Executive Committee Agenda

April 09, 2026

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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.

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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

April 09,2026

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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.
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	▶	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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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

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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

April 9, 2026 at 9:00 a.m.

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

The Executive Committee also services as the Audit Oversight Committee and Budget Development Committee

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 ~~March 19, 2026~~March 12, 2026 Executive Committee meeting Minutes.	Approve
	DISCUSSION ITEMS	
4.	**Fiscal Year (FY) 2027 Operating Budget Discussion (Gordon Meyer)** That the Executive Committee provide direction to staff on the FY 2027 Operating Budget.	Possible Action
5.	**Baltimore Junction and Euclid Avenue Planning Study (Heather Furey and Brent Boyd)**	Informational
6.	**E Street Affordable Component Transit-Oriented Development (TOD) Project (E St TOD Project) – Disposition and Development Agreement (Karen Landers)** Action would have the Executive Committee forward a recommendation to the San Diego Metropolitan Transit System (MTS) Board of Directors to: 1) Authorize the Chief Executive Officer to execute a Disposition and Development Agreement with Bayview Family Housing LP for the E St TOD Project (DDA); and 2) Authorize the Chief Executive Officer to take all actions necessary to fulfill MTS's obligations under the DDA, including, but not limited to, executing a Ground Lease and related regulatory agreements for the project.	Approve

7. **Real Estate and Joint Development Program Status Update (Sean Myott)** Informational

OTHER ITEMS

8. **Review of Draft April 16, 2026 MTS Board Agenda**

9. **Staff Communications and Committee Member Communications**

10. **Next Meeting Date: May 14, 2026**

11. **Adjournment**

MINUTES

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM

EXECUTIVE COMMITTEE

March 12, 2026

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

1. Roll Call

Chair Whitburn called the Executive Committee meeting to order at 9:09 a.m. A roll call sheet listing Executive Committee member attendance is attached as Attachment A.

2. Public Comment

David Rodger – Provided a verbal statement to the Board during the meeting. David expressed frustration about ongoing issues within the MTS system. He reported that most schedule monitors at Balboa Station were not functioning despite being previously reported. He also expressed frustration with unclear communication and lack of assistance during Orange Line construction, noting that signage and schedules were misleading. He commented on safety concerns at the Fifth Avenue Trolley Station and concluded by suggesting that MTS staff use public transit more frequently to better understand rider experiences.

3. Approval of Minutes

Vice Chair Goble moved to approve the minutes of the February 5, 2026, MTS Executive Committee meeting. Board Member Elo-Rivera seconded the motion, and the vote was 4 to 0 in favor with Board Member Fernandez, Board Member Dillard and Board Member Moreno absent.

DISCUSSION ITEMS

4. Fiscal Year (FY) 2026 Operating Budget Midyear Amendment (Gordon Meyer)

Gordon Meyer, MTS Manager of Financial Planning, presented on Fiscal Year (FY) 2026 Operating Budget Midyear Amendment. He discussed: Revenue assumptions for passenger levels, average fare, passenger revenue, and other revenue. Sales tax revenues, State Transit Assistance (STA), Senate Bill (SB) 125 and revenue summary. Expense assumptions overview, expense assumptions for personnel, outside services, purchased transportation, energy, risk management, other and expenses summary. Consolidated revenues less expenses, and staff recommendation.

Public Comment

There were no Public Comments

Committee Comment

Vice Chair Goble thanked the Chair and staff for the concise presentation and requested to revisit slide two. He asked for clarification on the recent softening in ridership, specifically whether the decline was occurring in bus or trolley services, and whether changes on the trolley side were due to fewer large events or station-related factors. Gordon Meyer explained that ridership targets were primarily being missed on the trolley side, while bus ridership was performing better than budget expectations. Sharon Cooney, MTS Chief Executive Officer,

(CEO), explained that the decline in ridership reflected broader national trends, particularly in border regions where concerns related to ICE activity had impacted travel behavior. She noted that economic pressures also contributed, as higher household expenses led to fewer discretionary trips. Additionally, she stated that unusual rainy weather had temporarily reduced ridership and that staff would continue monitoring the trend, noting it was consistent across major metropolitan areas. Vice Chair Goble asked whether the observed ridership softness was more pronounced in specific geographic areas, such as the South Bay compared to UCSD, or if the trend was consistent across regions. Ms. Cooney said staff had looked into it and found the drop in ridership was happening across the Trolley system, not just in specific areas.

Vice Chair Goble asked for clarification on slide nine regarding the structural deficit table. He noted the reduction in SB125 allocation from $10 million to $3 million and asked if this meant the funding was being spread over future years rather than reduced or lost if it is not used. Mr. Meyer confirmed that the funding was not being lost and was instead being extended into future years.

Vice Chair Goble asked about slide 16, noting the mention of a catch-up payment for two substations that had not yet been built. He questioned whether MTS was being billed for infrastructure that was not yet in use and asked for clarification. Mr. Meyer clarified that MTS was not being billed for unused infrastructure. He explained that the issue involved two substations that had been in use but were not billed for over three years due to a breakdown in communication between MTS and SDG&E during a repair process. Once the issue was identified and resolved, billing resumed, resulting in a one-time catch-up cost of approximately $1.8 million. Ms. Cooney added that SDG&E was required to recover costs from ratepayers for up to three years, which is why the catch-up amount totaled approximately $1.8 million.

Vice Chair Goble commented on CNG rates and expressed support for MTS's use of CNG buses, noting they were more cost-effective compared to hydrogen buses. He referenced higher fueling costs experienced by North County Transit and commended the bus team for their foresight.

Board Member Moreno thanked staff for the presentation and noted the information was daunting. She asked for clarification on whether there had been a 6.5% decrease in ridership. After reviewing the budget assumptions, she clarified that the 6.5% reflected projected growth that was not achieved. She then asked whether that projection had been based on prior ridership trends or if it had been overly ambitious. Mr. Meyer clarified that ridership was averaging about 1.3% below the previous year. He explained that projections had been based on continued growth trends seen in prior years, including stronger gains in FY25, with expectations that growth would gradually slow. However, he noted that forecasts did not anticipate ridership flattening in FY26. Board Member Moreno sought confirmation that ridership had declined by approximately 1% compared to the previous year and asked for the specific figures. Mr. Meyer clarified that while ridership this year was slightly below last year, the previous year had experienced significant growth of approximately 6–7% compared to FY24. Board Member Moreno acknowledged the prior year's 7% ridership growth and requested

additional data regarding trends in border regions, asking if comparative information from other large transit systems could be provided.

Board Member Moreno also agreed with comments supporting CNG, noting industry trends shifting toward electrification, and commended staff for diversifying energy strategies. She then asked for clarification on the TDA reserve at the county level and inquired about the amount available. Mike Thompson explained that the TDA reserve was typically around 5% of projected cash receipts, estimating it to be approximately $20 million. He noted that this amount was shared between MTS and North County Transit and was based on expected revenue requirements. Board Member Moreno acknowledged that the approximately $20 million TDA reserve was shared between MTS and North County Transit and asked whether those funds could be used if needed. Mr. Thompson explained that MTS could request to use the TDA reserve, but it is generally expected to be replenished and not remain below the 5% threshold for long. He noted that in times of financial strain, the reserve has been used when cash receipts fall short of projections, with a replenishment process reviewed annually by SANDAG and the county. Board Member Moreno stated that, given the structural deficit, MTS may be close to requesting use of the TDA reserve. She asked for confirmation that there was approximately a $2 million difference between the amended and projected budget and noted difficulty reconciling the figures, requesting a follow-up briefing. She then asked if the item was actionable and expressed willingness to make a motion to approve staff's recommendation. Mr. Meyer confirmed that the approximately $2 million difference related to the structural deficit was correct.

Board Member Elo-Rivera thanked the Chair and staff for the presentation and asked whether there were any strategies in place to boost ridership or offset the current shortfalls. Ms. Cooney explained that staff were planning several ridership campaigns to launch in the spring, including efforts tied to rising gas prices to highlight transit as a more affordable option. She added that targeted campaigns would also focus on increasing ridership along the Orange Line, particularly in the La Mesa area. Board Member Elo-Rivera asked whether ridership campaigns addressed concerns about safety and rider fears, particularly if those concerns were contributing to lower-than-expected ridership. He inquired about what actions were being taken to reassure riders and improve their sense of safety on the system. Ms. Cooney explained that staff were working with the County on a "Know Your Rights" signage and outreach campaign. She added that transit enforcement presence was being emphasized to help riders feel safe and supported, noting that staff continued to monitor activity across the system to ensure rider safety. Board Member Elo-Rivera expressed concern that, while there may not be formal reports of immigration activity on the system, there had been reports of immigration enforcement activity near transit areas. He noted that these concerns could still impact riders.

Board Member Elo-Rivera then asked staff to explain the difference between freezing positions and eliminating positions, and when discussions would shift from temporary hiring freezes to permanent position eliminations in response to the structural deficit. Mr. Thompson explained that staff planned to continue freezing positions through the ballot measure period, after which decisions would be made on whether to eliminate or reinstate those positions based on funding

outcomes. He noted that frozen positions carried no associated salary costs, providing short-term operating budget savings, while preserving flexibility to restore positions later if needed. Board Member Elo-Rivera asked what impact the hiring freeze would have on existing workers. Mr. Thompson explained that the frozen positions were already vacant, so there was no direct impact on current employees, as the roles were simply not being filled. Board Member Elo-Rivera clarified that he was not referring to job losses but asked whether unfilled positions were placing additional workload on existing employees, potentially stretching staff thinner or impacting time off and breaks. Ms. Cooney explained that in some cases, frozen positions had not increased workload due to operational efficiencies. She cited the revenue department as an example, where reduced cash handling from the PRONTO system allowed staff to eliminate unnecessary tasks, such as weekend cash counting, without overburdening employees. Board Member Elo-Rivera asked whether similar evaluations of workload and efficiency were being conducted across all levels of the organization. Ms. Cooney explained that in some cases, such as a frozen staff attorney position, responsibilities had been redistributed by relying more on outside counsel while existing staff managed remaining workloads as needed.

Board Member Elo-Rivera emphasized the importance of evaluating whether positions continued to serve their original purpose and asked if similar assessments were being conducted across all levels of the organization, including supervisory and management roles, to ensure efficiency. Ms. Cooney stated that staff were carefully evaluating positions and staffing levels across the organization and that she personally reviewed and approved all hiring decisions, particularly on the management and administrative side, to determine whether roles could remain frozen. She noted that no large-scale staff reductions were being proposed at this time.

Action Taken

Board Member Moreno moved to forward a recommendation to the MTS Board of Directors to enact Resolution NO. 26-3 amending FY 2026 operating budget for MTS, San Diego Transit Corporation (SDTC), San Diego Trolley, Inc. (SDTI), MTS Contract Services, and the Coronado Ferry. Chair Whitburn seconded the motion, and the vote was 5 to 0 in favor with Board Member Fernandez and Board Member Dillard, absent.

5. Fiscal Year (FY) 2027 Operating Budget (Gordon Meyer)

Gordon Meyer, MTS Manager of Financial Planning, presented on Fiscal Year (FY) 2027 Operating Budget. He presented on: Revenue assumptions for passenger revenue and subsidy, service levels, expense assumptions, takeaways and Budget Development calendar.

Public Comment

Ken – Provided a verbal statement to the Board during the meeting. Ken expressed frustration with the potential fare increase for FY27, noting that Los Angeles Metro fares were lower despite operating a larger system. He shared a personal example of low-cost travel in Los Angeles and asked why San Diego fares were higher.

Committee Comment

Board Member Elo-Rivera noted that the discussion connected to earlier comments regarding fares and upcoming agenda items. He asked for an update on non-fare efforts, specifically whether there were any emerging opportunities not yet included in the presentation that would bring in revenue in FY27. Mr. Meyer stated that a full forecast for non-fare revenue, including advertising and energy credits, had not yet been completed. He noted that the marketing team is actively exploring additional opportunities, specific details were not yet available but would be included in upcoming budget presentations.

Board Member Elo-Rivera asked for an update on discussions with the San Diego Community Power regarding potential opportunities for revenue generation or cost offsets. Mr. Meyer mentioned that staff had recently met with San Diego Community Power to begin discussions and establish a working relationship. He explained that purchasing service with them would not bring any significant savings to MTS compared to current arrangements with Calpine, but they had identified potential grant opportunities. He added that multiple departments, including finance and the Zero Emission Bus (ZEB) sustainability manager were involved in those discussions. Board Member Elo-Rivera was pleased to hear of the ongoing discussion with San Diego Community Power, noting that while direct energy purchasing may not yield significant savings, other opportunities for revenue generation or cost reduction may arise. He requested continued updates on progress in these areas.

Action Taken

No action taken. Informational item only.

6. Fiscal Year (FY) 2027 Capital Improvement Program (CIP) (Mike Thompson)

Mike Thompson, MTS Deputy Financial Officer, Eli Belknap, MTS Senio Project Manager and Mike Wygant, MTS Chief Operating Officer (COO) Bus, presented on Fiscal Year (FY) 2027 Capital Improvement Program (CIP). They presented on: Financial sustainability, innovative clean transit policy history, ZEB cost summary for transition. CIP open projects for facility and construction, rail infrastructure, capital funding levels proposed FY 2027, and development of the FY 2027 CIP guiding principles. FY 2027-31 CIP unconstrained project list, Capital project summary, FY 2027 CIP project highlights for bus revenue vehicles, and rail revenue vehicles. FY 2027 CIP facility and construction projects, rail infrastructure projects, and other equipment and installation projects. FY 2027 CIP five-year forecast for State of Good Repair (SGR), innovative clean transit, other initiatives, five-year summary and staff recommendation.

Public Comment

Ken – Provided a verbal statement to the Board during the meeting. Ken asked if MTS had considered incorporating residential, commercial, or retail development at the Kearny Mesa Transit Center similar to other transit developments. He questioned MTS’s approach to generating revenue through property management and raised concerns about higher transit fares in San Diego compared to Los Angeles.

Committee Comment

Board Member Moreno thanked staff for the presentation and asked whether this type of overview was conducted annually. Mr. Thompson explained that staff provided a similar presentation each year starting with the FY 27 CIP, nothing that this year's version included additional details such as open projects, board direction highlights, and Innovative Clean Transit (ICT) status. Board Member Moreno again, thanked staff for the presentation, noting it was the most extensive information she had received. She expressed support for making this type of overview a regular practice, given changing conditions and capital priorities.

Board Member Moreno acknowledged the importance of maintaining a State of Good Repair (SGR) tied to funding requirements and asked for a breakdown of the CIP, specifically how much of the funding was allocated to ZEB initiatives. Mr. Thompson responded that of the $107 million planned for next year, approximately $5.6 million was allocated to ZEB projects. Board Member Moreno noted that the capital improvement program totaled approximately $236 million and asked whether the $72 million identified for preventative maintenance was considered part of the SGR. Mr. Thompson clarified that preventative maintenance is considered part of the SGR, but it is reflected in the operating budget rather than the capital budget. He explained that the federal funds can be used for both capital projects and preventative maintenance, noting that activities like maintaining buses support SGR even though they are not classified as capital projects.

Board Member Moreno suggested that for transparency it would be helpful to identify the members of the Capital Projects Review Committee (CPRC), she noted uncertainty about whether the committee included MTS staff or Board Members. Mr. Thompson clarified that the CPRC is made up of MTS and SANDAG staff. Board Member Moreno asked how the social equity listening study is utilized on the CIP. Sharon Cooney, MTS CEO, explained that there were ongoing projects, such as bus stop lighting program, which were incorporated into the CIP over time. Board Member Moreno suggested that the CPRC should align the recent equity listening tour with capital improvement priorities. She emphasized the importance of maintaining SGR while increasing transparency around the project selection. She requested additional information to better understand how projects were chosen and confirmed whether Attachment B reflected the projects funded by the $107 million allocation. Mr. Thompson explained that Attachment B included all submissions for the next 5 years and detailed what was considered for funding and Attachment C was a smaller subset showing only the funded items. He also explained that Attachment F includes what projects have already been funded and Attachment D is a 5-year forecast for the CIP, outlining anticipated revenue streams and the project requests over period. Board Member Moreno asked for clarification on attachment D, noting that she may have been reviewing a different attachment than the one Mr. Thompson had just described. Karen Landers, MTS General Counsel, explained that the attachment Board Member Moreno was reviewing was Attachment D to the Title VI Analysis.

Board Member Moreno congratulated staff on securing the Federal Transit Administration (FTA) grant for Buses and Bus Facilities Program, emphasizing that the award reflected the strength of the organization's work and encouraged continued pursuit of available grant opportunities.

She noted that Phase 2 outreach workshops had been held in several communities but asked for greater focus in District 8, particularly near the Blue Line stations such as San Ysidro and Iris Avenue, given their high ridership and recent declines in trolley use. Board Member Moreno also asked for increased in-person outreach and workshops in San Ysidro and Iris Avenue, citing the digital divide and importance of direct engagement. She also raised concerns about community-based organizations needing resources to support communication efforts and encouraged MTS to expand its direct outreach capacity. Board Member Moreno concluded by appreciating the transparency of the information presented and stating that additional communication and outreach would further benefit the public.

Vice Chair Goble thanked staff for the presentation and asked to revisit slide 5. He noted that the cost estimate had increased to $833 million from an earlier estimate of approximately $600 million and, citing uncertainties such as supply chain issues, labor costs, and tariffs, questioned how confident staff were in the current estimate and whether costs could rise further. Mr. Wygant explained that the estimates were correct and that the original $600 million figure represented the additional cost needed to complete the ICT transition if the agency remained on the CNG alternative fuel path. He mentioned that the figure was developed through a year-long analysis involving consultants, industry input, pilot buses and coordination with San Diego Gas & Electric. Mr. Wygant noted that the numbers were revised late the previous year to $833 million to account for inflation, unforeseen regulatory impacts, reduced bus suppliers, and significantly increased costs, explaining that inflation had far exceeded original projections.

Vice Chair Goble reference slide 21 and mentioned that it was helpful to know the useful life of CNG and Batter Electric Buses (BEB) was the same. He asked for clarification on the differences in ongoing maintenance costs between BEB and CNG Buses. Mr. Wygant explained that the FTA requires CNG and BEB's to meet the same minimum useful life. He explained that maintenance and operating costs were tracked by sub fleet and that BEB had saved some money overall since 2019, though month to month results have varied. Mr. Wygant noted that savings declines as BEB's aged and came off warranty because battery repairs were more expensive that CNG repairs. He added that low costs were helped by off-peak charging but warned that as the fleet expanded, peak-rates charging would likely increase costs.

Vice Chair Goble noted that some routes required buses with ranges beyond current battery electric limits, preventing full fleet conversion. He asked what portion of the system could realistically use BEB's, and what percent is currently BEB. Mr. Wygant explained that when the fleet transition began, the average daily route length was about 147 miles, with most routes well below that range. He stated that roughly 47% of daily routes could be served by first generation BEB's and that newer models, with increased range of about 180 miles. He noted that technological improvements had progressed unevenly and that remaining limitations included battery density and vehicle weight. Mr. Wygant added that staff is currently working with the state through the regulatory process to secure continued exemption that would allow for buses to operate at a slightly heavier weight for a longer period of time. He stated that approximately 61% are BEB's.

Vice Chair Goble directed staff to slide 22 and referenced the earlier cost discussion noting that expenses appeared to be continually increasing. He questioned whether the flat cost assumptions shown on slides 22 and 24 were realistic over the next four fiscal years or whether additional cost escalation estimates should be included to better reflect anticipated needs. Mr. Thompson explained that the fleet plan includes assumed inflationary costs for bus purchases. He stated that funding levers were intentionally smoothed to avoid spikes in years with more expensive bus replacement, such as 60-foot buses. He added that similar inflation assumptions were built into rail car costs and that the total projected amount was evenly spread access multiple years to maintain stable funding levels.

Action Taken

Chair Whitburn moved to recommend that the MTS Board of Directs 1) Approve the FY 2027 CIP with the estimated federal and nonfederal funding levels. As the federal appropriation figures are finalized and/or other project funding sources become available, allow the CEO to identify and adjust projects for the adjusted funding levels; 2) Recommend that the San Diego Association of Governments (SANDAG) Board of Directors approve the submittal of Federal Section 5307, 5337 and 5339 applications for the MTS FY 2027 CIP; and 3) Recommend that the SANDAG Board of Directors approve amendment number 16 of the 2027 Regional Transportation Improvement Program (RTIP) in accordance with the FY 2027 CIP recommendations. Vice Chair Goble seconded the motion, and the vote was 5 to 0 in favor with Board Member Fernandez, and Board Member Dillard absent.

7. Senate Bill (SB) 125 Allocation Package Revision (Mike Thompson)

Mike Thompson, MTS Chief Financial Officer, presented on Senate Bill (SB) 125 Allocation Package Revision. He presented on: SB 125 funding update, SB 125 revised allocation package, financial sustainability strategy, and staff recommendation.

Public Comment

There were no Public Comments

Committee Comment

There were no Committee Member Comments

Action Taken

Chair Whitburn moved to forward a recommendation to the Board of Directors to approve the revised SB 125 allocation package. Chair Whitburn seconded the motion, and the vote was 4 to 0 in favor with Board Member Fernandez, Board Member Dillard and Vice Chair Goble absent.

8. Fare Change Study Update (Mark Olson and Israel Maldonado)

Mark Olson, MTS Director of Marketing and Communications, and Israel Maldonado, MTS Director of Fare Technology and Operations presented on Fare Change Study Update. They presented on: Fare change study background, strategy for filling the gap, what does $23 Million Mean, Phase I Outreach recap, package development, drafting fare change proposals, fare

change proposals: High Level, Package A, Package B. Phase II engagement goals, Phase II outreach, Phase II online survey results, Phase II outreach and fare change study timeline.

Public Comment

Ken – Provided a verbal statement to the Board during the meeting. Ken stated that the exclusion of Los Angeles from the peer agency comparison was unreasonable and that LA Metro offered far broader coverage at lower fares. He questioned why MTS fares were significantly higher that those in Los Angeles, where fares were around $1.50 to $1.75.

Committee Comment

Board Member Elo-Rivera thanked the staff for the presentation and noted the challenge of balancing financial sustainability with rider affordability. He reiterated that fare increases should be the last resort. He asked for clarification on what the Board would be asked to decide in April. Mr. Olson explained that staff planned to return in April with a final fare package containing specific proposed numbers. He stated that the current discussion item was intended to gather Board member feedback, which would then inform a concrete recommendation for fare increases for the Board's consideration and approval. Board Member Elo-Rivera asked if at that time the Board will also be presented with a full assessment of all potential non-fare revenue opportunities. Mr. Olson stated that he does not believe it is currently on the April agenda, but can be added. Ms. Cooney added that the assessment of non-fare revenue opportunities could be included as part of the FY27 budget presentation scheduled in April. Board Member Elo-Rivera mentioned that it was very important to him to ensure that all possible non-fare revenue options were fully explored before asking riders to pay higher fares. He emphasized the need to confirm that other revenue sources had been maximized first. Board Member Elo-Rivera asked how staff was accounting for major upcoming events, such as the 2026 FIFA World Cup and the 2028 Summer Olympics, noting that while San Diego is not hosting them, it would likely see increased visitors and transit demand as a result. Ms. Cooney stated that staff had not yet developed budgets for those future events and explained that providing additional service for major events would come with added costs. She noted that service planning depended in part on whether the stadium station at Snapdragon would be permitted to remain open for the Olympic events, adding that there were indications the Olympic Committee might restrict rail access due to safety concerns. Ms. Cooney mentioned that staff had recently learned about this potential limitation, is participating in ongoing discussions, and would account for these factors when developing future budgets.

Board Member Elo-Rivera reiterated the importance of ensuring that all revenue options were fully leveraged before asking riders to pay more. He expressed concern that higher monthly pass costs disproportionately affected lower-income riders who could not afford to pay larger amounts upfront, even if the pass offered better value. Board Member Elo-Rivera warned against policies that effectively penalized people for being poor and asked whether alternatives such as a weekly pass, payment splitting or other options could be provided. He also requested clarification on whether these equity concerns were being addressed through the PRONTO program, emphasizing that he did not want low-income riders to end up paying more simply because they could not afford a $90 monthly pass all at once. Mr. Maldonado explained that

fare capping was specifically designed to address this concern by ensuring riders were not charged more than the monthly maximum. He explained that riders could load smaller amounts over time, such as $10 or $20, and the system would track their spending across the month. Mr. Maldonado added that public feedback indicated fare capping was a well-received and appreciated feature. Board Member Elo-Rivera agreed that fare capping helped equity concerns, noting that many low-income riders consistently paid more because they could not afford large upfront costs. He stressed that before supporting any fare increases, he needed confidence that all non-fare revenue options had been fully maximized, noting that ensuring equity for riders was a key obligation of the Board.

Vice Chair Goble asked for clarification that fare capping applied on a monthly basis, not just daily. He asked whether a senior rider would never pay more than $90 under the proposed scenario, even if the fare was paid incrementally in smaller amounts over time. Mr. Maldonado explained that fare capping could be confusing but offers significant benefits. Using a senior rider example, he stated that under Package A, once a rider's cumulative payments reached the $30 monthly cap, even if paid in smaller amounts over time, the system would stop charging additional fares for the rest of the month. Ms. Cooney added that fare capping could also be viewed through the day-pass scenario, explaining that if a senior rider chose to make all trips a single day each week, they would only be charged the daily fare each time and would never reach the $30 monthly cap. Mr. Maldonado clarified that fare capping worked in two layers: a daily cap and a monthly cap. He explained that once a rider reached the daily cap that amount was added to a running monthly total. When the rider's cumulative payments reached the monthly cap, they would no longer be charged for the remainder of the month.

Vice Chair Goble emphasized that price was only one component of overall value and suggested that fare increases could be offset by improvements in perceived value. He encouraged exploring options such as a loyalty or rewards program to help riders feel appreciated. He acknowledged that the agenda item focused on pricing but urged consideration of value-based strategies alongside any fare increase. Mr. Maldonado responded that staff was working on a customer rewards program designed to integrate with the fare system. He explained that it would function as a loyalty-based, program to incentivize ridership and improve the customer experience and noted that staff was coordinating with executive leadership to advance the effort. Vice Chair Goble supported exploring a rider loyalty program, noting that recognizing frequent users, similar to how Petco Park acknowledged season ticket holders, created a sense of value and appreciation. He emphasized that offering incentives could encourage ridership and help soften the impact of fare increases by giving riders tangible benefits in return.

Board Member Montgomery Steppe thanked staff for the presentation and asked how many people had been engaged overall in the outreach efforts related to fare increase in Package A and Package B. Mr. Olson responded that staff received over 700 responses through the online survey, approximately 80 participants attended in-person workshops, and an estimated 30 to 40 people were engaged at each transit center during outreach efforts. Board Member Montgomery Steppe asked for clarification on what a transit center engagement involved and whether it was

conducted in the same manner as the in-person workshop. Mr. Olson explained that outreach at transit centers was more informal than workshops, since riders were often on the go. He said staff briefly shared information, answered questions, and distributed flyers with QR codes linking to the online survey. Board Member Montgomery Steppe asked whether the engagement numbers from transit center outreach could potentially overlap with the online survey responses, resulting in duplicate counts. Mr. Olson responded that there was a possibility the transit center engagement numbers overlapped with the online surveys responses. Ms. Cooney clarified that Phase One outreach resulted in approximately 5,700 survey responses. Mr. Olson confirmed that Phase One did result in approximately 5,700 survey responses but clarified that Phase One did not include packages A and B.

Action Taken

No action taken. Informational item only.

OTHER ITEMS

9. Review of Draft March 19, 2026 Board Agenda

Ms. Cooney stated that the SB 125 allocation package revision could be placed on the consent agenda items unless there was a need for a full presentation similar to the one just provided. She added that if a full report was preferred, the item could be moved to a later Board agenda. Ms. Landers stated that the upcoming Board meeting would include two closed-sessions items that would require a quorum, though she did not expect them to be lengthy. She also noted that the COA agenda item was scheduled on the Board discussion agenda. Ms. Cooney stated that the Fiscal Year 2027 Operating Budget would likely not return to the upcoming Board meeting, noting that it would come back to the committee later for a more detailed review. She added that the fare change study update could also be moved to the April Board agenda. Chair Whitburn recommended keeping the item on the Board agenda while moving SB 125 to the consent calendar.

10. Other Staff and Committee Member Communications

There was no Other Staff Communications and Business discussion.

11. Next Meeting Date

The next Executive Committee meeting is scheduled for April 9, 2026, at 9:00 a.m.

12. Adjournment

The meeting was adjourned at 11:52 a.m.

/s/ Stephen Whitburn	/s/ Lucia Mansour
Chairperson	Clerk of the Board
San Diego Metropolitan Transit System	San Diego Metropolitan Transit System

Attachment: A. Roll Call Sheet

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
EXECUTIVE COMMITTEE

ROLL CALL

MEETING OF (DATE): March 12, 2026 CALL TO ORDER (TIME): 9:09 a.m.
RECESS: _____ RECONVENE: _____
CLOSED SESSION: _____ RECONVENE: _____
PUBLIC HEARING: _____ RECONVENE: _____
ORDINANCES ADOPTED: _____ ADJOURN: 11:52 a.m.

REPRESENTING	BOARD MEMBER		ALTERNATE		PRESENT (TIME ARRIVED)	ABSENT (TIME LEFT)
Chair	Whitburn	☒	No Alternate	☐	9:09 a.m.	11:52 a.m.
City of San Diego	Elo-Rivera	☒	Whitburn	☐	9:09 a.m.	11:52 a.m.
County of San Diego	Montgomery Steppe	☒	Aguirre	☐	9:09 a.m.	11:52 a.m.
East County	Dillard	☐	Hall	☐	ABSENT	ABSENT
SANDAG Transportation Committee	Moreno	☒	Fernandez	☐	9:09 a.m.	11:52 a.m.
South Bay	Fernandez	☐	Downey	☐	ABSENT	ABSENT
Vice Chair	Goble	☒	No Alternate	☐	9:09 a.m.	11:52 a.m.

SIGNED BY THE CLERK OF THE BOARD: /s/ Lucia Mansour

Agenda Item No. 04

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
EXECUTIVE COMMITTEE

April 9, 2026

SUBJECT:

Fiscal Year (FY) 2027 Operating Budget Discussion (Gordon Meyer)

RECOMMENDATION:

That the Executive Committee provide direction to staff on the FY 2027 Operating Budget.

Budget Impact

None at this time. Development of the FY 2027 Operating Budget is ongoing and revisions will be made based on continued financial analysis, data updates, and direction provided in discussions with the Executive Committee and Board. The FY 2027 Operating Budget must be adopted in advance of July 1, 2026 (the first day of Fiscal Year 2027).

DISCUSSION:

Fiscal Year 2027 Budget Process

The following is a recap of the FY 2027 budget process:

MTS uses a zero-based budgeting process that begins in January each year. In MTS's process, every budget line-item is reviewed and approved each year. Department managers complete budget templates in which they propose amounts for each line item, submitted with the appropriate supporting details for each assumption (in contrast, with a traditional historic budgeting process, managers only justify variances versus prior year budget; the assumption is that the baseline is automatically approved). Meetings are held with each department to validate their assumptions, review proposals versus existing spending trends, and review any new initiatives. This collaborative process results in the assumptions that are then presented to and reviewed by senior management at MTS, the Executive Committee, and ultimately the MTS Board.

On March 12, 2026 (Agenda Item (AI) 4), staff met with the Executive Committee and reviewed and recommended approval of the FY 2026 midyear operating budget amendment and the FY 2027 Capital Improvement Program (CIP). Staff also presented preliminary expense and revenue assumptions for the FY 2027 operating budget during this meeting.

On March 19, 2026 (AI 16 and 17), staff met with the Board of Directors. During this meeting, staff reviewed and received Board approval of the FY 2026 amended operating budget and the FY 2027 CIP.

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.

Since March 19, 2026, staff have been developing the FY 2027 operating budget. Today's agenda item will present an initial draft of the operating budget to the Executive Committee for review and comment. The same presentation, as amended by any direction or comments provided by the Executive Committee, would be presented to the Board on April 16, 2026. Alternatively, the Committee could direct staff to return to the Committee again in May, prior to bringing the item to the full Board.

The current schedule would have the Board hold a public hearing to formally adopt the FY 2027 operating budget at the Board meeting scheduled for May 21, 2026. The budget needs to be approved no later than July 1, 2027 (the first day of FY 2027).

Staff will continue to refine assumptions as updated information is presented prior to the May 21, 2026 public hearing. In particular, staff will finalize position tables, reflect feedback from the fare study in the passenger revenue forecast, finalize service levels, and refine forecasts for energy and service-related expenses.

Fiscal Year 2027 Operating Budget

The FY 2027 total budgeted revenue is projected at $480.9 million, and total expenses are projected at $480.9 million, resulting in a balanced budget for FY 2027. Attachments A and B detail the current draft of the proposed FY 2027 Operating Budget.

Fiscal Year 2027 Revenues

Attachment B summarizes the total operating and non-operating revenues in a schedule format. As indicated within the schedule, FY 2027 combined revenues total $480.9 million, an increase from the FY 2026 amended budget of $9.8 million (2.1%).

Operating Revenue

Operating revenue totals $116.5 million, an increase from the FY 2026 amended budget of $2.2 million (1.9%).

Passenger revenues are projected to increase by $2.2 million (2.7%) based on projected ridership of 83.1 million passengers and an average fare of $1.00. The ridership target represents 2.8% growth over the FY 2026 amended budget target. The average fare of $1.00 represents no change from the FY 2026 amended budget as this current draft does not reflect any impact from the fare study.

Other operating revenues are projected to increase by $12,000 in total.

Within other operating revenues, energy credit revenue is increasing $2.4 million (22.6%) primarily due to reflecting a full year of higher credit generation for Trolley traction power (due to Low Carbon Fuel Standard program change) as well as the projected sale of 60,000 banked credits.

Advertising revenue is projected to increase $922,000 (14.7%), primarily due to higher revenue generation from the Gaslamp digital billboard as well as a variety of new advertising initiatives being developed by the Marketing department.

Real-estate revenues are projected to increase $151,000 (3.2%), primarily due to significant increases in right-of-entry permit fees to fully recover permit processing costs. The increases above are mostly offset by a projected decrease in interest revenue of $4.0 million (-52.1%). Unrestricted cash balances are expected to decline over time as the remainder of the operating deficit reserve will be used by the end of FY 2026. Interest rates are projected at 3.4% for the year, down from 3.6% assumed in the FY 2026 amended budget.

Non-Operating Revenue

Non-operating revenue totals $364.3 million, an increase from the FY 2026 amended budget of $7.6 million (2.1%). Non-operating revenue includes both subsidy revenue and other revenue (reserves) as detailed in Attachment B.

Federal Transit Administration (FTA) funding is structured on a reimbursement basis (after expenses are incurred), and funds both the CIP and operating budgets. MTS's share of recurring federal revenue in the operating budget is expected to increase by $6.0 million (7.5%) from the FY 2026 amended budget due to increasing the preventive maintenance funds in the operating budget. Within federal revenues, the FY 2027 budget also reflects $500,000 in non-recurring discretionary grant revenue ($200,000 for canine security patrols and $300,000 for the Otay Mesa Planning Study). Overall federal funds are projected at $85.5 million in FY 2027, an increase of $6.1 million (7.7%) from the FY 2026 amended budget.

Regional sales tax revenues (Transportation Development Act (TDA) and TransNet) in the MTS operating budget are expected to increase by $32.9 million (18.0%) year over year for FY 2027, as a result of both sales tax growth and shifting an additional $25 million in TDA revenue from the capital budget to operations ($50 million in total TDA shifted from capital to operations in FY 2027 versus $25 million in FY 2026). Regional sales tax receipts are projected to increase in FY 2027 based on forecasts provided by the San Diego Regional Association of Governments (SANDAG).

Regional TDA cash receipts are projected to increase 1.0% versus FY 2026 projected cash receipts. MTS files an annual TDA claim based on SANDAG's projections, and that claim amount is the amount received, regardless of actual sales tax performance. If sales tax receipts end up higher than the claim amount, excess funds are stored in a reserve at the County. If sales tax receipts come in lower than the claim amount, funds are drawn from the County reserve. The overall amount of TDA projected for FY 2027, available for both capital and operations, is increasing by $3.1 million (2.3%) from the FY 2026 amended budget based on SANDAG's projections. TDA revenue in the operating budget is increasing by $26.7 million (25.0%) from the FY 2026 amended budget, after shifting an additional $25.0 million from capital to operations.

Regional TransNet cash receipts are expected to grow by 2.1% based on SANDAG's current forecast. TransNet revenue in the MTS operating budget is projected to increase by $6.2 million (8.1%) versus the FY 2026 amended budget. Unlike TDA, TransNet revenues are not based on an annual claim process and are instead disbursed as the sales tax revenue is generated. The formula share of TransNet funding is expected to increase by $1.2 million (3.0%) to $43.1 million in total for FY 2027 operations. MTS also receives TransNet as operating assistance for TransNet-funded services, which includes Superloop, I-15 BRT, Mid-City Rapid, South Bay BRT, and Mid-Coast Trolley service. TransNet operating assistance is projected to be $39.9 million in FY 2027, an increase of $5.0 million (14.3%) from the FY 2026 amended budget. The increase is due to increasing net expenses for these services as well as a $2.0 million increase

due to SANDAG providing less FasTrak funding in the FY 2027 budget, and funding instead with TransNet.

In the FY 2026 fiscal year to date, MTS has received $15.1 million of the projected $31.5 million of State Transit Assistance (STA) funding. This funding is primarily programmed in the CIP due to its volatile history, but a portion is also allocated to operations. The amount in the operating budget is typically static at $11.3 million but was reduced to $9.3 million in the FY 2026 budget to keep the capital budget whole while reflecting an anticipated $2.0 million shortfall in overall STA revenue. The share of STA in the operating budget is increasing back to $11.3 million in FY 2027, an increase of $2.0 million (21.0%) from the FY 2026 amended budget.

Other state revenue is projected to be $50.2 million in FY 2027, an increase of $36.6 million from the FY 2026 operating budget. Senate Bill 125 (SB 125), approved by the Governor on July 10, 2023, guides the distribution of $4 billion in General Fund through the Transit Intercity Rail Capital Program (TIRCP) on a population-based formula to regional transportation planning agencies, which can use the funds for either capital or operations. MTS is expected to receive $237.3 million in SB 125 TIRCP funds over multiple fiscal years, including both capital and operations. The FY 2027 operating budget includes $3.5 million for security enhancements, $4.5 million for Route 227 (Iris Rapid) operations, $750,000 for Route 910 (Blue Line Overnight Express) operations, $1.8 million for Trolley service enhancements, and $39.6 million for balancing the structural deficit. SB 125 TIRCP will be used as the balancing mechanism for the operating budget until the funding is depleted.

Other local funding is projected to be $1.1 million in FY 2027, a decrease of $2.0 million (-64.1%) from the FY 2026 amended budget. This is due to a $2.0 million reduction in the amount of FasTrak revenue being provided by SANDAG in FY 2027. Consolidated subsidy revenue totals $364.4 million, an increase of $75.7 million (26.2%) from the FY 2026 amended budget.

Within other revenue, reserve revenue represents an overall contribution of $92,000 to various reserves in FY 2027, a reduction of $68.1 million from the FY 2026 amended budget. The FY 2026 amended budget included the usage of the final balance of $67.6 million from the Operating Deficit Reserve, meaning Operating Deficit Reserve usage in FY 2027 will be zero. The reserve revenue total also includes reserves for the For-Hire Vehicle (FHV) Administration and San Diego & Arizona Eastern (SD&AE), which both are self-funded activities. The FHV Administration is projected to use $107,000 of reserves to balance its operating budget in FY 2027, as expenses are projected to exceed revenues. SD&AE is expected to contribute $199,000 to its reserves, as revenues are projected to exceed expenses.

Fiscal Year 2027 Expenses

Attachment A contains the total revenues as detailed above and the total proposed expenses for FY 2027. FY 2027 combined expenses total $480.9 million, an increase from the FY 2026 amended budget of $9.8 million (2.1%).

Transit Service Level Assumptions

The proposed budget reflects planned service levels across all modes. Rail operations service levels are expected to increase by 1.3%. Fixed route bus service levels are expected to decrease -2.7% based on January 2026 service changes and preliminary estimates of June 2026 service changes. Paratransit service levels, based on demand, are projected to increase by 9.1%.

Personnel Expenses

Within operating expenses, personnel expenses are projected to increase from the FY 2026 amended budget by $2.6 million (1.3%). Wages are expected to increase by $3.6 million (3.0%) overall, primarily due to Collective Bargaining Agreements (CBAs) which include 4.0% raises for all represented employees. Non-represented employee wages in total are budgeted to achieve 0.0% year-over-year cost growth. Within personnel costs, fringe benefit costs are decreasing by $983,000 (-1.2%). The decrease is due to a reduction of $4.9 million in the San Diego Transit Corporation (SDTC) defined benefit pension plan due to Board-approved changes to the amortization policy (no changes to employee benefits). This decrease is being partially offset by increasing healthcare, Workers' Compensation, paid absences, and other costs.

Purchased Transportation Costs

Purchased transportation costs are projected to increase from the FY 2026 amended budget by $3.6 million (3.2%). This is primarily due to rate increases for both the fixed route contract (East County and South Bay operations) and paratransit/minibus contract (Copley Park operations), both operated by Transdev. Both contracts have fixed and variable rate components which determine total contract costs. The fixed cost rate is not dependent on service levels and is a fixed monthly fee, whereas the variable rate is dependent on the volume of service operated.

Transdev fixed costs in the fixed route contract are increasing by 3.1% over the FY 2026 amended budget. The variable rate for Transdev fixed route contract is increasing by 2.9% in FY 2027. Overall Transdev fixed route contract costs are projected to increase by $1.4 million (1.6%) when combining contract rates and a -1.9% decrease in scheduled service currently planned.

Fixed costs on the paratransit/minibus contract are increasing by 4.5% in FY 2027. The minibus per-mile rate is increasing 3.7% for FY 2027, and the paratransit per-hour rate is increasing by 1.8%. Overall, minibus costs are projected to increase by $23,000 (0.4%) due to decreasing scheduled service combined with the rate increases. Paratransit costs are expected to increase by $2.2M (11.7%) due to contract increases and a projected 9.1% increase in demand for the service.

Outside Services

Excluding purchased transportation, outside service expenses are projected to decrease from the FY 2026 amended budget by $2.3 million (-3.8%).

Within outside services, security costs are increasing by $1.0 million (6.8%). The current security contract with Inter-Con expires in December 2026, and the proposed budget reflects potential increases that could come with a new contract.

Repair and maintenance costs are projected to decrease by $2.6 million (-17.1%), primarily due to decreasing the budget for tie replacement by $2.8 million. Engines and transmissions spending is expected to decrease $382,000 (-33.1%) and other outside services are projected to decrease by $367,000 (-1.2%).

Materials and Suppliies

Materials and supplies costs are projected to increase by $1.4 million (6.6%), primarily due to an increase of $800,000 for SD8 Light Rail Vehicle (LRV) drive unit overhauls within the LRV maintenance budget as well as $600,000 in new spending for a credit card module upgrade on all ticket vending machines.

Energy Costs

Energy costs are projected to increase by $2.4 million (4.6%).

Electricity costs are projected to increase by $1.5 million (4.6%). The projected rate for electricity is $0.423 per kilowatt-hour for FY 2027, a 9.8% increase versus the rate in the FY 2026 amended budget. Consumption is expected to remain flat at FY 2026 levels. Overall electricity costs are only increasing 4.6% due to a one-time $1.8 million catchup payment for two substations in FY 2026 that will not be incurred again in FY 2027.

Compressed Natural Gas (CNG) costs are projected to increase by $259,000 (1.9%). The CNG rate is projected at $1.41 per therm in FY 2027, a 6.3% increase versus FY 2026. This includes a 17.8% increase for the commodity price and a 2.2% increase in the San Diego Gas & Electric transportation rate. Consumption is projected to decrease by 4.0% based on the latest projected service levels and current trends.

Other Expenses

Risk management costs are increasing by $1.6 million (12.0%). Insurance premiums (property, excess liability, etc.) are increasing $838,000 (8.6%). Claims are expected to increase $424,000 (14.3%), including partial payback of Self Insurance Reserves (SIR) used in FY 2026.

General and Administrative costs are increasing by $371,000 (5.1%) over the FY 2026 amended budget, primarily due to expected cost increases for computer equipment.

Vehicle and Facility Lease costs are projected to increase by $102,000 (4.4%), primarily due to non-revenue vehicle leasing expenses.

Debt service costs are zero in FY 2027. There are no outstanding debt service obligations.

In total, expenses are projected to increase by $9.8 million or 2.1% versus the FY 2026 amended budget.

