBJECT:

Fiscal Year (FY) 2026 Transportation Development Act (TDA) Claim

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors adopt Resolution Nos. 25-07 (in substantially the same format as Attachment A), 25-08 (in substantially the same format as Attachment B), and 25-09 (in substantially the same format as Attachment C) approving FY 2026 TDA Article 4.0, 4.5, and 8.0 claims allocating $127,968,234.00 in TDA revenues for MTS.

Budget Impact

The FY 2026 TDA claims would result in the approval of $127,968,234.00 in TDA funds for MTS to be utilized in the FY 2026 operating and capital budgets.

DISCUSSION:

TDA provides one-quarter percent of the state sales tax for operating and capital support of public transportation systems and non-motorized transportation projects. The San Diego Association of Governments (SANDAG), as the designated Regional Transportation Planning Agency (RTPA), is responsible for the allocation of TDA funds to the region's cities, the County, and transit operators. At its February 14, 2025, meeting, the SANDAG Board of Directors approved the San Diego County Auditor's estimate of $195,505,554.00 for the FY 2026 TDA apportionment.

A Master Memorandum of Understanding (MOU) exists between SANDAG, MTS, and the North County Transit District (NCTD) with respect to the functions and responsibilities transferred to SANDAG as a result of Senate Bill (SB) 1703 (Peace, 2003). Pursuant to the MOU, both transit agencies transfer TDA funding to SANDAG annually to pay for the administrative and planning functions that transferred to SANDAG as a result of the SB 1703 consolidation. The MOU is updated as circumstances change. For FY 2026, $2,800,807.00 in funding will remain with SANDAG for transferred administrative and planning functions.

TDA allocations are authorized under four separate articles of the law. Article 4 funds are used to provide general public transit services. Article 4.5 funds are designated for community transit services, and pursuant to SANDAG Board Policy No. 027, are allocated within the San Diego region to support paratransit services required by the Americans with Disabilities Act (ADA). Article 8 funds support specialized services such as express bus and ferry services.

A total of $127,968,234.00 is estimated to be allocated to MTS for FY 2026. This includes:

- $120,590,466.00 in TDA Article 4.0 claims
  - $93,160,584.00 of which will fund operating activities,
  - $27,429,882.00 will fund the capital improvement program;
- $6,414,097.00 in Article 4.5 claims to fund the MTS Access Paratransit services; and
- $963,671.00 in Article 8.0 claims to fund the ferry/commuter express services.

Actual revenue for MTS will be dependent on regional TDA sales tax receipts meeting the regional estimate, allowing MTS to receive up to the claimed amounts. If regional cash receipts do not meet the estimated totals, there is a reserve held by the County of San Diego to cover shortfalls, or in certain situations, MTS could receive less than these claimed amounts.

Therefore, staff recommend that the MTS Board of Directors adopt Resolution Nos. 25-07 (in substantially the same format as Attachment A), 25-08 (in substantially the same format as Attachment B), and 25-09 (in substantially the same format as Attachment C) approving FY 2026 TDA Article 4.0, 4.5, and 8.0 claims allocating $127,968,234.00 in TDA revenues for MTS.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachments: A. Resolution No. 25-07
B. Resolution No. 25-08
C. Resolution No. 25-09

San Diego Metropolitan Transit System
Authorizing Resolution

Resolution Number 25-07

Resolution Approving Fiscal Year 2026 (FY) Transportation Development Act, Article 4.0

WHEREAS, effective August 10, 2000, the San Diego Metropolitan Transit System (MTS) area consolidated Transportation Development Act (TDA) claim process provides that MTS will be responsible for submitting a single claim for each article of the TDA for all MTS operators; and

WHEREAS, consistent with the intent of consolidating all transit funding for MTS-area operators, the San Diego Association of Governments (SANDAG) approved the MTS FY 2026 TDA claim, and

WHEREAS, MTS and SANDAG Boards must approve any alternate use of said balances differing from that for which they were originally claimed; and

WHEREAS, MTS and SANDAG staffs have analyzed this amendment and found it to be warranted pursuant to Section 6659 of Title 21 of the California Code of Regulations (CCR);

NOW, THEREFORE, BE IT RESOLVED, DETERMINED, AND ORDERED that the MTS Board of Directors does hereby approve the FY 2026 TDA Article 4.0 MTS TDA claim of $120,590,466 $93,160,584 of the 4.0 TDA claim will be used for operating activities, and the remaining $27,429,882 will be used to fund capital.

PASSED AND ADOPTED by the Board of Directors this _____day of _____ 2025, 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:

_____
Office of the General Counsel
San Diego Metropolitan Transit System

San Diego Metropolitan Transit System
Authorizing Resolution

Resolution Number 25-08

Resolution Approving Fiscal Year (FY) 2026 Transportation Development Act, Article 4.5

WHEREAS, effective August 10, 2000, the San Diego Metropolitan Transit System (MTS) area consolidated Transportation Development Act (TDA) claim process provides that MTS will be responsible for submitting a single claim for each article of the TDA for all MTS operators; and

WHEREAS, consistent with the intent of consolidating all transit funding for MTS-area operators, the San Diego Association of Governments (SANDAG) approved the MTS FY 2026 TDA claim, and

WHEREAS, MTS and SANDAG Boards must approve any alternate use of said balances differing from that for which they were originally claimed; and

WHEREAS, MTS and SANDAG staffs have analyzed this amendment and found it to be warranted pursuant to Section 6659 of Title 21 of the California Code of Regulations (CCR);

NOW, THEREFORE, BE IT RESOLVED, DETERMINED, AND ORDERED that the MTS Board of Directors does hereby approve the FY 2026 TDA Article 4.5 MTS TDA claim of $6,414,097. The allocation will be used to fund the MTS Access Paratransit services.

PASSED AND ADOPTED by the Board of Directors this _____day of _____ 2025, 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:

_____
Office of the General Counsel
San Diego Metropolitan Transit System

San Diego Metropolitan Transit System
Authorizing Resolution

Resolution Number 25-09

Resolution Approving Fiscal Year (FY) 2026 Transportation Development Act, Article 8.0

WHEREAS, effective August 10, 2000, the San Diego Metropolitan Transit System (MTS) area consolidated Transportation Development Act (TDA) claim process provides that MTS will be responsible for submitting a single claim for each article of the TDA for all MTS operators; and

WHEREAS, consistent with the intent of consolidating all transit funding for MTS-area operators, the San Diego Association of Governments (SANDAG) approved the MTS FY 2026 TDA claim, and

WHEREAS, MTS and SANDAG Boards must approve any alternate use of said balances differing from that for which they were originally claimed; and

WHEREAS, MTS and SANDAG staffs have analyzed this amendment and found it to be warranted pursuant to Section 6659 of Title 21 of the California Code of Regulations (CCR);

NOW, THEREFORE, BE IT RESOLVED, DETERMINED, AND ORDERED that the MTS Board of Directors does hereby approve the FY 2026 TDA Article 8.0 MTS TDA claim of $963,671. The allocation will be used to fund the ferry/commuter express services.

PASSED AND ADOPTED by the Board of Directors this _____day of _____ 2025, 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:

_____
Office of the General Counsel
San Diego Metropolitan Transit System