Structural Budget Deficit – FY 2027

Based on the draft revenues and expenses presented above, the operating budget structural deficit of recurring expenses less recurring revenues would be $100.1 million for FY 2027. This deficit is balanced with $50 million of TDA revenue shifted from the FY 2027 CIP, and the use of $50.1 million of non-recurring SB 125 revenue.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachments: A. FY 2027 Operating Budget – Consolidated MTS
B. FY 2027 Operating Budget – Consolidated Revenue Summary

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATING BUDGET SUMMARY
FISCAL YEAR 2027
SECTION 2.01

	ACTUAL FY25	AMENDED BUDGET FY26	PROPOSED BUDGET FY27	$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	77,896,658	80,820,126	83,014,390	2,194,264	2.7%
OTHER OPERATING REVENUE	36,176,729	33,478,163	33,489,800	11,637	0.0%
TOTAL OPERATING REVENUES	**114,073,387**	**114,298,289**	**116,504,190**	**2,205,901**	**1.9%**
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	309,605,221	288,785,167	364,441,337	75,656,170	26.2%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	19,359,078	67,981,456	(91,924)	(68,073,380)	-100.1%
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	19,359,078	67,981,456	(91,924)	(68,073,380)	-100.1%
TOTAL NON OPERATING REVENUE	**328,964,299**	**356,766,623**	**364,349,413**	**7,582,790**	**2.1%**
TOTAL COMBINED REVENUES	**443,037,686**	**471,064,912**	**480,853,603**	**9,788,691**	**2.1%**
OPERATING EXPENSES					
LABOR EXPENSES	115,656,871	121,425,779	125,027,148	3,601,369	3.0%
FRINGE EXPENSES	78,958,853	81,367,453	80,384,139	(983,314)	-1.2%
TOTAL PERSONNEL EXPENSES	**194,615,723**	**202,793,232**	**205,411,287**	**2,618,055**	**1.3%**
SECURITY EXPENSES	14,142,830	15,274,622	16,311,495	1,036,873	6.8%
REPAIR/MAINTENANCE SERVICES	11,152,828	15,259,257	12,645,191	(2,614,066)	-17.1%
ENGINE AND TRANSMISSION REBUILD	1,328,910	1,154,468	772,000	(382,468)	-33.1%
OTHER OUTSIDE SERVICES	25,432,291	29,402,718	29,036,002	(366,716)	-1.2%
PURCHASED TRANSPORTATION	109,099,796	111,607,521	115,218,923	3,611,402	3.2%
TOTAL OUTSIDE SERVICES	**161,156,655**	**172,698,586**	**173,983,611**	**1,285,025**	**0.7%**
LUBRICANTS	490,290	484,000	524,310	40,310	8.3%
TIRES	1,351,794	1,562,300	1,608,519	46,219	3.0%
OTHER MATERIALS AND SUPPLIES	16,476,172	19,287,264	20,614,221	1,326,957	6.9%
TOTAL MATERIALS AND SUPPLIES	**18,318,256**	**21,333,564**	**22,747,050**	**1,413,486**	**6.6%**
GAS/DIESEL/PROPANE	2,862,634	3,139,575	3,772,105	632,530	20.1%
CNG	12,804,983	13,673,143	13,932,069	258,926	1.9%
TRACTION POWER	23,784,125	27,731,480	28,836,538	1,105,058	4.0%
UTILITIES	6,238,841	6,445,654	6,818,520	372,866	5.8%
TOTAL ENERGY	**45,690,583**	**50,989,852**	**53,359,232**	**2,369,380**	**4.6%**
RISK MANAGEMENT	**10,840,927**	**13,599,339**	**15,229,391**	**1,630,052**	**12.0%**
GENERAL AND ADMINISTRATIVE	**6,898,324**	**7,313,754**	**7,684,332**	**370,578**	**5.1%**
DEBT SERVICE	**-**	**-**	**-**	**-**	**-**
VEHICLE / FACILITY LEASE	**2,196,944**	**2,336,586**	**2,438,700**	**102,114**	**4.4%**
TOTAL OPERATING EXPENSES	**439,717,412**	**471,064,913**	**480,853,603**	**9,788,690**	**2.1%**
NET OPERATING SUBSIDY	**(325,644,025)**	**(356,766,624)**	**(364,349,413)**	**7,582,789**	**2.1%**
OVERHEAD ALLOCATION	**0**	**(0)**	**(0)**	**0**	**0.0%**
ADJUSTED NET OPERATING SUBSIDY	**(325,644,025)**	**(356,766,624)**	**(364,349,413)**	**7,582,789**	**2.1%**
TOTAL REVENUES LESS TOTAL EXPENSES	**3,320,274**	**-**	**-**	**-**	**0.0%**

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
REVENUE BUDGET SUMMARY
FISCAL YEAR 2027
SECTION 3.02

	ACTUAL FY25	AMENDED BUDGET FY26	PROPOSED BUDGET FY27	$ CHANGE AMENDED/ ORIGINAL	% CHANGE AMENDED/ ORIGINAL
OPERATING REVENUE					
PASSENGER REVENUE	77,896,658	80,820,126	83,014,390	2,194,264	2.7%
OTHER INCOME	36,176,729	33,478,163	33,489,800	11,637	0.0%
TOTAL OPERATING REVENUE	114,073,387	114,298,289	116,504,190	2,205,901	1.9%
NON OPERATING REVENUE					
SUBSIDY REVENUE					
FEDERAL REVENUE	76,351,734	79,320,613	85,453,312	6,132,699	7.7%
FEDERAL REVENUE - CARES/ARP	47,416,746	-	-	-	-
TRANSPORTATION DEVELOPMENT ACT (TDA)	92,541,132	106,728,725	133,431,418	26,702,693	25.0%
STATE TRANSIT ASSISTANCE (STA)	5,960,988	9,337,501	11,300,000	1,962,499	21.0%
STATE REVENUE - OTHER	9,017,648	13,534,886	50,155,748	36,620,862	270.6%
TRANSNET	73,965,206	76,743,441	82,980,859	6,237,418	8.1%
OTHER LOCAL SUBSIDIES	4,351,768	3,120,000	1,120,000	(2,000,000)	-64.1%
TOTAL SUBSIDY REVENUE	309,605,221	288,785,166	364,441,337	75,656,171	26.2%
OTHER REVENUE					
OTHER FUNDS	-	-	-	0	-
RESERVES REVENUE	19,359,078	67,981,456	(91,924)	(68,073,380)	-100.1%
TOTAL OTHER REVENUE	19,359,078	67,981,456	(91,924)	(68,073,380)	-100.1%
TOTAL NON OPERATING REVENUE	328,964,299	356,766,622	364,349,413	7,582,791	2.1%
GRAND TOTAL REVENUES	**443,037,686**	**471,064,911**	**480,853,603**	**9,788,692**	**2.1%**

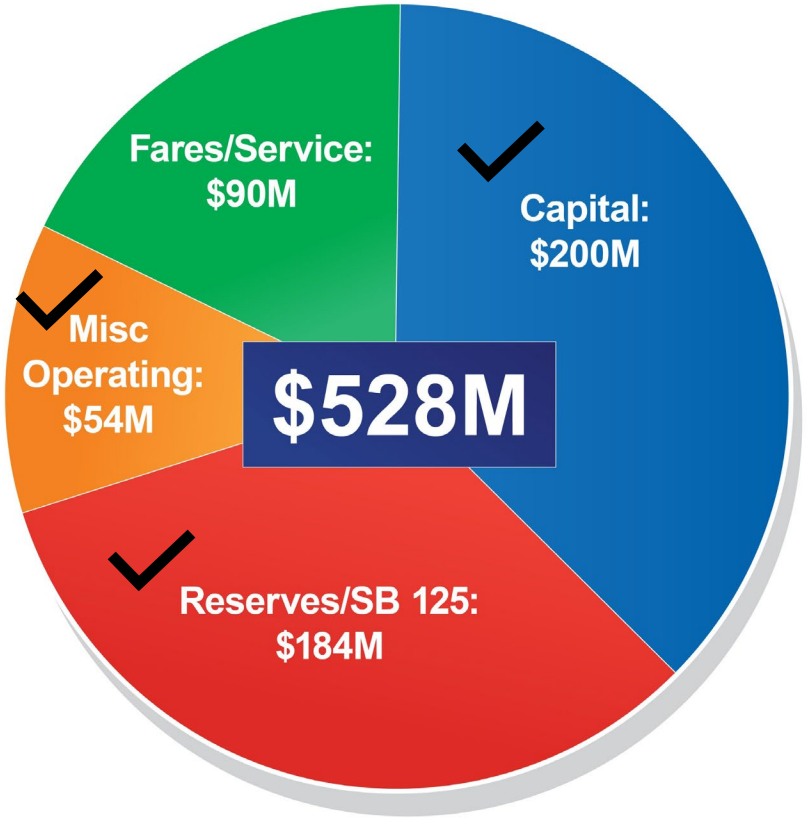
Metropolitan Transit System

FY 2027 Operating Budget Overview

Executive Committee

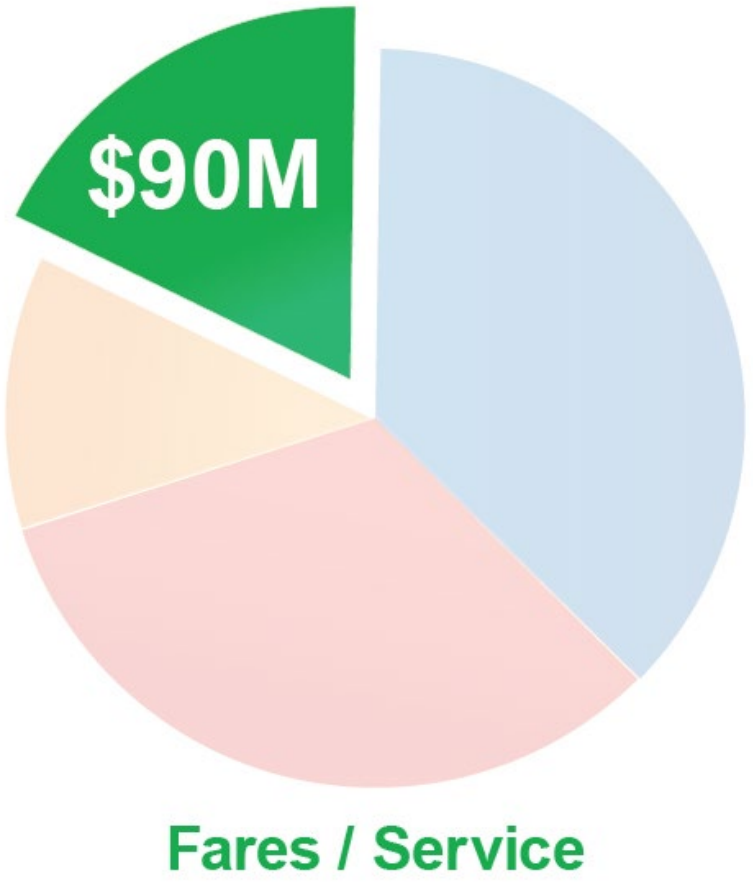
Fiscal Year 2027 Operating Budget
Financial Sustainability

- Goal is to balance operating/capital budgets through FY 2030 with existing one-time funding
  - Additional time to find other funding sources
    - Looking at all available regional, state, and/or federal sources
    - Legislation opportunities to expand transit revenue options through tourism, luxury vehicles or other options other than a sales tax
  - Allows the public the chance to decide at the ballot
  - Allows MTS time to react if a ballot measure is not passed
- Solutions approved by the Board and implemented
  - ✓ SB125 one-time funding to balance the deficits as long as possible
  - ✓ Funding shifts from Capital program
  - ✓ Operating budget savings/added revenues (excluding service and fares) -- ongoing



Fiscal Year 2027 Operating Budget
Financial Sustainability

- Significant gap still needs to be addressed
- Fare study
  - Board direction from February 2025: Work with SANDAG and NCTD to conduct a fare study regarding potential impacts of a fare increase
  - MTS riders support raising fares versus cutting service
  - Will be brought to the MTS Board next week
- Comprehensive Operational Analysis (COA)
  - Approved by the Board in February 2025
  - Existing conditions analysis completed by TMD
    - Staff has used this data for service efficiencies in the short term
  - Full COA process to be completed by TMD and brought to the MTS Board
  - Service changes are always the last resort

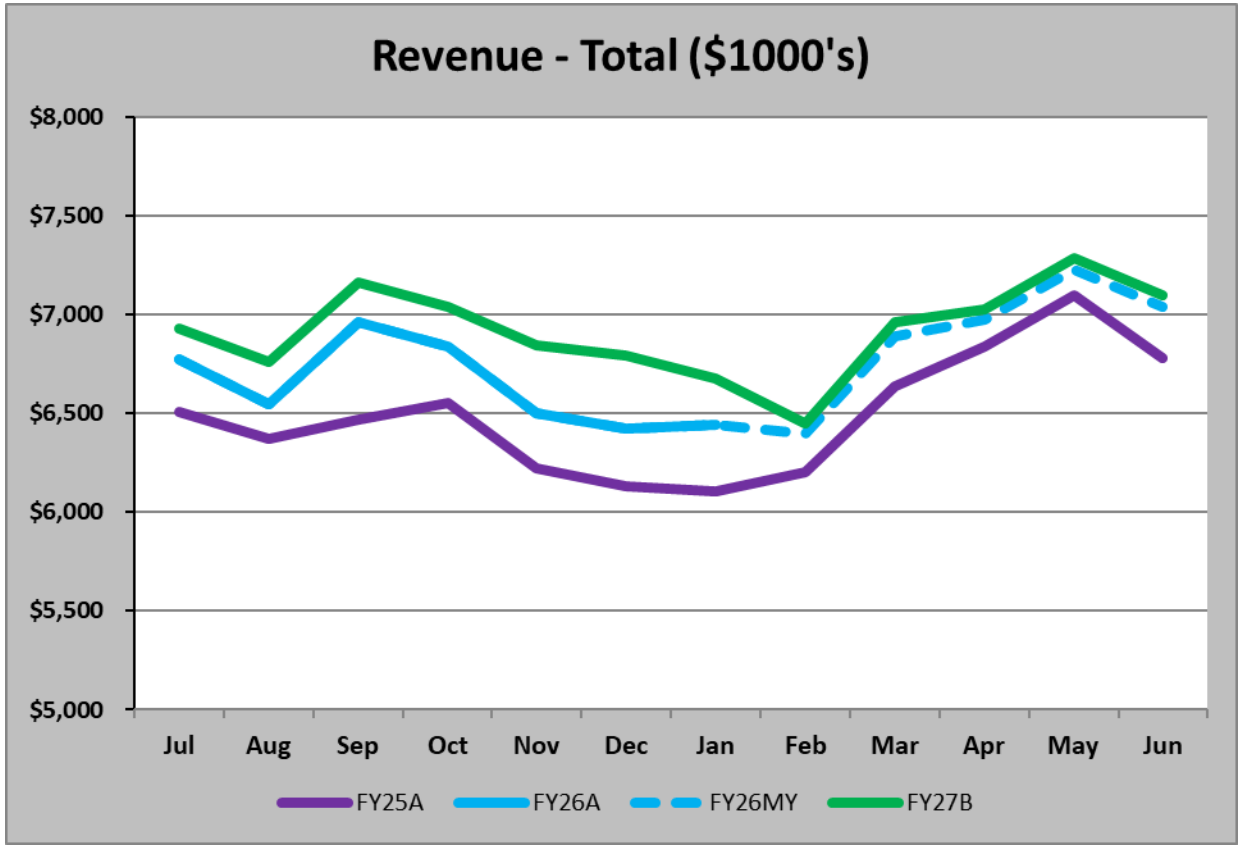


Fiscal Year 2027 Operating Budget
Budget Development Process

- MTS uses a zero-based budgeting process:
  - In traditional historic budgeting, managers only justify variances versus prior year
    - The assumption is that the baseline is automatically approved
  - By contrast, in zero-based budgeting, every line item must be approved each year
    - In Board presentations, typically talk about what is changing, but it is built from the ground up
- Operating Budget process begins in January
  - Budget Office meets with management from every discipline of the organization to:
    - Review current trends
    - Discuss and justify line-item details of their budget requests
    - Roll-up of mid-year budget amendments (current year's budget)
    - Roll-up of the new fiscal year budgets (following year's budget)
  - Rough draft presented today
    - Still finalizing some assumptions (fare study, personnel, service levels, energy)

Fiscal Year 2027 Operating Budget
Revenue Assumptions - Passenger Fare Revenue

- Fare revenue forecast
  - Ridership
    - Assuming 2.8% growth over FY 2026 projected ridership
      - Rebound in Trolley, fixed route growth
    - 83.1M passengers projected
  - Average Fare
    - Assuming $1.00 for FY 2027
    - Same as FY26 amended budget
  - Passenger Revenue
    - $83.0M projected
    - $2.2M (2.7%) increase over FY 2026 amended budget
    - Fare study decision will determine final budget



Fiscal Year 2027 Operating Budget
Revenue Assumptions – Other Operating Revenue

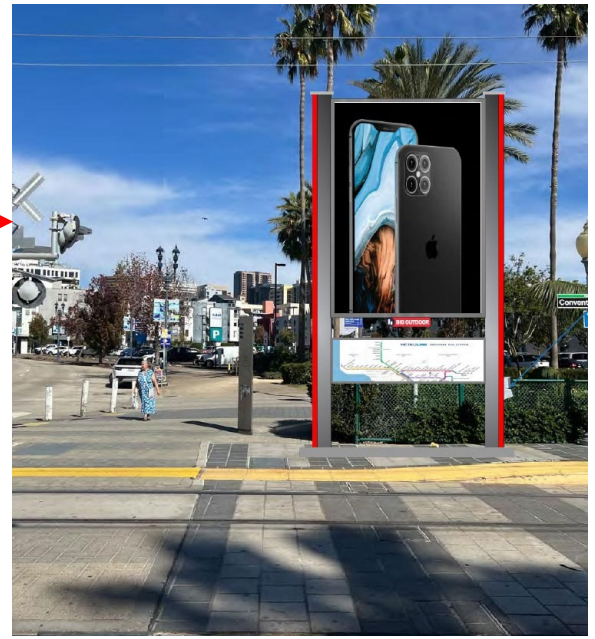
- Variety of miscellaneous revenues:
  - Energy credit update
    - LCFS (state) and RINS (federal) programs
    - LCFS price target: $70 (was $71 in February)
      - Full year of higher credit generation for fixed guideway
    - RINS price target: $2.30 ($2.42 in February)
  - Advertising Revenue
    - Significant revenue generation from Gaslamp sign
    - $397K in new initiatives (discussed on later slides)
  - Interest
    - Assuming 3.5% for first half of year, 3.25% for second
    - Declining cash balances (no stimulus funds, reserves)
  - Other
    - Includes naming rights, fare media revenue, and other misc. revenues

Other Revenue ($000s)	FY 2026 Amended	FY 2027 Proposed	Var.	Var. %
Energy Credits	$ 10,698	$ 13,112	$ 2,414	22.6%
Advertising	6,265	7,187	$ 922	14.7%
Real Estate Related	4,779	4,930	$ 151	3.2%
Interest	7,588	3,633	$ (3,955)	-52.1%
Other	4,148	4,627	$ 480	11.6%
Total	**$ 33,478**	**$ 33,490**	**$ 12**	**0.0%**

Fiscal Year 2027 Operating Budget
Revenue Assumptions – Other Operating Revenue

- Current Initiatives
  - Rapid 235 Advertising Wraps
    - Four wraps annually
    - Start in FY 2027
    - $350K annual gross revenue projected ($200K net for MTS)

  - Billboard at Copley (Kearny Mesa)
    - License agreement in negotiation
    - Start in between July and December 2027 (FY28)
    - $2.0M annual gross revenue projected ($1.0M net for MTS)
  - Digital Kiosk Network
    - $8K gross revenue per kiosk per month assumed ($4.4K net per kiosk per month)
    - Phase I (12th/Imperial, Convention Center, America Plaza, Little Italy)
      - Start August 2026
    - Phase II (Snapdragon, UTC)
      - Start July 2027 (FY28)

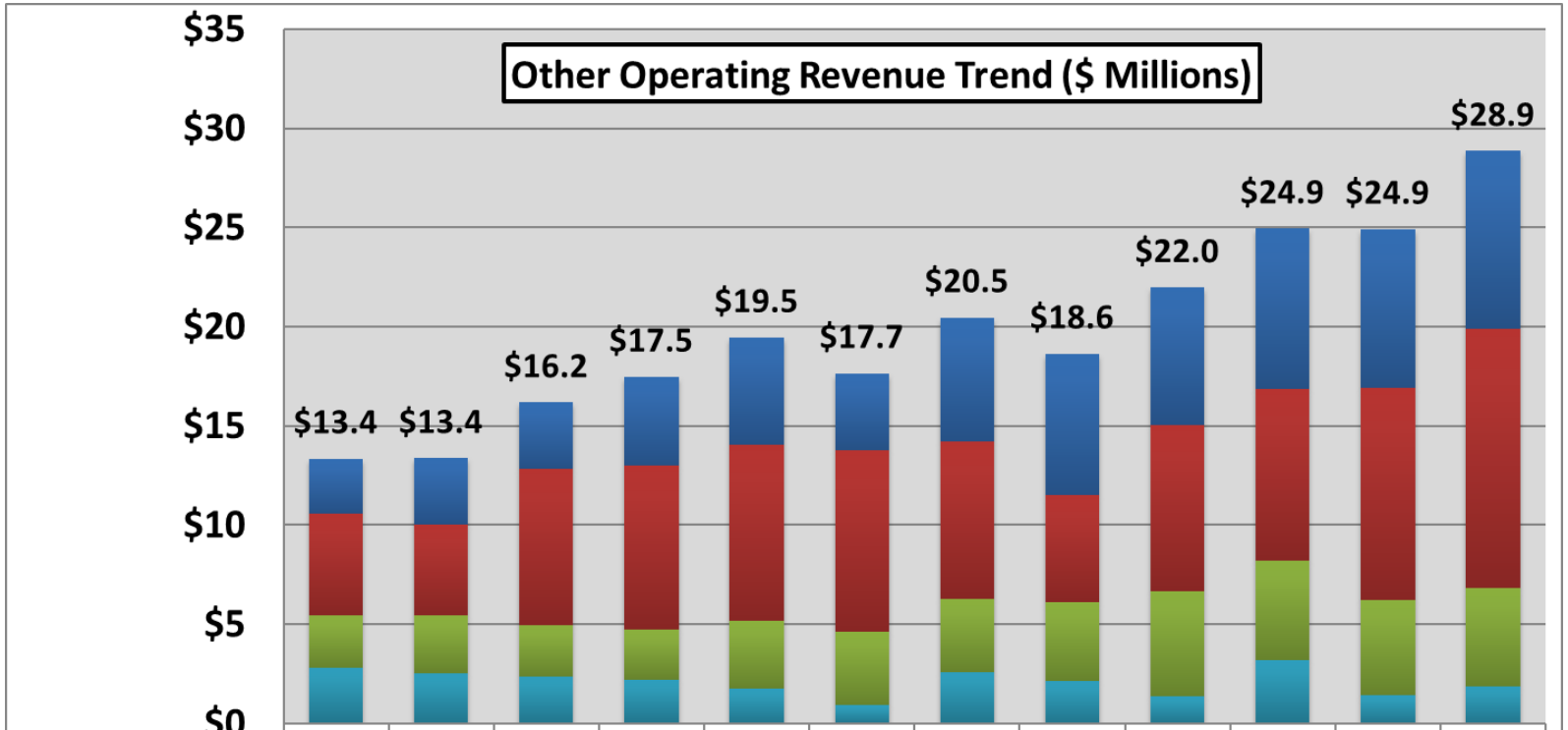


Fiscal Year 2027 Operating Budget
Revenue Assumptions – Other Operating Revenue

- Current Initiatives (Continued)
  - Trolley Station Ad Panels
    - Increasing inventory from 60 to 100 panels
    - $50K annual gross revenue ($30K net for MTS)
    - Start in January 2027
  - New Concession Kiosk at Iris Ave Transit Center
    - $46K annual gross revenue projected ($25K net for MTS)
    - Start date in July/August 2026
  - Interior Trolley Digital Monitors
    - Broken into 3 phases (50-60 cars new vehicle installations per year) starting FY28
    - $520K annual gross revenue ($275K net for MTS) once fully built out
  - Online MTS Merchandise Store
    - Start in December 2026
    - $25K-$50K annually

Fiscal Year 2027 Operating Budget
Revenue Assumptions – Other Operating Revenue

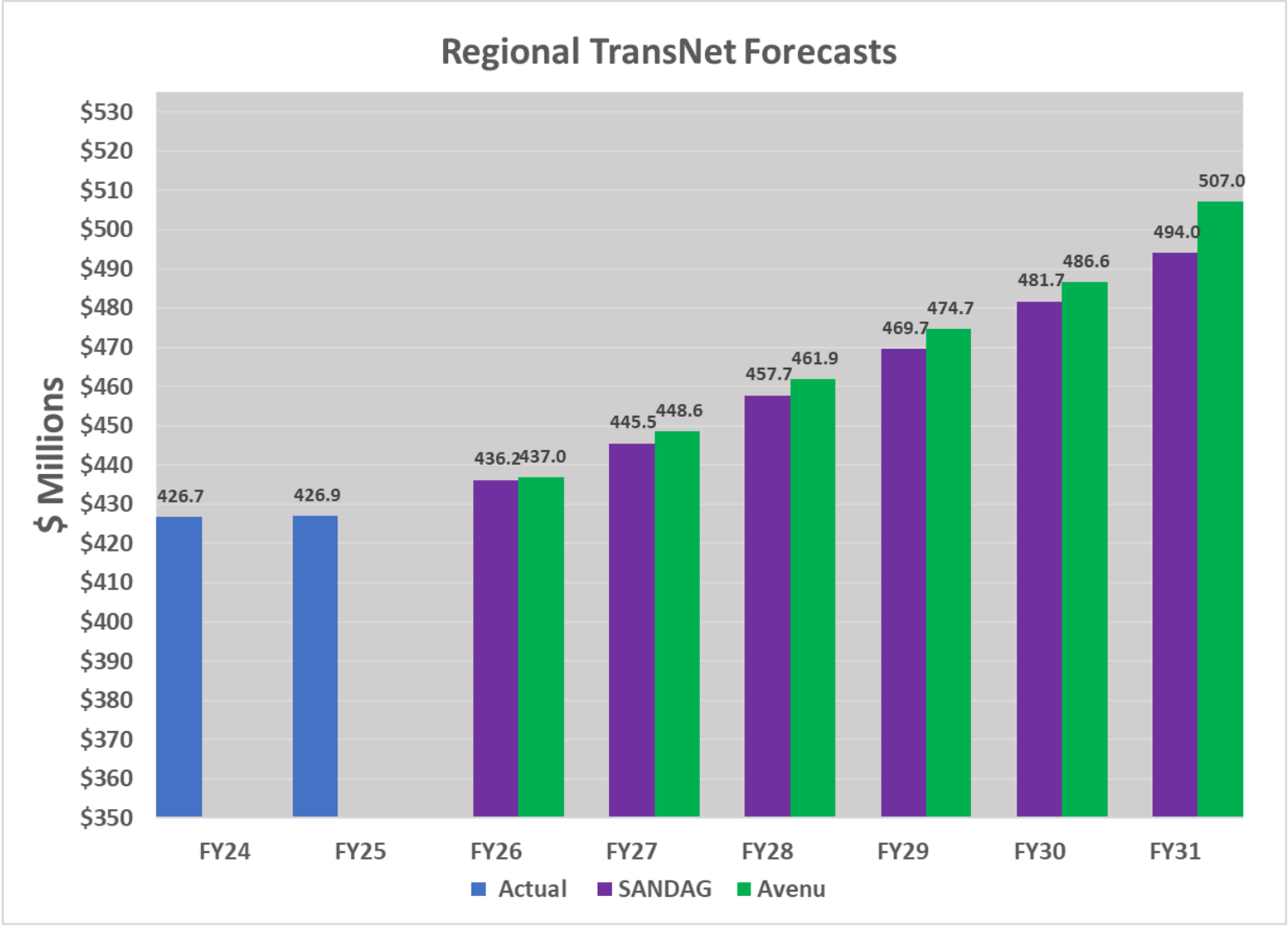
- Trend
  - Excludes interest revenue
  - Growth over time
  - Advertising revenue has more than doubled in the last 10 years
  - Energy credits are crucial revenue stream for MTS operations
  - Marketing department exploring new initiatives



	FY16A	FY17A	FY18A	FY19A	FY20A	FY21A	FY22A	FY23A	FY24A	FY25A	FY26MY	FY27B
Advertising	$2.8	$3.3	$3.4	$4.4	$5.4	$3.9	$6.2	$7.1	$6.9	$8.1	$8.0	$8.9
Energy Credits	5.2	4.6	7.9	8.3	8.9	9.1	8.0	5.4	8.4	8.7	10.7	13.1
Land Management	2.6	2.9	2.6	2.5	3.4	3.7	3.7	4.0	5.3	5.0	4.8	4.9
Other	2.8	2.6	2.4	2.2	1.8	1.0	2.6	2.2	1.4	3.2	1.4	1.9
Total	$13.4	$13.4	$16.2	$17.5	$19.5	$17.7	$20.5	$18.6	$22.0	$24.9	$24.9	$28.9

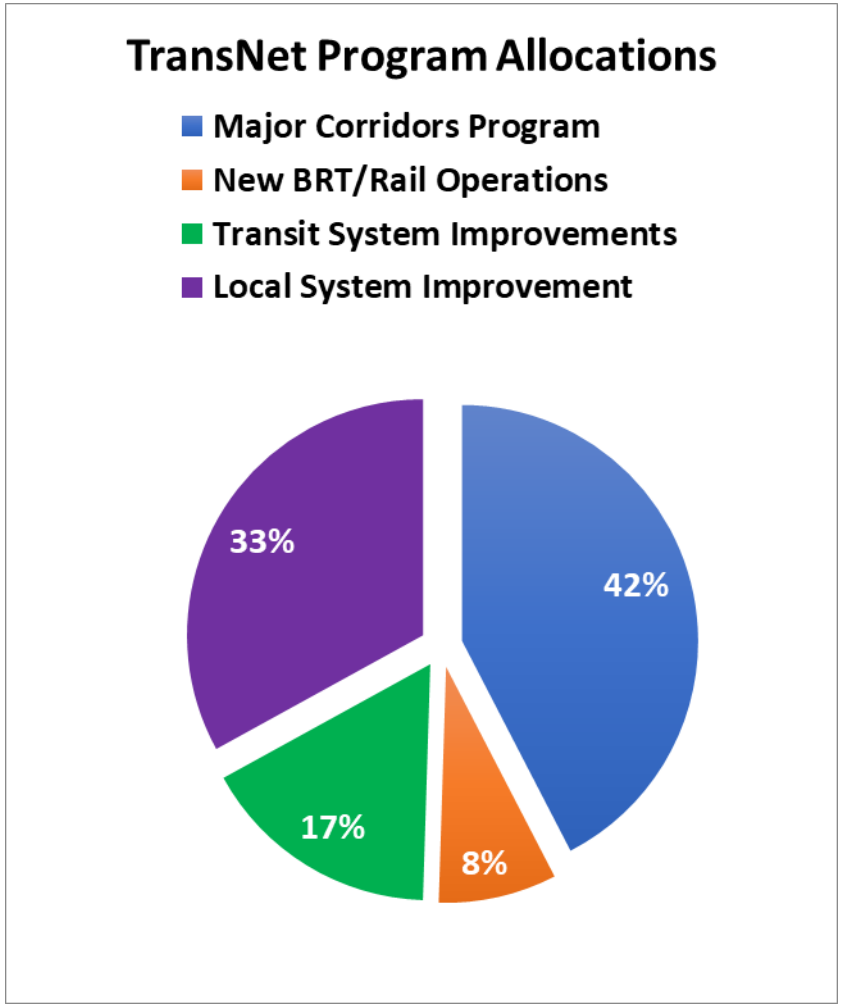
Fiscal Year 2027 Operating Budget
Revenue Assumptions - Sales Tax Revenues

- TransNet
  - ½ cent sales tax assessed in the region
    - Administered by SANDAG
  - $445.5M projected for region in FY 2027 SANDAG budget
    - Growth assumption of 2.1%
  - MTS budget based on SANDAG's forecast



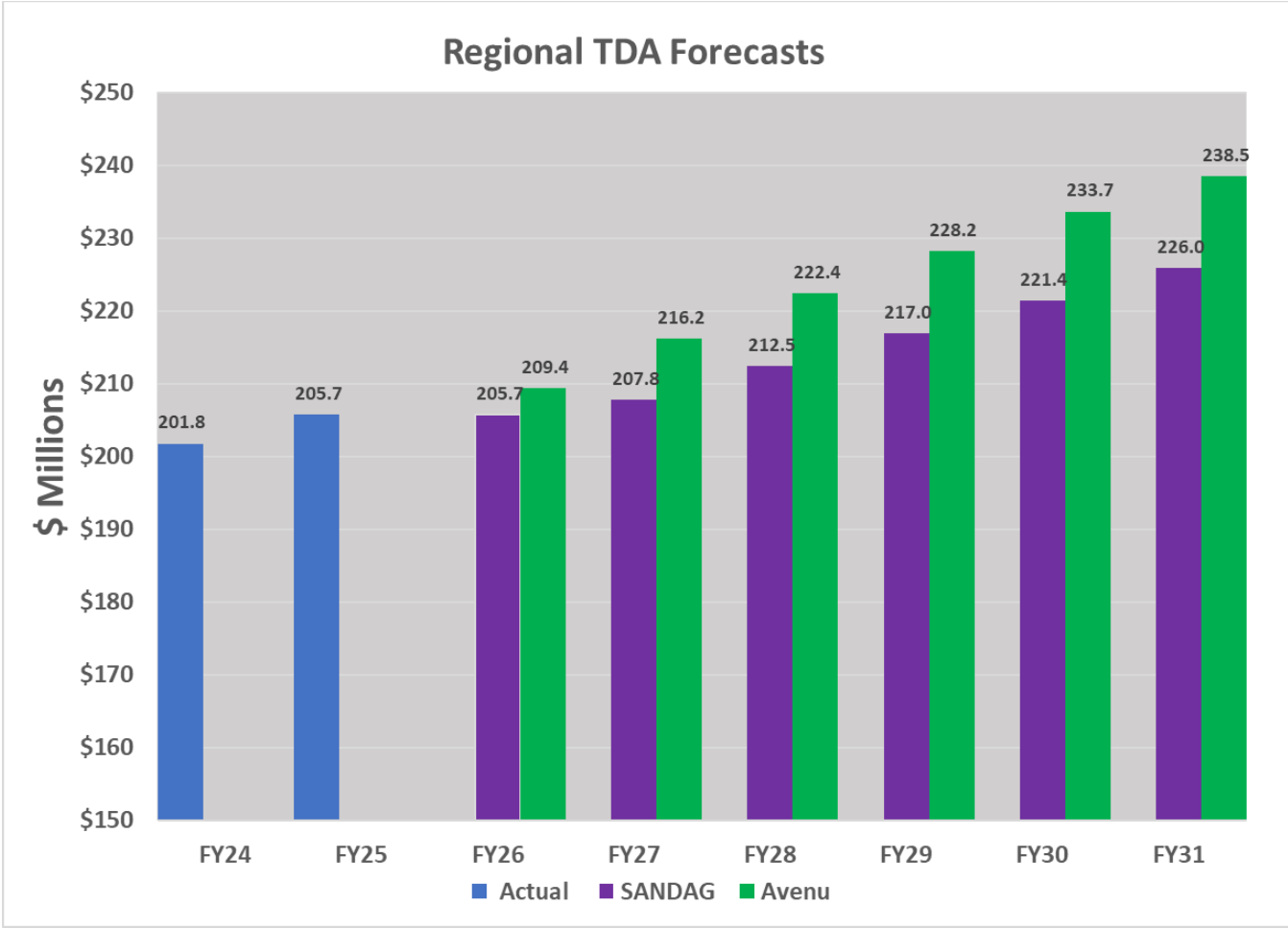
Fiscal Year 2027 Operating Budget
Revenue Assumptions - Sales Tax Revenues

- TransNet (continued)
  - Local Systems Improvement goes to county and cities for roads
  - Major Corridors funds TransNet capital projects like Mid-Coast and BRT projects
  - New Operations (8.1%)
    - Reimbursement for operations/maintenance of TransNet II projects (BRT Routes, SuperLoop, Mid-Coast)
      - MTS: MTS expected cost recovery = $39.9M
      - Full cost recovery only anticipated through mid 2030s
  - Transit System Improvements 16.5% for operations
    - Formula funding
    - MTS apportionment = $48.6M
      - $5.5M for Fare Discounts on Senior Disabled and Youth passes
      - $43.1M for Operations



Fiscal Year 2027 Operating Budget
Revenue Assumptions - Sales Tax Revenues

- Transportation Development Act (TDA)
  - Statewide, ¼ cent sales tax
    - SANDAG forecasts and apportions each year
    - MTS submits a claim based on the SANDAG budget
  - Provides funding for both Operating Budget and Capital Improvement Program (CIP)
  - Total region pool of $207.8M in FY 2027
    - 1.0% regional growth assumption over FY 2026
  - Total MTS apportionment: $137.3M
    - $133.4M in Operating Budget
    - $3.8M in CIP (reflects shift of $50M)
    - Increase of $3.1M (2.3%) in overall TDA for MTS
      - $26.7M (25.0%) increase to operating budget
      - $23.5M (-86.0%) reduction to TDA in CIP

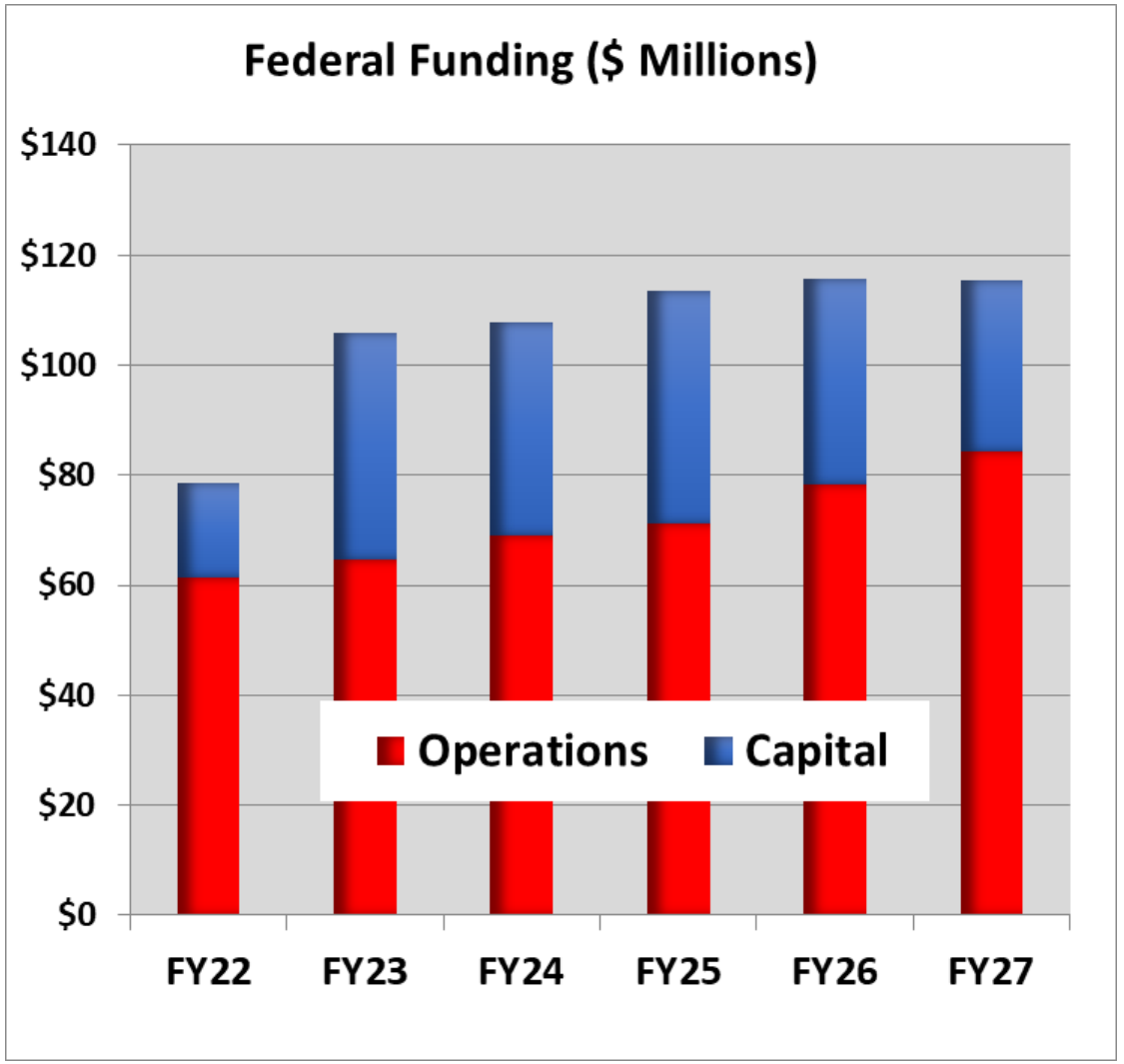


Fiscal Year 2027 Operating Budget
Revenue Assumptions - Sales Tax Revenues

- State Transit Assistance (STA)
  - Revenues derived from State sales tax on diesel fuel
    - Recurring formula funding administered by the State Controller's Office
    - Distributed based on population and agency revenue
  - Historically volatile funding source
    - State of CA diverting dollars for General Fund obligations
    - Tied to Diesel fuel sales, which has been a declining commodity
  - Funding can be used for Operations and Capital
    - $30.1M in total allocations for FY 2027
      - $11.3M in operations
      - Remainder allocated to Capital

Fiscal Year 2027 Operating Budget
Revenue Assumptions - Federal Transit Administration (FTA)

- Surface Transportation Reauthorization
  - Bipartisan Infrastructure Law passed in December 2021
    - Authorizing legislation expires 9/30/2026
      - 5307: Urban Area Formula funding
      - 5337: State of Good Repair funding
      - 5339: Bus and Bus Facilities funding
  - Funding can be used for Capital or Operating Budgets for Preventive Maintenance (PM)
    - Funding received on a reimbursement basis, after costs are incurred
    - MTS seeks to maximize the amount for PM for cash flow purposes
    - Swap with TDA to preserve Capital share
  - Increase in Operating Budget of $6.1M



Fiscal Year 2027 Operating Budget
Revenue Assumptions – Senate Bill (SB) 125

- Senate Bill (SB) 125 Funding
  - $4 billion in state funding distributed to transit agencies through TIRCP program
    - Distribution based on population
    - Funds operations or capital
    - $237.3 million planned for MTS over multiple fiscal years
  - Balancing mechanism until funding is depleted
    - $39.6M for balancing in FY27
  - Increasing $36.6M in total

Senate Bill (SB) 125 Revenue				
Category ($000's)	FY 2026 Amended	FY 2027 Proposed	Var.	Var. %
Security	$ 2,957	$ 3,500	$ 543	18.4%
Iris Rapid	$ 4,502	$ 4,500	$ (2)	0.0%
Route 910	$ 725	$ 750	$ 25	3.5%
Trolley Service	$ 1,842	$ 1,800	$ (42)	-2.3%
Structural Deficit Balancing	$ 3,509	$ 39,606	$ 36,096	1028.6%
Total	**$ 13,535**	**$ 50,156**	**$ 36,621**	**270.6%**

Fiscal Year 2026 Operating Budget
Revenue Assumptions - Other Subsidy Revenue

- Other Subsidy Revenues:
  - FasTrak Revenue from SANDAG
    - Toll revenue from the I-15 managed lanes
    - Subsidizes services in the I-15 corridor
      - $1.0M to fund Rapid Express Services (Routes 280/290)
    - $1.0M in total (decrease of $2.0M from FY26)
  - Other state and local sources
    - City of San Diego
    - Total of $120K in FY 2027

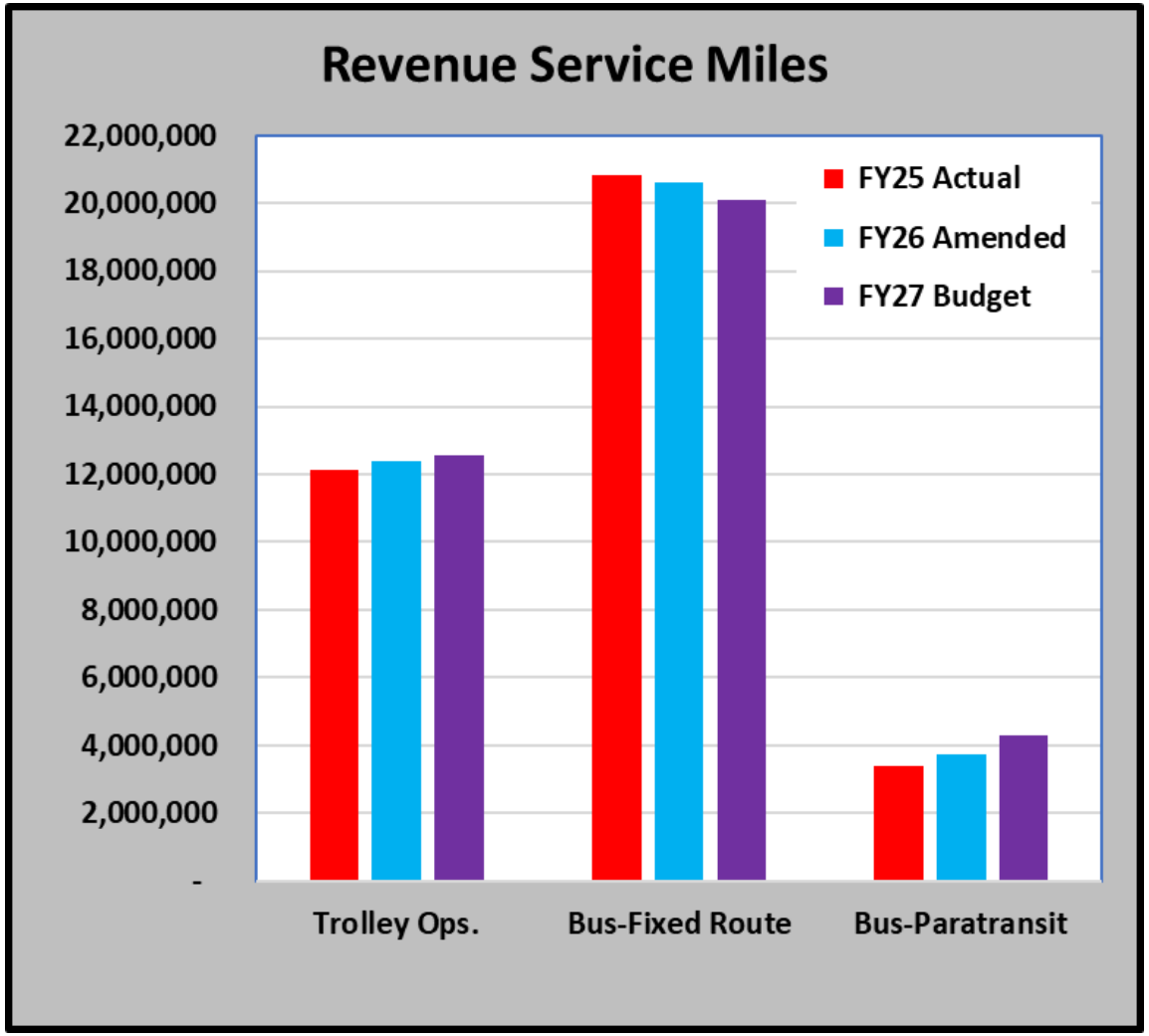
Fiscal Year 2027 Operating Budget
Revenue Summary ($000s)

	FY 2026 Amended	FY 2027 Proposed	Var.	Var. %
Passenger Revenue	$ 80,820	$ 83,014	$ 2,194	2.7%
Other Operating Revenue	33,478	33,490	12	0.0%
Total Operating Revenue	**$ 114,298**	**$ 116,504**	**$ 2,206**	**1.9%**
Federal	$ 79,321	$ 85,453	$ 6,133	7.7%
TDA	106,729	133,431	26,703	25.0%
TransNet Formula	41,859	43,109	1,250	3.0%
TransNet Operating	34,884	39,872	4,987	14.3%
STA	9,338	11,300	1,962	21.0%
SB 125 TIRCP	13,535	50,156	36,621	270.6%
Other	3,120	1,120	(2,000)	-64.1%
Total Subsidy	**$ 288,785**	**$ 364,441**	**$ 75,656**	**26.2%**
Reserves	$ 67,981	$ (92)	$ (68,073)	-
Total Revenue	**$ 471,065**	**$ 480,854**	**$ 9,789**	**2.1%**

- **Reserves include Operating Deficit Reserve as well as reserves for SD&AE and FHV Administration**

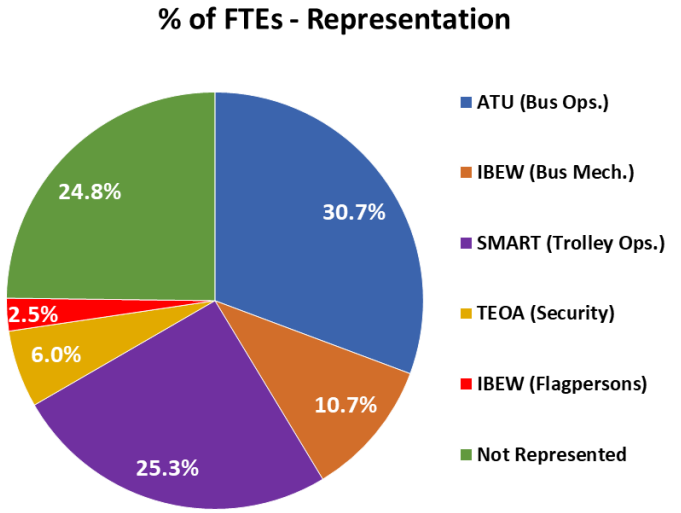
Fiscal Year 2027 Operating Budget
Service Levels

- Service Level Assumptions:
  - Rail:
    - 1.3% increase over FY 2026 budget
    - Evaluating two car trains at certain time/locations for cost savings
  - Bus-Fixed Route:
    - Decreasing -2.7% based on January service levels and additional changes planned for June
    - Still being finalized
  - Bus-Paratransit:
    - Demand based service
    - 15.3% projected increase in revenue miles
    - 9.1% in billable revenue hours



Fiscal Year 2027 Operating Budget
Expense Assumptions – Personnel

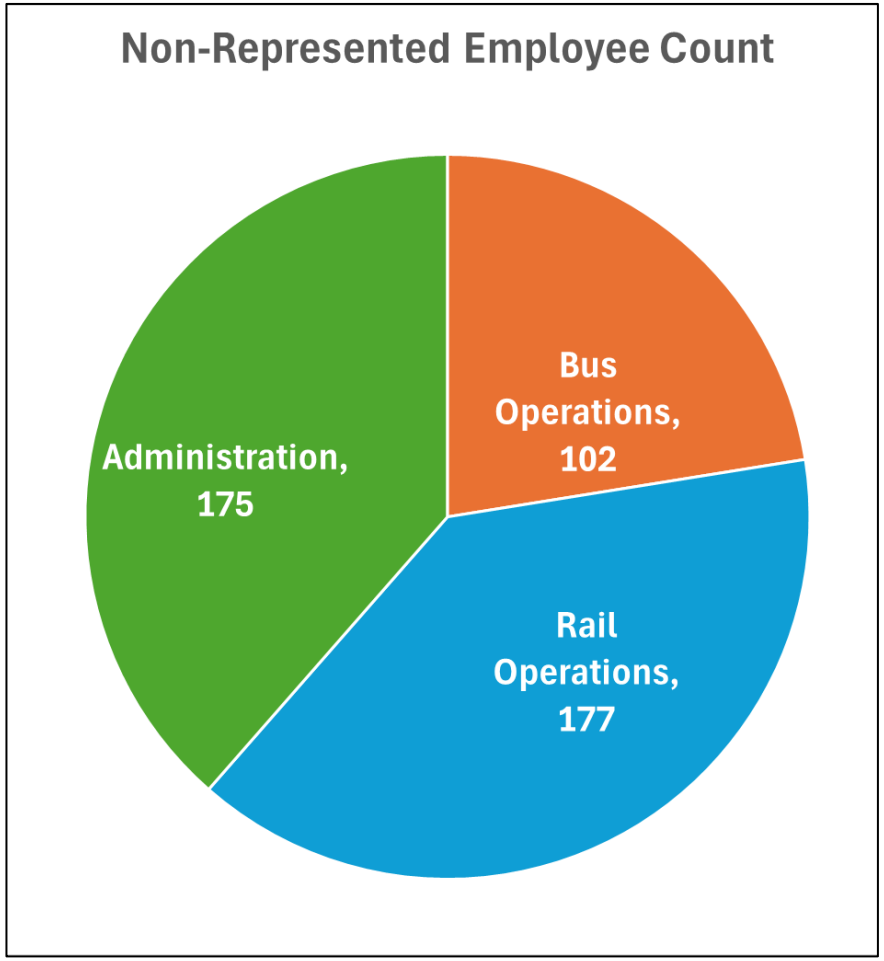
- Personnel Costs (Represented)
  - Wage rate assumptions
    - Collective bargaining agreements in place for ATU, IBEW, SMART, TEOA
      - 4.0% increases for all groups in FY27, after receiving substantial raises in first year of new CBAs (7.0% - 12.0% in Year 1 and no annual raises < 4.0%)
      - Annualized increase will be higher for TEOA employees (Code Compliance Inspectors) due to 7.0% increase in February 2026 and 4.0% in March 2027
    - Represented wages increasing $3.3M (3.9%)
  - Fringe assumptions
    - Pension costs are decreasing due to amortization change for SDTC defined benefit plan (no change to employee benefits) approved by Board in Feb
  - No layoffs planned for front-line staff
  - Hiring targets will be finalized with service levels



Personnel Costs (Represented Employees)								
Category ($000s)	FY 2026 Amended		FY 2027 Proposed		Var.		Var. %	
Wages	$	83,895	$	87,200	$	3,305	3.9%	
FICA		4,714		4,871	$	157	3.3%	
Paid Absences		10,299		10,824	$	525	5.1%	
Pension		21,302		18,303	$	(3,000)	-14.1%	
Health and Welfare		14,668		15,659	$	990	6.8%	
Total	**$**	**134,878**	**$**	**136,857**	**$**	**1,979**	**1.5%**	

Fiscal Year 2027 Operating Budget
Expense Assumptions – Personnel

- Personnel Costs (Non-represented)
  - Admin and management staff across the organization
    - Bus Operations: Front line supervisors, maintenance supervisors (bus, facilities), training, safety, customer support, management and admin staff
    - Rail Operations: Front line supervisors, maintenance supervisors (LRV, facilities, track, MOW), security supervisors, training, safety, passenger support representatives, management and admin staff
    - All administrative departments that support operations
      - Human Resources, IT, Marketing, Planning, Legal, Finance, Procurement, etc.
  - Goal to have zero expense growth for non-represented employee category in FY27
    - Multiple initiatives to achieve this goal



Fiscal Year 2027 Operating Budget
Expense Assumptions – Personnel

- MTS has always been a lean organization
  - Despite the higher cost of living, always a leader in all cost metrics
- San Francisco Muni commissioned a report from urban planning think tank SPUR
  - Uses FY 2024 National Transit Database information
  - Compares 14 peer agencies across many industry metrics
  - Cost per hour comparison (exhibit 17 in the report) is reproduced to the right
  - Shows MTS as the most cost-effective agency for both bus and rail!

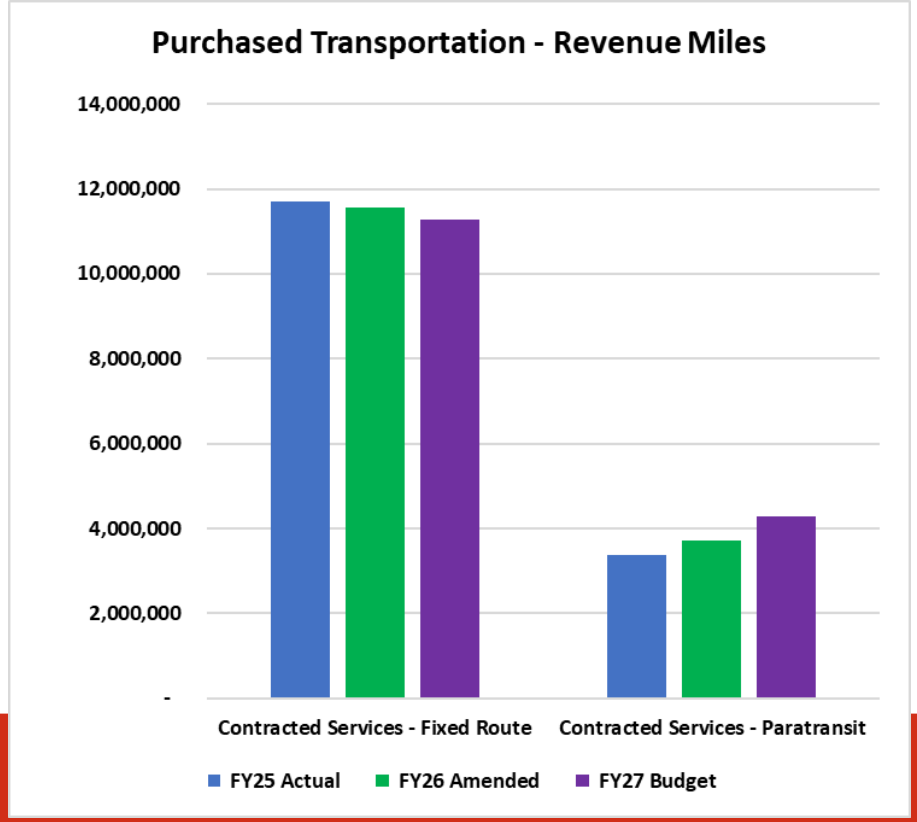
- Full report: SPUR_Taking_Muni's_Vitals.pdf

Agency (Metro Area)	Cost per Hour, Motorbus Only	Costs per Hour, Light Rail Only	Cost per Hour, All Modes
SFMTA	$301.60	$412.10	$327.39
NYMTA (New York)	$293.39	-	$287.02
CTA (Chicago)	$197.88	-	$200.42
Metro (Los Angeles)	$221.63	$691.33	$275.44
WMATA (Washington, D.C.)	$272.51	-	$302.88
MBTA (Boston)	$302.24	$420.18	$351.63
NJT (New Jersey/New York)	$213.96	$560.24	$327.86
SEPTA (Philadelphia)	$207.34	-	$232.38
King County Metro (Seattle)	$256.20	-	$227.03
Miami-Dade (Miami)	$230.00	-	$179.83
MTS (San Diego)	$153.87	$212.29	$141.76
MARTA (Atlanta)	$163.66	-	$213.89
TriMet (Portland)	$208.60	$464.84	$251.84
RTD (Denver)	$346.72	$311.28	$258.73
DART (Dallas)	$185.48	$493.85	$222.94
Average of Peer Set	$237.01	$445.76	$253.40

Fiscal Year 2027 Operating Budget
Expense Assumptions - Purchased Transportation

- Purchased Transportation Budget
  - Transdev - Fixed Route Contract
    - Revenue miles decreasing -1.9%
    - Fixed costs increasing 3.1%
    - Variable rate increasing by 2.9%
  - Transdev - Paratransit/Minibus Contract
    - Fixed costs increasing by 4.5%
    - Minibus fixed route variable rate increasing 3.7%
      - Revenue miles decreasing -10.1%
    - ADA Paratransit variable rate increasing 1.8%
      - Projected demand increasing 9.1%

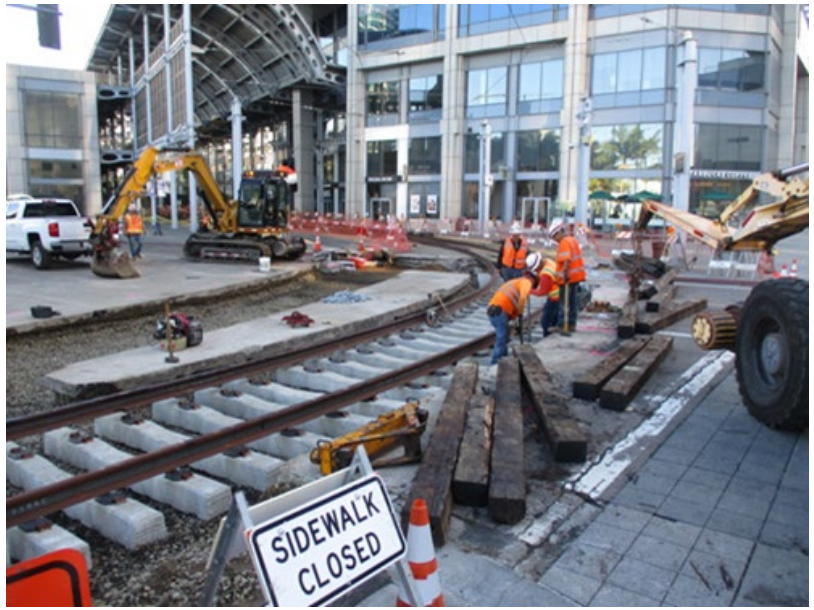
Category ($000s)	FY 2026 Amended	FY 2027 Proposed	Var.	Var. %
Transdev - Fixed Route	$ 86,714	$ 88,126	$ 1,412	1.6%
Transdev - Minibus	5,850	5,874	$ 23	0.4%
Transdev - Paratransit	18,712	20,901	$ 2,189	11.7%
Total	**$ 111,276**	**$ 114,900**	**$ 3,624**	**3.3%**



Fiscal Year 2027 Operating Budget
Expense Assumptions - Outside Services

- Outside Services Budget
  - Contracted Security costs expected to increase with current contract expiring 12/31/2026
  - Repair/maintenance costs decreasing $2.6M due to reduction of budget for tie replacement
  - Other Outside Services decreasing (less one-time projects)
  - Engines/Transmission costs decreasing $382K (-33.1%)
  - Noteworthy projects:
    - $1.1M for SAP HANA licenses and hosting (Information Technology)
    - $801K for CISA Assessment Remediation (Information Technology)
    - $640K for MOW Signal and Track Inspection Software Implementation
    - $2.8M for SD8 Drive Unit Overhauls (mid-life LRV overhaul)
    - $600K for replacement of CCTV cameras on board LRVs
    - $1.0M for tie replacement (down from $3.8M in FY26)

Category ($000s)	FY 2026 Amended	FY 2027 Proposed	Var.	Var. %
Security	$ 15,275	$ 16,311	$ 1,037	6.8%
Repair & Maint.	15,259	12,645	$ (2,614)	-17.1%
Engines/Trans.	1,154	772	$ (382)	-33.1%
Other Services	29,403	29,036	$ (367)	-1.2%
Total	**$ 61,091**	**$ 58,765**	**$ (2,326)**	**-3.8%**



Fiscal Year 2027 Operating Budget
Expense Assumptions - Energy

- Energy Budget
  - Electricity Costs
    - Electricity commodity - market index rates through Direct Access, 9.4% increase projected
    - Transmission/demand - SDG&E rates, 10.1% increase
    - $0.423 per kWh for FY27 (9.8% increase)
    - Consumption assume flat at FY26 levels
    - YoY change in total costs only 4.6% due to one-time $1.8M catchup payment for two substations in FY26
  - Compressed Natural Gas
    - Natural gas commodity - Market index rates through third party provider, 17.8% increase projected
      - Based on Department of Energy forecasts and futures
    - Transportation - SDG&E rates, 2.2% increase
    - $1.41 per therm for FY27 (6.3% increase)
    - Consumption decreasing with service levels

Category ($000s)	FY 2026 Amended	FY 2027 Proposed	Var.	Var. %
Electricity	$ 32,489	$ 33,995	$ 1,506	4.6%
CNG	13,673	13,932	$ 259	1.9%
Gas/Propane	2,936	3,576	$ 639	21.8%
Other	1,892	1,857	$ (35)	-1.8%
Total	**$ 50,990**	**$ 53,359**	**$ 2,369**	**4.6%**

Fiscal Year 2027 Operating Budget
Expense Assumptions - Other

- Materials & Supplies
  - $600K for credit card module upgrade on ticket vending machines
  - LRV Drive Unit Overhauls increasing from $2.0M to $2.8M
- Risk Management
  - Premiums (property, excess liability, etc.) increasing $838K (8.6%)
  - Budget for claims increasing $424K, assuming partial payback of insurance reserve usage in FY26
- General & Administrative
  - Computer equipment purchases in IT

Category ($000s)	FY 2026 Amended	FY 2027 Proposed	Var.	Var. %
Materials & Supplies	$ 21,334	$ 22,747	$ 1,413	6.6%
Risk Management	13,599	15,229	$ 1,630	12.0%
General & Administration	7,314	7,684	$ 371	5.1%
Other	2,337	2,439	$ 102	4.4%
Total	**$ 44,583**	**$ 48,099**	**$ 3,516**	**7.9%**

Fiscal Year 2027 Operating Budget
Expenses Summary ($000s)

	FY 2026 Amended	FY 2027 Proposed	Var.	Var. %
Personnel Expenses	$ 202,793	$ 205,411	$ 2,618	1.3%
Purchased Transportation	111,608	115,219	3,611	3.2%
Outside Services	61,091	58,765	(2,326)	-3.8%
Materials and Supplies	21,334	22,747	1,413	6.6%
Energy	50,990	53,359	2,369	4.6%
Risk Management	13,599	15,229	1,630	12.0%
Other	9,650	10,123	473	4.9%
Total Expenses	**$ 471,065**	**$ 480,854**	**$ 9,789**	**2.1%**

Fiscal Year 2027 Operating Budget
Consolidated Revenues less Expenses ($000s)

	FY 2026 Amended	FY 2027 Proposed	Var.	Var. %
Operating Revenues	$ 114,298	$ 116,504	$ 2,206	1.9%
Recurring Subsidy	250,250	264,286	14,035	5.6%
Total Recurring Revenues	**$ 364,549**	**$ 380,790**	**$ 16,241**	**4.5%**
Total Expenses	**471,065**	**480,854**	**$ 9,789**	**2.1%**
Structural Deficit	**$ (106,516)**	**$ (100,064)**	**$ 6,453**	**6.1%**
Reserves	67,981	(92)	(68,073)	100.1%
Shift TDA from Capital	25,000	50,000	25,000	
SB-125 Funding	13,535	50,156	36,621	270.6%
Revenues Less Expenses	**$ -**	**$ -**	**$ -**	

- Structural deficit of $100.1M projected for FY27
- SB125 funding is balancing mechanism until depleted

Fiscal Year 2027 Operating Budget
Preliminary 5-year Forecast

	FY 2027 Budget	FY 2028 Projected	FY 2029 Projected	FY 2030 Projected	FY 2031 Projected
Operating Revenues	$ 116,504	$ 116,854	$ 118,176	$ 120,197	$ 122,452
Recurring Subsidy	264,286	269,922	275,648	281,387	287,139
Total Recurring Revenues	**$ 380,790**	**$ 386,777**	**$ 393,824**	**$ 401,585**	**$ 409,591**
Total Expenses	**480,854**	**499,129**	**518,588**	**538,885**	**560,308**
Structural Deficit	**$ (100,064)**	**$ (112,352)**	**$ (124,763)**	**$ (137,300)**	**$ (150,717)**
Reserves	(92)	58	124	162	194
Shift from Capital to Ops	50,000	50,000	50,000	50,000	50,000
SB-125 Funding	50,156	62,294	71,807	-	-
Revenues Less Expenses	**$ -**	**$ -**	**$ (2,833)**	**$ (87,139)**	**$ (100,523)**

- Based on this draft of FY27 proposed budget and preliminary economic factor assumptions
- No fare increase in this forecast
- No further headcount changes or service reductions assumed in outyears for this forecast

Fiscal Year 2027 Operating Budget
Preliminary 5-year Forecast

	FY 2027 Budget	FY 2028 Projected	FY 2029 Projected	FY 2030 Projected	FY 2031 Projected
Operating Revenues	$ 116,504	$ 116,854	$ 118,176	$ 120,197	$ 122,452
Recurring Subsidy	264,286	269,922	275,648	281,387	287,139
Total Recurring Revenues	**$ 380,790**	**$ 386,777**	**$ 393,824**	**$ 401,585**	**$ 409,591**
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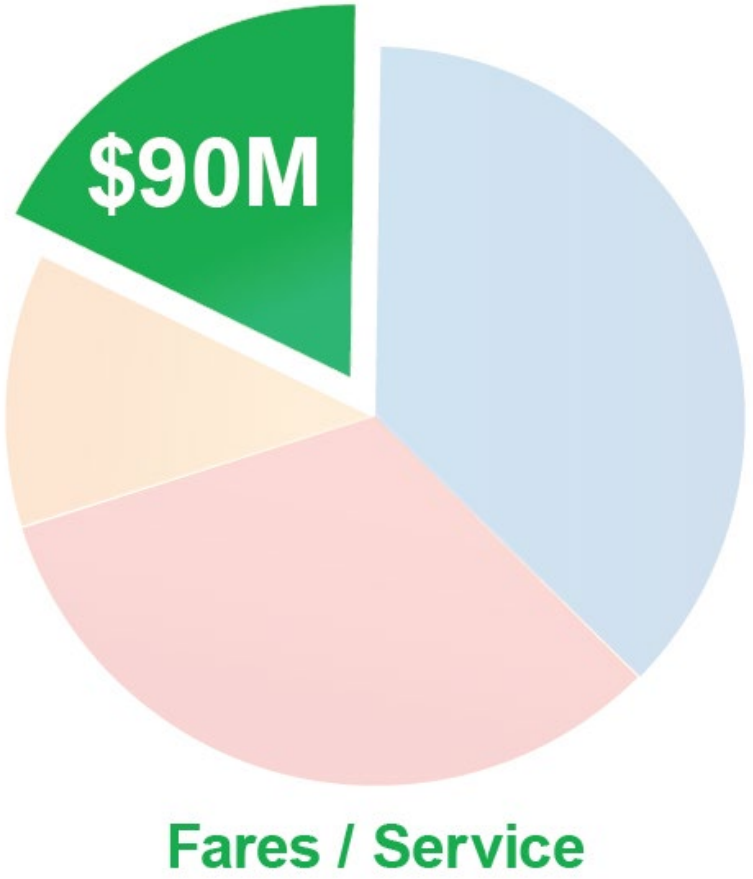
Structural Deficit	**$ (100,064)**	**$ (112,352)**	**$ (124,763)**	**$ (137,300)**	**$ (150,717)**
Reserves	(92)	58	124	162	194
Shift from Capital to Ops	50,000	50,000	50,000	50,000	50,000
SB-125 Funding	50,156	62,294	71,807	-	-
Revenues Less Expenses	**$ -**	**$ -**	**$ (2,833)**	**$ (87,139)**	**$ (100,523)**

- Goal is to balance through FY 2030
  - Key FY 2029 Date: November 2028 election, ballot measure
  - Key FY 2030 Date: January 2030, begin receiving revenue from ballot measure

Fiscal Year 2027 Operating Budget
Financial Sustainability

- Trying to get through FY 2030, $90M gap
- Continue to:
  - Look for additional funding sources
  - Maximize other operating revenues
  - Find other operational savings
- Fare study
  - Phased package will be proposed to the Board
  - Fare increase not expected to bridge the entire gap
- Comprehensive Operational Analysis (COA)
  - Full analysis complete during FY 2027
  - Hold service levels as long as possible
  - Continue to look for service efficiencies and savings opportunities



Fiscal Year 2027 Operating Budget
Preliminary 5-year Forecast

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Total Expenses	**480,854**	**499,129**	**518,588**	**538,885**	**560,308**
Structural Deficit	**$ (100,064)**	**$ (112,352)**	**$ (124,763)**	**$ (137,300)**	**$ (150,717)**
Reserves	(92)	58	124	162	194
Shift from Capital to Ops	50,000	50,000	50,000	50,000	50,000
Fare Increase	6,750	12,750	14,000	14,000	14,000
SB-125 Funding	43,406	49,544	60,640	30,667	-
Revenues Less Expenses	**$ -**	**$ -**	**$ -**	**$ (42,472)**	**$ (86,523)**

- Potential impact of fare increase

Fiscal Year 2027 Operating Budget
Budget Development Next Steps

- Finalize Operating Budget
  - Finalize all FY27 assumptions
    - Passenger revenue – base final forecast on Board feedback from fare study
    - Service levels – finalize service changes, update service dependent forecasts
    - Personnel – finalize headcount changes and reflect in position tables
    - Energy – take one last look at energy with most recent pricing data
  - Prepare full budget book
  - Update five-year forecast with final budget assumptions
  - Present proposed draft to Executive Committee on May 14th
  - Hold Public Hearing at the Board meeting on May 21st

Questions/Comments

Metropolitan Transit System

PUBLIC COMMENT
AI 4, 4/9/2026
No. in Queue:1

CALL – IN PUBLIC COMMENT

Christopher, provided a public comment for agenda item #4. A paraphrased version of Christopher's statement will be reflected in the minutes.

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INSTRUCTIONS

This meeting is offered both in an in-person and virtual format. In-person speaker requests will be taken first. Speaking time will be limited to two minutes per person, unless specified by the Chairperson. Members of the public are permitted to make general public comments at the beginning of the agenda or make specific comments on any item in the agenda at the time the Board/Committee is considering the item during the meeting. Requests to speak will not be taken after the public comment period ends, unless under the Chair's discretion.

BOARD OF DIRECTORS MEETING

General Public Comment at the beginning of the agenda will be limited to five speakers with the standard two-minute limit, unless otherwise directed by the Chair. Additional speakers with general public comments will be heard at the end of the meeting.

MEETING RECORD

A paraphrased version of this comment will be included in the minutes. The full comment can be heard by reviewing the recording posted on the respective meeting website: https://www.sdmts.com/about/meetings-and-agendas.

Metropolitan Transit System

PUBLIC COMMENT
AI 4, 4/9/2026
No. in Queue:2

CALL – IN PUBLIC COMMENT

Sara Ochoa provided a public comment for agenda item #4. A paraphrased version of Christopher's statement will be reflected in the minutes.

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Metropolitan Transit System

PUBLIC COMMENT
AI 4, 4/9/2026
No. in Queue:3

CALL – IN PUBLIC COMMENT

Minola Clark Manson provided a public comment for agenda item #4. A paraphrased version of Minola's statement will be reflected in the minutes.

PUBLIC SPEAKER DISCLAIMER

INSTRUCTIONS

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Agenda Item No. 05

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
JOINT AUDIT OVERSIGHT AND EXECUTIVE COMMITTEE

April 9, 2026

SUBJECT:

Baltimore Junction and Euclid Avenue Planning Study (Heather Furey and Brent Boyd)

INFORMATIONAL ONLY

Budget Impact

None

DISCUSSION:

In September 2022, MTS received a $750,000.00 Federal Transit Administration (FTA) grant for planning studies along the Orange Line, at Baltimore Junction and at Euclid Avenue. The Baltimore Junction area was studied to assess viability of additional trackwork to connect the Green and Orange lines, a transfer station, and related infrastructure. The Euclid Avenue portion of the study evaluated options for grade separation between the railroad tracks and Euclid Avenue. Staff will present the results of the planning studies.

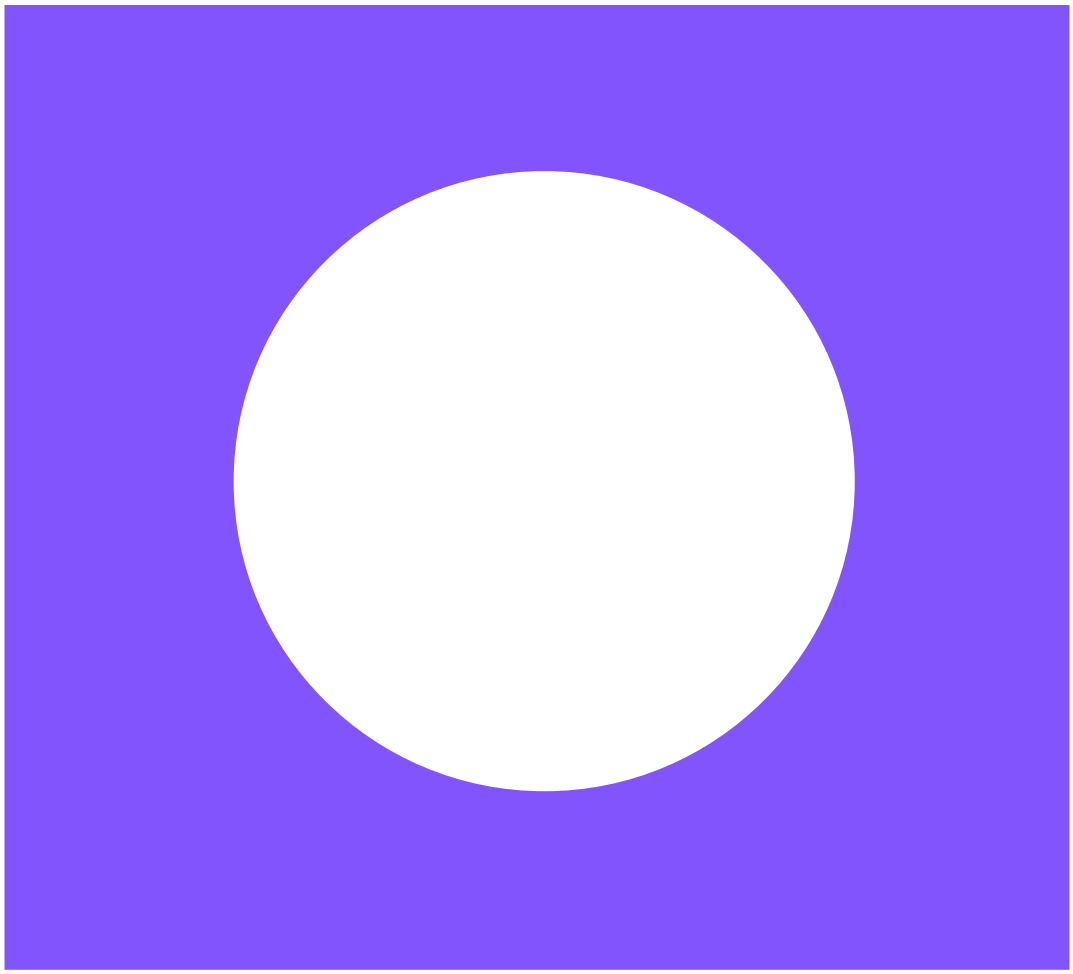
/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachments: A. Baltimore Junction Improvements Project Study Report dated January 2026
B. Euclid Avenue Grade Separation Project Study Report dated January 2026

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.

MOTT MACDONALD



Baltimore Junction Improvements

Project Study Report

January 2026

Mott MacDonald Public

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Baltimore Junction Improvements

Project Study Report

January 2026

Mott MacDonald Public

Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
0	10-23-25	P. Smith	R. Park	P. Smith	Internal Draft
1	12-8-2025	P. Smith	R. Park/B. Lobo	P. Smith	Draft
2	1-13-2026	P. Smith	C. Thibault	P. Smith	Final

Document reference: 504101624 | 1 | 2

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Executive summary

Project Overview

The Baltimore Junction Improvements Project Study Report (PSR) evaluates track and/or platform alternatives to provide operational flexibility at the Baltimore Junction site where the San Diego Trolley Green and Orange Lines merge into combined use tracks. Operating between the cities of San Diego on the west and El Cajon on the east, the Green and Orange Lines share the junction, which is located in the City of La Mesa. The PSR is funded under the Federal FY 2021 Grants Route Planning and Restoration Program to improve safety and service for low-income and disadvantaged communities. The grant references the SANDAG Regional Plan for Orange Line service frequency to be doubled from 15 minutes between trains to 7.5-minute headways. According to the writers of the grant, this likely cannot be supported with the existing infrastructure in the Baltimore Junction area.

Ten initial alternatives for a new transfer station and/or track configurations were considered, following discussion with MTS considering site constraints, this PSR evaluates only one feasible alternative that is to complete the wye tracks, which have 3 track configuration options. The other alternatives are eliminated due to right-of-way impacts, require significant additional infrastructure, or results in reduced Trolley operational performance.

Alternative 1 – Full Wye

- Upgrade tracks to a full wye junction with the construction of 2 new tracks connecting the Green and Orange Lines on the west side of the site.
- Some reconstruction of the existing tracks is required to remove the superelevation of the Green Line tracks and adjust the Orange Line track geometry.
- Alternatives 1A, 1B, and 1C provide options for track geometry changes that depend on design criteria exception approval.
- Modifications to signaling and OCS poles is required.
- Construction cost estimate: $13.3 million (Alts 1A & 1B); $11.9 million (Alt 1C)

Alternatives Analysis

Connecting the Green and Orange Line tracks with a full wye in Alternative 1 would allow operational flexibility for trains to switch to the other line without performing a reverse or turnback movement at the existing crossover north of the junction. A reverse movement could cause operational delays and would likely preclude reducing current 15-minute headways on the Orange Line to 7.5 minutes. Although removal of the Green Line superelevation would reduce the design speed by 10 MPH, this could be mitigated by the overall operational improvement resulting from the wye connection. Transfers between the Green and Orange Lines will continue in the current condition at the Grossmont Transit Center Station, roughly one mile northeast of Baltimore Junction.

An approximate 42,000 ft^2 area in the southwest section of the property could be available for private development. This development area considers maintaining space outside of the wye tracks for an MTS maintenance access road and future relocation of the traction power substation (TPSS) after the existing facility reaches the end of its service life.

Recommendations

- Continue to study the operational benefits of adding the Alternative 1 full wye connection between the Green and Orange Lines.
- Determine if implementing Alternative 1 supports reducing Orange Line headways from 15 to 7.5 minutes.

1 Introduction

1.1 Project Description

The San Diego Metropolitan Transit System (MTS) has initiated this Project Study Report (PSR) for the Baltimore Junction Planning Area Study. The study is funded under the Federal FY 2021 Grants under the Route Planning and Restoration Program and aims to identify improvements for safety and transit service for low-income and disadvantaged communities. This PSR studies the engineering feasibility of upgrading Baltimore Junction in the City of La Mesa, to a full wye connection between the San Diego Trolley Green and Orange Lines, that possibly supports increasing service frequency on the Orange Line, and provides operational flexibility, as well as assess the benefits of adding a transfer station at the site.

1.2 Purpose and Need

The Orange Line currently operates every 15 minutes between trains and the SANDAG Regional Plan calls for an increase in service frequency to 7.5-minute headways, however the current configuration of the rail infrastructure likely cannot support this increase in service. Adding a full wye junction and transfer platform could provide operational flexibility as well as, improve on-time performance, and system recovery.

2 Site Conditions and Performance

2.1 Existing Site and Facilities Conditions

Owned by MTS, Baltimore Junction is a 5.5-acre site adjacent to Interstate 8 (I-8) and Baltimore Drive in La Mesa, where the Green and Orange Lines converge, to operate on common tracks heading northeast toward El Cajon, and diverge to operate on separate tracks heading west and south toward San Diego. The site is bordered by Baltimore Drive to the west, I-8 to the south, and the Green and Orange Line tracks to the north and east, respectively (Figure 2-1). A single driveway entrance on Baltimore Drive at the northwest corner of the site provides vehicular access. The underdeveloped site houses transit-related infrastructure, including a traction power substation and a signal house, as well as provides occasional storage for vehicles and construction materials.

Figure 2-1: Baltimore Junction Site Aerial

The nearest Trolley stations to the site are the Orange Line La Mesa Boulevard Station one-half mile to the south, the Green Line 70th Street Station one mile to the west, and Grossmont Transit Center Station one mile to the northeast. The Grossmont Transit Center serves both the Orange and Green Lines and facilitates transfers with the 852, 854, and 854x bus routes.

According to CalEnviroScreen 4.0, the census tract surrounding the site exhibits several environmental and socioeconomic factors contributing to an overall percentile score of 45. Key indicators such as solid waste at the 94th percentile, hazardous waste at the 54th percentile, housing burden at the 72nd percentile, poverty at the 59th percentile, and traffic at the 52nd percentile indicate challenges in environmental health and social conditions. Although the community does not strictly meet the criteria of a "disadvantaged community" as defined by CalEnviroScreen's threshold, which requires a score greater than 75, the elevated scores for these specific indicators suggest areas where additional attention and resources may be warranted.

The surrounding area includes a mix of residential neighborhoods, community parks, strip malls, a big box retailer (Costco), storage center, city public works facility, and industrial and commercial businesses. The site

is directly surrounded by mostly large-scale commercial and light industrial uses. The La Mesa 2012 General Plan includes the Baltimore Junction site within a "Regional Serving Commercial" area along Fletcher Parkway for retail shopping centers, office complexes, and land uses providing public services to the traveling public such as restaurants, service stations, and hotels. The 2021 Housing Element update to the General Plan does not identify Baltimore Junction as a housing opportunity site. Exhibits of the Planned Use and Housing Element Update maps are provided in Appendix B

Trolley and Rail Operations

The Green and Orange Lines currently operate service on 15-minute headways in both directions throughout most of the day, with Trolleys passing through the site every three to four minutes. In revenue service, Trolleys do not switch from one line to the other, but if needed a turnback movement is possible using a single crossover 1500' northeast of the junction on the tracks shared by the two lines. The Orange Line operates at 20 mph through the junction, as the tracks are not superelevated so as to accommodate the passage of a weekly freight train. The Green Line can operate up to 35 mph through the junction as its tracks are superelevated.

Genesee and Wyoming Inc. operates the San Diego and Imperial Valley Railroad (SDIY) on the Orange Line tracks (Figure 2-2). Service is typically provided once a week on Sunday night between downtown San Diego and a customer in El Cajon, with a train consisting of two locomotives and three to five freight cars.

Figure 2-2: SDIY Route Along MTS Orange Line

The Orange Line connects to the junction on the south side with the northbound track using a through steel plate girder bridge and the southbound track using a cast-in-place concrete box girder bridge that cross over I-8. The steel through plate girder bridge uses ballasted track and wood ties, while the concrete box girder bridge uses direct fixation track. The Green Line connects to the junction on a double track cast-in-place box girder viaduct with direct fixation track that crosses over I-8 and Baltimore Drive. The at-grade tracks are ballasted on concrete ties through the junction curves, with a mix of concrete and wood ties on the shared tracks to the northeast and wood ties on the northbound Orange Line track north of the steel plate girder bridge. There is a spur tack along the shared tracks to the northeast that extends into City of La Mesa Publics Works property beyond a chain link fence gate. The distance from the mainline track to the fence gate is approximately 190', providing limited storage capacity for maintenance-of-way equipment (Figure 2-3).

Figure 2-3: Baltimore Junction Spur Track

MTS Bus Operations

In the vicinity of Baltimore Junction, MTS operates Bus Routes 1, 14, 852, 854, and 854x, the last three of which stop at Grossmont Transit Center. None of the bus routes operate along Baltimore Drive at the junction site (Figure 2-4).

Figure 2-4: Bus Routes Near Baltimore Junction

Traffic and Safety

The Baltimore Junction site is accessed by a driveway on Baltimore Drive, which is a four-lane arterial street with a raised center median, posted speed of 35 mph, and Average Daily Traffic (ADT) of 28,000 vehicles (Figure 2-5). The driveway access is unsignalized, but a left turn pocket for southbound vehicles entering the site avoids backing up traffic. Northbound vehicles entering the driveway must navigate an acute right turn.

Vehicles exiting the site must turn right and have a limited sightline to oncoming traffic due to trees, the curved road geometry, and railing along the bridge over I-8.

Figure 2-5: Site Entrance Driveway on Baltimore Drive

According to the UC Berkeley Transportation Injury Mapping System (TIMS) there have been seven reported incidents on Baltimore Drive near the site entrance in the past 10 years, mostly rear-end crashes.

Environmental Setting

The Baltimore Junction site is relatively flat, mostly unpaved except for paved parking for MTS vehicles, with an asphalt concrete (AC) driveway leading to the traction power substation and storage container (Figure 2-6). The north side of the site along the Green Line tracks is supported at the top of a mechanically stabilized earth (MSE) retaining wall that descends to a slope, keystone wall, and driveway approximately 30’ below the tracks (Figure 2-7). The south side of the site has an approximate 6’ tall berm with a Caltrans ROW fence and drainage swale on top.

Figure 2-6: Baltimore Junction Site Elements

Figure 2-7: Tiered MSE and Keystone Walls along Green Line

The site is composed of fill soils, gravel, and cobbles (sandstone and conglomerate). There are a few small patches of sensitive vegetation, including coastal sage scrub, in a disturbed state. Eucalyptus trees along the Caltrans ROW have the potential to support nesting birds, but they are unlikely to support any listed or sensitive bird species. There are no recorded archaeological sites on the site but the Orange Line tracks could have historical significance. An exhibit in Appendix A indicates the extents of potential sensitive vegetation.

2.1.1 Drainage, Flood Risk, and Utilities

Drainage

The site slopes and drains from the east side to the west toward Baltimore Drive through surface runoff, an open channel, and buried pipes. Runoff is collected at pipe headwalls and a curb inlet at the bottom of the driveway entrance. The open channels run parallel to the paved AC driveway and have 18" reinforced concrete pipes (RCP) running below them, discharging to Baltimore Drive (Figures 2-8 and 2-9).

Figure 2-8 Open Channel Drainage and Site Utilities

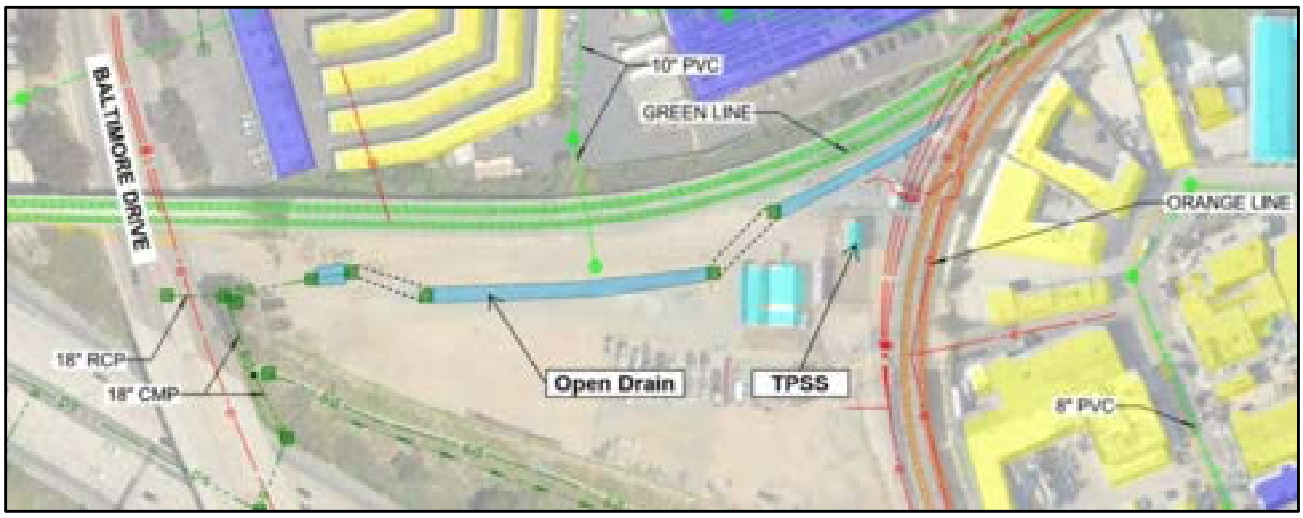


Figure 2-9: Drainage Culvert Headwalls

The berm between Baltimore Junction and I-8 has a drainage swale on the Caltrans ROW side of the fence line (Figure 2-10).

Figure 2-10 Caltrans Drainage Swale at Top of Slope

Flows at the top of the slope are collected and discharged through an 18” RCP pipe, which connects into a 24” RCP pipe crossing under I-8 (Figure 2-11).

Figure 2-11 Caltrans Swale and Fence

Flood Risk

Based on review of Federal Emergency Management Agency (FEMA) mapping, the site is not within a flood hazard zone given its relatively high elevation compared to the surrounding topography. Flood plains for 100-year and 500-year events on the west side of Baltimore Drive near Fletcher Parkway are mapped in an exhibit in Appendix A.

Utilities

In addition to the site drainage, there are electrical lines and a sewer line on the site. Overhead electric lines on wood utility poles cross over the tracks from Commercial Street, run parallel to the Orange Line tracks through the junction, cross the Green Line tracks and head northeast toward Grossmont Transit Center. A 10" PVC sewer line originates from a manhole in the site driveway and runs north past Costco to a sewer line in Fletcher Parkway (Figure 2-8). An exhibit in Appendix A shows the utilities in the vicinity of the Baltimore Junction site.

2.1.2 Geotechnical Considerations

A Geotechnical Desktop Study report in Appendix B discusses the area's geologic setting, geologic hazards, project design and construction conclusions, and recommendations for additional future geotechnical investigation. The report supports the feasibility of the design and construction of improvements to Baltimore Junction.

2.2 Governance and System Coordination

The site is currently owned by MTS. As operator of public transit services in the area, the agency oversees service development and day-to-day operations, fleet maintenance, and capital improvements related to transit operations.

MTS works in partnership with SANDAG to develop long-term plans to improve mobility and transit options for residents and visitors of the cities of San Diego, La Mesa, Chula Vista, Coronado, El Cajon, Imperial Beach, Lemon Grove, National City, Poway, and Santee, as well as some unincorporated areas of San Diego County. As per the memorandum of understanding between the two agencies, SANDAG is responsible for the development of new routes through its Regional Plan. MTS supports this effort as well as oversees the operation of the routes once implemented. The development and selection of preferred alternatives for the site will require a concerted approach between the two agencies and alignment with SANDAG's regional planning efforts.

Caltrans is also another key stakeholder in this project. With I-8 adjacent to the site, alternatives that may increase traffic volumes and congestion in the area could affect the performance of the freeway as well.

2.3 Proposed Projects and Developments

Several projects are planned to enhance the transit infrastructure around the junction. These initiatives focus on improving pedestrian access, enhancing safety, and potentially expanding transit services to better serve the surrounding communities. These planned enhancements address current traffic conditions and flow, including the frequency of Trolley trips, traffic volumes and congestion levels on surrounding roadways, as well as traffic incidents. The City of La Mesa has a Local Road Safety Plan that identifies improvements along Baltimore Drive and at its intersection with Fletcher Parkway to improve safety for motorists and pedestrians. The SANDAG Regional Transportation Improvement Program has funding for improving bike routes and sidewalk connections for various streets in La Mesa, including Baltimore Drive. Improvements at Baltimore Junction are expected to align with these proposed City projects.

3 Alternatives

3.1 Project Alternatives

The purpose of this project is to identify opportunities to improve infrastructure at Baltimore Junction that possibly would allow for the doubling of service along the Orange Line, as identified in the 2021 SANDAG Regional Plan, and provide operational flexibility to help improve on-time performance. Nine alternatives were considered during the initial phase of the project and discussed at a workshop. Exhibits for each alternative are provided in the Workshop meeting minutes in Appendix D.

1. Full Wye (connecting double track between of the Green and Orange Lines)
2A. Full Wye with 4 Side Platforms (2 Each on Green and Orange Lines)
2B. Full Wye with 2 Green Line Side Platforms, Retain Orange Line Tracks
2C. Full Wye with 2 Side Platforms within the Wye Connection
2D. No Wye Connection with 4 Side Platforms (2 Each on Green and Orange Lines)
2E. Single Track Wye with 2 Green Line Side Platforms
3. Full Wye with Side Platforms on Shared Green/Orange Tracks
4. Full Wye with Single Platforms at Outbound Movements
5. Full Wye with Single Platforms at Outbound Movements and Center Transfer Platform
6. Full Wye with Center Transfer Platform

3.2 Alternatives Considered and Eliminated

Design Constraints

Each of the ten alternatives considered could meet the purpose and need of the project, but they also must be feasible to engineer within the context of the project scale as well as avoid significant ROW acquisition and negative impacts to the community and environment. Each alternative must meet the following Grant and MTS requirements:

- Include a full wye for improved operational flexibility between the Green and Orange Lines
- Maintain freight operations on the Orange Line tracks
- Allow for the possibility of increased service on the Orange Line
- Improve travel times and reliability
- Provide station platforms at least 360’ in length

The alternatives require geometric changes to some or all the tracks in the junction, which need to comply with the SANDAG LRT Design Criteria Manual (DCM) to support Trolley operations as well as consider geometry that can accommodate the weekly freight train. Per the DCM, the minimum desirable radius is 150’ and the absolute minimum allowed is 90’. The minimum desirable radius for Class 1 freight railroads is 574’, but as a short line railroad the SDYI’s shorter length trains can negotiate curves with smaller radii at slower speeds. Using BNSF data as a guide, the standard freight box car is approximately 60’ long and can accommodate a minimum curve radius of 229’. The current minimum curve radius of the Orange Line tracks at Baltimore Junction is 433’ and for this study a 300’ minimum curve radius is assumed for the weekly freight train, which will need to be confirmed with the railroad operator. Alternatives that have a modified track curve with a radius of less than 150’ for Trolley operations or less than 300’ for freight trains were eliminated.

Alternatives Eliminated

Alternative 2A. Full Wye with 4 Side Platforms (2 Each on Green and Orange Lines):

This alternative implements a full wye configuration at Baltimore Junction, adding straight side platforms on the Green and Orange Lines. However, this requires reducing the curves to radii as small as 130' to connect all the tracks, which is unacceptable for both Trolley and freight operations (Figure 3-1). The outer side platform on the Green Line tracks would be located above the existing MSE wall, which would need to be removed and reconstructed to accommodate the platform. Since the curves are too small for freight operations and would require the Trolley to significantly slow down, this alternative was eliminated as it would not support the overall objective of reducing headway.

Figure 3-1: Alternative 2A

Alternative 2B. Full Wye with 2 Green Line Side Platforms, Retain Orange Line Tracks:

This alternative implements Green Line platforms as in Alternative 2A, but retains the Orange Line tracks in their current configuration. Due to the significant infrastructure modifications to construct an outer Green Line platform and track radii for the Green Line of less than 150', this alternative was also eliminated (Figure 3-2).

Figure 3-2: Alternative 2B

Alternative 2C. Full Wye with 2 Side Platforms within the Wye Connection:

This alternative maintains the existing Green and Orange Line track geometry and places side platforms along the new wye track. This configuration could be beneficial for transfer operations with a bus bridge to Grossmont Transit Center by allowing passengers to drop off at the junction and the Trolley transferring to the other line and not needing to travel to the northeast. However this is only efficient in one direction on each line and it requires trains to make a reverse movement to remain on the same line or coming from the northeast to access the platforms. Given the limited use of the platforms for only certain directions and the negative operation impacts from reverse movements, this alternative was eliminated (Figure 3-3).

Figure 3-3: Alternative 2C

Alternative 2D. No Wye Connection with 4 Side Platforms (2 Each on Green and Orange Lines):

This alternative adds straight side platforms on the Green and Orange Line tracks as in Alternative 2A but omits the wye connection. Due to the poor track geometry with small radius curves that do not support freight operations, no wye track connection to improve Trolley operations, and significant infrastructure modifications needed to accommodate the outer Green Line platform on the side of the MSE wall, this alternative was eliminated (Figure 3-4).

Figure 3-4: Alternative 2D

Alternative 2E. Single Track Wye with 2 Green Line Side Platforms:

This alternative offsets the Green Line tracks toward the interior of the site and places the Green Line side platforms within the junction property to avoid impacts to the MSE wall. However, the Green Line viaduct would have to be widened to realign the tracks, requiring significant infrastructure investment to build a parallel bridge and modify track geometry on the existing bridge (Figure 3-5). Orange Line trains could only access the platforms by making a reverse operation or switching over to the Green Line, negatively affecting operations. For these reasons, this alternative was eliminated.

Figure 3-5: Alternative 2E

Alternative 3. Full Wye with Side Platforms on Shared Green/Orange Tracks:

This alternative adds side platforms northeast of the junction on the shared track beyond the spur track switch, and adds curved track to complete the wye (Figure 3-6). The new platforms could be contained within MTS ROW, but retaining walls would be needed to support the City of La Mesa property and the platform on the downhill slope next to the Costco property. Some of the overhead electric distribution line poles on the downhill slope may need to be relocated to accommodate the platform construction. Passenger transfers could only occur on the shared track, and a turnback movement would be required to drop off passengers and send a train back on the other line, negatively affecting operations. For these reasons, this alternative was eliminated.

Figure 3-6: Alternative 3

Alternative 4. Full Wye with Single Platforms at Outbound Movements:

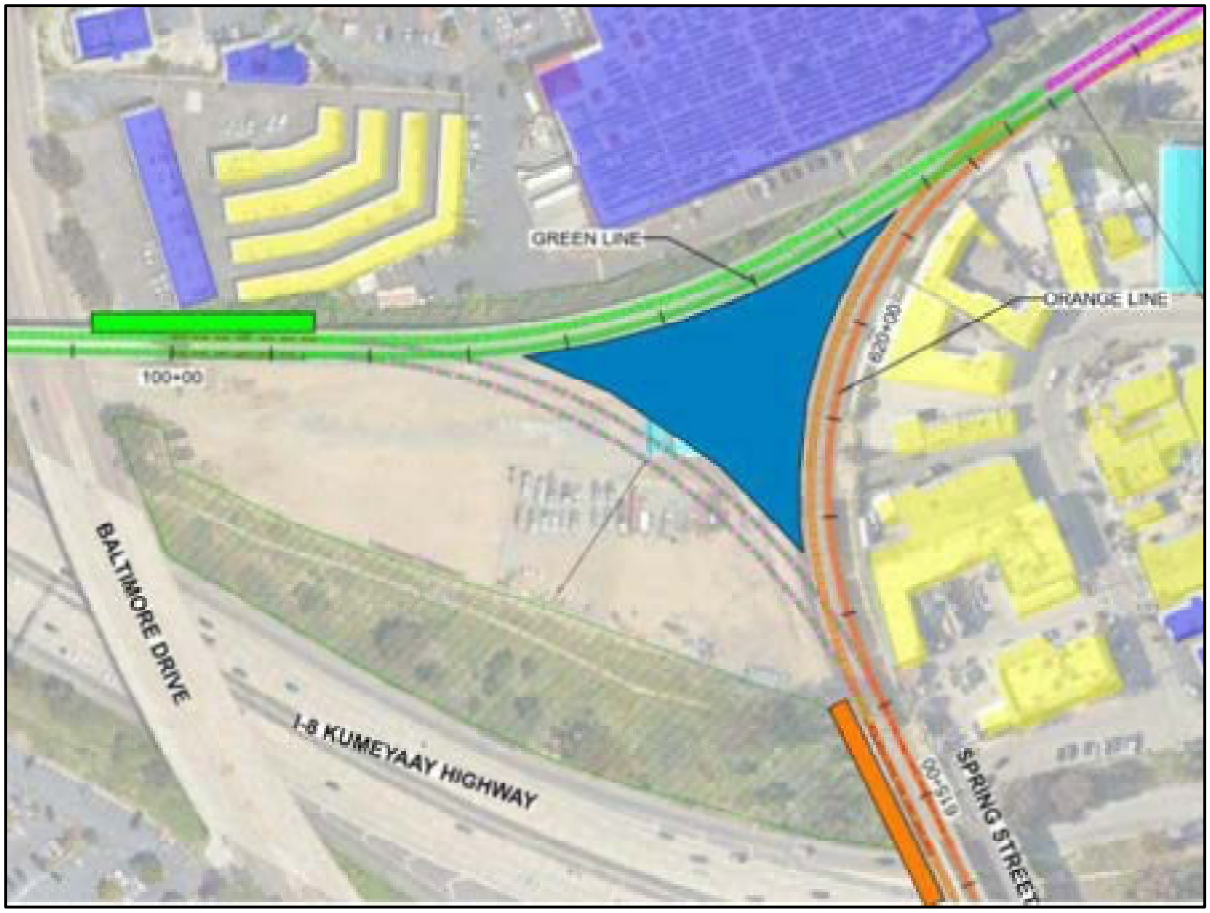
Rather than having the transfer platforms northeast of the junction as in Alternative 3, this alternative places single side platforms on all the outbound movements (Figure 3-7). However, separating the platforms at the extremities of the wye has operational and security challenges and would require passengers to walk over 800' between them, defeating any convenience gained by implementing the transfer station. Significant infrastructure modifications would be needed to accommodate the outbound platforms for the Green Line platform at the edge of the MSE wall and extending parallel to the viaduct, and the Orange Line platform parallel to the existing bridge and over the I-8 freeway ramps. Due to the infrastructure upgrades needed and the potential right-of-way impacts, this alternative was eliminated.

Figure 3-7: Alternative 4

Alternative 5. Full Wye with Single Platforms at Outbound Movements and Center Transfer Platform:

This alternative places single side platforms on the outbound Green Line and Orange Line movements as in Alternative 4, but replaces the outbound platform on the shared track with a center platform within the wye (Figure 3-8). The center platform reduces the distance transferring passengers would have to walk between platforms. Similar to Alternative 4, considering the significant infrastructure upgrades that would be needed and potential right-of-way impacts, this alternative was eliminated.

Figure 3-8: Alternative 5

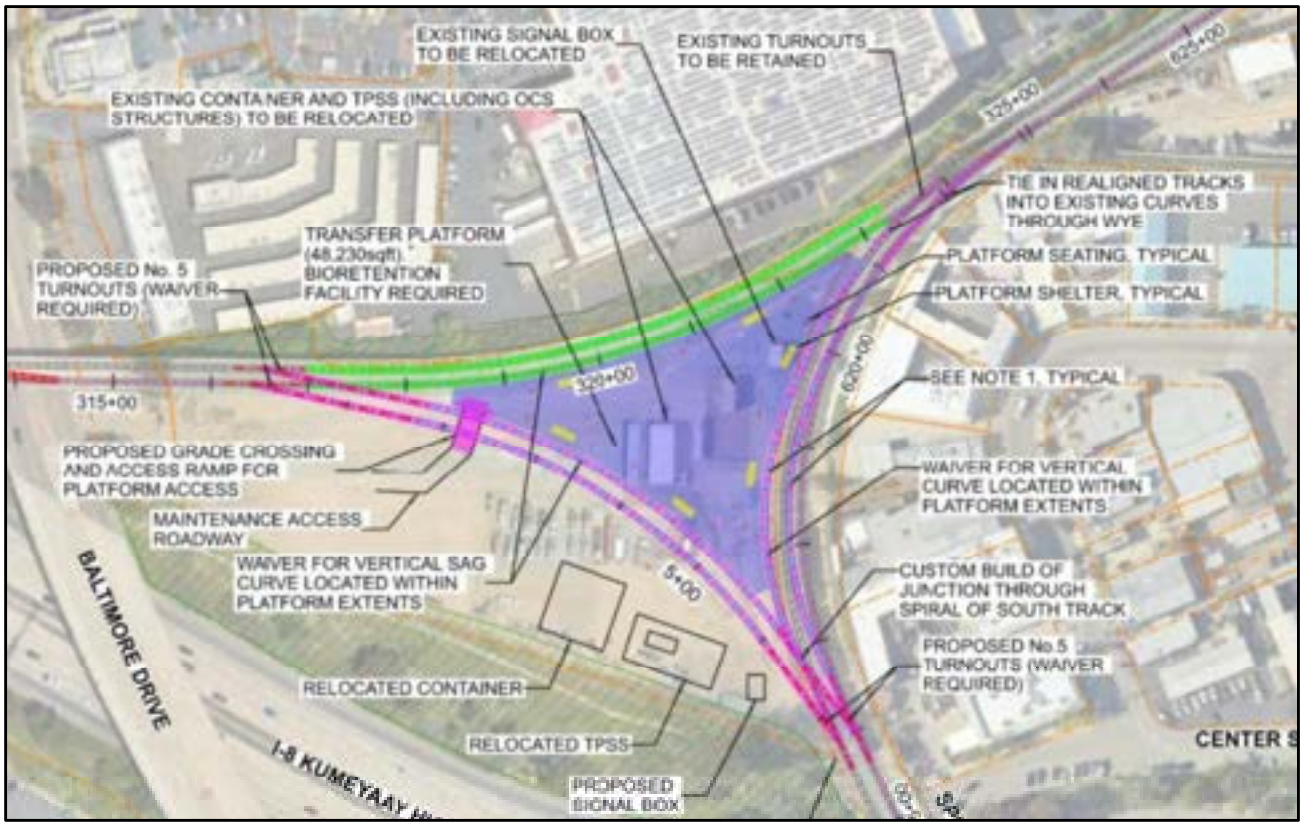


Alternative 6. Full Wye with Center Transfer Platform:

This alternative, studied after the Workshop, uses the track geometry proposed in Alternative 1 adding a center transfer platform within the enclosed track area. Shown in Figure 3-9, the platform is intended to facilitate transfers between the Green and Orange Lines.

The center platform would have shelters and benches, require relocation of the TPSS, signal house, and storage containers, and have a grade crossing and ramp for maintenance vehicle access. Due to the track horizontal and vertical curves within the platform edge, design exception approval to the DCM would be required.

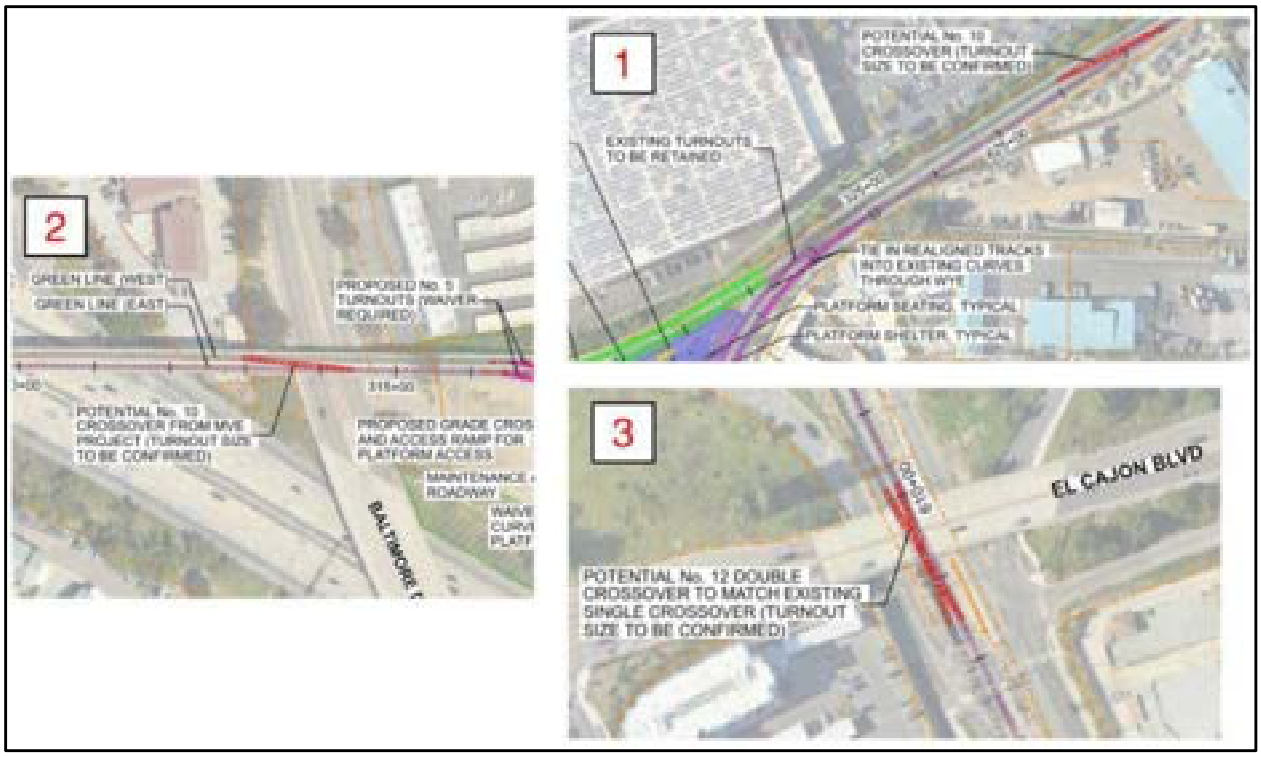
Figure 3-9: Alternative 6



In addition to the track geometry for Alternative 1, new crossovers would be needed to allow Green and Orange Line Trolleys traveling in either direction to access the center platform and return to the correct track upon departing the platform as shown in Figure 3-10. This includes:

1. Adding a single No. 10 crossover northeast of the junction between the shared line tracks
2. Adding a single No. 10 crossover on the viaduct over Baltimore Drive (per the as-built plans)
3. Replacing the single crossover on the Orange Line tracks at El Cajon Blvd. with a double No. 12 crossover

Figure 3-10: Alternative 6 Additional Crossovers



Trolleys crossing to the adjacent track and traveling in the opposing direction would have a negative impact on Trolley operations that are expected to cause delays and potential safety hazards. Given these impacts, this alternative was eliminated.

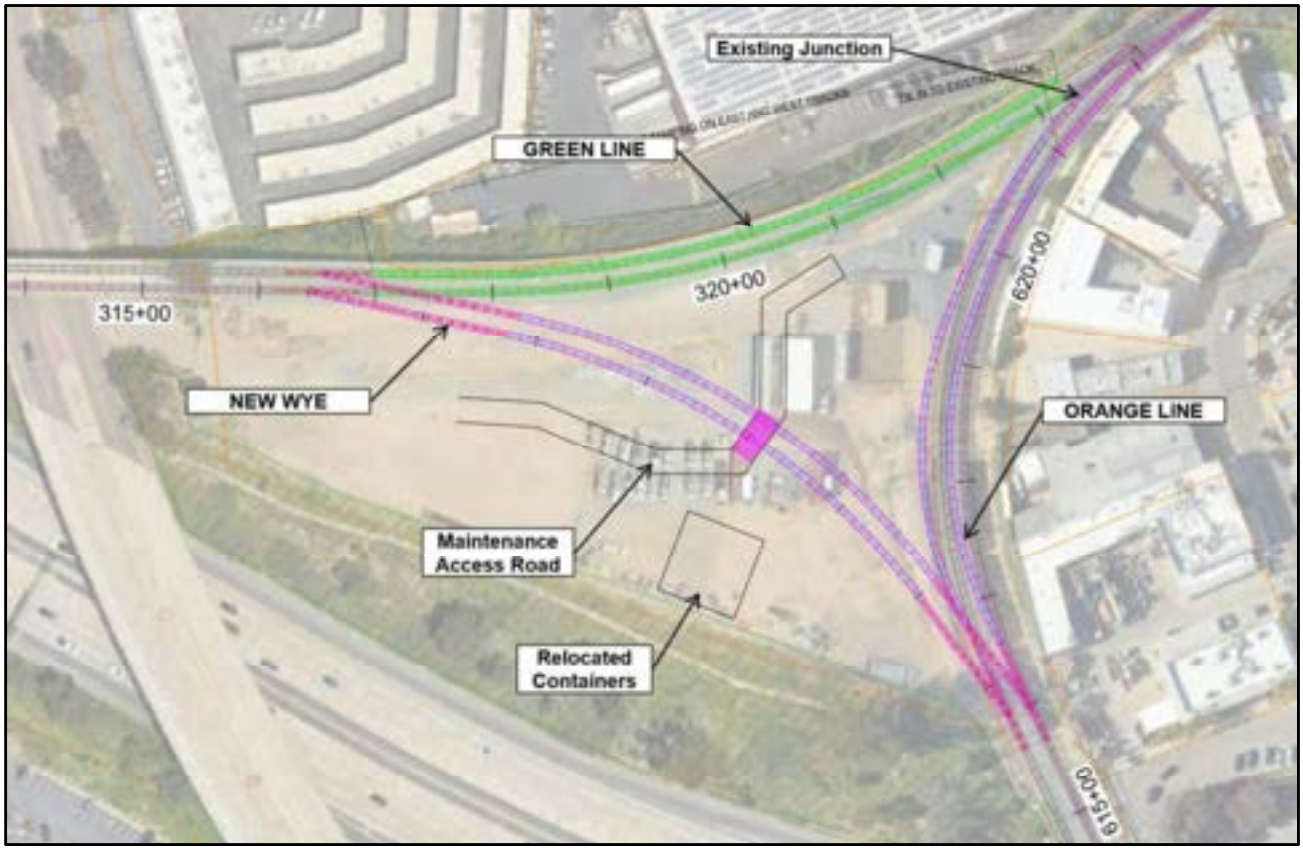
Following the elimination of alternatives only Alternative 1 is developed for the PSR.

3.3 Alternative 1 – Full Wye

3.3.1 Description of Alternative

This alternative constructs a twin set of tracks to connect the Green and Orange Lines within the open area southwest of the existing junction to complete the wye connection (Figure 3-11). This configuration improves operational flexibility by allowing Green and Orange Line trains, traveling in either direction, to switch to the other line at the junction without having to perform a crossover or turnback movement and causing a potential delay.

Figure 3-11: Alternative 1 Full Wye Layout



The wye track location and geometry are selected to conform with the DCM to provide the largest curve radius possible and to properly connect to the existing Green and Orange Line tracks. The turnouts are located to avoid impacting the existing bridge structures and provide adequate clearance to the Caltrans ROW. Maintaining the minimum DCM clearance of 7.5' between the Caltrans ROW fence and the Orange Line tracks sets the turnout placement.

Per the DCM special trackwork, including turnouts, shall be located on vertical and horizontal tangents. The standard for mainline track is No. 10 Turnouts, however there is not enough tangent track length between the ends of the bridges and start of the existing spiral curves for turnouts this long; therefore No. 5 Turnouts are proposed for the wye. Turnouts this small are typically used in sidings or yard tracks and are limited to 12 mph per AREMA standards, which govern the design speed of the wye connection tracks. Use of No. 5 Turnouts on the mainline will require design exception approval to the DCM standards. The track geometry of the new wye tracks can accommodate curve radii of over 600 feet (Figure 3-12).

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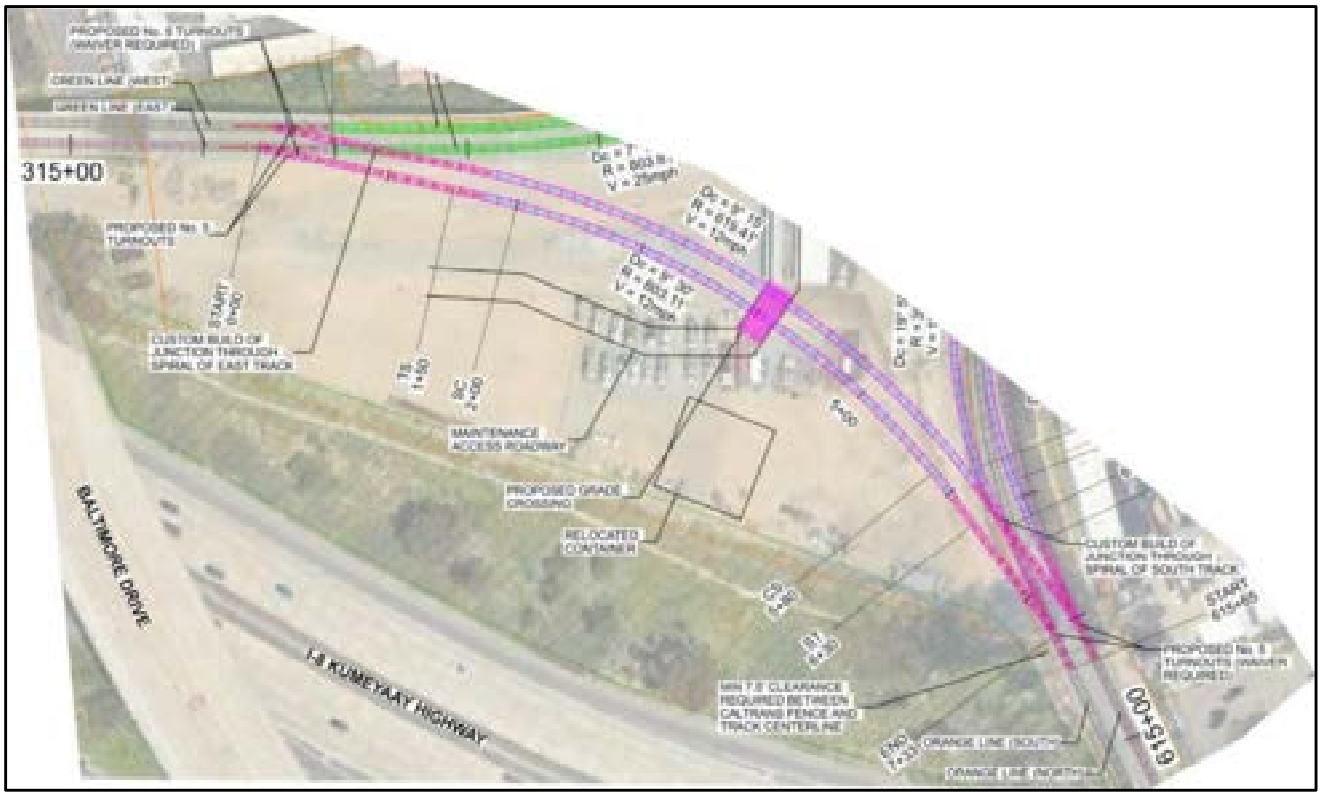
The existing Green Line tracks are superelevated through the junction and the new wye connection tracks are estimated to connect to the Green Line at or within the spiral transitions, based on as-built drawings. Designing turnouts with superelevation is not standard railroad practice and geometrically infeasible for this situation, with the outside wye track crossing the superelevated curved track. Therefore, the superelevation on the Green Line would have to be removed to accommodate the parallel turnouts. Removing the superelevation also accommodates the functionality of a possible central transfer platform, where it would be undesirable to have a superelevated train leaning away from the platform edge.

Figure 3-12: Geometry of Wye Track Connecting the Green and Orange Line Tracks



Alternative 1 has three options (1A, 1B, and 1C) that provide different track geometry possibilities for the Green and Orange Lines tracks, exhibits of each are provided in Appendix C.

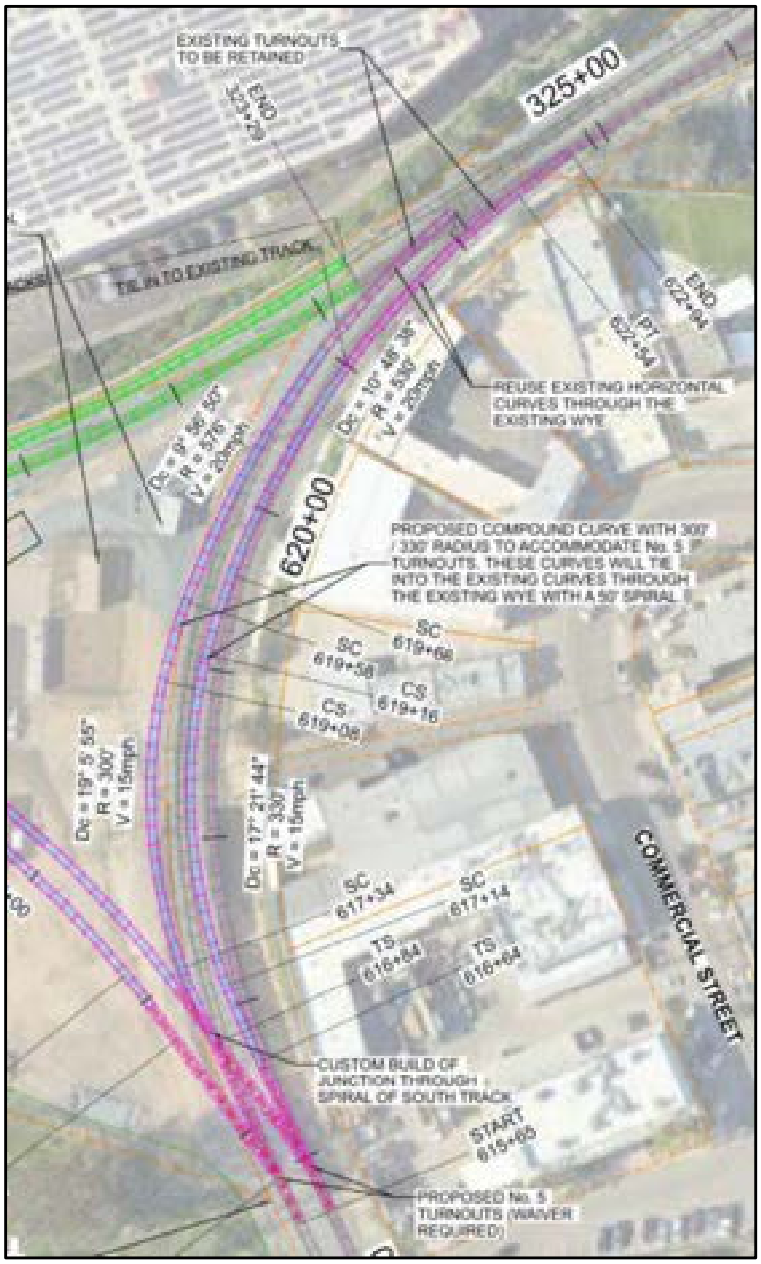
3.3.1.1 Alternative 1A: Remove Green Line Westbound and Eastbound Track Superelevation

For Alternative 1A, both the westbound and eastbound Green Line tracks are tamped to remove the superelevation but maintain the same curve alignment, which reduces the track design speed from 35 to 25 mph. The No. 5 Turnouts are placed between the end of the bridge and beginning of spirals with a custom junction (frog) in the spiral transition for the exterior track (Figures 3-13 and 3-14).

Figure 3-13: Alternative 1A Green Line Track Geometry

For the Orange Line tracks, the eastbound track spiral would be within the turnout. To avoid construction of a complex nonstandard turnout with spiral track, the track tangents would be extended north, compressing the curves, and compound curves would be used to connect to the existing turnouts on the north side of the junction. The minimum curve radius is 300’ and the track centerline spacing is over 15’. The existing design speed of 15 mph would be maintained in the 300’ radius curve, but the larger compound curves would have a 20 mph design speed (Figure 3-14).

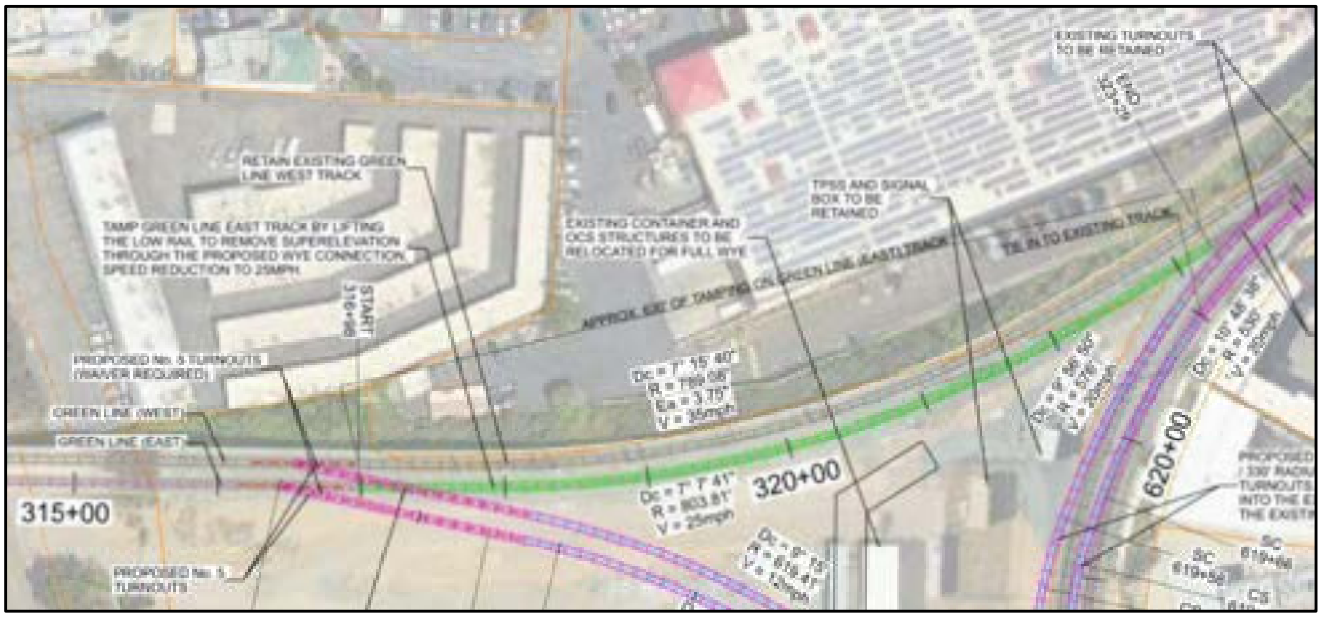
Figure 3-14: Alternative 1A Orange Line Track Geometry



3.3.1.2 Alternative 1B: Remove Green Line Eastbound Track Superelevation

Alternative 1B is the same as Alternative 1A, except it would maintain the superelevation in the westbound Green Line track. This could be an option after a detailed track survey is carried out to determine if the location of the spiral transition can be located outside the turnout, allowing the current 35 mph design speed for the westbound track to be maintained. The superelevation would be removed from the eastbound track (Figure 3-15).

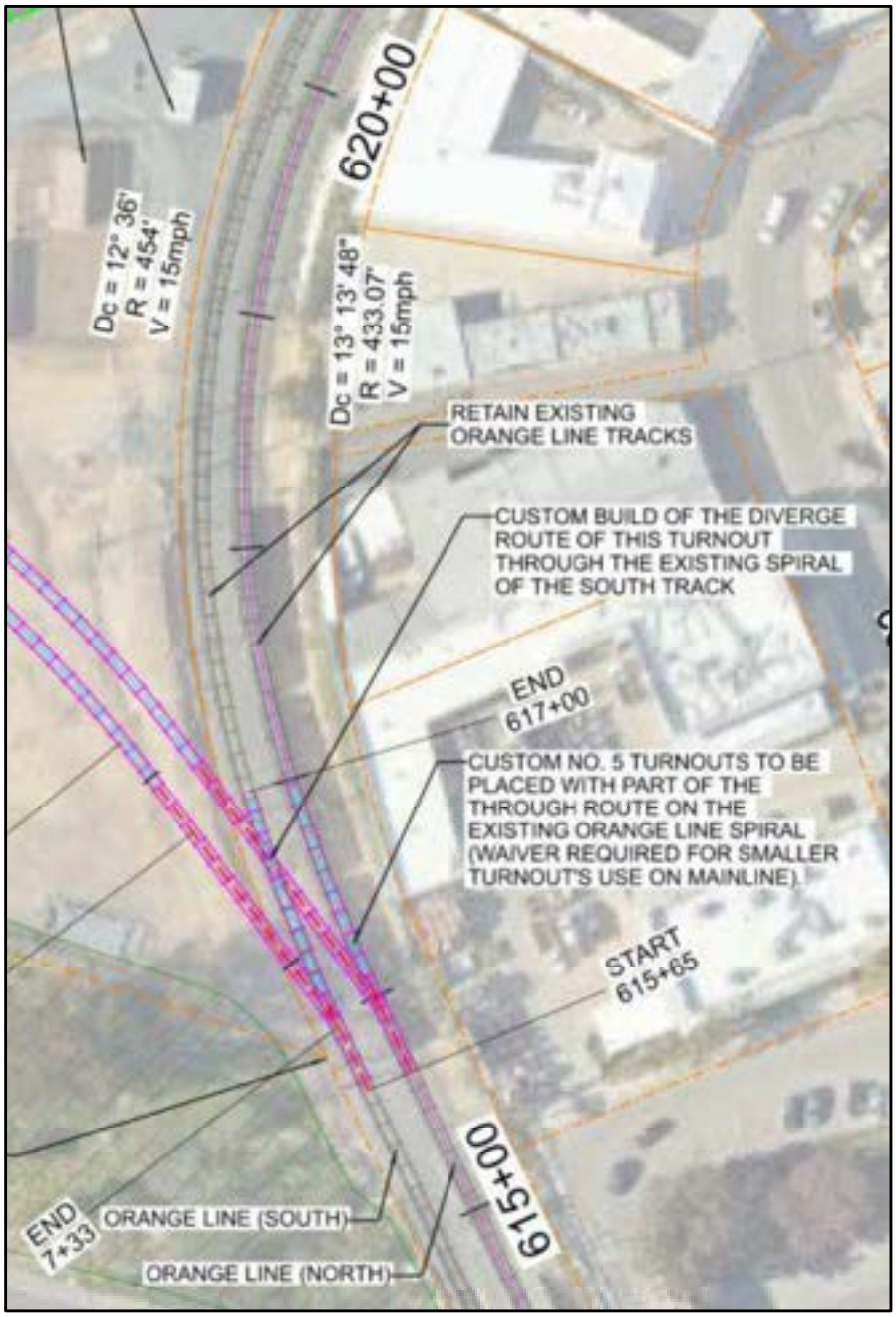
Figure 3-15: Alternative 1B Green Line Track Geometry



3.3.1.3 Alternative 1C: Maintain Orange Line Track Geometry

This alternative is the same as Alternative 1A, but with the option of constructing a custom No. 5 turnout to accommodate the spiral in the outer track. This type of turnout would require design exception approval and is expected to have increased costs; however, this would allow the existing Orange Line track geometry to be maintained (Figure 3-16).

Figure 3-16: Alternative 1C Orange Line Track Geometry



3.3.2 OCS and Systems

For each alternative, the overhead contact system (OCS) would be reconstructed where the existing track geometry is modified and where new OCS infrastructure is installed along the new wye tracks. For the Green Line tracks, removal of the superelevation would likely require an adjustment to the catenary wires to maintain proper contact with the Trolley pantograph. For the Orange Line tracks, realignment of the curves for Alternatives 1A and 1B would require removal and relocation of the OCS poles and foundations.

The existing systems signal boxes, signal house, and TPSS building would be maintained in their current location within the area between the wye tracks (Figure 3-17).

Figure 3-17: Existing TPSS Building and Signaling Infrastructure

3.3.3 Signaling

A high-level assessment was undertaken to estimate the position and quantity of signaling equipment needed to support the full wye configuration. Factors such as switch line placement, track circuit lengths, and braking distances beyond this location are to be determined at a later detailed design phase.

The following signaling items and quantities have been identified for cost estimating and are shown on an exhibit in Appendix C.

Item	Quantity
New Signals	14
Point Machines	4
Axle Counters	18
Interlocking Logic	18
New Cabling	1,268 ft

3.3.4 Civil

3.3.4.1 Site Drainage

The existing open drainage channel parallel to the Green Line tracks would be crossed by the new wye tracks and would be directed into a culvert pipe under the tracks to connect into the existing site drainage. The Caltrans drainage swale would not be impacted.

3.3.4.2 Maintenance Access Roadway

The existing site access roadway and vehicle parking would need to be relocated outside the wye tracks and a new grade crossing installed over the tracks to allow maintenance vehicles to access the signal house and TPSS building (Figure 3-18:). The shipping container near the TPSS building requires relocation to avoid conflict with the tracks and grade crossing.

Figure 3-18: Access Roadway and Grade Crossing

3.3.5 Right-of-Way

Alternative 1 can be constructed within the Baltimore Junction property owned by MTS, avoiding any right-of-way impacts.

3.3.6 Preliminary Construction Cost Estimate

Preliminary construction costs of the Alternatives 1A, 1B, and 1C are:

- Alternative 1A: $13.3 million
- Alternative 1B: $13.3 million
- Alternative 1C: $11.9 million

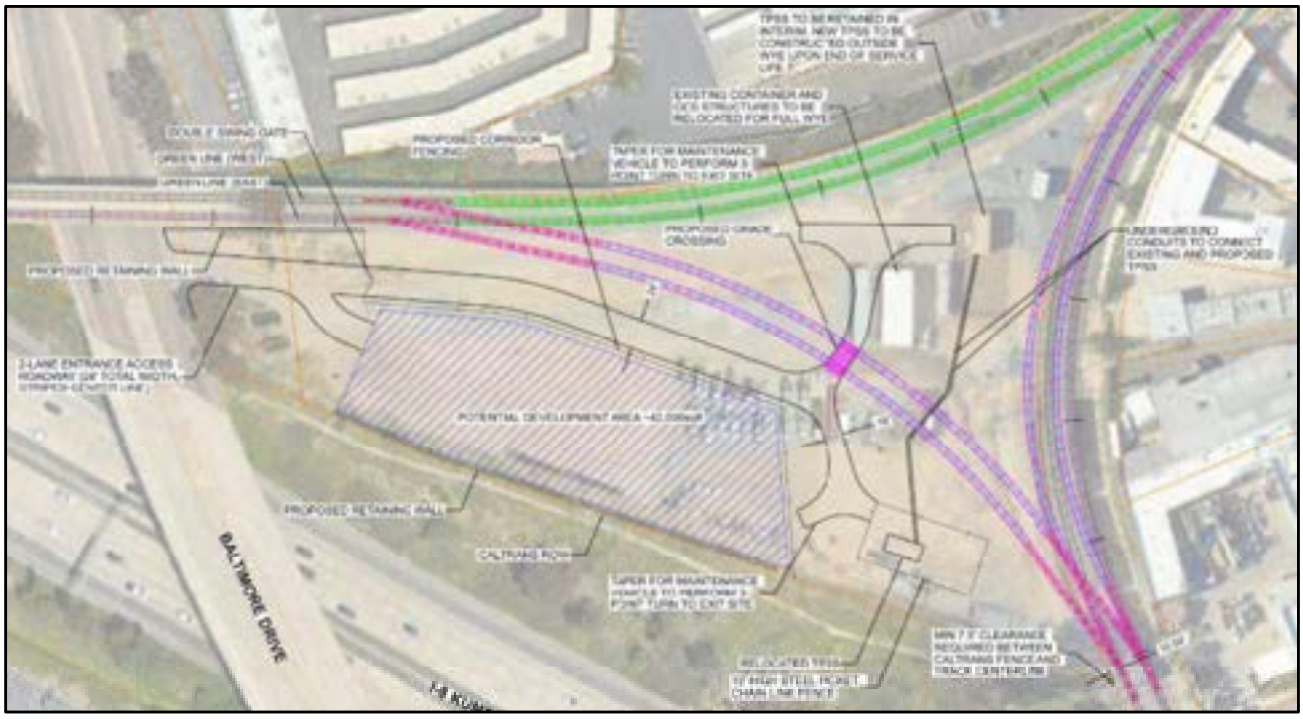
Alternatives 1A and 1B have the same estimate rounded to the nearest $100,000 as the difference of maintaining the westbound Green Line track superelevation in Alternative 1B is a small portion of the estimate. Alternative 1C has the lowest cost due to not reconstructing the Orange Line track geometry in the junction.

3.3.7 Potential Area for Development

The Baltimore Junction property has available space that could be used for private development, construct the wye tracks, and accommodate MTS operations. The southwest section of the property has available development space, as shown in Figure 3-19, and in an exhibit in Appendix C. Portions of the property will be reserved for an MTS access road and to relocate the TPSS outside the wye track area. At the end of the existing TPSS service life, it would be relocated outside the wye track area for a large crane and flatbed truck to install a new TPSS without interrupting Trolley service. Underground conduits would be installed with the new wye tracks to facilitate the TPSS replacement. The access road geometry is set to DCM geometry to accommodate turnaround of maintenance trucks and is secure with fencing and gate.

Approximately 42,000 ft^2 is available for development with retaining walls at the property entrance and along the berm at Caltrans ROW. The site developer will need to evaluate drainage impacts, possibly requiring an underground storage tank, and access to utilities. Depending on the development use, a traffic study may be needed to determine the impacts to Baltimore Drive and the nearby intersections.

Figure 3-19: Site Layout with Potential Development Area



4 Alternatives Analysis

4.1 Alternative 1

Alternative 1 with the three options, 1A, 1B, and 1C, completes the wye track configuration to provide operational flexibility by allowing Green and Orange Line trains to switch to the other line without requiring a reverse or turnback movement. Design criteria approval for the use of No. 5 Turnouts on mainline track would be needed.

At a minimum, the eastbound Green Line track superelevation through the junction would need to be removed to accommodate the new wye track turnout while there is a possibility to maintain the superelevation of the westbound track. Depending on the selected configuration, removing the superelevation would reduce the design speed from 35 MPH to 25 mph.

The Orange Line track curves require reconfiguration to compound curves to accommodate standard turnout geometry, however the majority of the existing track could be maintained if a custom turnout with spiral mainline track is approved. In either case the current Orange Line design speed of 15 mph can be maintained.

The estimated construction cost for the options are:

- Alternative 1A: $13.3 million
- Alternative 1B: $13.3 million
- Alternative 1C: $11.9 million

The potential operational benefit of completing the wye connecting track, with some speed reduction on the Green Line tracks, will need to be evaluated by MTS. Based on having the lowest construction cost of $11.9 million, Alternative 1C is the preferred alternative.

The site could be developed with approximately 42,000 ft^2 of available space and accommodate all the Alternative 1 options and anticipated future infrastructure improvements.

4.2 Environmental Considerations

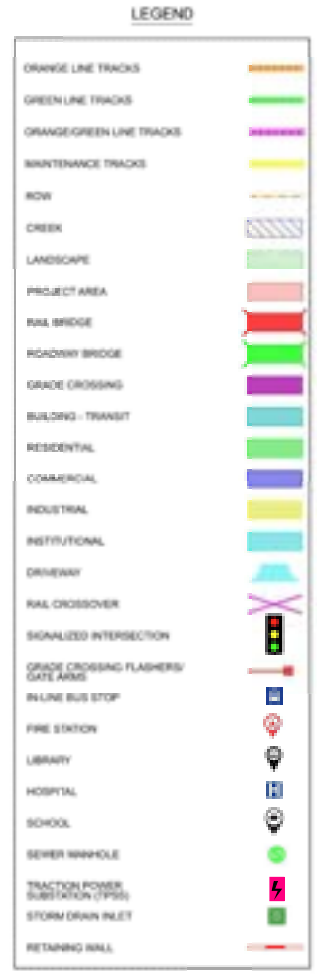
Alternative 1 is contained within MTS property, is not capacity increasing, and would not have significant impacts on the community or environment as the Baltimore Junction site is disturbed and in a developed commercial area. This project would be expected to qualify as a Categorical Exemption or Negative Declaration under the California Environmental Quality Act (CEQA). If federal funds are used for the project, then compliance with the National Environmental Protection Act (NEPA) will be required.

5 Recommendations for Future Study

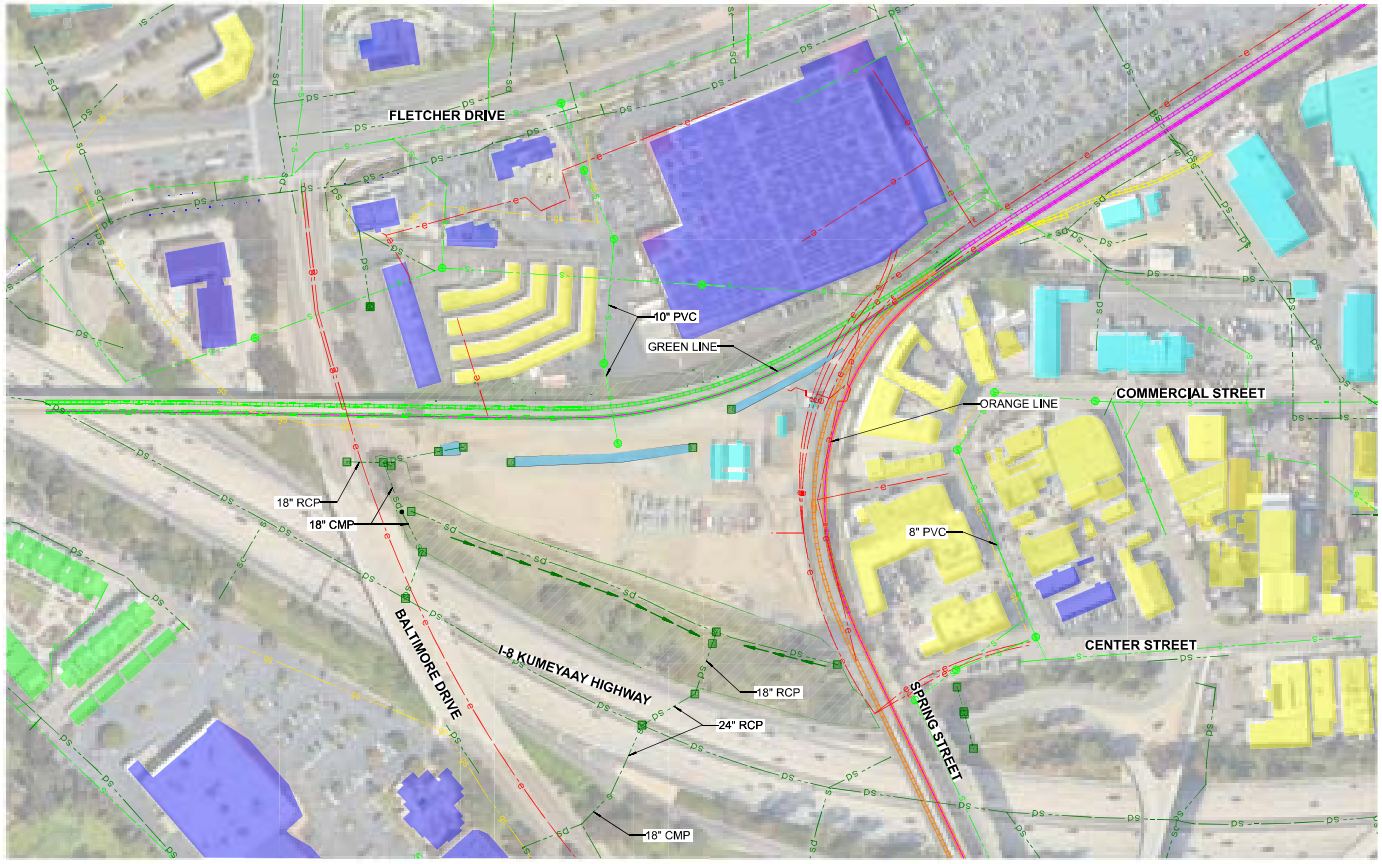
Implementing the Alternative 1 connecting wye tracks between the Green and Orange Lines can be further studied by MTS to determine if this facilitates an increase in Orange Line service to 7.5-minute headways and if this provides operational benefits.

Appendix A – Existing Conditions Exhibits and Data

- Existing Conditions Overview
- Existing Utilities
- Green Line Plan, Profile & Typical Sections
- Orange Line Plan, Profile & Typical Sections
- Green / Orange Line Plan, Profile & Typical Sections
- Existing Floodplains
- Environmental Constraints
- Existing Transit and Traffic Operations
- Transportation Injury Mapping System (TIMS) – 10 year Summary Map
- City of La Mesa Planned Land use Map
- City of La Mesa Housing Site Inventory Map
- BNSF 60’ Box Car Data Sheet

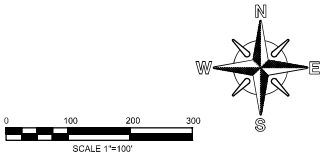


MOTT MACDONALD	MTS	BALTIMORE JUNCTION - ALTERNATIVE ANALYSIS WORKSHOP	EXISTING CONDITIONS OVERVIEW



LEGEND

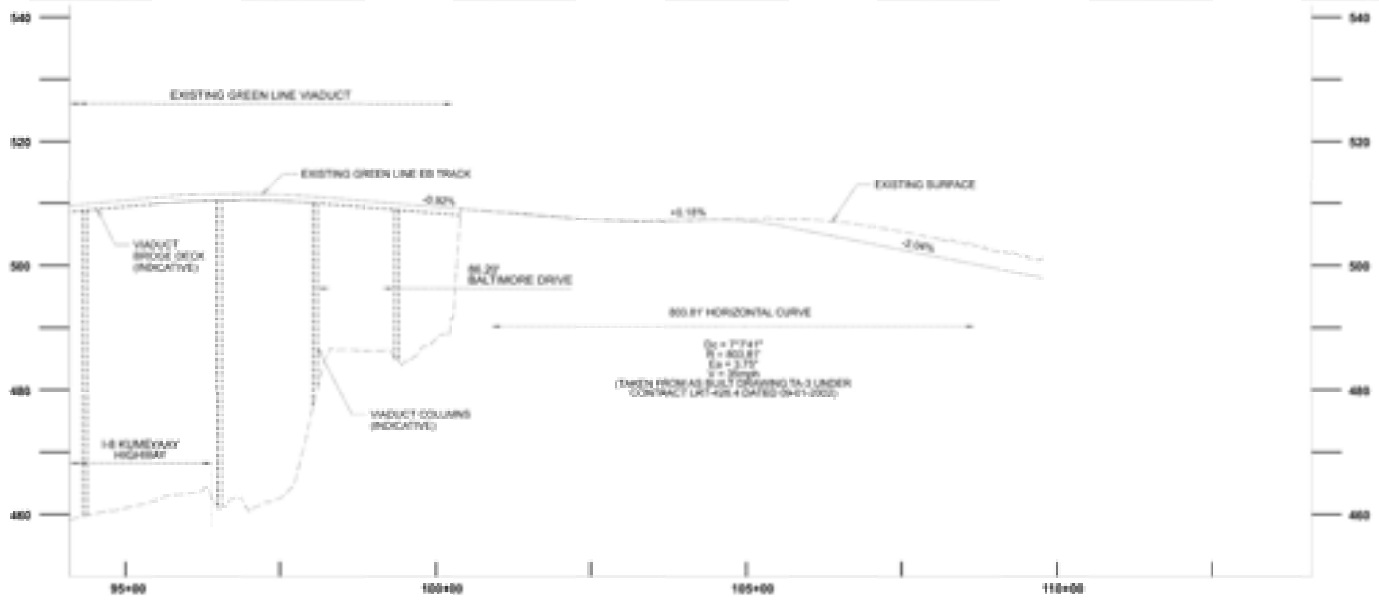
- ORANGE LINE TRACKS
- GREEN LINE TRACKS
- ORANGE/GREEN LINE TRACKS
- MAINTENANCE TRACKS
- CREEK
- LANDSCAPE
- DRAINAGE DITCH
- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- INSTITUTIONAL
- WATER
- ELECTRICAL
- GAS
- SEWER
- STORM DRAIN
- SEWER MANHOLE
- STORM DRAIN INLET
- CONCRETE DRAINAGE SWALE



MOTT MACDONALD

BALTIMORE JUNCTION -
ALTERNATIVE ANALYSIS WORKSHOP

EXISTING UTILITIES

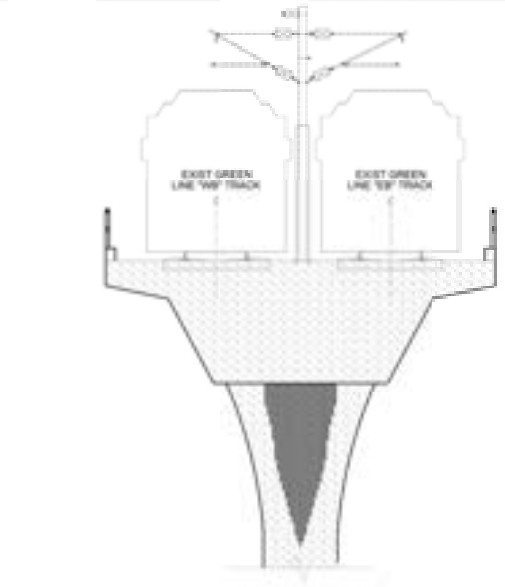


PROFILE VIEW

SCALE 1" = 100' HORIZ, 1"=10' VERT

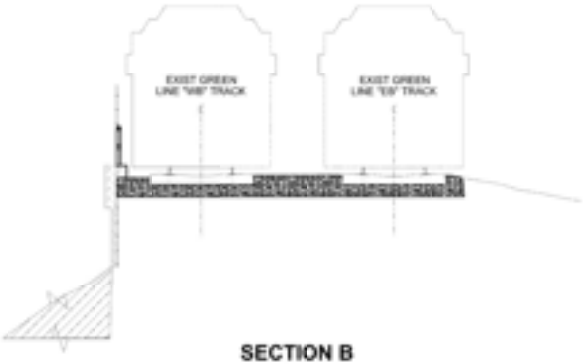
PLAN VIEW

SCALE 1" = 100'



SECTION A

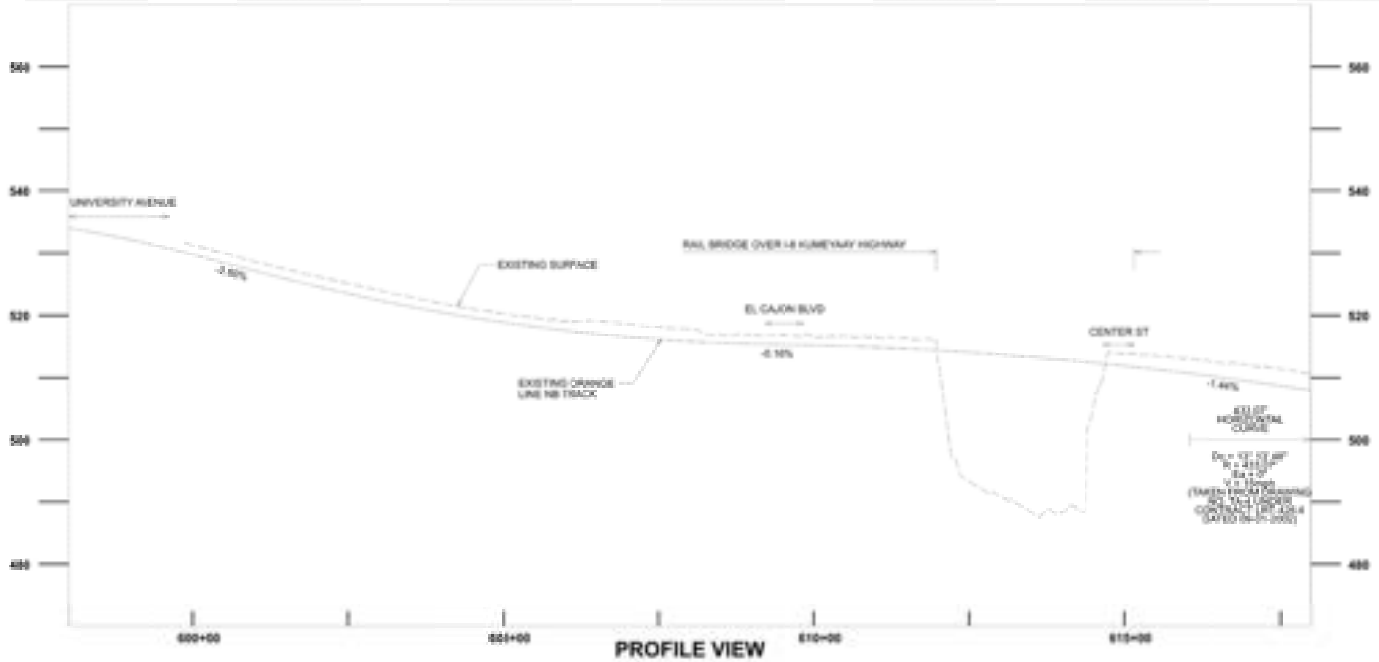
SCALE 1" = 5'



SECTION B

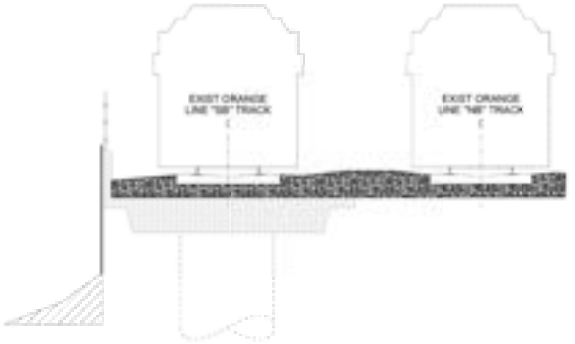
SCALE 1" = 5'

MOTT MACDONALD	MTS	BALTIMORE JUNCTION - ALTERNATIVES ANALYSIS WORKSHOP	GREEN LINE PLAN, PROFILE & TYPICAL SECTIONS



PROFILE VIEW

SCALE 1" = 100' HORIZ, 1"=10' VERT



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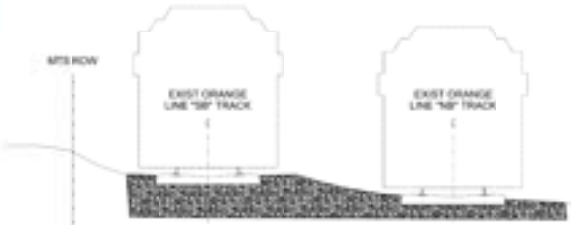

SECTION E

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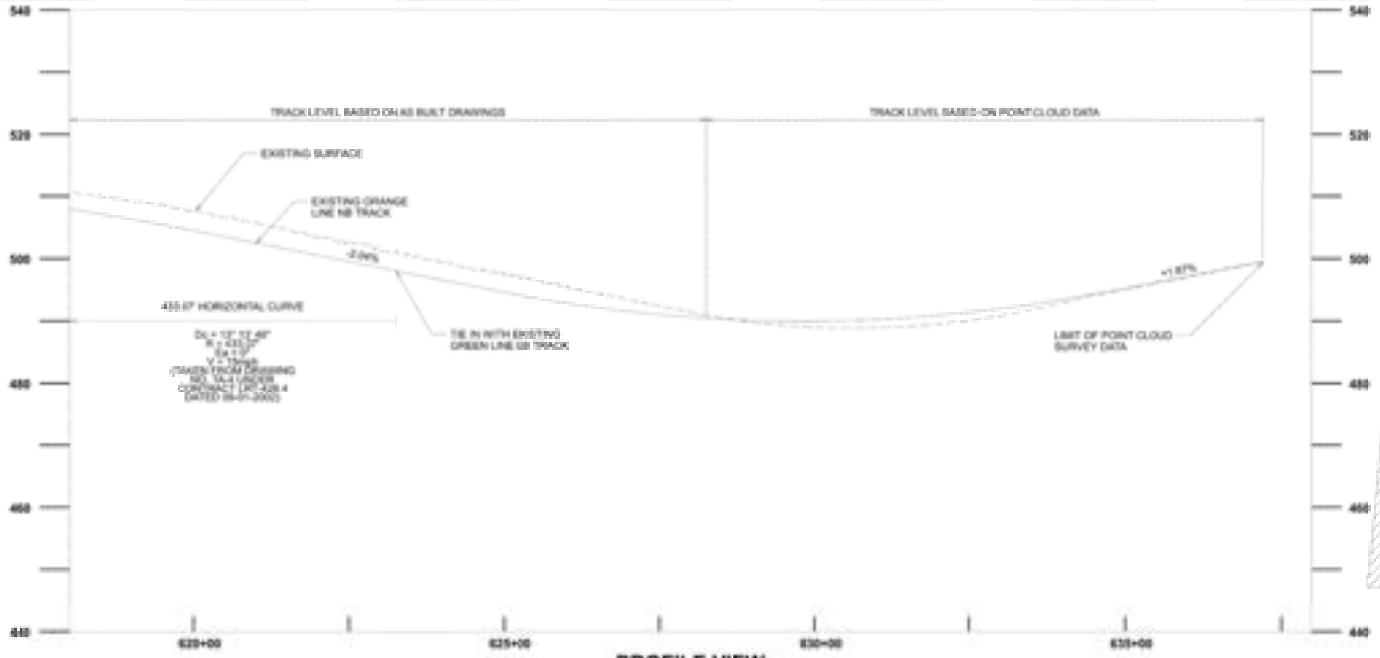
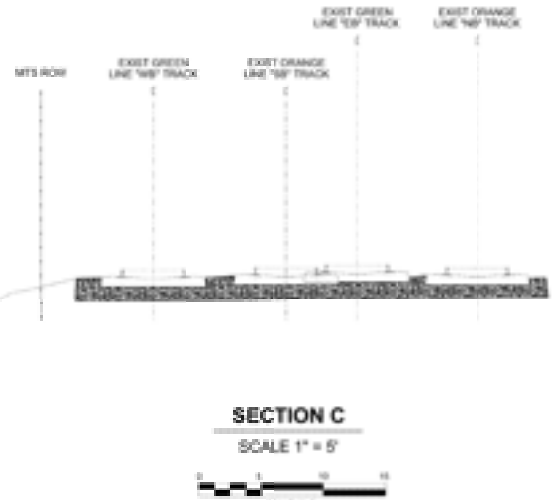


PROFILE VIEW

SCALE 1" = 100' HORIZ, 1"=10' VERT



SECTION C

SCALE 1" = 5'

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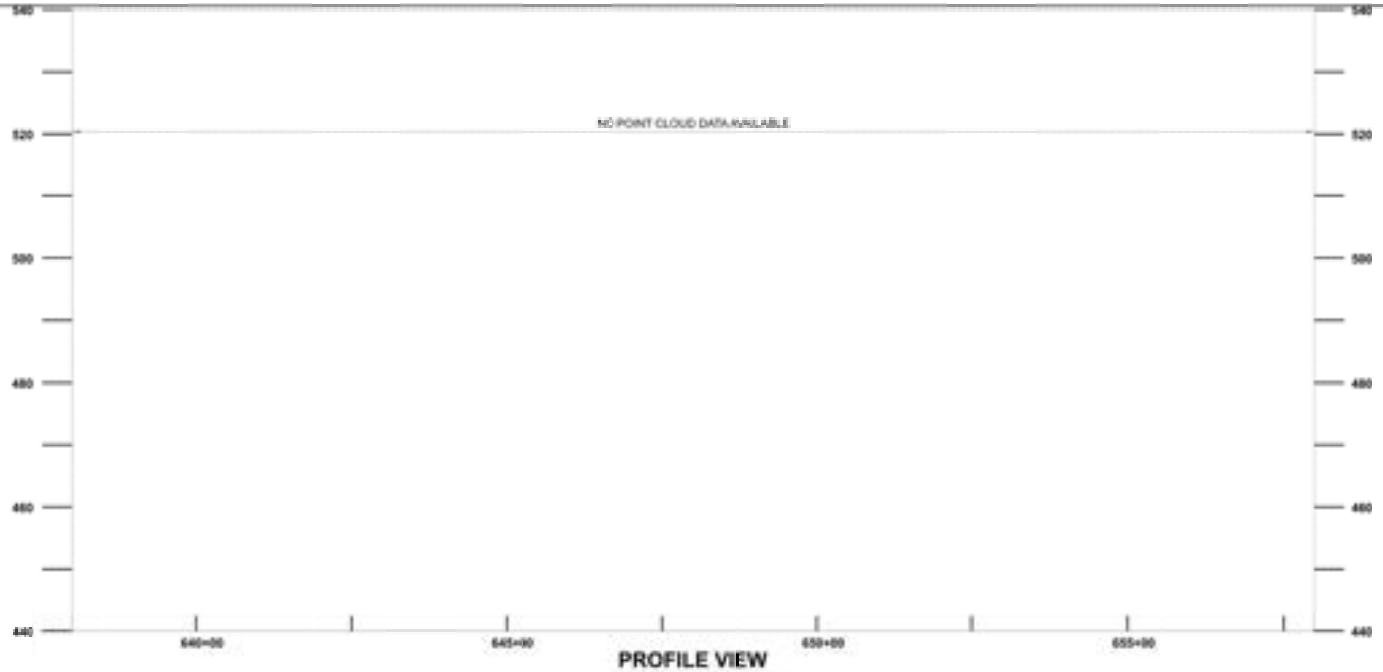


PROFILE VIEW

SCALE 1" = 100' HORIZ, 1"=10' VERT

MOTT MACDONALD M M	MTS Metropolitan Transit System	BALTIMORE JUNCTION - ALTERNATIVES ANALYSIS WORKSHOP	GREEN / ORANGE LINE PLAN, PROFILE & TYPICAL SECTIONS

LEGEND

- 100-YEAR FLOOD PLAIN (1% ANNUAL CHANCE FLOOD EVENT)
- 500-YEAR FLOOD PLAIN (0.2% ANNUAL CHANCE FLOOD EVENT)
- 100-YEAR FLOODWAY
- CREEK

MOTT MACDONALD M M	MTS Metropolitan Transit System	BALTIMORE JUNCTION - ALTERNATIVES ANALYSIS WORKSHOP

EXISTING FLOODPLAINS

LEGEND

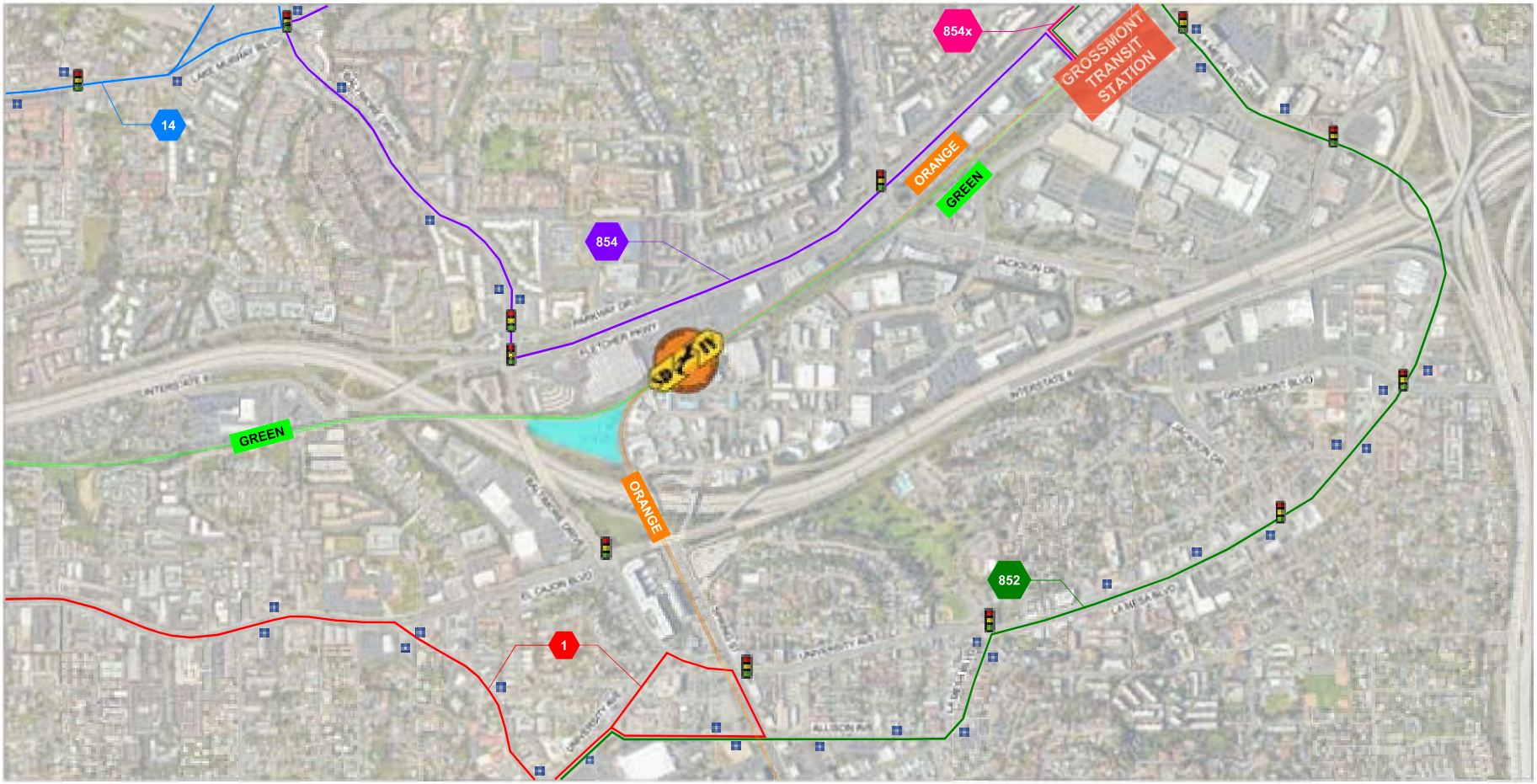
SENSITIVE VEGETATION AREA

MOTT MACDONALD

MTS

BALTIMORE JUNCTION -
ALTERNATIVES ANALYSIS WORKSHOP

ENVIRONMENTAL CONSTRAINTS



STREET DATA TABLE

STREET NAME	CLASSIFICATION	SPEED (MPH)	ADT (VEHICLES)	R/W (FT)
Baltimore Dr.	Arterial	35	22,500	68'-86'
Fletcher Pkwy.	Parkway Arterial	45	25,000-30,000	100'-116'
El Cajon Blvd.	Arterial	35	15,000-20,000	68'-86'
Lake Murray Blvd.	Arterial	35	15,000-20,000	68'-86'
University Ave.	Arterial	35	15,000-20,000	68'-86'
La Mesa Blvd.	Arterial	35	15,000-20,000	68'-86'
Interstate 8	Freeway	70	103,000-118,000	

ROUTE	HEADWAYS (minutes) 5AM-9AM	8AM-4PM	4PM-8PM	AFTER 8PM
ORANGE	15	15	15	30
GREEN	15	15	15	30
1	30/15	15	15	30
14	60	60	60	N/A
852	30	30	30	30
854	60	60	60	60
854x	30	30	30	30

MOTT MACDONALD

MTS

BALTIMORE JUNCTION -
ALTERNATIVES ANALYSIS WORKSHOP

EXISTING TRANSIT AND TRAFFIC OPERATIONS

Crash Diagram

Primary Street:
Baltimore Drive

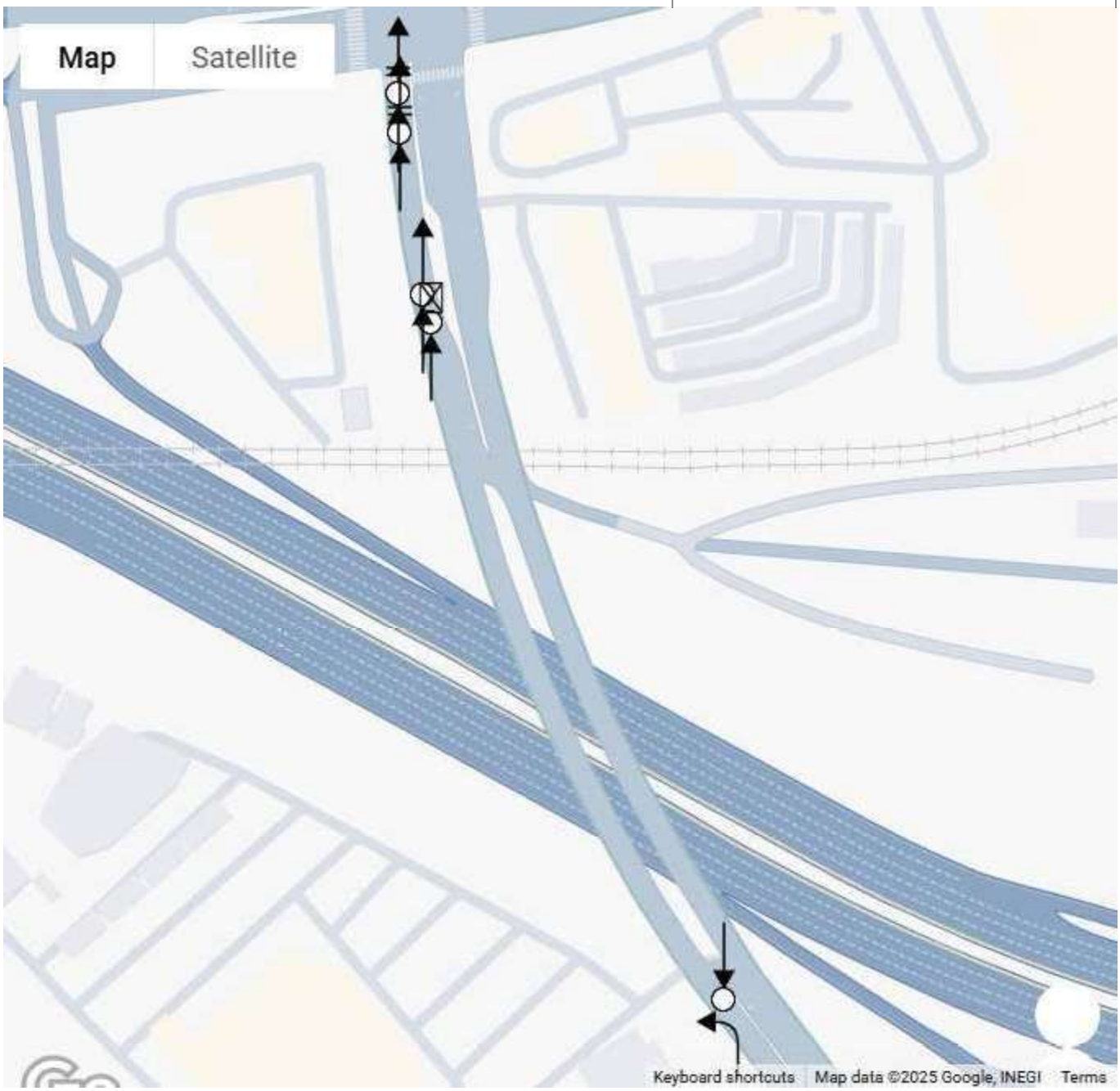
Secondary Street:

Time Period:
2015-2024

Agency Name:

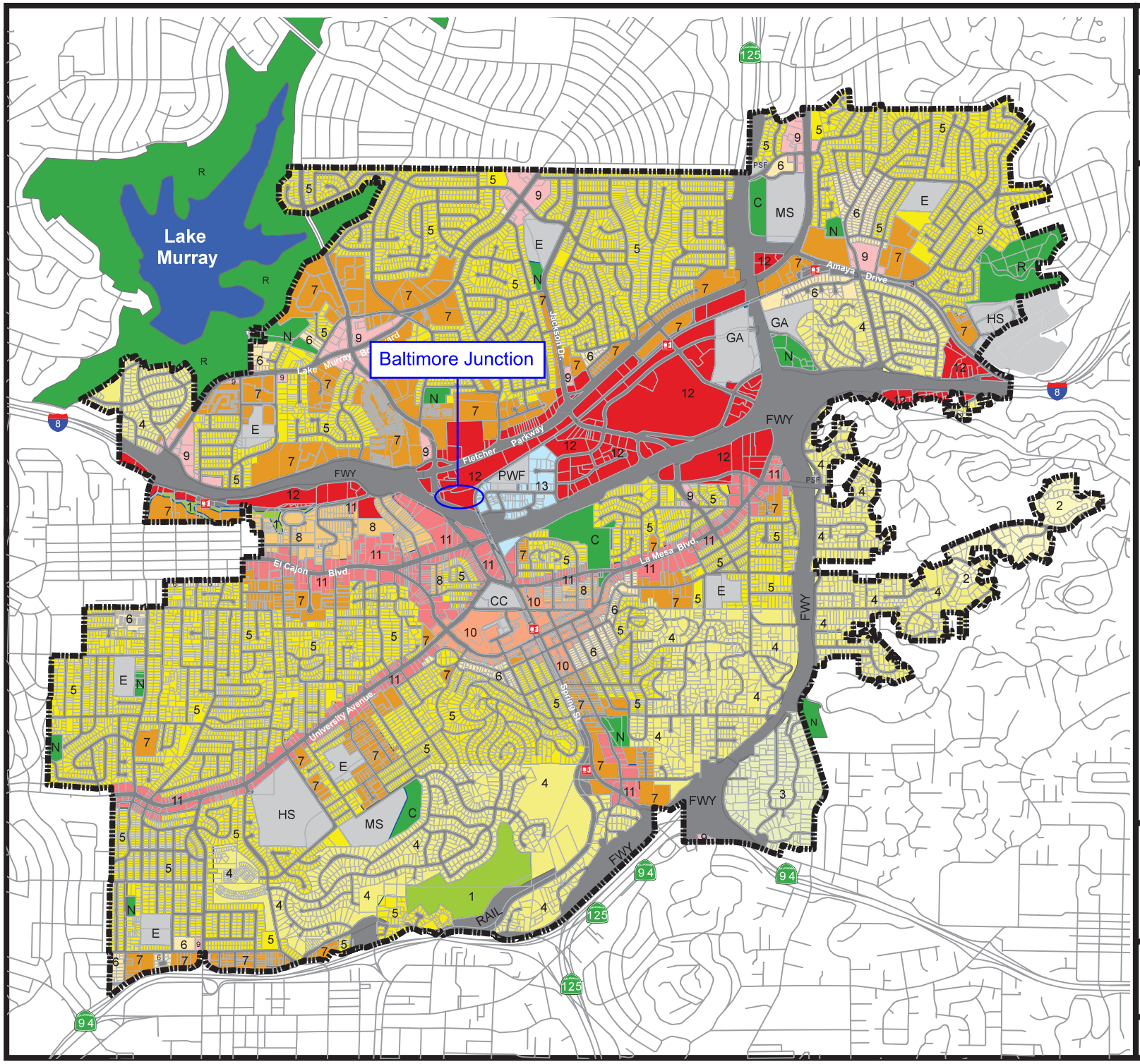
Mapping Summary:	
Fatal Crash	0
Injury Crash	5
Mapped	5
Not Drawn	2
Total	7

- Straight
- Left Turn
- Right Turn
- U-Turn
- Overturned
- Ran Off Road
- Stopped
- Parked
- Pedestrian
- Bicycle
- Object
- Fatal Crash
- Injury Crash



Date Created: 11/21/2025

Created by TIMS (https://tims.berkeley.edu) © UC Regents, 2014-2025



GENERAL PLAN

PLANNED LAND USE

Legend

- Open Space — See Related Specific Plans
- Rural Residential — 1-2 Dwelling Units per Acre
- Semi-Rural Residential — 3 Dwelling Units per Acre
- Suburban Residential — 4 Dwelling Units per Acre
- Urban Residential — 7-10 Dwelling Units per Acre
- Restricted Multiple Unit Residential — 14 Dwelling Units per Acre
- Multiple Unit Residential — 18-23 Dwelling Units per Acre
- Mixed Density Residential — 7-23 Dwelling Units per Acre
- Local Serving Commercial
- Downtown Commercial
- Mixed Use Urban — 24-40 Dwelling Units per Acre
- Regional Serving Commercial
- Commercial Light Industrial
- Recreation Uses
  - N - Neighborhood Park
  - C - Community Park
  - R - Regional Park
- Public Use
  - CC- Civic Center
  - PSF - Public Safety Facility
  - PWF - Public Works Facility
  - GA - Other Government Agencies
  - E - Elementary School
  - MS - Middle School
  - HS - High School
- Transportation Uses
  - FWY - Freeway
  - RAIL - Trolley Right of Way
  - Trolley Station

Data Sources:
SanGIS
City of La Mesa

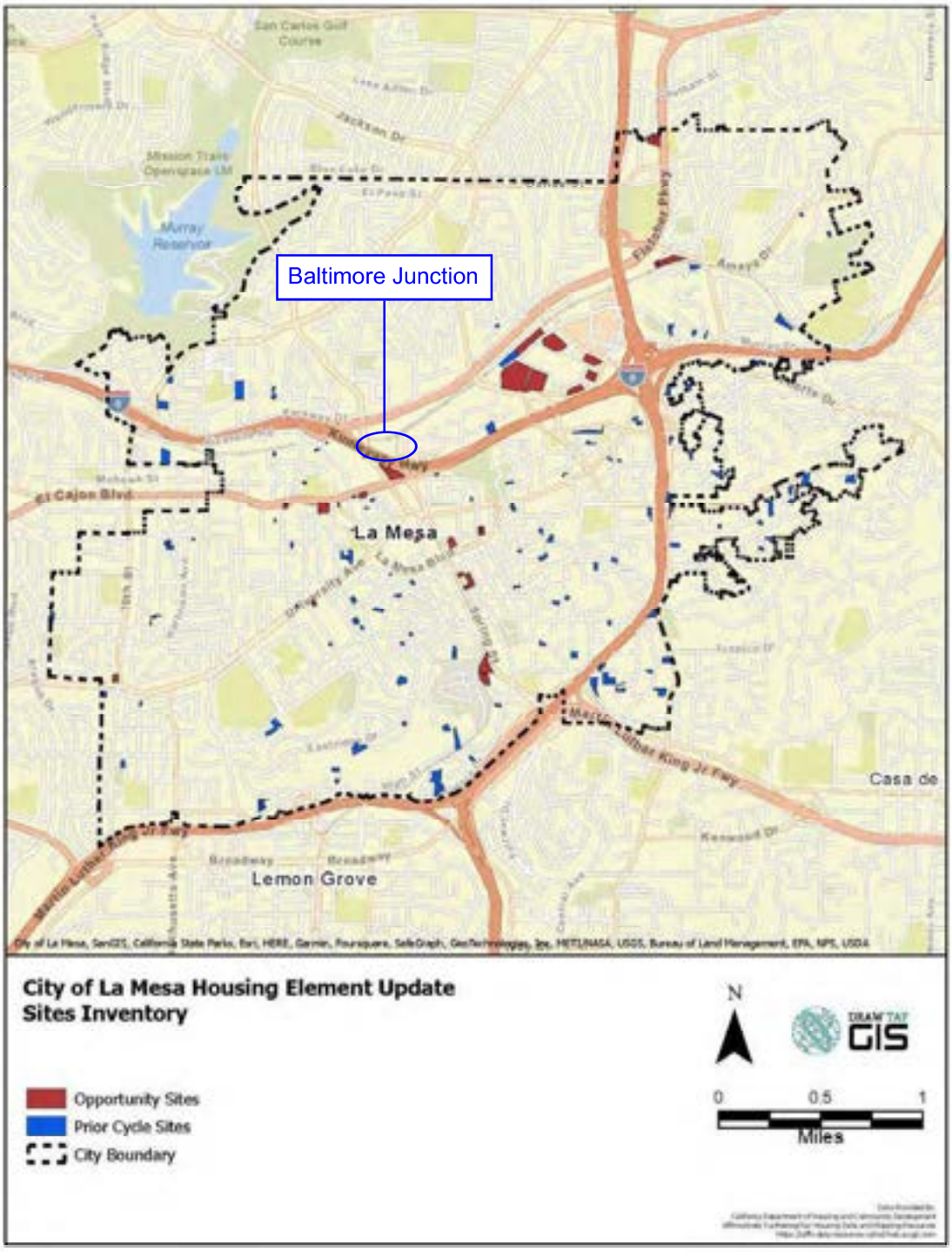
CITY OF LA MESA
JEWEL of the HILLS

File: E:\General Plan Update\General Plan Maps and Graphics\ LD-7 Planned Land Use (11x17)

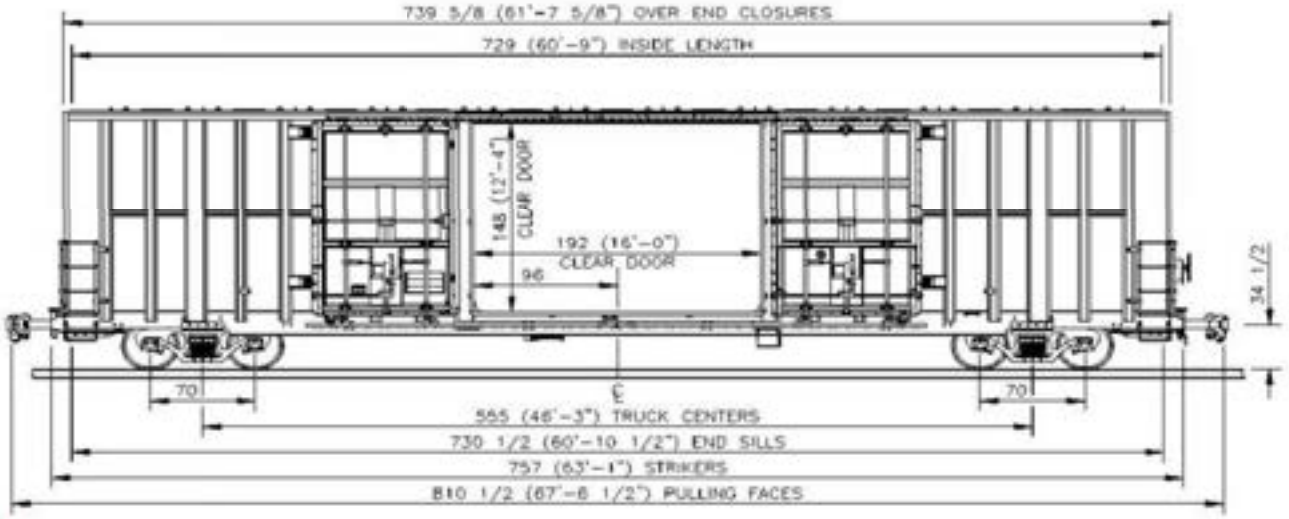
0 1,000 2,000 3,000 4,000 Feet

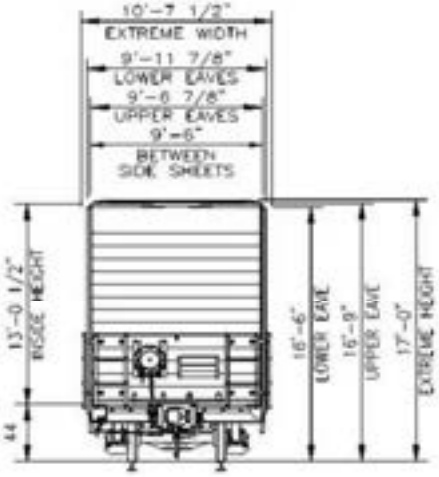
Figure LD-7

Figure B-1. Sites Inventory Map



BNSF RAILWAY	BOX CAR 60 FT. 286 GRL	BNSF 761000-761099





GENERAL CAR INFO

Built date	2001
Car builder	Gunderson
AFE number	
AAR Mech. Des.	
AAR Car Code	
GST Code	
Clearance plate	AAR Plate F
C.G. - Empty	61 1/2"
C.G. -loaded*	98"
Minimum curve-Coupled	229 ft.
Minimum curve-Uncoupled	180 ft.
Braking ratio - Empty	22%
Braking ratio - Loaded	11%
Braking ratio - H.B.	13%

FORMER REPORTING MARKS

DIMENSIONS/CAPACITIES

Length (strikers)	63' - 1"
Coupled length (full draft)	67' - 10 1/2"
Truck Centers	46' - 3"
Inside length	60' - 9"
Inside width (between side sheets)	9' - 6"
Inside height	13' - 0 1/2"
Extreme width (@ aux. door stops)	10' - 7 1/2"
Extreme height	17'-0"
Volume	7526 cu. ft.
Gross rail load	286,000 lb
Light weight	84,800 lb
Load limit @ 286 K	201,200 lb
Load limit @ 263 K	178,200 lb
Floor rating	70K
Door opening (Clear width)	16'-0"
Door opening (clear height)	12'-4"
Floor height (light car)	3'-8"

SPECIALTY SUPPLIERS AND PART NUMBERS

Truck type	286K ASF Super Service Ride Master
Bols. Patt./ AAR Code	AAR Code B9A-YY4N-FX, Gr B+ Steel
Side Frame/AAR Code	AAR Code F9A-11EN-UA, Gr B+ Steel
Truck spring group	7 D-5 Outer, 7 D-5 Inner, 2 D-6A Inner-Inner
Snubbing type	ASF Super Service Ride Master
Snubber spring group	ASF 5062 Outer, ASF 5063 Inner
Column wear plate	ASF 98-1-10232 3/8 X 8 1/2 X 9 7/16
Pedestal roof liners	Transdyne A05048 Flat Clip On
Wheels	Standard Steel CH-36, Class C
Roller bearing	6 1/2" X 9", Class K, Timken AP-2
Axles	Standard Steel 6 1/2" X 9" Class K Grade F
Adapters	Hayes Albion 6 1/2" X 9", Class K, Type N
Truck side bearing	A. Stucki 688-BR
Horizontal center plate liner	1/4" X 15 7/8" X 3" 14% Mn Steel Loose
Vertical wear ring	1/4" X 2" Stainless Steel, Welded
Coupler/Knuckle	ASF SBE68DE With E50BE Knuckle
Yoke	Keystone YF-15-J
Draft sill / Striker assy.	A26969-01/A25885-01
Front draft lug	Keystone PC-9462
Rear draft lug	1 1/2 X 6 ASTM A572 GR 50 Steel Bar
Center plate	ASF BS-341-B
Coupler carrier wear plt	Pace Int. #671109-00 Cast Mn Steel

Uncoupling Device	Stanrail No. 586
Cushioning	*ASF/Keystone, F-13/2G-B M-921B
Brake system	NYAB DB-60S on SS Pipe Bkt.
Control valve	DB-10 / DB-20 (Aluminum)
Empty Load Brakes*	Ellcon National C-6600-1 (60%)
Brake cylinder	8 1/2" X 12" ABU
Slack adjuster	Universal 2300, Group E
Brake beam	#24 Triax Certificate #204
Brake beam wear plate	Miner UW-116 All Metal
Brake shoes	2", AAR H-4
Handbrake	Klasing 1700-1 Group N
Floors (Mfg.)	Stanrail 70K Knurled Steel
Doors (Mfg.)	YSD Double 8'-0" X 12'-4" Plug
Lading anchors	136 Ireco 2761
	120" Continuous Ireco 3846
Roof	YSD ZR-81979
	(G-115 pitched 1/2 in. total)
Paint	
Decals	

NOTES AND EXCEPTIONS:

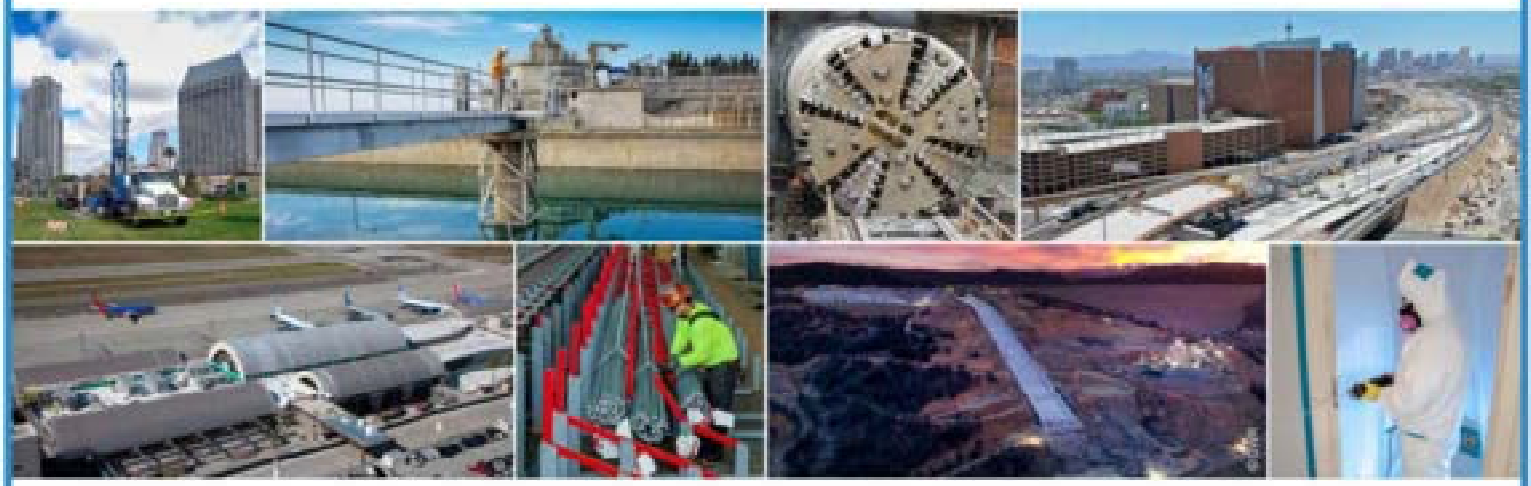
* 98" C.G. is with lading restricted to 11'-11" above the floor.
* The Wabtec SC-1 Empty Load is a direct replacement for the Ellcon National C-6600-1
* 30 cars converted to dual draft gear in 2017. See project B-984.

Appendix B – Geotechnical Desktop Study

Geotechnical Desktop Study
San Diego Metropolitan Transit System (MTS) Baltimore Junction Study
La Mesa, California

Mott MacDonald Group, Inc.
750 B Street, Suite 2880 | San Diego, California 92101

July 29, 2025 | Project No. 109424005



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore
A SOCOTEC COMPANY

Ninyo & Moore
A SOCOTEC COMPANY

Geotechnical Desktop Study
San Diego Metropolitan Transit System (MTS) Baltimore Junction Study
La Mesa, California

Mr. Peter Smith
Mott MacDonald Group, Inc.
750 B Street, Suite 2880 | San Diego, California 92101

July 29, 2025 | Project No. 109424005

Christina Tretinjak, PG, CEG
Senior Project Geologist

KWK/GS/CAT/GTF/co

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Gregory T. Farrand, PG, CEG
Principal Geologist

REGISTERED GEOLOGIST
GREGORY T. FARRAND
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CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

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1 – Site Location
2 – Aerial Site Plan
3 – Geology
4 – Fault Locations

1 INTRODUCTION

In accordance with our proposal and your authorization, we have performed a geotechnical desktop study for the Metropolitan Transit System (MTS) Baltimore Junction Study in La Mesa, California (Figure 1). The purpose of our evaluation was to perform a desktop review of existing information on soil conditions from previous adjacent projects and provide documentation of findings, provide conceptual parameters for input into the feasibility of various structures, and to prepare boring plan recommendations for future subsurface investigations.

2 SCOPE OF SERVICES

Our scope of services for this evaluation included the following:

- Reviewing background information including available geotechnical reports, environmental reports, topographic maps, geologic maps, fault maps, flood zone maps, groundwater data, and aerial photographs.
- Coordinating with the client and the owner to gain access to the site for our personnel.
- Performing a site reconnaissance by an engineering geologist.
- Compiling and performing analyses of the data obtained.
- Preparing this illustrated report to provide our findings and conclusions related to the geologic and geotechnical conditions at the site, and potential geologic and geotechnical constraints for the proposed improvements.

3 SITE AND PROJECT DESCRIPTION

The project site is located on the east side of Baltimore Drive and the north side of Interstate 8 in the City of La Mesa in San Diego County, California (Figure 1). The site consists of an irregularly-shaped lot bounded by MTS trolley tracks to the north and east, Interstate 8 on the south, and Baltimore Drive on the west. Access to the site is from Baltimore Drive. The site is largely unpaved, and is currently occupied by utility vaults, MTS vehicles, storage containers, and stockpiles of ballast. The site is relatively flat with elevations ranging from approximately 495 feet at the west end of the site to approximately 510 feet above mean sea level at the east end of the site. The northern side of the trolley tracks are at the top of a mechanically stabilized earth wall that descends to a slope, a keystone wall, and a driveway approximately 30 feet below. An approximately 9-foot-high fill slope at the west end of the site ascends to the MTS tracks above. At the south end of the site there is an approximately 3-foot-high slope that ascends to a vegetated area that is not part of the property. The global coordinates of the project site are approximately 32.7723°N Latitude and 117.0253°W Longitude.

We understand that the project consists of an alternatives analysis for upgrading the Baltimore junction to a wye. Also being considered for the site are a transfer station, development options and constructing other rail infrastructure. Anticipated improvements include structures with shallow foundations, pavements, and utility lines.

4 GEOLOGIC AND SUBSURFACE CONDITIONS

Our findings regarding regional and site geology at the project location are provided in the following sections.

4.1 Regional Geologic Setting

The project site is situated in the coastal foothill section of the Peninsular Ranges Geomorphic Province. The province encompasses an area that extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California (Norris and Webb, 1990; Harden, 2004). The province varies in width from approximately 30 to 100 miles. In general, the province consists of rugged mountains underlain by Jurassic metavolcanic and metasedimentary rocks, and Cretaceous igneous rocks of the southern California batholith. The portion of the province in western San Diego County that includes the project area consists generally of uplifted and dissected coastal plain underlain by Tertiary-age sedimentary rocks (Figure 3).

The Peninsular Ranges Province is traversed by a group of sub-parallel faults and fault zones trending roughly northwest (Jennings, 2010). Several of these faults are considered to be active. The Elsinore, San Jacinto and San Andreas faults are active fault systems located northeast of the project area and the Rose Canyon, Coronado Bank, San Diego Trough, and San Clemente faults are active faults located southwest of the project area. Major tectonic activity associated with these and other faults within this regional tectonic framework consists primarily of right-lateral, strike-slip movement. The Rose Canyon Fault Zone, the nearest active fault system, has been mapped approximately 9 miles west of the project site. Further discussion of faulting relative to the site is provided in the faulting and seismicity section of this report.

4.2 Site Geology

The geology of the site vicinity is shown on Figure 3. Generalized descriptions of the earth units anticipated at the project site and encountered in previous geotechnical evaluations in the project vicinity are provided in the subsequent sections.

4.2.1 Fill

Fill materials are anticipated at the site and were encountered in previous borings located near the site. The fill materials are generally anticipated to consist of various shades of brown, moist, medium dense, silty and clayey sand. Scattered gravel was encountered in the fill materials. Previous evaluations encountered fill materials to depths up to approximately 5 below the ground surface. Documentation regarding the placement and compaction of these existing fill materials was not available for our review.

4.2.2 Stadium Conglomerate

Stadium Conglomerate is mapped at the site and was encountered in previous borings located near the site, underlying the fill materials (Kennedy and Tan, 2008). Materials of the Stadium Conglomerate generally consist of various shades of brown, gravel and cobble to boulder conglomerates and sandstone.

4.3 Groundwater

Groundwater was encountered in previous exploratory borings during subsurface exploration adjacent to the site at depths of approximately 20 feet. Groundwater levels can fluctuate due to seasonal variations, groundwater withdrawal or injection, and other factors.

5 GEOLOGIC HAZARDS

In general, hazards associated with faulting and seismic activity include strong ground motion, ground rupture, and liquefaction. These considerations and other potential geologic hazards such as flooding, tsunamis, and landsliding are discussed in the following sections.

5.1 Faulting and Seismicity

Based on our review of the referenced geologic maps and stereoscopic aerial photographs, as well as on our geologic review, the site is not underlain by known active or potentially active faults (i.e., faults that exhibit evidence of ground displacement in the last 11,000 years and 2,000,000 years, respectively). The site is not located within a State of California Earthquake Fault Zone (EFZ) (formerly known as an Alquist-Priolo Special Studies Zone) (Hart and Bryant, 2007). However, like the majority of Southern California, the site is located in a seismically active area and the potential for strong ground motion is considered significant during the design life of the proposed structures. Figure 4 shows the approximate site location relative to the major faults in the region. The nearest known active fault is the Rose Canyon fault, located 9 miles west of the site. The La Nacion Fault is mapped approximately 3½ miles

west of the site. However, the La Nacion Fault is not considered an active fault by the State of California. Table 1 lists selected principal known active faults that may affect the subject site, the approximate fault to site distance, and the characteristic magnitudes provided by the United States Geological Survey (USGS) National Seismic Hazard Maps – Fault Parameters website (USGS, 2024a) and the USGS Building Seismic Safety Council 2014 Event Set (USGS, 2024b).

Table 1 – Principal Active Faults

Fault	Approximate Fault-to-Site Distance miles (kilometers)	Characteristic Magnitude
Rose Canyon	9 (14.5)	7.0
Coronado Bank	20.9 (33.6)	7.4
Elsinore (Julian Segment)	33.4 (53.8)	7.3
Newport-Inglewood (Offshore Segment)	35.4 (57.0)	7.0
Earthquake Valley	37.9 (61.0)	6.7
Elsinore (Temecula Segment)	39.2 (63.1)	7.1
Elsinore (Coyote Mountain Segment)	42.4 (68.2)	6.8
San Jacinto (Coyote Creek Segment)	54.4 (87.5)	7.0
San Jacinto (Borrego Segment)	56.2 (90.4)	6.8
San Jacinto (Clark Segment)	57.4 (92.4)	7.0
San Jacinto (Anza Segment)	57.6 (93.0)	7.3

5.1.1 Ground Rupture

Based on our review of the referenced literature and our site reconnaissance, active faults are not known to cross the project vicinity. Therefore, the potential for ground surface rupture due to faulting at the site is considered low. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

5.1.2 Strong Ground Motion

Considering the proximity of the site to active faults capable of producing a maximum moment magnitude of 6.0 or more, the project area has a high potential for experiencing strong ground motion. The California Building Code (CBC) specifies that the risk-targeted maximum considered earthquake ground motion response accelerations may be used to evaluate seismic loads for design of buildings and other structures. We recommend that ground motion response accelerations be determined in accordance with CBC and American Society of Civil Engineers (ASCE) Publication 7-22.

5.1.3 Liquefaction and Seismically Induced Settlement

Liquefaction of cohesionless soils can be caused by strong vibratory motion due to earthquakes. Research and historical data indicate that loose granular soils and non-plastic silts that are saturated by a relatively shallow groundwater table are susceptible to liquefaction. Based on the relatively dense nature of the underlying formational material of the Stadium Conglomerate, it is our opinion that liquefaction and seismically induced settlement at the subject site are not anticipated to be design considerations.

5.2 Flooding

Based on review of Federal Emergency Management Agency (FEMA) Mapping Information Platform website (2024), the site is not mapped as being within a flood hazard zone, which includes areas assigned to be outside of the 500-year flood zone. The site is also not located within a mapped dam inundation area (CDWR, 2024). Based on this review and our site reconnaissance, the potential for significant flooding and dam inundation at the site are not design considerations.

5.3 Tsunamis and Seiches

Tsunamis are long wavelength seismic sea waves (long compared to the ocean depth) generated by sudden movements of the ocean bottom during submarine earthquakes, landslides, or volcanic activity. Seiches are similar oscillating waves on inland or enclosed bodies of water. Based on the location and elevation of the site, the potential for a tsunami or seiche to affect the site is not a design consideration.

5.4 Landsliding

Per Tan (1995), the majority of the site is mapped as “generally susceptible” to landsliding. Based on our review of referenced geologic maps, literature, topographic maps, and stereoscopic aerial photographs, as well as our site reconnaissance, no landslides or indications of deep-seated landsliding were noted underlying the project site. As such, the potential for significant large-scale slope instability at the site is not a design consideration.

5.5 Expansive Soils

Expansive soils generally result from specific clay minerals that have the capacity to shrink or swell in response to changes in moisture content. Shrinking or swelling of foundation soils can lead to damage to slabs, foundations, and other engineered structures, including tilting and cracking. Clayey soils were encountered in previous evaluations adjacent to the site. The nature and extent

of expansive soils within the proposed project limits, along with recommendations for mitigating expansive materials if present, should be evaluated by subsurface investigation and laboratory testing.

5.6 Corrosive Soils

Caltrans (2021) corrosion criteria defines corrosive soils as those possessing a chloride concentration of 500 ppm or greater, a sulfate concentration of 0.15 percent or greater (i.e., 1,500 ppm or greater), a pH value of 5.5 or less, and/or an electrical resistivity of 1,500 ohm-cm or less. The nature and extent of corrosive soils within the project site should be evaluated by subsurface investigation and laboratory testing.

5.7 Erosion

In general, erosion refers to the process by which soil or earth material is loosened or dissolved and removed from its original location. Erosion can occur by varying processes and may occur in the project area where bare soil is exposed to wind or moving water (both rainfall and surface runoff). The processes of erosion are generally a function of material type, terrain steepness, rainfall or irrigation levels, surface drainage conditions, wind velocity, and general land use. Review of geologic maps and previous soil data indicates that surface soils are generally comprised of sandy materials. Based on the soils anticipated to be underlying the project site, the pavement and flatwork coverage, and gentle gradients of the site topography, the potential for water erosion is considered low.

6 CONCLUSIONS

Based on the results of our geological desktop evaluation, it is our opinion that project design and construction of the proposed improvements will be feasible from a geotechnical standpoint. As part of project design, a subsurface geotechnical evaluation should be performed to evaluate site-specific geotechnical conditions and provide recommendations. Geotechnical considerations include the following:

- The site is anticipated to be underlain by fill materials and materials of the Stadium Conglomerate.
- Groundwater in the project vicinity has been encountered as shallow as 20 feet below the ground surface. However, fluctuations in the groundwater elevation and the potential for perched water should be anticipated. Groundwater conditions at the site should be evaluated and considered.
- The project area is not located within a State of California Earthquake Fault Zone. Based on our review of published geologic maps and aerial photographs, no known active faults underlie the project site. The probability of surface fault rupture at the project site is considered to be low.

However, the site has a high potential for experiencing strong ground motion and we recommend ground motion response accelerations be evaluated in accordance with CBC and ASCE 7-22.

- The project area is underlain by granular fill materials, and materials of the Stadium Conglomerate. Accordingly, the site soils are not considered susceptible to liquefaction-induced settlement.
- The site is not located within a mapped regulatory floodway and flood hazards are not anticipated to be a design consideration.
- Based on the onsite soils, and the site configuration in the area of the proposed improvements, the project is not anticipated to be susceptible to erosion.
- The existing fill materials encountered on-site should be generally excavatable with heavy duty earth moving equipment in good working condition. However, previous evaluations encountered fill materials containing gravel and cobbles and additional efforts including heavy ripping should be anticipated. Additionally, strongly cemented zones, concretions, gravel, cobbles, and/or boulders may be encountered in the Stadium Conglomerate that may require the use of heavy ripping or core barrels for drilling efforts. Excavatability of the underlying materials should be evaluated as part of a subsurface evaluation at the site.
- On-site excavations are anticipated to generate oversize material. Additional processing and handling of these materials, including screening, should be anticipated prior to reuse as engineered fill.

7 POTENTIAL CONSTRUCTION CONSTRAINTS

Based on our review of the referenced background data, it is our opinion that the following geological characteristics of the project site will require specific consideration when designing the project. Fill materials associated with the existing site and underground utilities may be loosely or inadequately compacted, may contain oversize materials unsuitable for reuse in engineered fills, and may contain unsuitable organic or expansive materials and debris that may preclude their use in engineered fills. Based on our experience with previous work in the project area, some soils at the project site may be expansive and corrosive.

8 RECOMMENDATIONS FOR FUTURE INVESTIGATION

We recommend that a subsurface exploration program with associated geotechnical laboratory testing be performed for the selected improvements. We recommend that borings be performed within the vicinity of proposed improvements depending on the scope of such improvements. We recommend borings be performed to 20 feet, unless deeper foundations and/or improvements are planned.

9 LIMITATIONS

The desktop geological assessment and analyses presented in this report have been conducted in accordance with current engineering practice and the standard of care exercised by reputable geotechnical consultants performing similar tasks in this area. No warranty, implied or expressed, is made regarding the conclusions, recommendations, and professional opinions expressed in this report. Variations may exist and conditions not identified or described in this report may be encountered. Our preliminary conclusions and recommendations area based on a review of the reported conditions and the referenced background information. A geologic field reconnaissance of the site to observe site conditions was not performed as part of the preparation of this desktop geological assessment.

The purpose of this study was to evaluate geologic conditions within the project site and to provide a preliminary desktop geological assessment report to assist in the preparation of environmental impact documents for the project. A comprehensive geotechnical evaluation, including field reconnaissance, subsurface exploration and laboratory testing, should be performed prior to design and construction of structural improvements.

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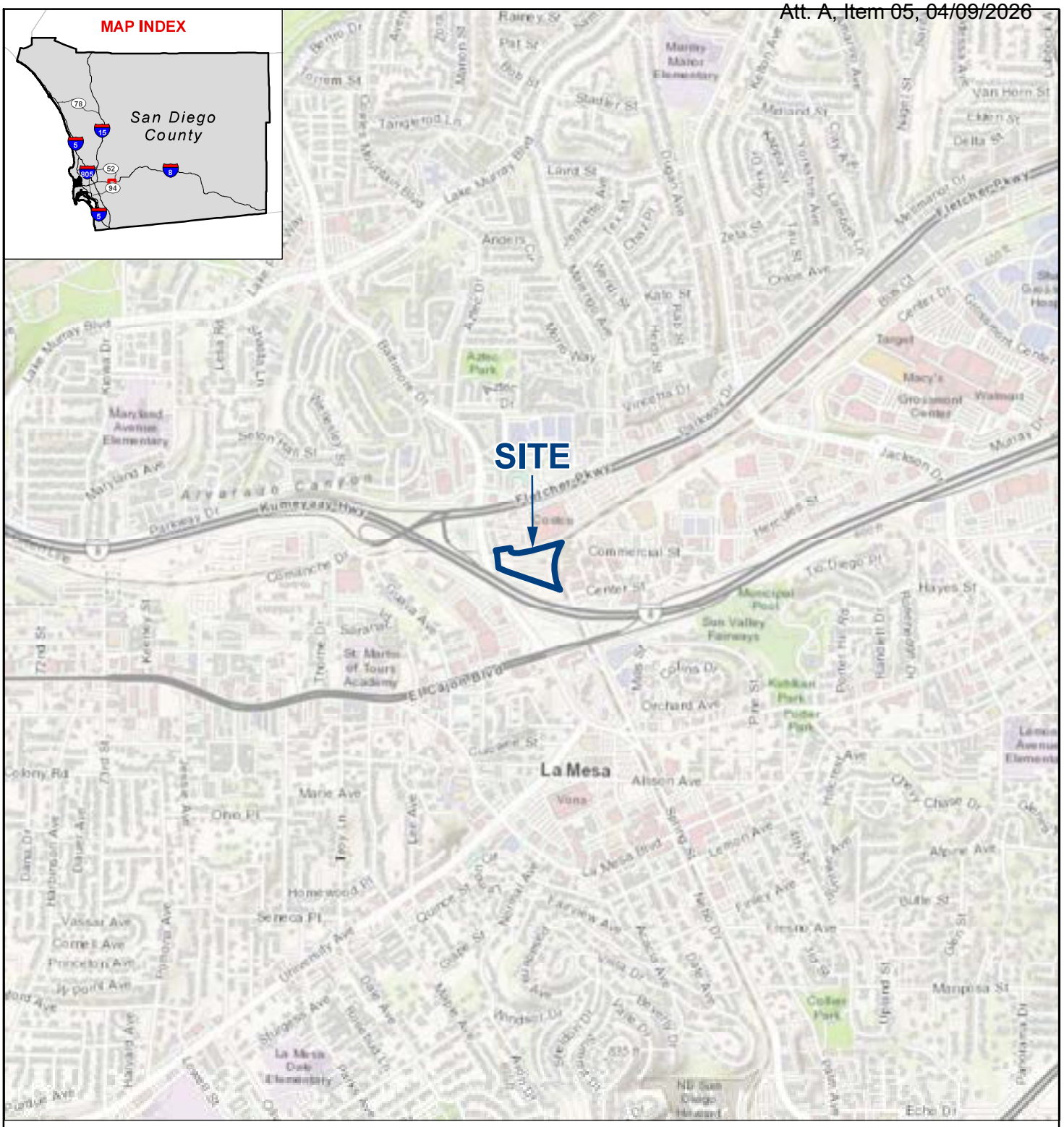
FIGURES


MAP INDEX
San Diego County
SITE
La Mesa
Fletcher Pkwy
Kumeyaay Hwy
Jackson Dr
Commercial St
Center St
Hercules St
Orchard Ave
Alpine Blvd
Lemon Ave
Allison Ave
Spring St
Maryland Ave
Maryland Avenue Elementary
Marty Mater Elementary
Municipal Pool
Kiwanis Park
Potter Park
Collier Park
St. Martin of Tours Academy
La Mesa Dale Elementary
Target
Macy's Grossmont Center
Walmart
Aztec Park
Lake Murray Blvd
Parkway Dr
Comanche Dr
Center Dr
Ohio Pl
Marie Ave
Homewood Pl
Seneca Pl
Vassar Ave
Comet Ave
Princeton Ave
Hyperion Ave
Manzanita Dr
Mariposa St
Echo Dr
Van Horn St
Delta St
Meridian Dr
Ohio Ave
Zeta St
Kato St
Vincetta Dr
Baltimore Dr
Aztec Dr
Anoeta Cir
Stadler St
Tangerine Ln
Laird St
Rainey St
Pat St
Bob St
Torrem St
Berino Dr
Marion St
Jeanette Ave
Ted St
Chad Dr
Duggan Ave
Marengo Ave
Verdi St
Marie Way
Kelton Ave
Garfield Ave
Night St
Midland St
Clark Dr
Kenwood Dr
Lanada Ln
Trent St
Ohio Ave
Fletcher Pkwy
Murray Dr
Jackson Dr
Hercules St
Tio Diego Pl
Hayes St
Municipal Pool
San Vallejo Fairways
Orchard Ave
Collins Dr
Mills St
Pine St
Porter Hill Rd
Randell Dr
Kiwanis Park
Potter Park
Alpine Blvd
Lemon Ave
Allison Ave
Spring St
Nebo Dr
Finley Ave
Fresno Ave
Butte St
Ohio St
Upland St
Mariposa St
Collier Park
Cypress Ave
Chase Dr
Glenn Dr
Lemon Grove Avenue Elementary
Cuyamaca St
Quince St
Acacia Ave
Violet Dr
Beverly Dr
Dale Ave
Maple Ave
Rincon Dr
Sheridan Dr
Avocado Dr
Redwood Dr
Lemon Ave
Eucalyptus Ave
Date Ave
Rondell Rd
Shadow Ave
Lowell St
Harvard Ave
Dallas Dr
Dunbar Ave
Ford Ave
Colony Rd
72nd St
Keeney St
Thorne Dr
Sarah Dr
Costa Ave
Lee Ave
Troy Ln
Jessie Ave
Dallas Dr
Dunbar Ave
Harvard Ave
Poplar Ave
University Ave
Glade St
Natoma Ave
Lemon Ave
Acacia Ave
Violet Dr
Dale Ave
Maple Ave
Rincon Dr
Sheridan Dr
Avocado Dr
Redwood Dr

LEGEND

SITE BOUNDARY

N

FEET

0 120 240

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE. | SOURCE: GOOGLE EARTH, 2025

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FIGURE 2

AERIAL SITE PLAN

BALTIMORE JUNCTION
5159 BALTIMORE DRIVE
LA MESA, CALIFORNIA

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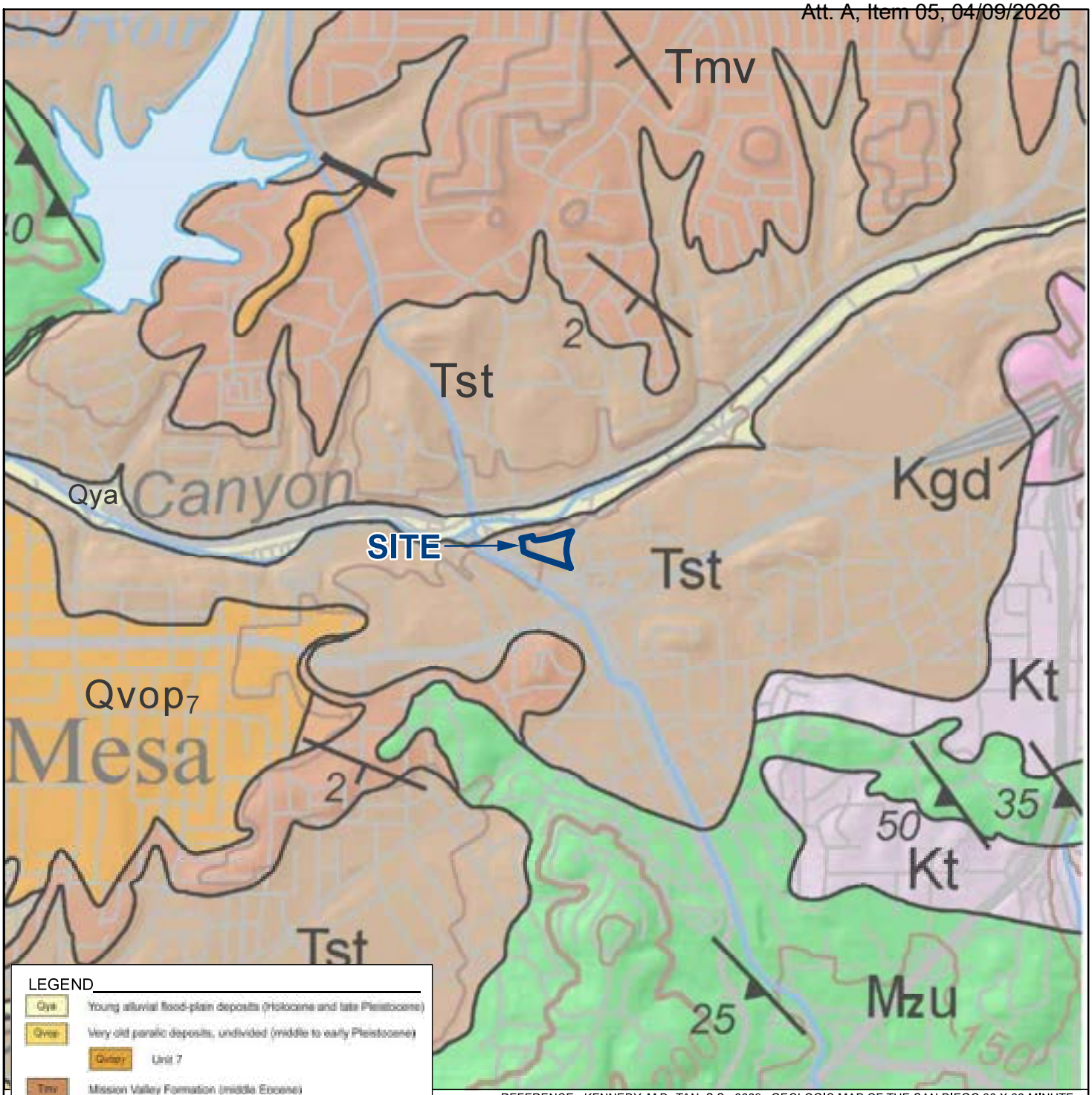
Ninyo & Moore
Geotechnical & Environmental Sciences Consultants



REFERENCE: KENNEDY, M.P., TAN, S.S., 2008, GEOLOGIC MAP OF THE SAN DIEGO 30 X 60-MINUTE QUADRANGLE, CALIFORNIA

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

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FIGURE 3

GEOLOGY
BALTIMORE JUNCTION
5159 BALTIMORE DRIVE
LA MESA, CALIFORNIA

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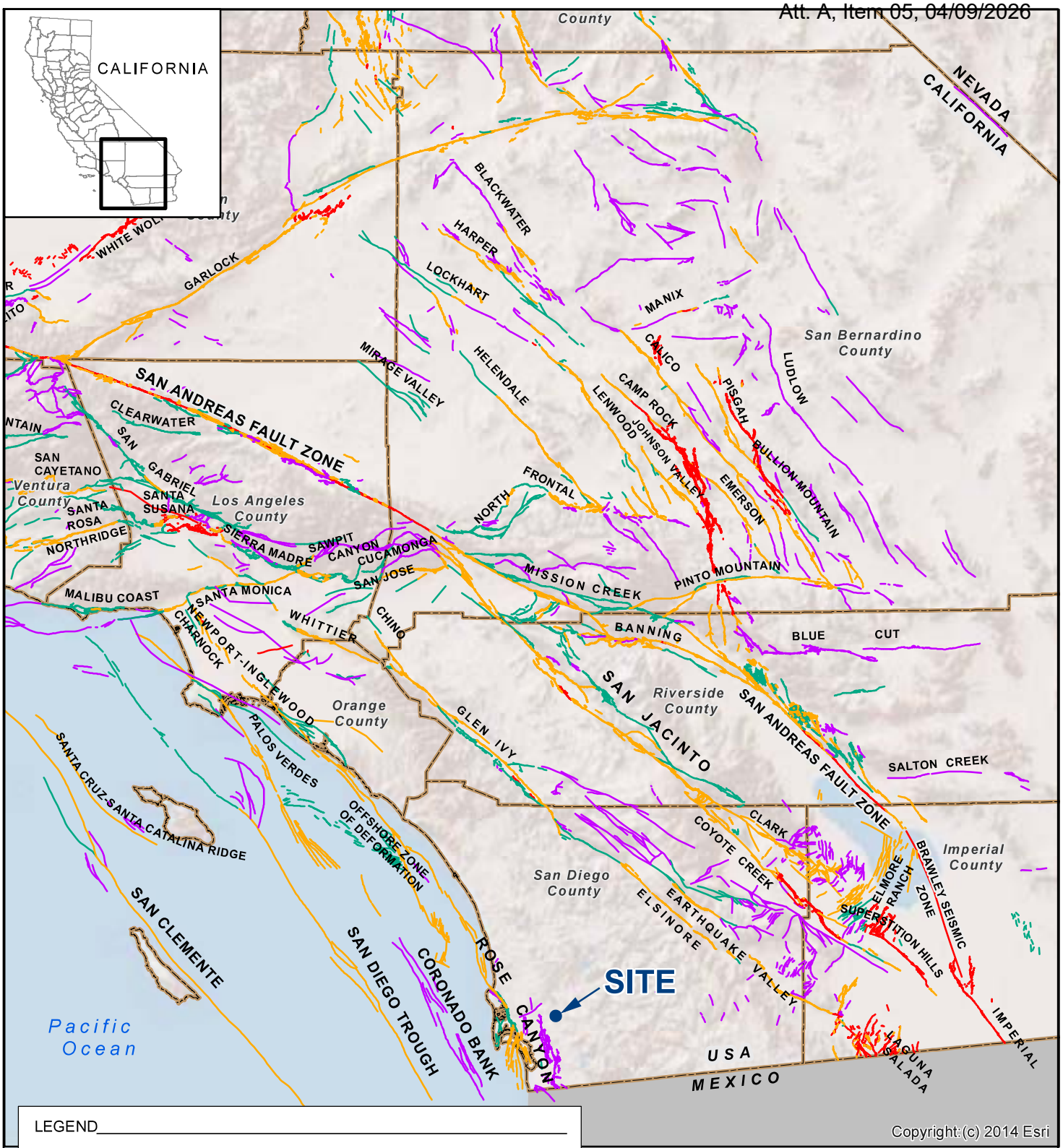

LEGEND

CALIFORNIA FAULT ACTIVITY

- HISTORICALLY ACTIVE
- HOLOCENE ACTIVE
- LATE QUATERNARY (POTENTIALLY ACTIVE)
- QUATERNARY (POTENTIALLY ACTIVE)
- STATE/COUNTY BOUNDARY

SOURCE: U.S. GEOLOGICAL SURVEY AND CALIFORNIA GEOLOGICAL SURVEY, 2006, QUATERNARY FAULT AND FOLD DATABASE FOR THE UNITED STATES.

N

MILES

0 30 60

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

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FIGURE 4

FAULT LOCATIONS
BALTIMORE JUNCTION
5159 BALTIMORE DRIVE
LA MESA, CALIFORNIA

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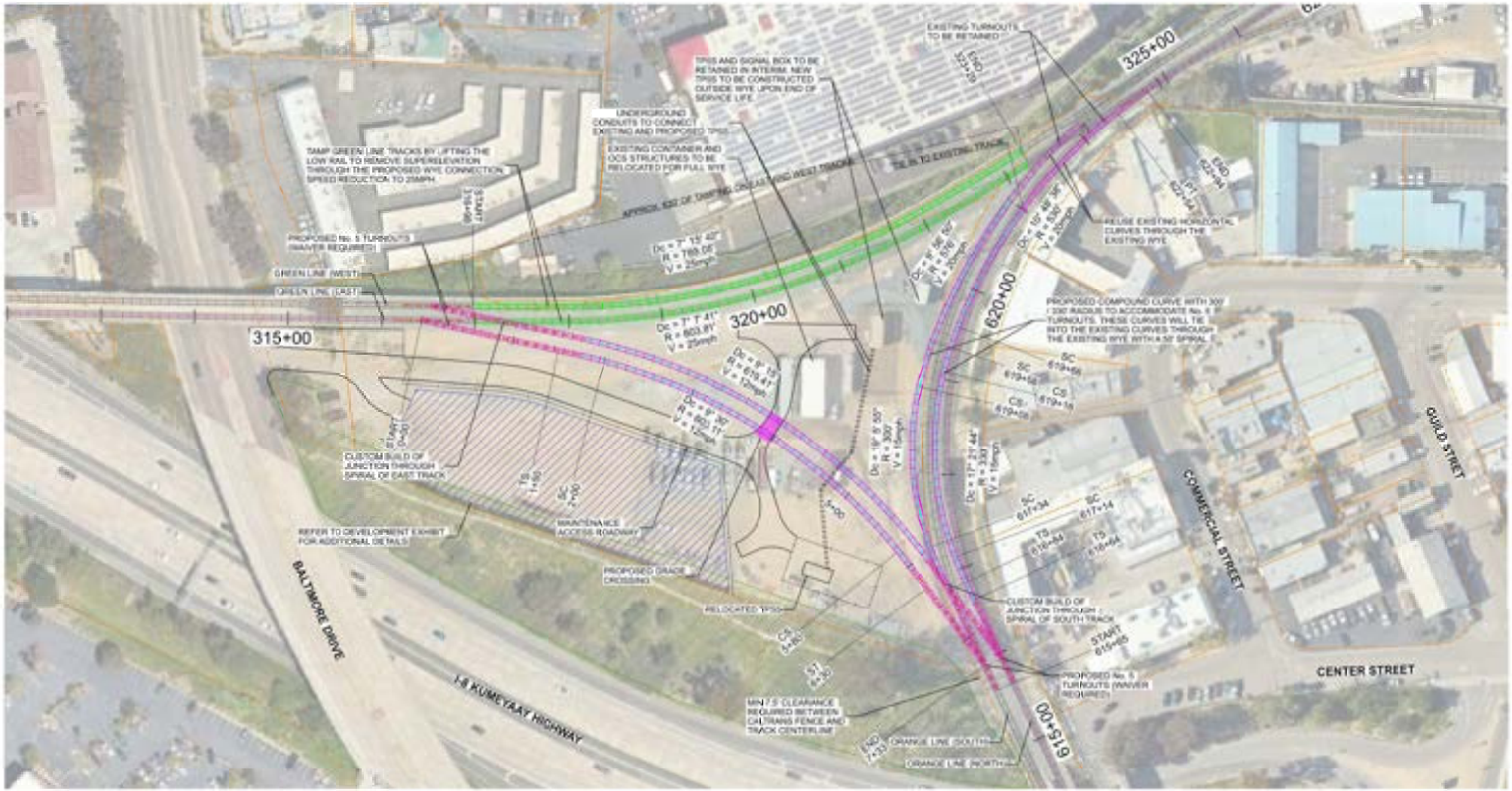
Appendix C – Alternatives 1A, 1B, 1C, & Potential Area for Development Exhibits and Cost Estimates



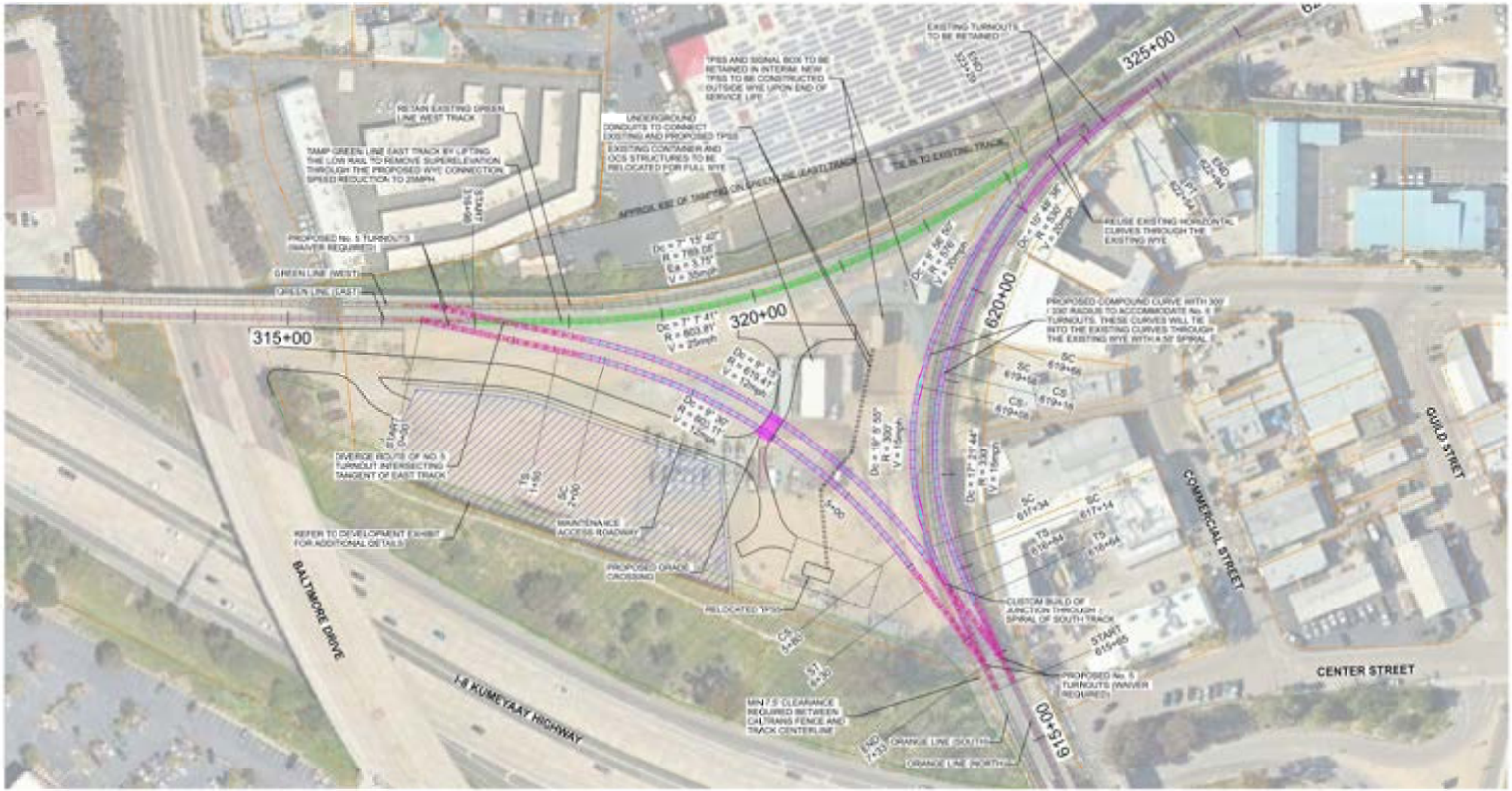
NOTES

1. EXISTING TRACK GEOMETRY TO BE CONFIRMED AT NEXT STAGE OF DESIGN DEVELOPMENT.

PLAN VIEW

SCALE 1" = 50'

MOTT MACDONALD	MTS	BALTIMORE JUNCTION WYE IMPROVEMENTS
		ALTERNATIVE 1A - FULL WYE



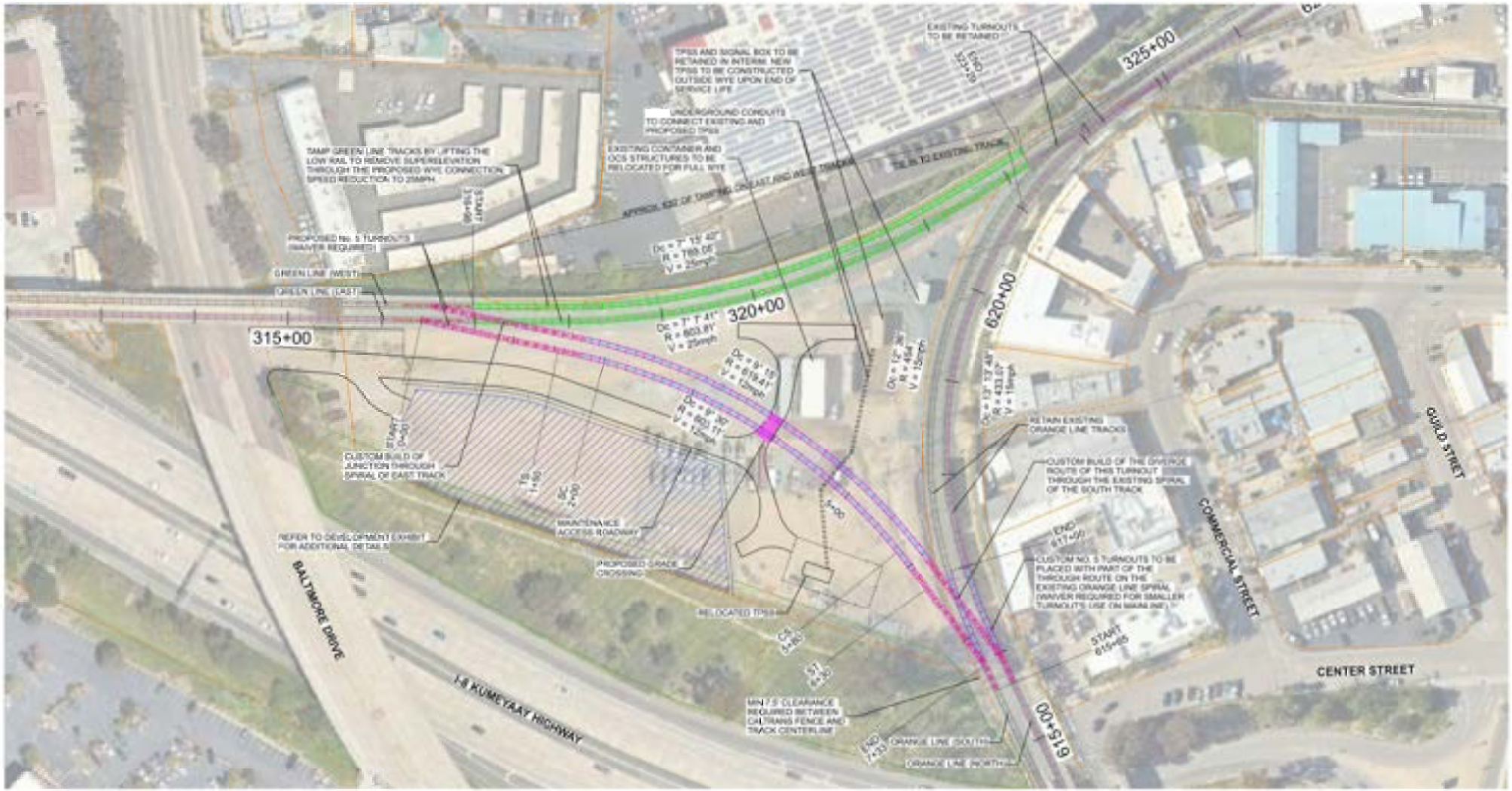
NOTES

1. EXISTING TRACK GEOMETRY TO BE CONFIRMED AT NEXT STAGE OF DESIGN DEVELOPMENT.

PLAN VIEW

SCALE 1" = 50'

MOTT MACDONALD	MTS	BALTIMORE JUNCTION WYE IMPROVEMENTS
		ALTERNATIVE 1B - FULL WYE, RETAIN GREEN WB TRACK



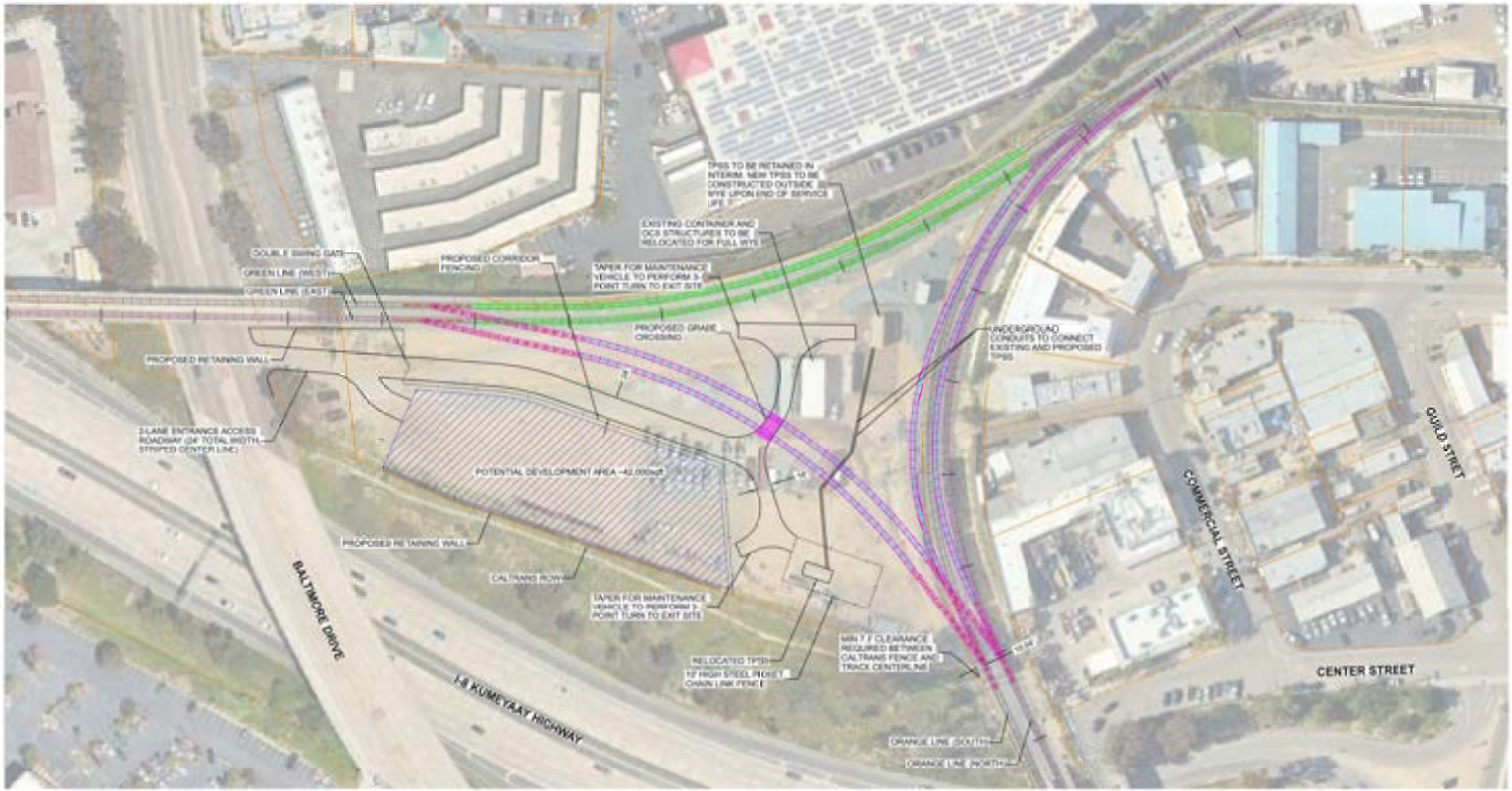
NOTES

1. EXISTING TRACK GEOMETRY TO BE CONFIRMED AT NEXT STAGE OF DESIGN DEVELOPMENT.

PLAN VIEW

SCALE 1" = 50'

MOTT MACDONALD	MTS	BALTIMORE JUNCTION WYE IMPROVEMENTS
		ALTERNATIVE 1C - FULL WYE, CUSTOM TURNOUTS



NOTES

1. EXISTING TRACK GEOMETRY TO BE CONFIRMED AT NEXT STAGE OF DESIGN DEVELOPMENT.

PLAN VIEW

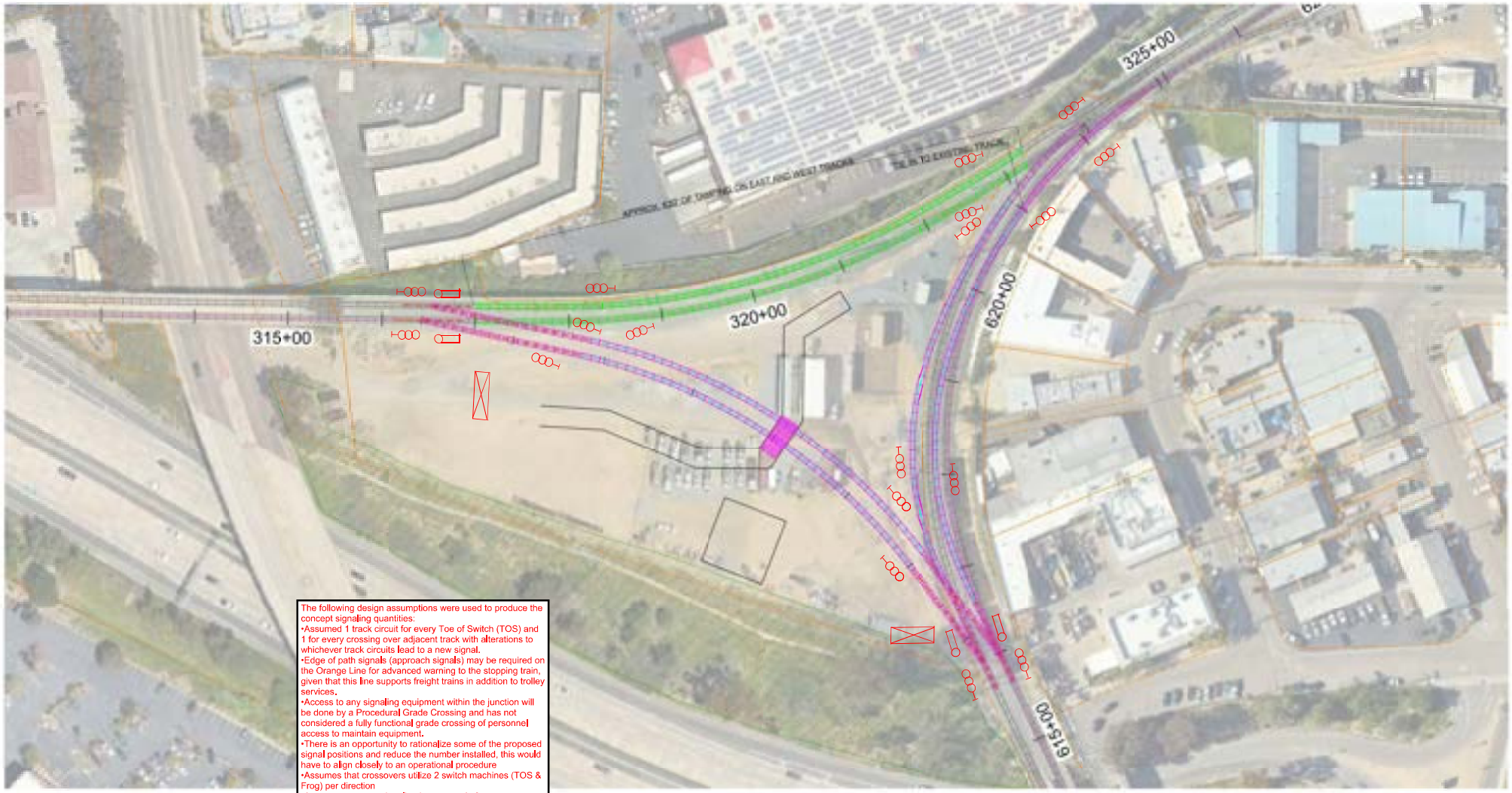
SCALE 1" = 50'

MOTT MACDONALD	MTS	BALTIMORE JUNCTION WYE IMPROVEMENTS	ALTERNATIVE 1 - POTENTIAL AREA FOR DEVELOPMENT

Baltimore Junction Improvements - Alternative 1A					
CONSTRUCTION COST ESTIMATE					
Line No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
	TRACK				
1	Track to be demolished (Orange Line)	1,070	LF	$ 126.00	$ 134,820.00
2	New track at grade (Orange Line)	1,070	LF	$ 586.00	$ 627,020.00
3	New track at grade (Wye Connection)	1466	LF	$ 586.00	$ 859,076.00
4	Tamping of Existing Track (Green Line)	1262	LF	$ 25.00	$ 31,550.00
5	New No. 5 Turnouts	4	EA	$ 175,000.00	$ 700,000.00
6	Add Grade Crossing and Reconstruct Maintenance Roadway	1	LS	$ 284,000.00	$ 284,000.00
				SUBTOTAL TRACK	$ 2,636,466.00
	OCS				
7	Catenary system (Orange Line)	535	LF	$ 495.00	$ 264,825.00
8	Traction electrification system (Orange Line)	535	LF	$ 550.00	$ 294,250.00
9	Catenary system (New Wye Connection)	733	LF	$ 495.00	$ 362,835.00
10	Traction electrification system (New Wye Connection)	733	LF	$ 550.00	$ 403,150.00
11	Adjust Catenary system (Green Line)	631	LF	$ 200.00	$ 126,200.00
				SUBTOTAL OCS	$ 1,451,260.00
	RAIL SYSTEMS				
12	New Signals	14	EA	$ 235,454.00	$ 3,296,356.00
13	Point Machines	4	EA	$ 60,000.00	$ 240,000.00
14	Axle Counters	18	EA	$ 30,000.00	$ 540,000.00
15	Interlocking Logic (per Route Function)	18	EA	$ 75,000.00	$ 1,350,000.00
16	Cabling	1	LS	$ 76,080.00	$ 76,080.00
				SUBTOTAL RAIL SYSTEMS	$ 5,502,436.00
	MOBILIZATION AND CONTINGENCY				
				SUBTOTAL CONSTRUCTION COST	$ 9,590,162.00
				10% MOBILIZATION	$ 1,065,573.56
				25% CONTIENGENCY	$ 2,663,933.89
	TOTAL CONSTRUCTION COST (rounded to nearest 100,000)				$ 13,300,000.00

Baltimore Junction Improvements - Alternative 1B					
CONSTRUCTION COST ESTIMATE					
Line No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
	TRACK				
1	Track to be demolished (Orange Line)	1,070	LF	$ 126.00	$ 134,820.00
2	New track at grade (Orange Line)	1,070	LF	$ 586.00	$ 627,020.00
3	New track at grade (Wye Connection)	1466	LF	$ 586.00	$ 859,076.00
4	Tamping of Existing Track (Green Line)	631	LF	$ 25.00	$ 15,775.00
5	New No. 5 Turnouts	4	EA	$ 175,000.00	$ 700,000.00
6	Add Grade Crossing and Reconstruct Maintenance Roadway	1	LS	$ 284,000.00	$ 284,000.00
				SUBTOTAL TRACK	$ 2,620,691.00
	OCS				
7	Catenary system (Orange Line)	535	LF	$ 495.00	$ 264,825.00
8	Traction electrification system (Orange Line)	535	LF	$ 550.00	$ 294,250.00
9	Catenary system (New Wye Connection)	733	LF	$ 495.00	$ 362,835.00
10	Traction electrification system (New Wye Connection)	733	LF	$ 550.00	$ 403,150.00
11	Adjust Catenary system (Green Line)	631	LF	$ 200.00	$ 126,200.00
				SUBTOTAL OCS	$ 1,451,260.00
	RAIL SYSTEMS				
12	New Signals	14	EA	$ 235,454.00	$ 3,296,356.00
13	Point Machines	4	EA	$ 60,000.00	$ 240,000.00
14	Axle Counters	18	EA	$ 30,000.00	$ 540,000.00
15	Interlocking Logic (per Route Function)	18	EA	$ 75,000.00	$ 1,350,000.00
16	Cabling	1	LS	$ 76,080.00	$ 76,080.00
				SUBTOTAL RAIL SYSTEMS	$ 5,502,436.00
	MOBILIZATION AND CONTINGENCY				
				SUBTOTAL CONSTRUCTION COST	$ 9,574,387.00
				10% MOBILIZATION	$ 1,063,820.78
				25% CONTIENGENCY	$ 2,659,551.94
	TOTAL CONSTRUCTION COST (rounded to nearest 100,000)				**$ 13,300,000.00**

Baltimore Junction Improvements - Alternative 1C					
CONSTRUCTION COST ESTIMATE					
Line No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
	TRACK				
1	New track at grade (Orange Line)	270	LF	$ 586.00	$ 158,220.00
2	New track at grade (Wye Connection)	1466	LF	$ 586.00	$ 859,076.00
3	Tamping of Existing Track (Green Line)	1262	LF	$ 25.00	$ 31,550.00
4	New No. 5 Turnouts	2	EA	$ 175,000.00	$ 350,000.00
5	New Custom Turnouts (Orange Line)	2	EA	$ 262,500.00	$ 525,000.00
6	Add Grade Crossing and Reconstruct Maintenance Roadway	1	LS	$ 284,000.00	$ 284,000.00
				SUBTOTAL TRACK	$ 2,207,846.00
	OCS				
7	Catenary system (Orange Line)	0	LF	$ 495.00	$ -
8	Traction electrification system (Orange Line)	0	LF	$ 550.00	$ -
9	Catenary system (New Wye Connection)	733	LF	$ 495.00	$ 362,835.00
10	Traction electrification system (New Wye Connection)	733	LF	$ 550.00	$ 403,150.00
11	Adjust Catenary system (Green Line)	631	LF	$ 200.00	$ 126,200.00
				SUBTOTAL OCS	$ 892,185.00
	RAIL SYSTEMS				
12	New Signals	14	EA	$ 235,454.00	$ 3,296,356.00
13	Point Machines	4	EA	$ 60,000.00	$ 240,000.00
14	Axle Counters	18	EA	$ 30,000.00	$ 540,000.00
15	Interlocking Logic (per Route Function)	18	EA	$ 75,000.00	$ 1,350,000.00
16	Cabling	1	LS	$ 76,080.00	$ 76,080.00
				SUBTOTAL RAIL SYSTEMS	$ 5,502,436.00
	MOBILIZATION AND CONTINGENCY				
				SUBTOTAL CONSTRUCTION COST	$ 8,602,467.00
				10% MOBILIZATION	$ 955,829.67
				25% CONTIENGENCY	$ 2,389,574.17
	TOTAL CONSTRUCTION COST (rounded to nearest 100,000)				$ 11,900,000.00



The following design assumptions were used to produce the concept signaling quantities:
- Assumed 1 track circuit for every Toe of Switch (TOS) and 1 for every crossing over adjacent track with alterations to whichever track circuits lead to a new signal.
- Edge of path signals (approach signals) may be required on the Orange Line for advanced warning to the stopping train, given that this line supports freight trains in addition to trolley services.
- Access to any signaling equipment within the junction will be done by a Procedural Grade Crossing and has not considered a fully functional grade crossing of personnel access to maintain equipment.
- There is an opportunity to rationalize some of the proposed signal positions and reduce the number installed, this would have to align closely to an operational procedure
- Assumes that crossovers utilize 2 switch machines (TOS & Frog) per direction
- Assumes one new signaling box per end of a crossover or turnout.
- Clearance/fouling points vs signal placements have not been assessed and will be required.
- Assumes no alteration to the existing wye connection.
- Assumes sufficient power and space within the existing signal box to supply new signals placed in the existing wye area
- Existing mainline active grade crossings in the area may need modifications to their strike-ins and this has not been assessed as a part of this work.

LEGEND

Signal Box x 2

Signal x 14

Point/Switch Machine x 4

PLAN VIEW

SCALE 1" = 50'

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MTS

BALTIMORE JUNCTION WYE IMPROVEMENTS

CONCEPTUAL SIGNALING LAYOUT FOR ALTERNATIVES 1A, 1B AND 1C

Appendix D – Workshop #1 Meeting Minutes

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Record of meeting

Project title Baltimore Junction Operational Enhancements

Subject Alternatives Analysis (AA) Workshop #1

Location 1255 Imperial Ave, 9th Floor / MS Teams

Date/time of meeting May 7, 2025, 1:00 p.m.

Project number WOA354-AE-38 (MM #504101624)

Recorded by Bethany Garretson

Attendees

Name	Organization	Role	Email Address
Gabe McKee	MTS	MTS Project Manager (PM)	gabriel.mckee@sdmts.com
Brent Boyd	MTS	Planning & Scheduling Director	Brent.boyd@sdmts.com
Alex Pereyra	MTS	Maintenance of Way Director	Alex.pereyra@sdmts.com
Bethany Garretson	Mott MacDonald (MM)	Consultant PM / Facilitator	Bethany.garretson@mottmac.com
Robert Gave	MM	Asst. Consultant PM / Systems	Robert.gave@mottmac.com
Conor Atkinson	MM	Digital Manager / Track	Conor.atkinson@mottmac.com
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Tiffany Clonts	Caltrans D-11		Tiffany.clonts@dot.ca.gov

CC'ed

Name	Organization		Email Address
Heather Furey	MTS	Director of Capital Projects / PM	Heather.furey@sdmts.com
James Benedik	MTS	Rail Transportation Manager	James.benedik@sdmts.com

Discussion

Item	Text
1	**Safety moment / housekeeping** Robert shared a safety moment related to hot weather and sun exposure. Gabe pointed out the exits and bathroom locations for all attendees. Individuals trained in CPR and First Aid identified themselves, and Gabe identified the location of the onside defibrillator.
2	**Introductions** All attendees introduced themselves and their role on the project (see "Attendees" table above)
3	**Process / existing conditions overview** Alternatives Analysis (AA) process: Bethany walked through the AA process the group will complete over the course of two workshops. Today, the following steps will be covered: 1. Develop a purpose and need statement 2. Identify and select the evaluation criteria for analyzing and comparing the alternatives 3. Weight the evaluation criteria 4. Identify and agree on the alternatives to be analyzed. Bethany explained that the role of AA within the overall development of the project is to scope the environmental phase. The purpose of these workshops is to facilitate the scoping by identifying and examining alternatives that address the purpose and need of the project, constructing the decision-making framework within which the alternatives should be evaluated, and then eliminating any non-viable alternatives through this evaluation. Reducing the number of alternatives that undergo a full CEQA / NEPA analysis will save time and money. Having all stakeholders and areas of expertise involved in this process, agreeing on each of the components along the way, and achieving consensus on alternatives to be eliminated ensures we can defend the decisions made when/if questions come up later in the public environmental process. The evaluation criteria will be key considerations specific to this project – for example constructability, accessibility, etc. Between workshops 1 and 2, the design team will develop the alternatives and analyze their performance against the agreed upon evaluation criteria. Rough order of magnitude (ROM) costs and approximate construction durations will also be determined. Additional data requests may arise during this workshop, and we'll ask that responses are returned within two weeks. At workshop 2, the design team will present the features of the alternatives and findings of the various analyses performed. Then, as a group, we will comparatively score the alternatives against the criteria. Before we adjourn, we will ensure all attendees agree on the final scoring.

Item	Text
	After the workshops, the design team will document the AA process and incorporate it into a Project Study Report (PSR), which they will present to MTS for review and approval. Existing Conditions: Bethany presented a **Google Earth fly-through** of the project site and surrounding area. The group spent a few minutes reviewing exhibits displaying the existing infrastructure and land uses, utilities, flood plain limits, streets / highways and traffic volumes, and transit operations. *Existing conditions exhibits are combined into a file called, **"250506 Baltimore Jxn Exhibits Combined.pdf**."* Rail / Transit Operations: Brent walked through trolley operations: Both Green and Orange Lines operate on 15-minute headways in both directions all day, which means there is a trolley coming through the site approximately every three to four minutes. They do not typically switch from one line to the other, but if they needed to, they would need to do a turnback movement using the crossover east of the junction. The Orange Line speed limit is 20 mph through the site as the tracks are not superelevated and has a weekly freight train. The Green Line speed limit is 50 mph as the tracks are superelevated through the curve. The parcel was slotted for sale a few years ago, but MTS prefers to keep it and look at ways to make it more useful. These could include adding a wye, adding trolley platforms to create a transfer station, and adding bus operations for multimodal operations – not necessarily adjusting the track configuration, but providing more flexibility. Orange / Green Line transfers occur at Grossmont, which is one stop to the east. There are five bus routes operating in the vicinity: 1, 14, 852, 854, and 854x. Most service the Grossmont station, with two also stopping in downtown La Mesa. These routes would need to be reoriented if the transfer point were shifted to the Baltimore Junction. Pete Casselini shared that SANDAG is kicking off a study looking at options for grade separating the trolley in various locations within downtown La Mesa. The Regional Plan calls for increased frequency on both trolley lines by 2050. There is also an interest in densifying the area around the La Mesa Blvd. station, with affordable housing developments in the works. Brent added that MTS is starting a comprehensive operations analysis, which will likely result in changes throughout network (e.g. bus routes). Bus routes in general can always be rerouted, so the group shouldn't think of them as locked into place. Genesee & Wyoming operates the SD&IY short line freight on these tracks. They operate one train per week (typically Sunday night) for one customer, and it consists of two locomotives and three to five cars. Traffic: Phil explained that Fletcher Parkway is a prime arterial and the busiest street in La Mesa. Baltimore Drive is considered an arterial, equivalent to a 4-lane major in City of San Diego. Bike facilities in the area include only Class II lanes. There are a few entrance / exit ramps for I-8 scattered around the area and five bridges crossing the highway within the greater project area. Currently there is only one vehicular access point to the site, which is a steep driveway at an unsignalized intersection off Baltimore. I-8: Roy brought the group's attention to the WB on-ramp from Fletcher Pkwy, which currently only has a 700' weaving distance. An auxiliary lane could help. The Spring Street and WB Fletcher Parkway ramps are metered. In the original Comprehensive Multimodal Corridor Plan (CMCP), there were some managed lanes proposed, but there is less focus on this now. Utilities: There are minimal existing utilities onsite and nearby. Ryan asked if the alternatives would divert surface flows to the Caltrans R/W, recognizing it might be too early for this level of detail. Bethany explained that Caltrans would need to provide their constraints and criteria for

Item	Text
	drainage and any other design consideration (like access, traffic, etc.), and the design team can incorporate them into the alternatives development for the options that progress into the environmental / preliminary engineering (PA&ED) phase. Environmental / geotechnical conditions: Christina shared that there are no geologic hazards at the site, which consists of sandstone and conglomerate. Although there is a great deal of gravel and cobbles, none of it would prevent normal construction. Tim pointed out a few small patches of sensitive vegetation onsite with coastal sage scrub, but it's in a disturbed state. There are also eucalyptus trees along the border abutting Caltrans ROW. There is a potential for birds to nest in them, but they're unlikely to support any listed or sensitive bird species. There are no recorded archaeological sites onsite, but the tracks themselves should be evaluated for historical significance, as they're part of the SD&AE La Mesa Branch Line.
4	**Purpose and Need** Bethany reiterated that this project is one of two planning studies MTS is conducting with FTA grant funds to improve the capacity and reliability of the Orange Line, as it serves historically underserved communities. Many of its riders rely on transit as their only means of transportation. The purpose of this project is to identify and analyze options for giving MTS additional operational flexibility. Brent added that these studies will inform where significant investments are made in the future.
5-6	**Discussion of possible evaluation criteria / selection** Bethany explained the importance of all stakeholders and various subject matter experts participating in the process, so that none of the key considerations are left out or incorrectly prioritized. There are many different operational configurations that could be considered at the Baltimore Junction. However, going through the environmental analysis and preliminary engineering for several alternatives would be a lengthy and expensive endeavor. The purpose of going through a robust AA is to follow a formal, defensible process to eliminate alternatives before the environmental phase, so the findings can stand up legally if later challenged by the public or funding sources. The group brainstormed key considerations for the project and developed a list of 34 items. With more discussion, these items were grouped into the following categories: A. Operations & Maintenance B. User experience / accessibility C. Traffic / community impacts D. Constructability / temporary impacts E. Right-of-way & utility impacts Bethany explained there are two ways construction cost can be considered in the evaluation: 1. It can be a stand-alone criterion 2. Remove it as a criterion, then divide each alternative's score by its respective ROM construction cost at the end. She recommended the latter, as this method serves to "normalize" the scores in terms of fundability. The group agreed to use this method. *The criteria categories and individual criteria are listed in the "Criteria" tab of the AA Evaluation spreadsheet, "**MTS Baltimore Jxn-AA Matrix WS1.xlsx**."*
7	**Weighting of evaluation and pass/fail criteria**

Item	Text
	The group then weighted the five criteria by considering each criterion's importance vs. each other criterion's, counting the number of times each criterion "won," and then dividing by the total number of "contests" to determine the weight of each one. The following chart displays the outcome of this weighting:

	A	B	C	D	E	Total	Weight
A		B	A	A	A	3	30%
B			B	B	B	4	40%
C				C	C	2	20%
D					E	0	0%
E						1	10%
						10	100%

The group discussed these results and concluded "Constructability / temporary impacts" (D) should be included and assigned a weight of 10%. To do this, "Operations & Maintenance" and "User Experience / Accessibility" should each be reduced by 5%. The group agreed on the following adjusted weights:

A	B	C	D	E
25%	35%	20%	10%	10%

This table can also be found on the "Weighting" tab of the AA Evaluation spreadsheet.

The group then discussed potential pass/fail criteria. They agreed on one: precluding freight operations.

8	**Discussion / identification of alternatives** As Bethany presented plan view layouts of various potential alternatives, the group discussed the operations of each. As the list of alternatives to be analyzed started to form, Brent reiterated that all alternatives should include the full wye, since operational flexibility is the primary goal.

Item	Text
	The group also discussed the possibility of constructing the full wye, as well as tracks in a configuration that would accommodate the future construction of stations, even if they are not included in the first phase. This would bring the Green Line operating speed down, since the tracks could no longer be superelevated through the curve, but instead would be flat to allow for the special trackwork associated with the wye. The design team will determine what the new Green Line speed limit would be if the tracks were flattened, and then calculate how much travel time would be added. The group agreed that alternatives with geometry that does not accommodate freight operations will be eliminated. The five alternatives to be developed to conceptual design level are: 1. Full wye, no platforms (“BASELINE”) 2. Full wye, Green Line platforms before the junction 3. Full wye, one set of platforms after the junction 4. Full wye, add one platform at each outbound movement 5. Full wye, add one common platform between Green and Orange Lines, 1 platform outside Green Line, and 1 platform outside Orange Line These are shown in the exhibit, “***MTS Baltimore Jxn-Alts-WS1.pdf***.”
9	**Next steps / action items** Bethany reiterated that the design team will now go to work developing conceptual designs for the five alternatives, completing analyses, and gathering data to support the evaluation of the alternatives against the five agreed-upon criteria. This group will reconvene in four to six weeks to review and score the alternatives. In the meantime, the following action items will be completed: 1. **MTS** to provide Green Line as-builts. 2. **MTS** to confirm the layouts of the five alternatives to developed and analyzed. 3. **Design team** to send out meeting poll to identify time / date of Workshop 2. **All action items are due on Friday, May 23, 2025.** *Action item matrix can be found in file titled,* ***“MTS Baltimore Jxn AA - Action Items.xlsm.”*** Bethany quickly summarized the planned activities for Workshop 2, which include the design team presenting the alternatives and their comparative performance against each of the evaluation criteria, followed by the group working together to score the alternatives.

BALTIMORE JUNCTION

Alternatives Analysis

Instructions:

1. Copy criteria and subcriteria from "Criteria" tab to the table on the right.
2. Evaluate importance of each criterion compared to each of the other criterion (eg. A vs. B, A vs. C, etc.).
3. Spreadsheet will tally "wins" for each criterion and convert it to a weight.

A	Operations / Maintenance
B	User experience / accessibility
C	Traffic / community Impacts
D	Constructability / temp impacts
E	Right-of-way / Utilities

	A	B	C	D	E	Total	Weight	MODIFIED WEIGHT
A		B	A	A	A	3	30%	25%
B			B	B	B	4	40%	35%
C				C	C	2	20%	20%
D					E	0	0%	10%
E						1	10%	10%
						10	100%	100%

BALTIMORE JUNCTION

Alternatives Analysis

25%	35%	20%	10%	10%
A	**B**	**C**	**D**	**E**
Operations / Maintenance	**User experience / accessibility**	**Traffic / community Impacts**	**Constructability / temp impacts**	**Right-of-way / Utilities**
Service disruption (transit)	Transit connectivity	Opportunities for adjacent land use	Construction duration	R/W impacts
Operational flexibility	First mile / last mile compatibility	Road closures / detours	Temporary freight ops	Utility impacts / relocations
Impacts to traction power requirements	Site access	Site access	Temporary trolley ops	Property access
Site access	User experience / accessibility	Community support	Road closures / detours	Temporary construction easements
Impacts to travel time	Impacts to travel time	Environmental impacts		
Complex / additional signaling	Security needs	Traffic generation		
Security needs	Bike / ped / disabled access			
Impacts to freight operations	TOD opportunities			
Caltrans accessibility				
Accitional maintenance reqts				
Additional staffing				
Precluding future rail expansion				

MOTT MACDONALD	MTS	BALTIMORE JUNCTION - ALTERNATIVE ANALYSIS WORKSHOP	ALTERNATIVE 01 - FULL WYE ONLY

Alternative Eliminated at Workshop

MOTT MACDONALD	MTS	BALTIMORE JUNCTION - ALTERNATIVE ANALYSIS WORKSHOP	ALTERNATIVE 2A - FOUR PLATFORMS, FULL WYE

Alternative Eliminated after Workshop

MOTT MACDONALD	MTS	BALTIMORE JUNCTION - ALTERNATIVE ANALYSIS WORKSHOP	ALTERNATIVE 2B - ONE GL STATION WITH WYE

Alternative Eliminated at Workshop

MOTT MACDONALD	MTS	BALTIMORE JUNCTION - ALTERNATIVE ANALYSIS WORKSHOP	ALTERNATIVE 2C - ONE STATION IN THE FULL WYE

Alternative Eliminated at Workshop

MOTT MACDONALD	MTS	BALTIMORE JUNCTION - ALTERNATIVE ANALYSIS WORKSHOP	ALTERNATIVE 2D - FOUR PLATFORMS, NO WYE CONNECTION

Alternative Eliminated at Workshop

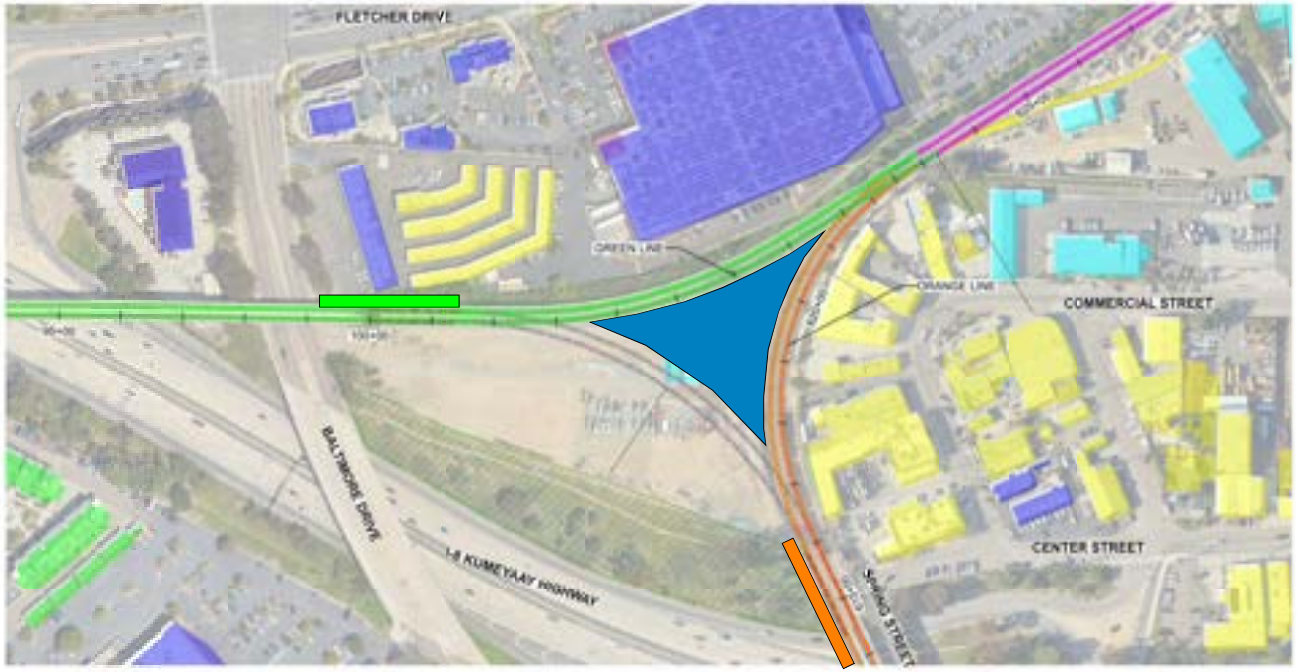
MOTT MACDONALD	MTS	BALTIMORE JUNCTION - ALTERNATIVE ANALYSIS WORKSHOP	ALTERNATIVE 2E - ONE NEW STATION (GREEN LINE) WITH SINGLE FULL WYE TRACK

Alternative Eliminated after Workshop

MOTT MACDONALD	MTS	BALTIMORE JUNCTION - ALTERNATIVE ANALYSIS WORKSHOP	ALTERNATIVE 3 - ONE STATION AFTER WYE

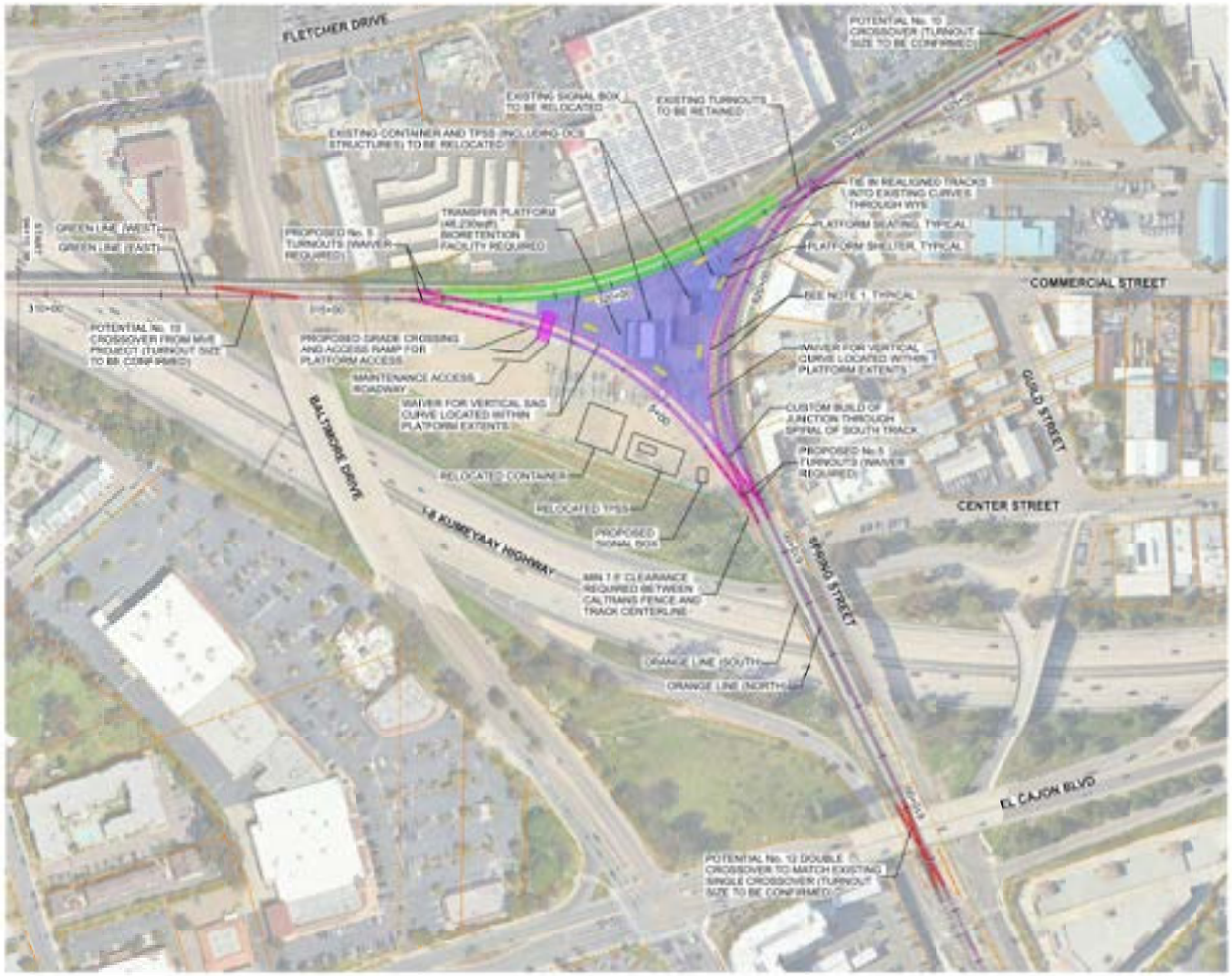
Alternative Eliminated after Workshop

MOTT MACDONALD	MTS	BALTIMORE JUNCTION - ALTERNATIVE ANALYSIS WORKSHOP	ALTERNATIVE 4 - FULL WYE, PLATFORMS AT EACH OUTBOUND MOVEMENT



Alternative Eliminated after Workshop

MOTT MACDONALD	MTS	BALTIMORE JUNCTION - ALTERNATIVE ANALYSIS WORKSHOP	ALTERNATIVE 5 - FULL WYE, GREEN/ORANGE COMMON PLATFORM + PLATFORMS AT WB OUTBOUND MOVEMENTS



NOTES

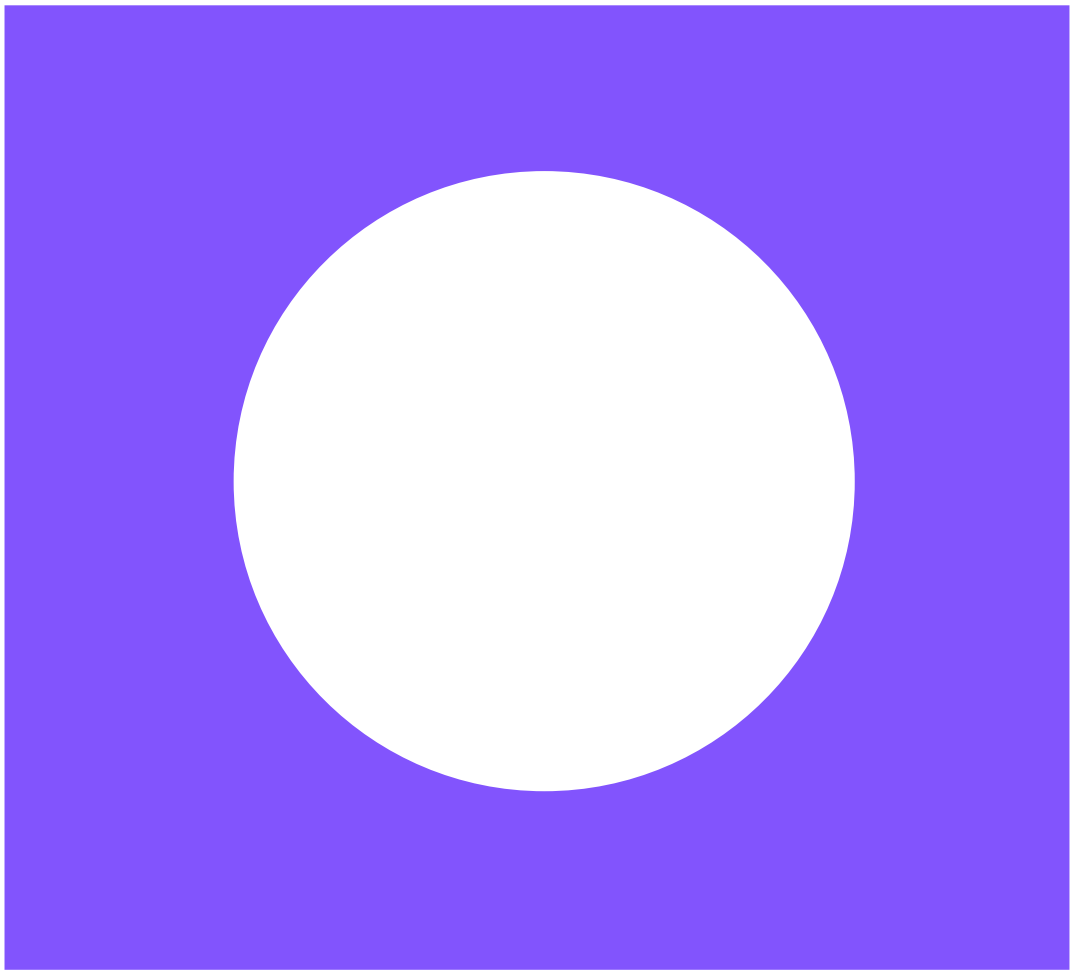
1. SEE ALTERNATIVE 1A FOR EXTENTS OF NEW TRACK, TRACK MODIFICATIONS, AND TRACK GEOMETRIC INFORMATION.

PLAN VIEW

SCALE 1" = 100'

Alternative Developed after Workshop and Eliminated

MOTT MACDONALD	BALTIMORE JUNCTION WYE IMPROVEMENTS	ALTERNATIVE 6 - FULL WYE, CENTER TRANSFER PLATFORM



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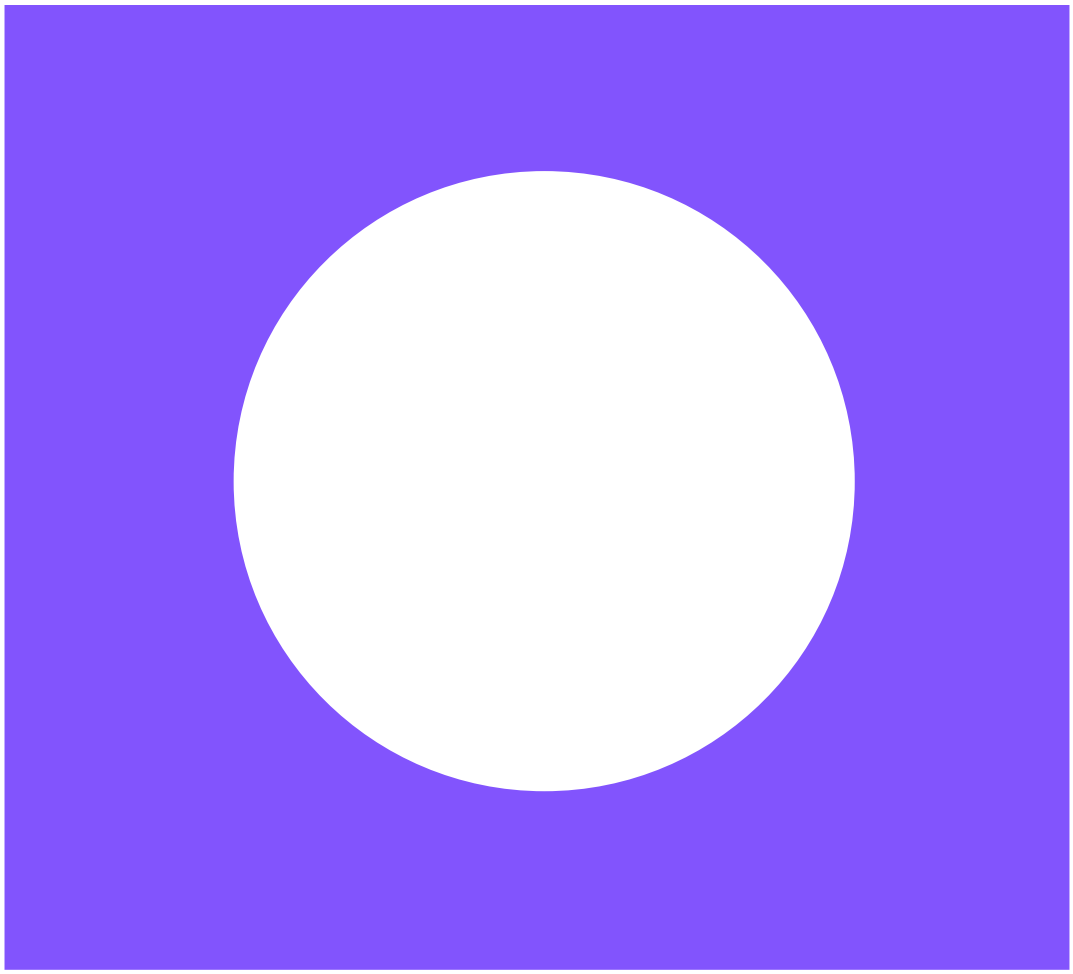

Euclid Avenue Grade Separation

Project Study Report

January 2026

Mott MacDonald Public

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Euclid Avenue Grade Separation

Project Study Report

January 2026

Mott MacDonald Public

Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
0	11-7-2025	P. Smith	C. Thibault	P. Smith	Internal Draft
1	11-13-2025	P. Smith	C. Thibault	P. Smith	Draft
2	1-8-2025	P. Smith	C. Thibault	P. Smith	Final

Document reference: 504101624 | 1 | 2

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Mott MacDonald Public

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Executive summary

Project Overview

The Euclid Avenue Grade Separation Project Study Report (PSR) evaluates alternatives to improve safety, transit efficiency, and community connectivity at the at-grade crossing of the MTS Orange Line Trolley and freight rail tracks across Euclid Avenue in the Chollas View neighborhood of San Diego. The grade crossing is adjacent to the Euclid Avenue Transit Center which is a major hub with high bus and Trolley ridership. Euclid Avenue is a four-lane major arterial street, and the grade crossing is near the intersection of Market Street, another four-lane major arterial street. The area is served by multiple bus routes and experiences frequent trolley crossings causing traffic delays. The site is in a highly developed area adjacent to Chollas Creek and the Encanto Channel that are prone to flooding.

The PSR considered six alternatives for grade separating the roadway and railroad tracks and, due to site constraints, evaluates only the three feasible alternatives. Alternatives 3, 5, and 6 involve either lowering the tracks under the roadway or lowering the roadway under the tracks. With the Euclid Avenue crossing located in close proximity to the creek and channel and a major intersection at Market Street, these options are infeasible due to engineering constraints, or require significant tunnel engineering. The three feasible alternatives have the following features:

Alternative 1 - Raise MTS and Freight Tracks Over Euclid Avenue

- Full grade separation of both trolley and freight rail operations.
- Trolley station elevated on structure with elevators and stairs.
- Highest community benefit and safety improvement.
- Requires full rail shutdown during construction (estimated 3 years).
- No permanent property impacts.
- Construction cost estimate: $176 million.

Alternative 2 - Raise Trolley Over Euclid Avenue, Maintain Freight At-Grade

- Trolley elevated; freight operations remain at-grade.
- Trolley station elevated on structure with elevators and stairs.
- Shorter construction duration (2 years 3 months) but full rail shutdown during construction.
- Requires property acquisition and more complex construction.
- Similar safety and traffic benefits to Alternative 1.
- Construction cost estimate: $220 million.

Alternative 4 - Raise Euclid Avenue Over Rail

- Roadway elevated; rail remains at-grade.
- Vehicular traffic blocked from crossing tracks, but pedestrians and bicyclists have special track crossing.
- Shortest construction duration (2 years).
- Does not require shutdown of rail during construction.
- Impacts bus routes and local traffic circulation.
- Lowest cost but reduced multimodal connectivity.
- Construction cost estimate: $35 million.

Comparative Evaluation

The three feasible alternatives were evaluated and scored against each other by five criteria that are weighted based on a percentage of importance to the project:

1. Construction impacts (10%)
2. Multimodal user experience (30%)
3. Community support and benefits (30%)
4. Maintenance and operations (20%)
5. Right-of-way and utility impacts (10%)

The alternatives have the following weighted score and normalized score. The normalized score divides the weighted score by the construction cost.

	Weighted Score	Construction Cost	Normalized Score
Alternative 1	190	$176 million	1.08
Alternative 2	160	$220 million	0.73
Alternative 4	180	$35 million	5.14

The three alternatives have similar weighted scores with no single alternative standing out over the others, however Alternative 1 likely has the greatest support of the community by eliminating the railroad grade crossing on Euclid Avenue and maintaining current local street operations. Normalized for cost, Alternative 4 scores significantly higher than the other two alternatives due to its construction cost being over $140 million less than Alternatives 1 and 2. This alternative however restricts some left turn vehicular movements on Euclid Avenue and negatively impacts some bus routes that could no longer cross the railroad tracks.

Recommendations

- Proceed with further community engagement to select and refine the preferred alternative.
- Initiate environmental approvals under CEQA and NEPA, with anticipated exemptions and categorical exclusions.
- Coordinate with regulatory agencies for permits related to water quality, biological resources, and hazardous materials.

1 Introduction

1.1 Project Description

The San Diego Metropolitan Transit System (MTS) has initiated this Project Study Report (PSR) for the Euclid Avenue Grade Separation. The study is funded under the Federal FY 2021 Grants under the Route Planning and Restoration Program and aims to identify improvements for safety and transit service for low-income and disadvantaged communities. This PSR studies the feasibility of various alternatives to separate the at-grade crossing of the railroad tracks across Euclid Avenue in the San Diego neighborhood of Chollas View.

1.2 Purpose and Need

Grade separating rail operations from roads and pedestrian paths improves safety by eliminating collisions and conflicts. Removing crossing gates reduces delays for vehicles and enhances rail efficiency by eliminating the need to maintain the crossing. Per the grant application the project objectives are:

- Provide safety and operational enhancements allowing for improved service, including reduced travel times and reliability.
- Inform MTS on how to best proceed with long-term, significant infrastructure investments on the Orange Line with focus on grade separation opportunities near Euclid Avenue.
- Better serve lower-income communities that have been historically underserved and underinvested.

1.3 PDT Team

A Project Development Team (PDT) was created to oversee project development and to provide guidance and information on technical feasibility, local context, and relevant initiatives led by other jurisdictions. The Project Development Team is composed of staff from San Diego MTS, City of San Diego, and consultants Mott MacDonald, Helix Environmental Planning, Ninyo & Moore, and STC Traffic.

2 Site Conditions and Performance

2.1 Existing Site and Facilities Conditions

The Euclid Avenue Orange Line Trolley crossing, located south of the intersection of Euclid Avenue and Market Street in southeastern San Diego, is owned and managed by the San Diego Metropolitan Transit System (MTS). The surrounding area features diverse land use, including residential, commercial, and institutional facilities. To the north of the crossing lies the Emerald Hills community, while the Euclid Avenue Transit Center, a major public transit hub, is situated to the west. South of the site, Market Creek Plaza offers a variety of retail and dining options, and the west side features the Chollas View community, with residential areas and community facilities. The closest Trolley station to the site is the Euclid Avenue Trolley Station, which serves the Orange Line, and the Transit Center serves several bus routes. Additional nearby destinations include Horton Elementary school, the Elementary Institute for Science, the Jacobs Center, the Valencia Park Malcolm X Branch Library, the Southeastern Live Well Center, the Euclid Medical Center

According to CalEnviroScreen 4.0, the community within the project area has an overall percentile score of 91, placing it within the top 25% of disadvantaged areas in California. Key indicators reveal significant environmental and social challenges: diesel PM at the 94th percentile, hazardous waste at the 80th percentile, impaired water bodies at the 90th percentile, housing burden at the 94th percentile, and traffic at the 89th percentile. Additionally, socioeconomic factors such as poverty (92nd percentile), unemployment (67th percentile), and linguistic isolation (72nd percentile) further compound the community's vulnerabilities. Consequently, this community is officially categorized as disadvantaged according to the CalEnviroScreen framework. The high cumulative environmental and social burden underscores the critical need for targeted interventions and resource allocation to address these disparities effectively.

Figure 2-1: Euclid Avenue Crossing and Euclid Avenue Station

Trolley and Rail Operations

The Orange Line Trolley operates between the downtown San Diego Courthouse Station and the El Cajon Transit Center. The Euclid Avenue Transit Center is the busiest station on the Orange Line outside of downtown and operates every 15 minutes in each direction deploying the crossing gates eight times per hour.

Genesee and Wyoming Inc. operates the San Diego and Imperial Valley Railroad (SDIY) that runs on the Orange Line Trolley tracks (Figure 2-2). One train operates per week, typically Sunday night, for one customer in El Cajon consisting of two locomotives and three to five freight cars between downtown San Diego and El Cajon.

Figure 2-2: SDIY Route long MTS Orange Line

The existing track is a double-track at-grade ballasted track on timber ties to the east and west sides of the Euclid Station and grade crossing except for approximately 0.1 mile west of the station just past the existing crossover, where the track switches to concrete ties on ballast up to the station. Euclid station consists of two side platforms with embedded tracks. Just east of the station and just west of the grade crossing, there is a small portion of ballasted track on concrete ties.

The grade crossing at Euclid Avenue consists of concrete panels for both tracks with asphalt paving between them. There are two crossing gates with flashers per direction of roadway travel with a hard median separating traffic except where the grade crossing passes through the intersection. The grade crossing includes bike lanes and sidewalks on each side.

To the east of the grade crossing the tracks consist of ballasted track on concrete ties for a few yards where it then becomes ballasted track on timber ties. There is an unpowered siding track that has a turnout to the south used to store track maintenance equipment, and a crossover just to the east of the siding turnout.

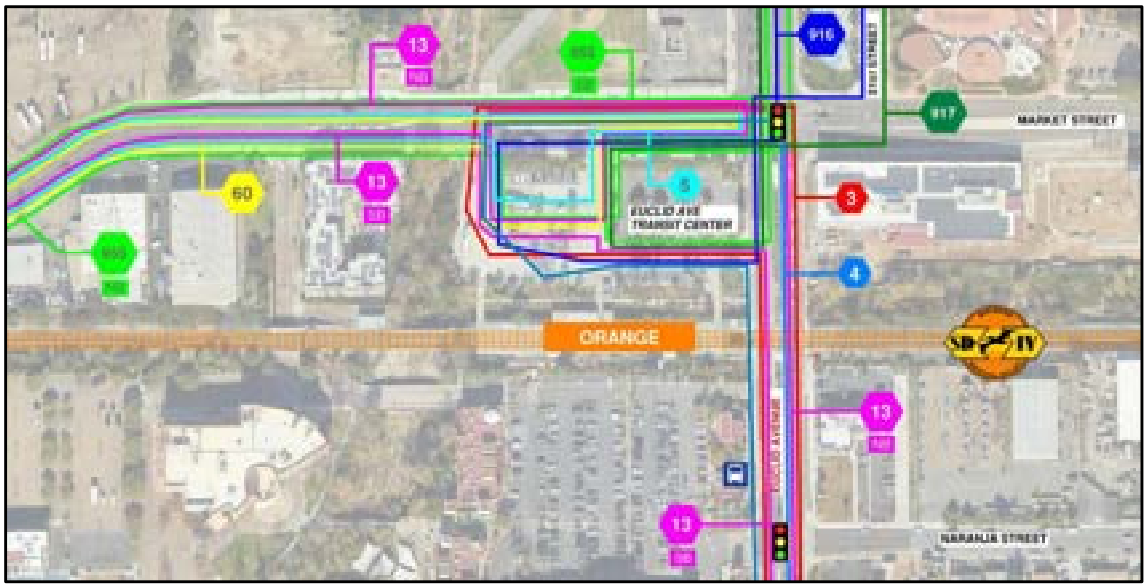
The existing Trolley system through the study area is electrified and is a 650-volt DC overhead catenary system. The catenary poles are outboard of each track throughout this section of the existing rail system.

The Federal Railroad Administration (FRA) maintains a database of all railroad crossings and incidents that occur at the crossings. FRA reports one incident in 2021 for the Euclid Avenue crossing with a pedestrian that went around the signal gate while a freight train was passing through at approximately midnight. The pedestrian was struck by the train and was taken to the hospital.

MTS Bus Operations

The Euclid Avenue Transit Center is a major transfer station with eight different bus routes and 6,250 bus passenger boardings and alightings per day. The transit center serves seven local routes (3, 4, 5, 13, 916, 917, and 955) and one express route (60). Routes 3, 4, and 13 cross the rail grade crossing and can be delayed by the gate closures. Figure 2-3 shows the bus routes at the transit center and more information is provided in Appendix A.

Figure 2-3: Euclid Avenue Transit Center Bus Routes



Traffic and Safety

The Euclid Avenue crossing faces notable traffic challenges due to its configuration as a double-track at-grade intersection. This design generates high volume of local traffic and frequent trolley crossings. The need for crossing gates activation disrupts vehicular movement and often leads to congestion, particularly during peak hours. This congestion impacts both local traffic and transit schedules. Euclid Avenue itself is a busy four-lane road with dedicated bike lanes. The Orange Line Trolley operates every 15 minutes throughout the day and every 30 minutes after 8:00 PM. Additionally, the station is connected to multiple bus routes with peak-hour frequencies ranging from 10 to 20 minutes. These movements are amplified by the surrounding high-density residential and commercial activities, which intensify the demand on the transportation network.

Daily traffic volumes on Euclid Avenue (between Market Street and Naranja Street) are approximately 21,000 and volumes on Market Street (west of Euclid) are approximately 6,000 vehicles per day. Table 2-1 shows the peak hour intersection level of service under existing conditions for the Euclid Avenue intersections at Market Street and Naranja Street.

Table 2-1: Intersection Level of Service Summary

ID	Intersection	Existing Conditions			
		AM		PM	
		Delay (seconds)	LOS	Delay (seconds)	LOS
1	Euclid Ave / Market St	**55.3**	**E**	33.9	C
2	Euclid Ave / Naranja St	18.1	B	20.8	C

Table 2-1 shows that the Naranja Street intersection operates effectively during both peak hours but the Market Street intersection operates at LOS E during the AM peak hour. Figure 2-4 and Figure 2-5 show the existing AM and PM peak hour traffic volumes, respectively. Table 2-2 shows the 95th percentile queue analysis summary for the Euclid Avenue intersections.

Table 2-2: Queue Analysis Summary

Intersection	Approach	Movement	Existing Conditions		
			Storage Length	AM	PM
Euclid Ave / Market St	EB	LT	200	210	193
		Thru/RT	-	68	208
	WB	LT	135	104	122
		Thru/RT	-	511	162
	NB	LT	150[1]	515	134
		Thru/RT	250[1]	869	254
	SB	LT	250	162	144
		Thru	-	418	396
		RT	200	112	79
Euclid Ave / Naranja St	EB	Thru/LT	70	50	141
		RT	-	41	52
	WB	LT/Thru	-	89	70
		RT	130	62	35
	NB	LT	160	175	158
		Thru/RT	-	265	134
	SB	LT	125[1]	87	126
		Thru/RT	250[1]	186	327

Storage and queue length reported in feet. [1]c250 feet back to trolley tracks. 95th percentile queue reported for queue length. EB = eastbound, WB = westbound, NB = northbound, SB = southbound, LT = left turn, Thru = through, RT = right turn.

Table 2-2 shows that the northbound volume at the Market Street intersection, in particular the northbound left turn volume, is a contributing factor to the less than desirable LOS E during the AM peak hour. Furthermore, the table shows that these queues stack back beyond the trolley tracks, which are 250 feet from the intersection. The southbound queue at Naranja Street also stacks back beyond the trolley tracks.

There were three incidents in the last ten years on Euclid Avenue between Market and Naranja (not including the intersections):

- 2017: SB rear-end, traffic was stopped.
- 2021: SB rear-end, construction merge.
- 2024: SB rear-end, stopped for trolley gate arms.

Figure 2-4: AM Peak Hour Existing Traffic Volumes

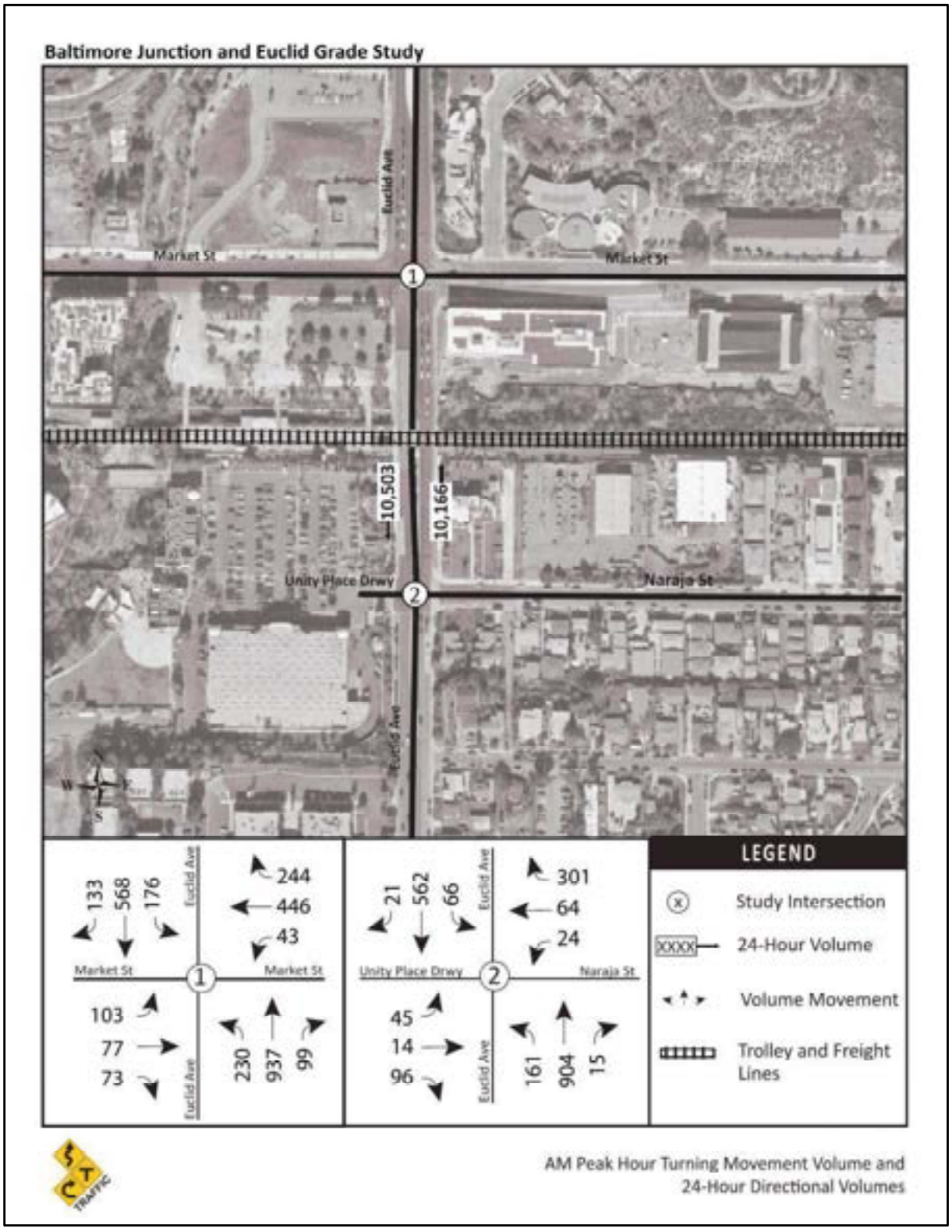
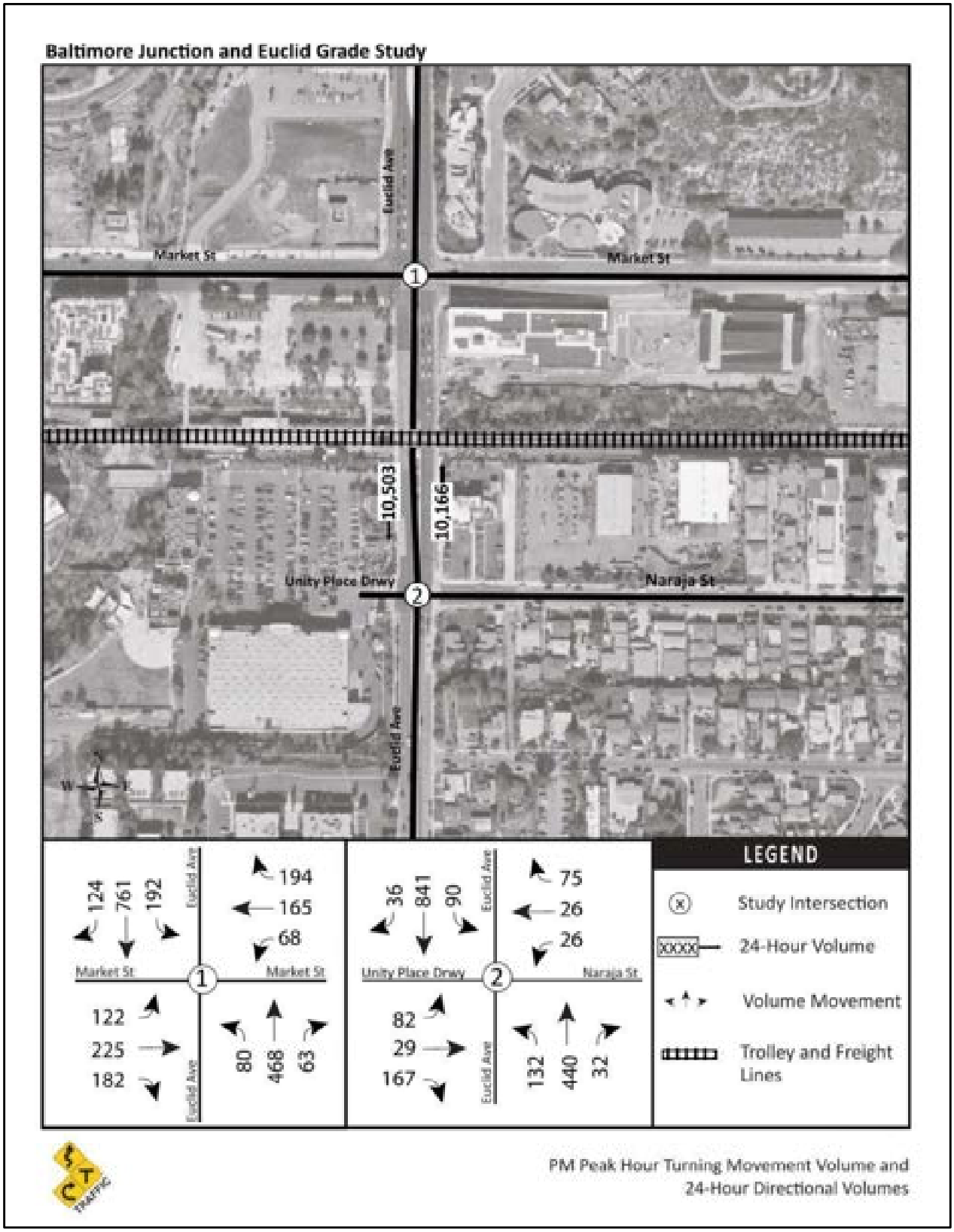


Figure 2-5: PM Peak Hour Existing Traffic Volumes



Environmental Setting

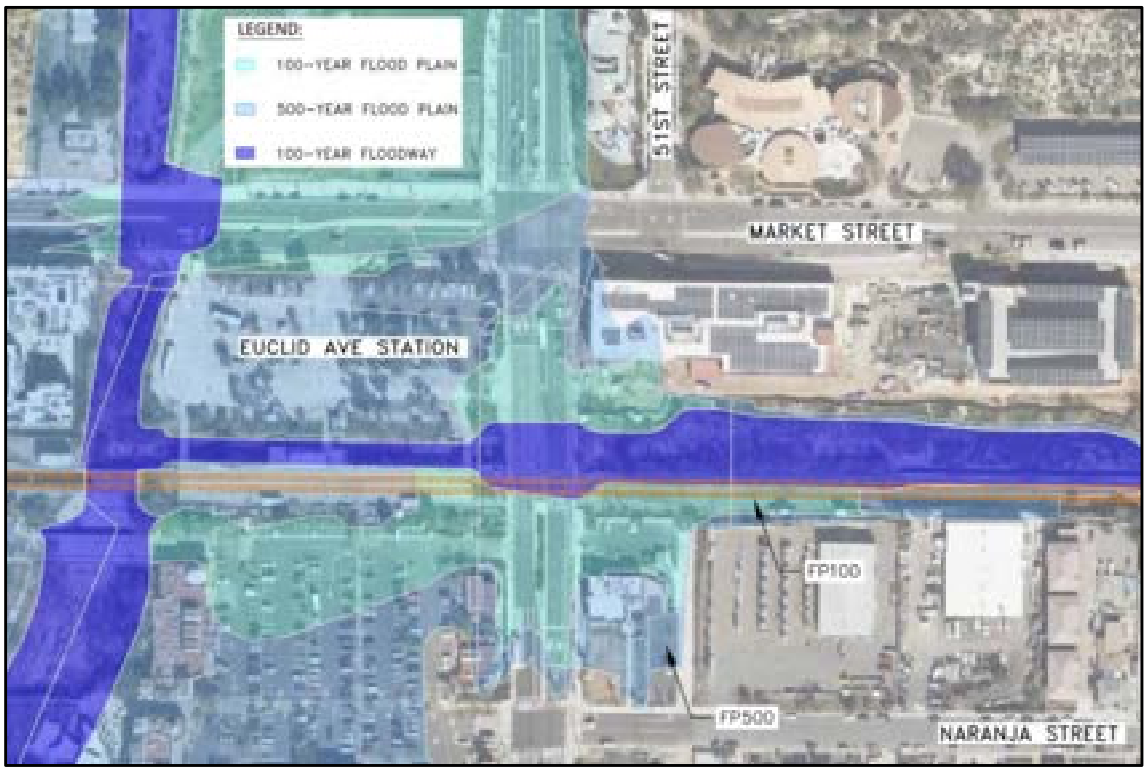
The Euclid Avenue area is characterized by urban development primarily comprised of commercial, industrial, and residential uses. Given the predominantly urbanized setting, natural environment resources are limited and include Chollas Creek west and south of the Euclid Avenue Transit Center and Chollas Radio Canyon Open Space to the northeast, north of Market Street and east of Malcom X Library. Some sensitive vegetation is present within the Chollas Creek corridor and within the Chollas Radio Canyon Open Space. Portions of the City's biological preserve, the Multi-Habitat Planning Area (MHPA), also occurs to the northeast within the Chollas Radio Canyon Open Space. Topography is relatively level with elevations ranging between approximately 110 and 120 feet above mean sea level (AMSL) along Euclid Avenue and between 90 and 120 feet AMSL within Chollas Creek. An exhibit showing the environmental constraints in the project area is in Appendix A.

Flood Risk

Situated near Chollas Creek, the Euclid Avenue is characterized by specific soil conditions and susceptibility to flooding. San Diego County Area Soil Survey - U.S. Department of Agriculture's Web Soil Survey, the soil in this region primarily consists of urban land complexes, often a mix of altered alluvial deposits mixed with Redding and Huehero soils, with textures ranging from loam to clay and sandy loam. These well-drained soils are classified as non-prime farmland due to their low water retention capacity but are stable enough to support urban development. However, the high runoff potential and low infiltration rates make the area prone to flooding and land sliding, especially during heavy rainfall.

The area of the grade crossing and surrounding streets is in a flood prone area per the FEMA Flood Insurance Rate Maps (FIRM). The grade crossing is in low point within Euclid Street adjacent to the Encanto Channel and the regulatory floodway encroaches into the rail crossing. The 100-year floodplain covers portions of the track, east and west of Euclid Avenue, and extends north to Market Street and South toward Naranja Street. Figure 2-6 shows the FEMA floodway in dark blue, 100-year floodplain in light cyan, and the 500-year floodplain in light blue. The FEMA FIRM maps in the project vicinity are included in Appendix A.

Figure 2-6: FEMA Floodway and Floodplain



Heavy rains in January 2024 resulted in significant flooding, severely damaging infrastructure, including the collapse of a retaining wall at the 65th Street and Imperial Avenue grade crossing. This disruption led to the suspension of service at two stations, requiring passengers to use bus shuttles between the Euclid Avenue Transit Center and the Lemon Grove Transit Center. The flooding highlighted the susceptibility of the area to erosion and compaction, which can impact the structural stability of transit infrastructure.

Air Quality

According to the Euclid Avenue Gateway Master Plan, no air quality problems from stationary or mobile sources have been reported in the area. However, CalEnviroScreen data shows that the area is facing higher than average exposure to diesel particulate matter. While the project does not highlight significant stationary air quality or noise issues, it does note that traffic along Euclid Avenue could impact ambient air quality and noise levels.

Water Quality

The Euclid Avenue area is traversed by branches of Chollas Creek, which is a drainage system that extends through urban neighborhoods within the Mid-City (City Heights, Eastern Area), Encanto Neighborhoods, Southeastern San Diego, and Barrio Logan communities, from its headwaters in La Mesa and Lemon Grove to the San Diego Bay. The Encanto Branch extends in a west-east alignment and crosses under Euclid Avenue, south of Market Street and the Euclid Avenue Transit Center. The South Branch generally extends southwest-northeast and intersects with the Encanto Branch just west of the transit center and crosses under Euclid Avenue just south of Guymon Avenue. Chollas Creek has historically had water quality concerns due to the presence of several pollutants. Currently, Chollas Creek is listed on the State Water Resources Control Board's 2024 Clean Water Act Section 303(d) list of impaired water bodies for 19 different pollutants.

Utilities

Euclid Avenue contains underground electric, gas, water, drainage, and sewer lines. Overhead electrical lines run parallel to the railroad tracks. An exhibit in Appendix A provides more information on the utilities near the project site and adjacent streets.

2.2 Governance and System Coordination

MTS works in partnership with SANDAG to develop long-term plans to improve mobility and transit options for residents and visitors to the cities of San Diego, La Mesa, Chula Vista, Coronado, El Cajon, Imperial Beach, Lemon Grove, National City, Poway, Santee and in some unincorporated areas of the San Diego County. As per the memorandum of understanding between the two agencies, SANDAG is responsible for the development of new routes through its Regional Plan. MTS supports this effort as well as oversees the operations of the routes once implemented. The development and selection of preferred alternatives for the site will require a concerted approach between the two agencies and alignment with SANDAG's regional planning efforts.

The City of San Diego is an important stakeholder in this project, managing the development and maintenance of transportation infrastructure. MTS will need to work in partnership with the City to determine the best alternative for the crossing.

2.3 Proposed Projects and Developments

The site falls within the Encanto Neighborhood Community Planning Area, which has been the focus of various planning initiatives. Ongoing and planned projects aim to enhance mobility, safety and aesthetics in the Euclid Avenue corridor. Among these projects, the Market Street Complete Street Project (Figure 2-7) improved pedestrian and cyclist accessibility through widened sidewalks, bike lanes, crosswalks, medians, street lighting, and upgraded traffic signals. Additionally, the Euclid Avenue Gateway Master Plan provides a comprehensive framework for enhancing traffic calming, pedestrian-friendly infrastructure, landscaping, and public spaces.

The City of San Diego and Jacobs Center for Neighboring Innovation were also awarded in 2016 a grant from Caltrans Active Transportation Program for the development of a complete street on Market Street. The project included the implementation of Class II and IV bike infrastructure, medians, street trees and other traffic calming measures to improve walking and biking within the study area.

Figure 2-7: Market Street Complete Street Project

3 Alternatives

3.1 Project Alternatives

The purpose of this project is to study alternatives to grade separate the rail crossing to increase safety by eliminating Trolley and vehicular/pedestrian conflicts and improve traffic service by eliminating rail signal preemption. Six alternatives of grade separation were considered during the initial phase of the project, with the first five listed in the grant application and the sixth added by the team:

1. Raise MTS and Freight Tracks over Euclid Avenue
2. Raise MTS Tracks over Euclid Avenue and Maintain Freight Tracks at Grade
3. Lower MTS and Freight Tracks under Euclid Avenue
4. Raise Euclid Avenue over Tracks
5. Lower Euclid Avenue under Tracks
6. Partially Raise and Lower of Tracks and Roadway

3.2 Alternatives Considered and Eliminated

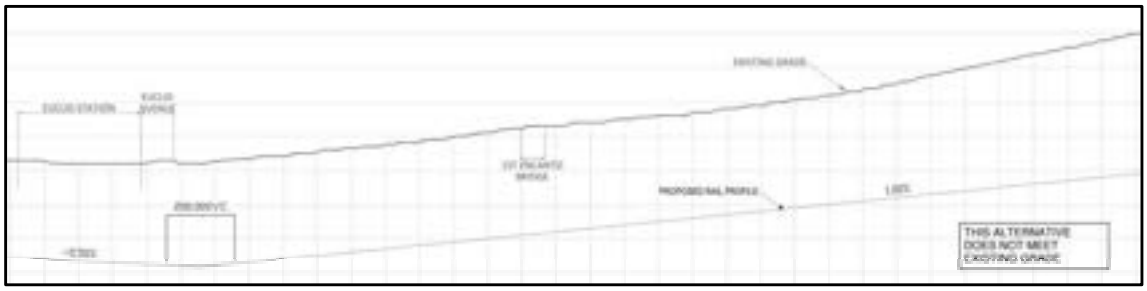
Each of the six alternatives considered meet the project purpose and need of grade separation but they also must be feasible to engineer within the context of the project scale and not be negatively impactful to the community and environment. Each alternative must meet the following requirements:

- Maintain the Market Street and Euclid Avenue intersection. The streets are classified as 4-lane Major Arterial and the alternatives must not block or change the operation of the intersection that could increase traffic delays and congestion.
- Must not disrupt flow of the Encanto Channel and Chollas Creek, causing a major revision to the FEMA flood maps, increasing flood risks on adjacent properties, and requiring maintenance of pumping stations.

Due to the large floodplain widths, proximity to channels, and the fact that both the street and rail cross the channel, any alternative that involves lowering the profile was eliminated. Lowering would require permanent pumping equipment for water infiltration, potential floodwalls which would increase floodplain widths, or tunneling under the creek crossings which would significantly increase costs with the need for fire life-safety, ventilation, and air handling requirements. For these reasons Alternatives 3, 5, and 6 were eliminated from further study.

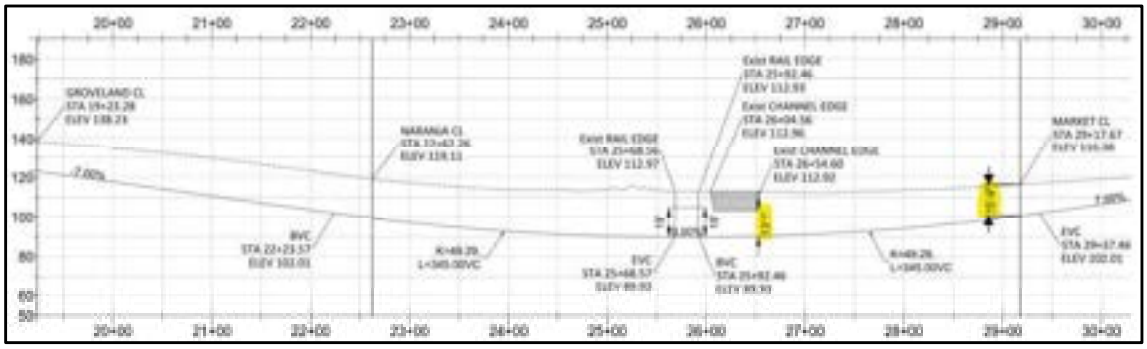
An additional geometric problem with lowering the rail under Euclid Avenue in Alternative 3 is that the ground surface rises to the east at a grade steeper than 1%, which is the preferred maximum freight railroad design grade. The Alternative 3 profile is “chasing the grade” to get back to the ground surface which further lengthens the structure as shown in Figure 3-1.

Figure 3-1: Alternative 3 Ground and Rail Profile



For Alternative 5, the road profile was set to the steepest grade allowed by City standards to determine the shortest length tunnel, approximately 2000' long. There would be insufficient clearance under the Encanto Channel and at the Market Street intersection, at 13' and 15.9', respectively. These clearances do not account for the depth of the structure or additional space needed for air handling. A feasible tunnel would need to be deeper and longer to provide sufficient clearance under the creek and the Market Street intersection, significantly increasing cost and engineering complexity.

Figure 3-2: Alternative 5 Underground Profile and Clearances



Alternative 6 has the same problems as Alternatives 3 and 5 and is not a feasible solution.

3.3 Common Constraints

3.3.1 Environmental Considerations

Environmental constraints and considerations apply equally to each of the project alternatives because all alternatives occur at the same location centered around the Euclid Avenue at-grade crossing and entail overcrossing structures. As previously mentioned, Euclid Avenue is in an urbanized area that is predominantly built out with commercial, industrial, and residential development. Environmental constraints associated with natural environment resources are limited to those associated with the Chollas Creek corridor and the Chollas Radio Canyon Open Space area, and are related to biological and cultural resources. Other environmental constraints and considerations are associated with an urban environment and are related to hazardous materials, water quality, noise, and aesthetics.

Biological Resources

The Chollas Creek corridor extends through the project area via two branches. The Encanto Branch runs east-west generally parallel to the north side of the trolley tracks, under Euclid Avenue, and then crosses under the tracks to the east. The South Branch is directly west of the Euclid Avenue Transit Center and crosses under the tracks, Market Street, and then Euclid

Avenue just south of Guymon Street. The creek contains sensitive wetland vegetation and jurisdictional waters likely regulated by the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. Impacts to these resources may require regulatory permits from these agencies, as well as compensatory mitigation.

The Chollas Radio Canyon Open Space is located northeast of Euclid Avenue, north of Market Street, and east of the Malcom X Library. This open space area is characterized by undeveloped hillsides covered with native vegetation and canyon bottoms with drainage features. Most of the open space area is also within the City of San Diego's MHPA, a biological preserve. Sensitive upland vegetation is present on the hillsides, and sensitive wetland vegetation occurs along three drainages within canyon bottoms between the hillsides. Direct impacts to these resources are not anticipated given their distance from the at-grade crossing (approximately 1,000').

Sensitive species may be present within the Chollas Creek corridor and Chollas Radio Canyon Open Space. Specifically, there is suitable habitat within the creek to support the federally and state listed endangered least Bell's vireo (*Vireo bellii pusillis*) and federally listed endangered Southwestern willow flycatcher (*Empidonax traillii extimus*). The federally threatened coastal California gnatcatcher (*Polioptila californica californica*) is known to be found within the Chollas Radio Canyon Open Space. Direct and indirect impacts to areas occupied by these listed species would require minimization, avoidance and mitigation measures, and potentially take authorization from the resource agencies.

Cultural Resources

Based on a focused records search conducted for the project area, there are two recorded cultural resources near the rail alignment. These resources consist of P-37-011959 (CA-SDI-11959), a small lithic and shell scatter, and P-37-016029 (CA-SDI-14599), an occupation site with numerous lithic and ground stone artifacts. P-37-011959 (CA-SDI-11959), first recorded in 1990, is comprised of a small shell and lithic scatter located on a bench above the north side of the Chollas Creek South Branch, south of the trolley tracks and about 600' west of Euclid Avenue. This area is now developed with the Jacobs Center and thus, this recorded resource has likely been destroyed.

The other recorded resource, P-37-016029 (CA-SDI-14599) was located to the east near the Imperial Avenue/Valencia Parkway intersection. Subsequent studies and cultural material testing concluded that the area where this resource was found had been heavily disturbed and the resource had been destroyed. Additional development has occurred in this area and as such, it is unlikely that cultural material associated with this resource would be present within the project area.

The rail tracks along the Orange Line date back to the early 1900s and were originally part of the San Diego Cuyamaca and Eastern Railroad that was later renamed the San Diego and Arizona Eastern Railroad. Sections of the San Diego and Arizona Eastern Railway outside of the project area are recorded as P-37-013073 (the Coronado Railroad/Branch) and P-37-025680 (the Main Line and Desert Line). The Coronado Railroad was first recorded in 1993 and has since been found not eligible for inclusion in the National Register of Historic Places (NRHP) or the California Register of Historic Resources (CRHR). The Main Line and the Desert Line sections of the San Diego and Arizona Eastern Railway were first recorded in 2000; at this time, the railroad, except the section of railroad through Carrizo Gorge, was determined to be not eligible under any criteria for inclusion in the NRHP or CRHR. The segment of railway within the project area was a part of the La Mesa Branch, which has yet to be recorded and/or

evaluated. Documentation and further research will be required to determine this segment's eligibility for the NHRP and CRHR.

Hazardous Materials

Based on a search of the State Water Resources Control Board's GeoTracker and Department of Toxic Substance Control's EnviroStor database, there are three listed hazardous materials sites in the project area with an active status, including:

- 504 Euclid Avenue: across the street from the Euclid Avenue Transit Center and listed as a cleanup site under the voluntary assistance program.
- 4970 Market Street: northwest of the Euclid Avenue Transit Center and listed as a cleanup site for soil and soil vapor.
- 310 Euclid Avenue: south of the Euclid Avenue Transit Center within Market Street Plaza and listed as cleanup site for soil and groundwater.

Given the proximity of these listed active sites, there is potential for soils and/or groundwater underlying the project site to contain contaminants.

Water Quality

As previously mentioned, Chollas Creek has historically had water quality concerns due to elevated concentrations of pollutant constituents. This is primary due to the urban environment and surrounding development that have contributed over time to runoff of pollutants. Based on the State Water Resource Control Board's 2024 303(d) list of impaired water bodies, Chollas Creek is listed for 19 pollutants, including:

- Benthic community effects
- Bifenthrin
- Copper
- Cyfluthrin
- Cyhalothrin, lambda
- Cypermethrin
- Dichlorvos
- Indicator bacteria
- Lead
- Malathion
- Nitrogen
- Oxygen, dissolved
- Permethrin
- Phosphorus
- Pyrethoids
- Total dissolved solids
- Toxicity
- Trash
- Zinc

Construction activities and the introduction of additional impervious areas associated with the project elements could increase the potential for polluted runoff to discharge to Chollas Creek, affecting water quality.

Noise

The project area is developed and includes some noise-sensitive land uses in the area surrounding the Orange Line near Euclid Avenue, including a multi-family residential development (Trolley Park Terrace Apartments) west of the Euclid Avenue Transit Center and on the north side of the trolley tracks, the Elementary Institute of Science and Malcom X Library to the northeast at the Euclid Avenue/Market Street intersection, and single-family residences a bit further to the northeast (along Euclid Avenue, Roswell Street, and 51st Street) and to the south along Naranja Street and Groveland Drive. Construction of elevated structures could place transportation noise sources (automobiles or trolley cars) within direct line-of-sight with surrounding noise-sensitive land uses thereby increasing transportation noise and/or vibration levels at such uses.

Aesthetics

All of the project alternatives involve new elevated overcrossing structures within the project area, including elevated trolley structures to cross over Euclid Avenue and an elevated Trolley station or an elevated road overcrossing structure to cross over the trolley tracks. These new structures would be approximately 20' above grade and could extend for lengths ranging from approximately 0.25 to 0.75 miles, depending on the alternative. This would introduce a new, dominant visual element within the project area that would be highly visible to all viewer groups. While there are no existing views of designated scenic vistas or visual resources available in the project area, careful attention should be given to aesthetics and design treatments of the structures to ensure they are visually compatible with the visual character and quality of the surrounding environment.

3.3.2 Geotechnical Considerations

A Geotechnical Desktop Study report is provided in Appendix B, that discusses the area's geologic setting, geologic hazards, project design and construction conclusions, and recommendations for additional future geotechnical investigation. The report supports the feasibility of the design and construction of the three alternatives.

3.3.3 Construction Cost Estimates

High-level cost estimates for each alternative were developed by estimating quantities and unit prices for the major items of work. The quantities were calculated based on drawing measurements, mathematical calculations, and identifying unique items of work for the alternative. Unit prices are derived from cost data from projects in California with similar size and complexity. The total cost includes contractor mobilization and a 25% contingency that is standard practice for planning level estimates. The details of the cost estimates are included in Appendix C.

3.4 Alternative 1 – Raise MTS and Freight over Euclid Avenue

3.4.1 Description of Alternative

This alternative involves raising the tracks used by both the Trolley and freight trains on a long viaduct supported on columns and deep foundations. The Euclid Station would be elevated at the current location and use stairs, elevators, and bridges for access like other elevated stations on the MTS Blue and Green lines. ADA ramps are not anticipated given the height of the station platform and lack of available free space at the station for switchback ramps. The rail crossing at Euclid Avenue would be removed eliminating the possibility of Trolley/vehicle conflicts, improving safety, and reducing delays at the nearby intersections due to the trolley signal preemption triggering the signal at Market Street.

3.4.1.1 Structures

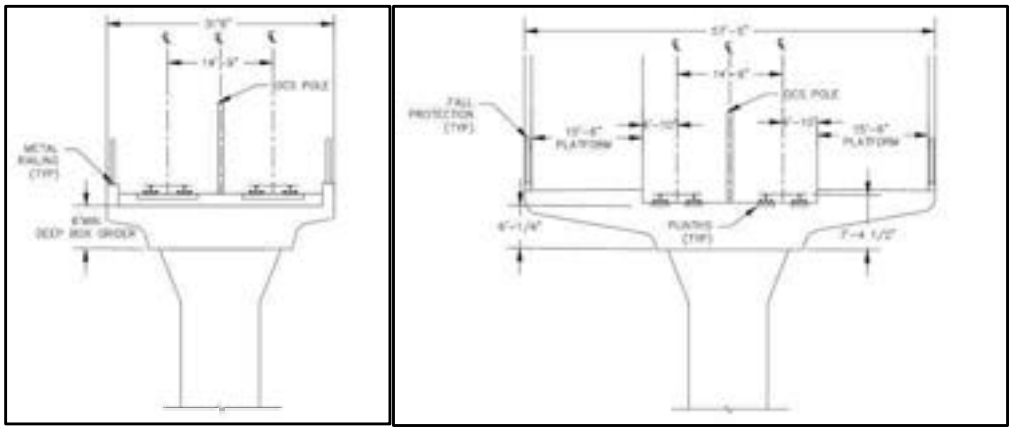
The length of the viaduct is determined by the maximum design grade of the Trolley and freight railroad for ascending and descending hills and the need to clear the mapped 100-year floodplain, which extends to the U.S. Post Office parking lot east of the crossing. The SANDAG LRT Design Criteria Manual sets a maximum design grade slope of 4.3% for the Trolley and the AREMA Manual for Railway Engineering recommends maximum grade of 1% for freight operations. Therefore, the freight train controls the viaduct grade, and profile has been set with 1% grades on each end and a height to provide a minimum 15' vertical clearance over Euclid Avenue per California Public Utility Commission regulations. The total length of the raised track

profile is approximately 5,700'. An exhibit of the viaduct plan, profile, and cross sections are in Appendix C. The structure cross sections are shown below in Figure 3-3.

The viaduct will have retaining walls at each end to form the approach embankments up to a height of 10'-15', and transition to a bridge superstructure. The bridge superstructure could be composed of steel girders, precast concrete beams, or a cast-in-place concrete box superstructure, with the latter being the most common bridge superstructure type in California. Since most of the existing MTS Trolley structures are cast-in-place concrete box girder superstructures, this type of bridge is assumed for this study. The viaduct will be supported by single concrete column bents and cast-in-drilled-hole (CIDH) concrete piles are assumed for the foundations. This type of foundation is structurally resilient for large vertical and seismic loads and can be constructed and designed to support the superstructure in the loose, wet soil materials anticipated near the channel and creek.

The structure will be designed for imposed loads including dead loads, Trolley and freight train live loads, pedestrian loads at the station, wind loads, thermal loads, and seismic demands. The governing design code will be the SANDAG LRT Design Criteria, however portions of the design will use the AREMA Manual for Railway Engineering since the structure supports freight service. In reviewing as-built structure plans on the Orange Line, the design freight loading is Cooper E60.

Figure 3-3: Alternative 1 Typical and Elevated Station Sections



The elevated station will be a widened section, the box girder superstructure supporting the platforms, canopies, benches, and other amenities found at MTS stations. The station will need stairs, elevators, and bridges connecting the elevated platform, over the Encanto Channel, connecting to the transit station below. This configuration would be similar to the Executive Drive Station on the Blue Line shown in Figure 3-4.

Figure 3-4: Executive Drive Elevated Station Stairs, Elevators, and Bridges

3.4.1.2 Track and Systems

The existing track, overhead catenary system (OCS), signals, buried conduit, and ballast would be modified to be supported on the viaduct, approximately from the 47th Street Bridge to Stevens Way. Viaduct structures on the MTS system typically use direct fixation rails and are not ballasted. The crossovers east and west of the Euclid Avenue Station would be reconstructed on the viaduct to maintain the current Trolley and rail operations. The new viaduct structure would not accommodate the spur track to the east of Euclid Avenue to maintain a uniform cross section structure and avoid right-of-way impacts. A new location will need to be found for the maintenance vehicles and equipment. Figure 3-5 shows the existing spur track below the mainline tracks.

Figure 3-5: Spur Track East of Euclid Station

The existing Euclid grade crossing would be removed along with the gates and warning devices. Euclid Avenue would be built to be a through street under the new viaduct. This would include building new sidewalks, curb and gutter, bike and vehicle lanes, and raised median. New pedestrian and bike connections would be constructed to the new entrances for the above ground station vertical circulation amenities. The removal of the existing grade crossing would require following the CPUC's GO-88B process.

Along with the newly constructed at-grade and aerial guideway and tracks, the new OCS would be constructed with single poles in between the tracks. New duct banks for traction power, signaling, SCADA and other systems would be included with the new construction. These systems would be transitioned and integrated with the existing systems at the conform locations.

3.4.1.3 Civil and Roadway

This alternative is expected to have minimal impacts in Euclid Avenue other than removal of the grade crossing after the viaduct is constructed. The Market Street and Naranja Street intersection traffic signals will need to be evaluated to verify the bridge superstructure does not block drivers sight lines to the signals. Otherwise, the bridge superstructure height and/or signals may need adjustment for proper sight lines to the signals.

3.4.1.4 Utility Impacts

The utilities running underground in Euclid Avenue can be protected in place and will be spanned by the viaduct. Utilities running transversely under the tracks at the Market Creek Plaza Driveway would need to be located accurately to ensure no conflicts with the viaduct drilled shafts. There are sewer and overhead electrical lines that run parallel with the tracks and are expected to be protected in place during construction. Figure 3-6 shows the utilities near the grade crossing and transit center.

Figure 3-6: Utilities Near Euclid Avenue Station and Grade Crossing

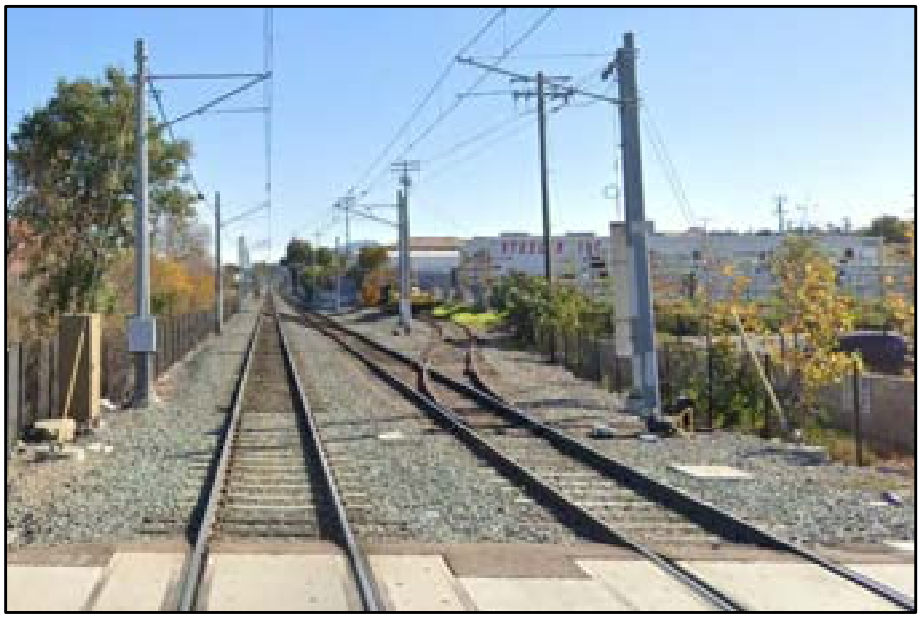
3.4.1.5 Drainage and Flooding

Rain captured on the viaduct will be collected and piped down the structure columns to be treated and drained onto the MTS ROW drainage. The viaduct columns would be in the floodplain requiring a CLOMR/LOMR (Conditional Letter of Map Revision/Letter of Map Revision) analysis and approval from FEMA to determine if flood boundaries, elevations, and insurance rate maps need revision.

3.4.1.6 Construction Impacts

The tracks near Euclid Avenue Station are in a narrow corridor with developed private properties on both sides and the Encanto Channel running for over 2000’ next to the track embankment. The MTS ROW is 100’ wide west of Euclid Avenue and reduces to 40’ in width on the east side as shown in Figure 3-7.

Figure 3-7: Narrow ROW East of Euclid Avenue



Due to the narrow right-of-way, it is not feasible to construct the viaduct and elevated station in halves and maintain Trolley or freight rail service. Construction of the viaduct will require large cranes and equipment to drill deep foundations and install 60'-80' long rebar cages, and it is not possible to safely perform this work next to live electrical overhead wires that power the Trolley. Complete closure of the existing trolley tracks and system is required.

A track shoofly to temporarily move the track out of the MTS ROW is not feasible as this would require acquiring several private properties and permitting new bridges over the creek crossings on the south of the ROW. A track shoofly down Market Street is also not feasible due to the complexity of running the Trolley in the street. Market Street also narrows to two lanes east of Euclid Avenue, not providing enough space for the trolley tracks, and property acquisitions would be needed to bring the Trolley back to the MTS ROW.

To accommodate the track shutdown during construction, buses will be needed to provide service and trucking for the freight train deliveries. Shutting down Trolley service is expected to significantly reduce ridership, increase commute times, and increase vehicular traffic on the local streets. In addition, the temporary shutdown eliminates Trolley operational redundancy forcing East County trains to take the longer Green Line route through Mission Valley, along I-5, and through downtown to return to the 12th & Imperial maintenance facility.

Traffic on Euclid Avenue will be accommodated during construction of the viaduct with occasional night closures at the grade crossing for installation and removal of falsework bents and beams. Temporary barriers will be erected for protection of the work area with openings for pedestrians, bicycles, and vehicular traffic. A protective cover over the street and under the falsework will catch any construction debris that could fall on the public. Construction operations will follow City of San Diego requirements for allowable working hours, noise levels, stormwater best management practices, and dust mitigation to minimize disruption to the public and to protect the environment.

3.4.2 Traffic

Construction Considerations

Estimates for this alternative indicate it has the longest duration in terms of construction schedule. A full closure of the Trolley is required due to the constrained right-of-way, particularly

to the east of Euclid Avenue, and limitations for constructing shoofly tracks without causing significant encroachment impacts to the adjacent creek and surrounding properties. Trolley operations will be suspended during construction, and a bus bridge will be implemented, which will add trips to the roadway network between the upstream and downstream stations. The specific Trolley stations to be maintained during this period are to be determined.

Freight deliveries to East County normally handled by MTS' rail freight contractor will go by truck instead. Construction will occur within the MTS right-of-way and within Euclid Avenue which may be subject to a lane reduction to accommodate construction. A potential laydown area is being considered on the Northwest corner of Market Street and Euclid Avenue.

Additional bus traffic and LOS impacts are to be expected, particularly at the Market Street and Naranja Street intersections along Euclid Avenue. There may also be additional bus traffic and delays on the Market Street or Imperial Avenue corridors, due to the bus bridge between the East/West Trolley stations. There may also be impacts to Euclid Avenue during construction if closure is needed. However, any level of service impact will be limited to the construction period or during specific phases within the overall schedule.

Multimodal User Experience

This alternative may result in slower Trolley service when climbing the proposed viaduct, but, the impact is expected to be minimal. Bus and Trolley routes will operate the same as they do today. Bus travel times along Euclid Avenue will be reduced, which will improve operational efficiency and may "induce" ridership. Trolley service interruptions will be reduced as trackway incursions will be greatly reduced or eliminated.

The most significant improvements for the safety of bus and rail patrons will come from the grade separation of the Trolley and trains. Pedestrians, people with disabilities, and bicyclists will benefit from improved safety with the grade separation, as they will be able to freely cross under the tracks. An elevated station will be required, which will be accessible via a minimum of two elevators and stairs. Additional security measures will be needed for the guideway viaduct, elevated station, and elevators. No reduction in parking is needed with this alternative. However, there is a possible disruption in accessibility service if all elevators are out of service.

North-south connectivity and accessibility will be improved for all modes of transportation and trolley preemption operations will no longer be required at the Market Street and Naranja Street signals on Euclid Avenue.

Permanent Traffic Impacts

Following project completion, travel times are expected to improve on the Euclid Avenue corridor as stopping for the Trolley to pass will no longer be required. The travel time reduction would be similar to the current wait times for traffic at the grade crossing when the gates are down. Based on field observations, gates are down for 1-2 minutes during Trolley crossing. This would also provide the opportunity to extend the turn pockets at Euclid Avenue and Naranja Street and increase queueing capacity. There may be a negligible impact to LOS and delay at the Market Street and Naranja Street intersections, as there is no longer a break in the corridor for the grade crossing. However, there would be an opportunity to improve operations of the traffic signals by updating the coordination, timings and phasing at both intersections.

3.4.3 Right-of-Way

The viaduct can be contained within the existing MTS right-of-way and no permanent property impacts are anticipated. Temporary construction easements may be needed for equipment access, material storage, and contractor laydown area.

3.4.4 Preliminary Construction Schedule and Cost Estimate

A conceptual construction schedule showing the major items was developed and estimates 780 working days or approximately three years for construction of Alternative 1. The construction cost is estimated at $176 million.

3.4.5 Risks

The major construction risk of this alternative involves the construction of deep foundations in potentially loose wet soils. CIDH pile foundations involve some amount of risk in encountering unknown obstructions during drilling, possible caving soils, or poorly constructed concrete that is difficult to assess and repair. These issues can result in uncertain structural integrity of the foundations and possible contractor construction claims.

These risks are mitigated through accurately prepared construction drawings and specifications, contractors experienced in this type of work, and construction managers continuously inspecting and verifying the quality construction. Temporary or permanent steel casings can be used to protect adjacent property and keep the hole from collapsing until a rebar cage and concrete are placed in the hole. Hollow inspection tubes run the length of the pile for probes to be dropped using sonic or nuclear techniques to map the pile cross section and check for voids or unsound concrete. Caltrans has procedures to assess the strength of the pile with voids to verify the acceptability of a substandard pile. The inspection tubes also provided a possible means of filling voids, if needed.

3.4.6 Community Impacts and Opportunities

User Experience

Safety and Security on the platform

A rail over road option entails the construction of an elevated platform for rail riders. This could present a challenge by removing “eyes on the street”, or visibility of activity on the platform from street level, causing tangible and perceived concerns for the personal safety of patrons, especially during the evening and at night. In addition to ensuring that redundant accessibility features are included in the design of the new platform, additional consideration should be given to security add-ons that alleviate these safety concerns.

Connectivity with other transit services

An elevated platform could also lead to an extended journey across the transit center for patrons who need to connect to a bus service. This could be challenging for users with mobility impairments. While the design of the platform is outside of the scope of this study, special attention should be given to internal flows of circulation to support seamless connections. Route schedules should also be looked at to allow ample time for connections.

Impacts during construction

This alternative estimates a three-year duration for construction, with road closures at the rail crossing, for some construction operations, and additional bus service to temporarily replace the

interrupted Trolley service. Replacing Orange Line service in this area, with 15-minute headways, may be difficult to replicate with the same level of service using buses on the local streets. Bus service would be subject to local traffic conditions where the Trolley has a dedicated guideway and preemptive right at the grade crossings. This could have significant impacts for transit users, and especially transit-dependent riders who, according to MTS's latest customer survey, account for a large majority of patrons (83% of bus riders and 72% of Trolley riders)[1]. These impacts and potential delays may affect customers' ability to get to work on time, leading to personal economic impacts. Temporary transit service planned during the construction phase should limit delays for patrons as much as possible.

Opportunities to improve customer experience

Upgrades to the station also represent an opportunity to improve the comfort of patrons using the station. Currently, passengers for the Trolley can access the platform either directly from the station's parking lot or through a footbridge from the commercial lot south of the station. There are no dedicated walkways for pedestrians accessing the platform from this side, which could lead to conflicts between users of the Starbucks drive-thru or other patrons of the many businesses and amenities of the center, as shown on Figure 3-8. The new station design should consider access to the station and identify opportunities to improve the safety of patrons getting on from the south.

Figure 3-8: Existing South Side Station Access

[1] See MTS Board meeting presentation on April 2025

Improved bus operations

The elevated platform will reduce conflicts between rail operations and bus and vehicle movements. This removes existing delays experienced at the rail crossing. Removing this interaction could support on-time performance and travel times of buses operating out of Euclid station.

Opportunities to improve bus egress from station

This alternative maintains vehicular traffic at surface level, with existing flows and signals remaining the same. Currently, buses exiting the station on Euclid Avenue have to do an unprotected right turn, as shown in Figure 3-9. This can be challenging during peak times where flows on Euclid are continuous, which can lead to delays and effect on-time performance of the service. Traffic analyses that will be required as a follow-on to this study should assess opportunities to support bus transit efficiency by providing a protected right turn from the station.

Figure 3-9: Bus Egress onto Euclid Avenue

Community impact/opportunities

Opportunities to improve walkability and first-last mile

Elevating rail activities should reduce conflicts between road users and transit and freight activities. Combined with traffic calming measures along Euclid Avenue, this alternative could lead to an improved walking and biking experience for surrounding communities as well as for patrons walking to and from the transit station.

Opportunities to restore the creek

Current creek access is located below street level perpendicular to Euclid Avenue in a concrete lined channel with limited access. While the creek plays an important role for drainage and stormwater management, the upgraded platform is an opportunity to re-naturalize the creek and provide access to the community (Figure 3-10).

Figure 3-10: Creek Channel Between Station Platform and Parking Lot

3.5 Alternative 2 – Raise Trolley over Euclid Ave., Maintain Freight At-Grade

3.5.1 Description of Alternative

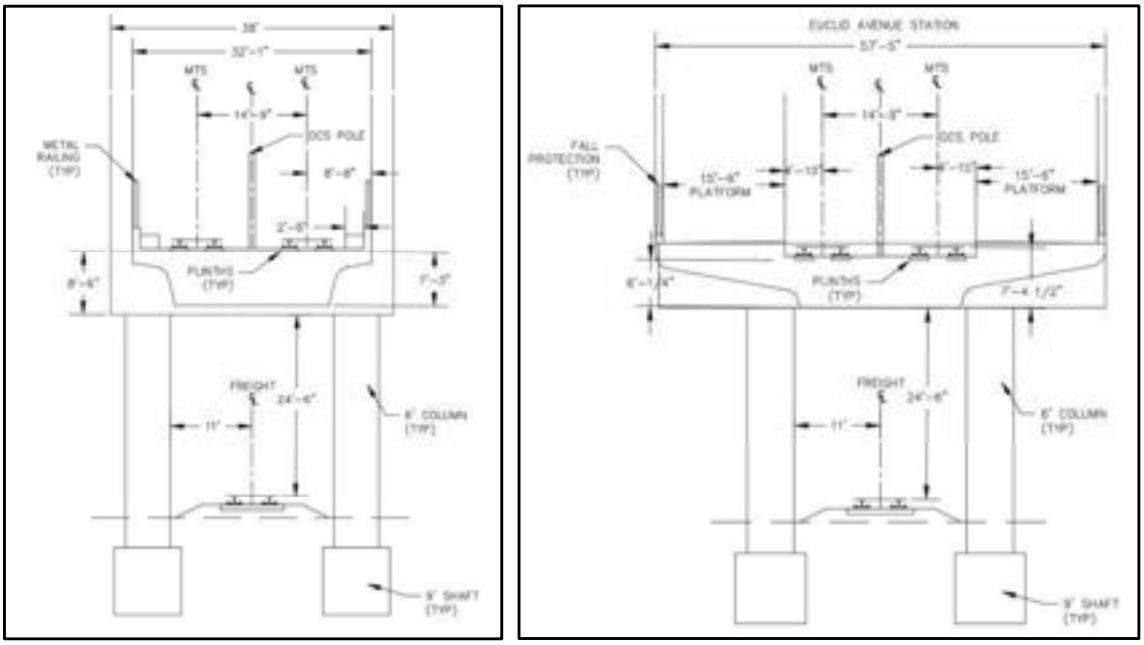
This alternative is similar to Alternative 1, but only the trolley tracks will be elevated on a long viaduct with an elevated station and a separate freight track is maintained on the ground. The freight rail track runs under the viaduct to maintain the majority of the improvements within the MTS ROW. The disruption to traffic of the grade crossing will be very minor with only once-per-week freight service. This alternative has similar improvements to safety and traffic delays as Alternative 1.

3.5.1.1 Structures

The structure length is determined by the operating slope grades of the Trolley and requirement to clear the 100-year floodplain, similar to Alternative 1, but must also maintain enough vertical clearance to run the freight train under the viaduct. Per CPUC requirements, the vertical clearance from underneath the viaduct structure to the top of the freight rail is 24'-6". An exhibit in Appendix C shows the proposed bridge layout using a maximum grade of 3.5% and has a total length of 5,150'.

Like Alternative 1, the viaduct will have retaining walls to form the approach embankments up to the start of the superstructure that is assumed to be a cast-in-place concrete box girder bridge. A difference from Alternative 1 is the superstructure can be designed for lighter loading of only the LRT trains which could result in a lighter superstructure and shallower foundations. The viaduct will have single column bents except where the freight train runs under the viaduct and two columns per bent are used to create space for the freight track as shown in Figure 3-11.

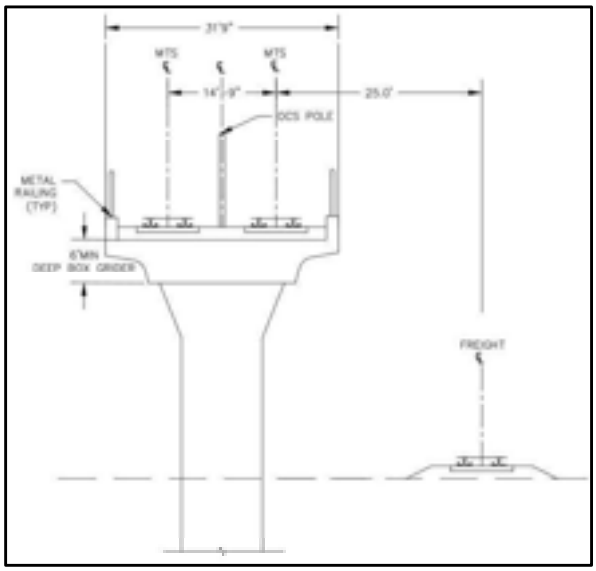
Figure 3-11: Alternative 2 Typical and Elevated Station Sections



Before the Trolley track grade can rise, a separate spur track for the freight train must branch off to run parallel to the Trolley until sufficient height is obtained to run the freight underneath. The

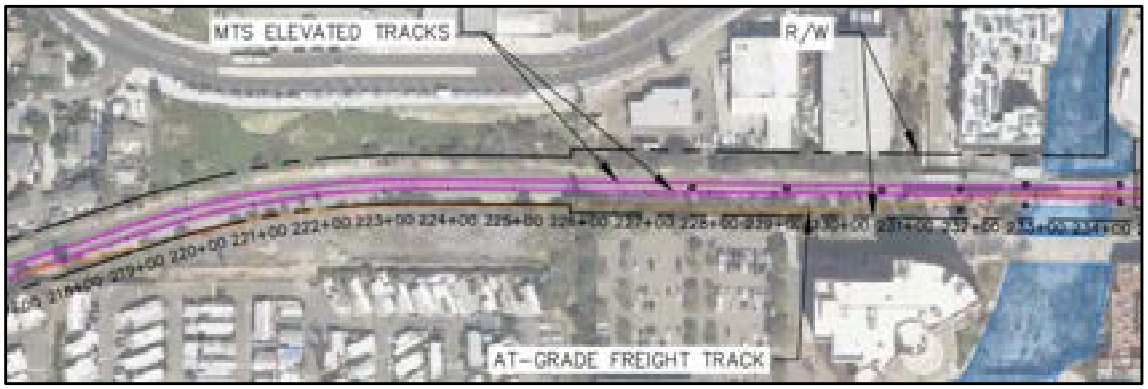
following section shows the offset of the freight spur track from the trolley tracks as shown in Figure 3-12.

Figure 3-12: Freight Spur Track At-Grade



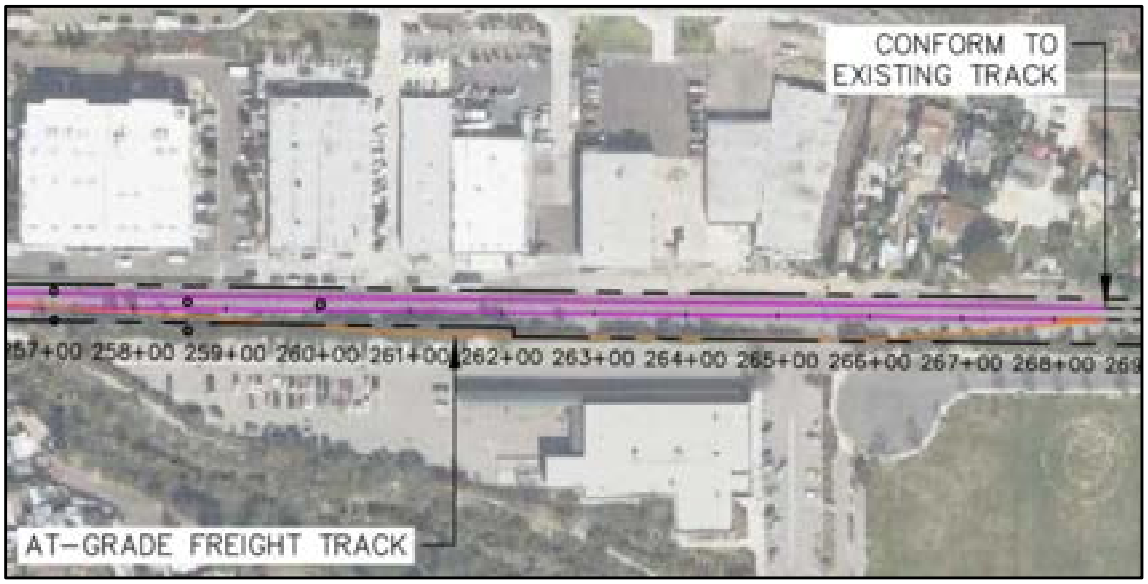
The south side of the MTS ROW has space where the freight spur track can branch off on the west and east sides of Euclid Avenue. On the west side, the freight spur in Figure 3-13 is shown branching off near the Del Rey Mobile Home Park, where there is unimproved land, and runs on top of and over the shared MTS property line. The freight line continues to the Market Creek Plaza parking lot, where the viaduct has sufficient vertical clearance for the track to run underneath, before the bridge over Chollas Creek.

Figure 3-13: West Side Freight Spur Track



On the east side in Figure 3-14, the freight spur track branches off to the side near the U.S. Post Office parking lot and continues toward Stevens Way until the trolley tracks tie into the existing grade, where the freight track reconnects to the trolley tracks.

Figure 3-14: East Side Freight Spur Track



The elevated station section of the viaduct will be similar as described for Alternative 1, with an elevated platform, elevators, pedestrian bridges and stairs.

3.5.1.2 Track and Systems

The existing trolley track, overhead catenary system (OCS), signals, buried conduit, and ballast would be modified to be supported on the viaduct, from the east of 47th Street Bridge to just passed the Stevens Way cul-de-sac. Viaduct structures on the MTS system typically use direct fixation rails and are not ballasted. The crossovers east and west of the Euclid Avenue Station would be reconstructed on the viaduct to maintain the current Trolley operations. The new viaduct structure would not accommodate the spur track to east of Euclid Avenue but the spur track could be connected to the new at-grade freight track and could still be used to store track maintenance equipment.

The existing freight line would be rebuilt using a single track running alongside the viaduct structure at each end, until enough clearance under the structure could be achieved where the alignment would weave under the viaduct.

The existing Euclid grade crossing would be modified to accommodate the single freight track. This would include building new sidewalks, curb and gutter, and bike and vehicle lanes. New pedestrian and bike connections would be constructed to the new entrances for the above ground station vertical circulation amenities. The modification of the existing grade crossing would require following the CPUC's GO-88B process.

Along with the newly constructed Trolley at-grade and aerial guideway and tracks, the new OCS would be constructed with single poles in between the tracks. New duct banks for traction power, signaling, SCADA and other systems would be included with the new construction. These systems would be transitioned and integrated with the existing systems at the conform locations. New freight rail systems infrastructure would also be constructed throughout the project limits.

3.5.1.3 Civil and Roadway

Civil and roadway considerations are like Alternative 1, but the potential blocking of the traffic signal sight distances at the intersections is less likely due to the higher vertical structure clearance needed for the freight rail.

3.5.1.4 Utility Impacts

Utility considerations are the same as Alternative 1, and most are expected to be protected in place. The Alternative 2 bents that have two columns are closer to the ROW lines, and some parallel sewer and electric utilities may need relocation if conflicts cannot be avoided.

3.5.1.5 Drainage and Flooding

Drainage and flooding considerations are the same as Alternative 1, except the two-column bents will obstruct more flow in the floodplain, and slightly higher flood elevations flow width could result in the hydraulic analysis.

3.5.1.6 Construction Impacts

The construction impacts are like Alternative 1, requiring a full shutdown of the Trolley and freight rail operations during construction. Construction duration is slightly longer with a greater number of piles due to the two-column bents.

3.5.2 Traffic

Construction Considerations

Estimates for this alternative indicate the middle duration for the construction schedule. A full closure of the Trolley is required due to the constrained right-of-way and limitations for constructing a shoofly track without causing significant encroachment impacts to the adjacent creek and surrounding properties. Trolley operations will be suspended during construction, and a bus bridge will be implemented which will add trips to the roadway network between the upstream and downstream stations. The specific Trolley stations to be maintained during this period are to be determined.

Similar to the considerations for Alternative 1, freight deliveries to East County normally handled by MTS' rail freight contractor will go by truck instead. Construction will occur within the MTS right-of-way and within Euclid Avenue, which may be subject to a lane reduction to accommodate construction. A potential laydown area is being considered on the Northwest corner of Market Street and Euclid Avenue.

Additional bus traffic and LOS impacts are to be expected, particularly at the Market Street and Naranja Street intersections along Euclid Avenue. There may also be additional bus traffic and delays on the Market Street or Imperial Avenue corridors, due to the bus bridge between the East/West Trolley stations. There may also be impacts to Euclid Avenue during construction if closure is needed. However, any impact to LOS or delay will be limited to the construction period or during specific phases within the overall schedule.

Multimodal User Experience

This alternative may result in slower Trolley service when climbing the proposed viaduct, however, the impact is expected to be minimal. Bus and Trolley routes will operate the same as they do today. Bus travel times along Euclid Avenue will be reduced which will improve operational efficiency and may "induce" ridership. Trolley service interruptions will be reduced as track obstruction on the grade crossing is no longer an issue.

The most significant safety benefits for bus and rail patrons will be almost identical to those described for Alternative 1 in section 3.4.2, and result from the grade separation of the Trolley. Safety improvements will be gained for pedestrians, people with disabilities, and bicyclists as they will be able to freely cross under the tracks apart from during the weekly freight crossing at night. As with Alternative 1, an elevated station will be required, which will be accessible via a minimum of two elevators and stairs. Additional security measures will be needed for the guideway viaduct, elevated station and elevators. Existing parking provision can be retained, however, there is a possible disruption in accessibility service if all elevators are out of service.

North-south connectivity and accessibility will be improved for all modes of transportation and trolley preemption operations will no longer be required at the Market Street and Naranja Street intersections on Euclid Avenue. However, freight trains will still pre-empt the signals.

Permanent Traffic Impacts

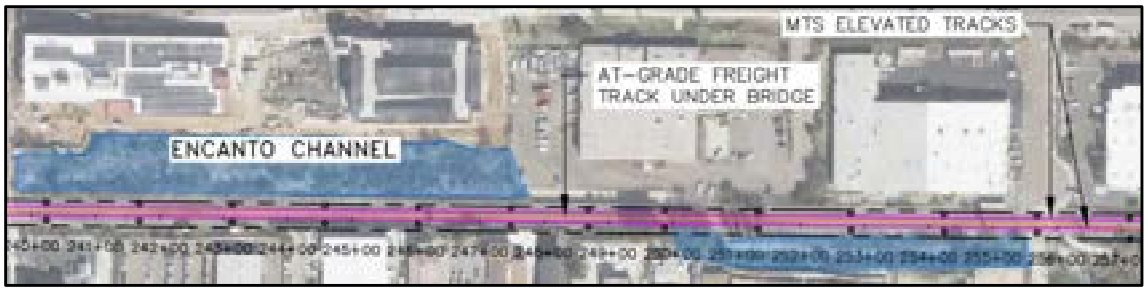
As with Alternative 1, post construction travel times are expected to improve on the Euclid Avenue corridor as stopping for the Trolley to pass will no longer be required. The travel time reduction would be similar to the current wait times for traffic at the grade crossing when the gates are down.

There may also be a minimal impact to LOS and delay at the Market Street and Naranja Street intersections for this alternative, as there is no longer a break in the corridor for the grade crossing. However, there would also be an opportunity to improve operations of the traffic signals by updating the coordination, timings and phasing at both intersections. Freight will still cross the street at grade, but trains currently only run once a week, late at night, when traffic is minimal. Therefore, delays will also be negligible, meaning there is little or no measurable benefit to incurring additional costs and delays to grade separating the freight line.

3.5.3 Right-of-Way

This alternative is anticipated to have permanent property impacts in the Del Ray Mobile Home park, and Market Creek Plaza on the west side, and the U.S. Post Office and City property on the east side.. Additional property impacts may occur along the Encanto Channel where the two-columns bent foundations are near the MTS ROW line as shown in Figure 3-15.

Figure 3-15: Bent Foundations Near MTS ROW



The potential property impacts will need investigation but are not expected to materially affect the overall project cost estimate in this study.

3.5.4 Preliminary Construction Schedule and Cost Estimate

A conceptual construction schedule showing the major items of work developed and estimates at 595 working days or two years and three months for the construction of Alternative 2. The construction cost is estimated at $220 million.

3.5.5 Risks

The major risks are similar to Alternative 1, with pile construction being the greatest risk. For Alternative 2, this risk is slightly increased with a larger number of piles to construct for the two-column bents.

3.5.6 Community Impacts and Opportunities

Community impacts and opportunities for Alternative 2 are expected to be similar to those described for Alternative 1.

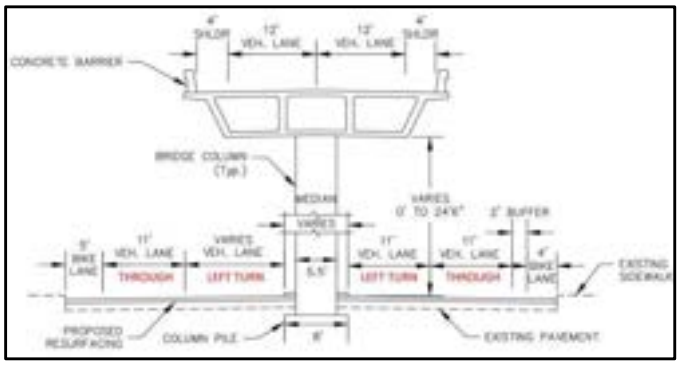
3.6 Alternative 4 – Raise Euclid Avenue over Rail

3.6.1 Description of Alternative

This alternative involves raising Euclid Avenue on a bridge over the grade crossing and maintaining the Trolley and freight operations in their current condition. The grade crossing would be closed to vehicular traffic, eliminating vehicle and rail conflicts, but would have special signal gates to allow only pedestrians and cyclists to cross the tracks.

Euclid Avenue is a four-lane Major Arterial street, and the area in the vicinity of the grade crossing is highly developed with nearby street crossings and driveways to businesses, residential properties, and the transit station. Raising the full width of the street over the grade crossing is impractical and would negatively impact the community. Therefore, only the center two lanes of the street are raised over the grade crossing, maintaining the exterior lanes as through lanes, for accessing the residential and commercial driveways and the cross streets, and left turn lanes can be accommodated under the bridge where there is sufficient vertical clearance. Figure 3-16 shows the proposed bridge and street cross section and an exhibit of this alternative is in Appendix C.

Figure 3-16: Alternative 4 Bridge Bent Cross Section



The bridge is proposed to carry two 12-foot lanes and 4-foot shoulders on each side, and has a total deck width of 35’ including the concrete barriers.

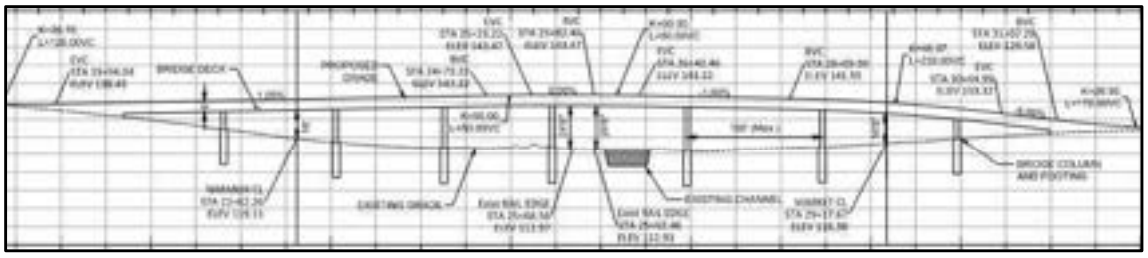
3.6.1.1 Structures

As discussed for Alternative 1, the most common bridge type in California is a cast-in-place concrete box girder bridge, and this type of bridge is proposed for Alternative 4. The length of the bridge is controlled by providing a minimum 15' vertical clearance over the cross streets and 24'-6" minimum vertical clearance over the tracks, meeting the City of San Diego road geometric requirements. The bridge is approximately 950' long extending 180' south of Groveland Drive to 260' south of Guymon Street.

Figure 3-17: Bridge Plan View

Figure 3-18 shows the proposed elevation of the bridge that has slope grades of 1% and 6% on the south and north ends, respectively. Sufficient clearance is provided at the Naranja and Market Street Intersections but does not provide clearance at Groveland Drive for traffic to pass underneath.

Figure 3-18: Bridge Elevation View



The bridge will be supported on single column bents and drilled concrete pile shaft foundations. Foundation and column locations are spaced to avoid conflicts with cross streets, the railroad tracks and Encanto Channel.

3.6.1.2 Track and Systems

This alternative's impact to the railway would only consist of modifications to the existing grade crossing at Euclid Avenue. The modifications would include removal of the vehicular gates and installation of bike and pedestrian gates and warning devices only. These modifications would be required to follow the CPUC's GO-88B process.

3.6.1.3 Civil and Roadway

Existing Roadway Geometry

The Euclid Avenue roadway cross section has a center median that accommodates left turn pocket lanes, two lanes of traffic in each direction, and bike lanes on both sides between Guymon Street and Naranja Street. South of Naranja Street, the exterior lanes are shared with

cyclists due to street parking. Figure 3-19 shows an aerial image of the roadway and lane striping looking north from Naranja Street toward the grade crossing.

Figure 3-19: Euclid Avenue Lane Striping Looking North from Naranja Street

From Castana Street to Naranja Street, Euclid Avenue has a width of approximately 66' between exterior curbs. From Naranja Street north to the south side of Market Street, the width linearly increases to 80'. On the north side of Market Street, Euclid Avenue is approximately 94' wide to accommodate an additional two left turn lanes, a right turn only lane in the southbound direction, and bicycle lanes on both sides. North of the Market Street intersection, the street width reduces to 77'at the Walgreens driveway and to 70' at Guymon Street. Figure 3-20 shows the intersection at Market Street looking north.

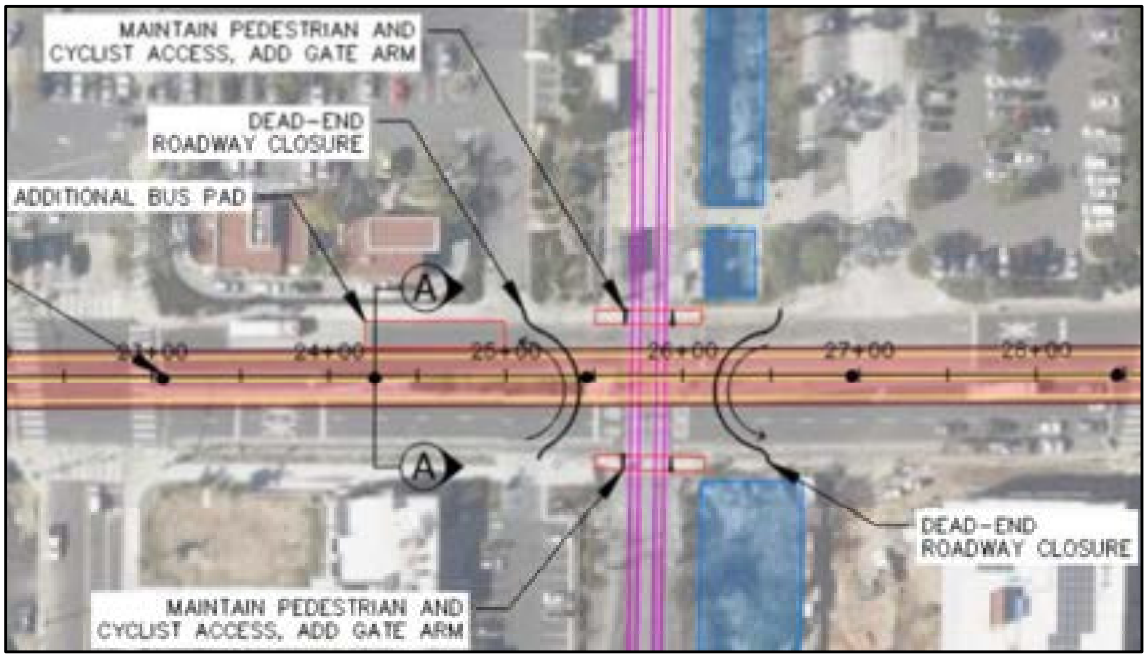
Figure 3-20: Market Street Intersection looking North Along Euclid Avenue

Alternative 4 Geometry

As discussed, this alternative would maintain the exterior traffic and bicycle lanes at-grade while raising the middle two lanes on a bridge to pass over the railroad grade crossing. Retaining walls would be used to support the approaches lifting the center lanes to the start and end of the bridge. Left turn lanes could be accommodated under the bridge where there is a minimum vertical clearance of 15', as shown in Figure 3-18. Single left turn lanes can be accommodated under the bridge at the intersections of Naranja Street and northbound at Market Street, and two left lanes southbound at Market Street.

The railroad grade crossing would be closed to vehicular traffic but special gate crossings are provided only for pedestrians and cyclists to cross the tracks. Due to its narrow width, pedestrians and cyclists would be discouraged through signage. The roadway will have dead-end turn around movements for vehicles at the grade crossing as shown on Figure 3-21.

Figure 3-21: Proposed Dead-End Closures at Rail Crossing



Closing the grade crossing to vehicular traffic impacts MTS bus routes No. 3, 4, and 13 that currently travel over the crossing and alternate routes will need to be developed. To maintain bus service south of the grade crossing, the bus stop on Euclid Avenue would be extended with an additional bus pad to allow for more bus street parking as shown in Figure 3-21.

The two middle traffic lanes and raised median will have taper transitions from the street to the bridge. Figure 3-22 shows the proposed lane transition maintaining the southbound Euclid Avenue left turn lane pocket at Castana Street but at Groveland Drive the turning movement will be a right turn in and right turn out only.

Figure 3-22: South End Lane Taper Transition

At the north end, the street taper ends at the intersection of Guymon Street with traffic coming off the bridge having the option of continuing north on Euclid Avenue or turning left on Guymon Street. Traffic traveling north on the outside lane of Euclid Avenue can only continue north at the Guymon Street intersection, as there is not enough weaving length to change lanes to the left turn lane, and there would be conflicts with vehicles coming off the bridge. Figure 3-23 shows the transition at the north end and Figure 3-24 shows the street section in the taper.

Figure 3-23: North End Lane Taper Transition

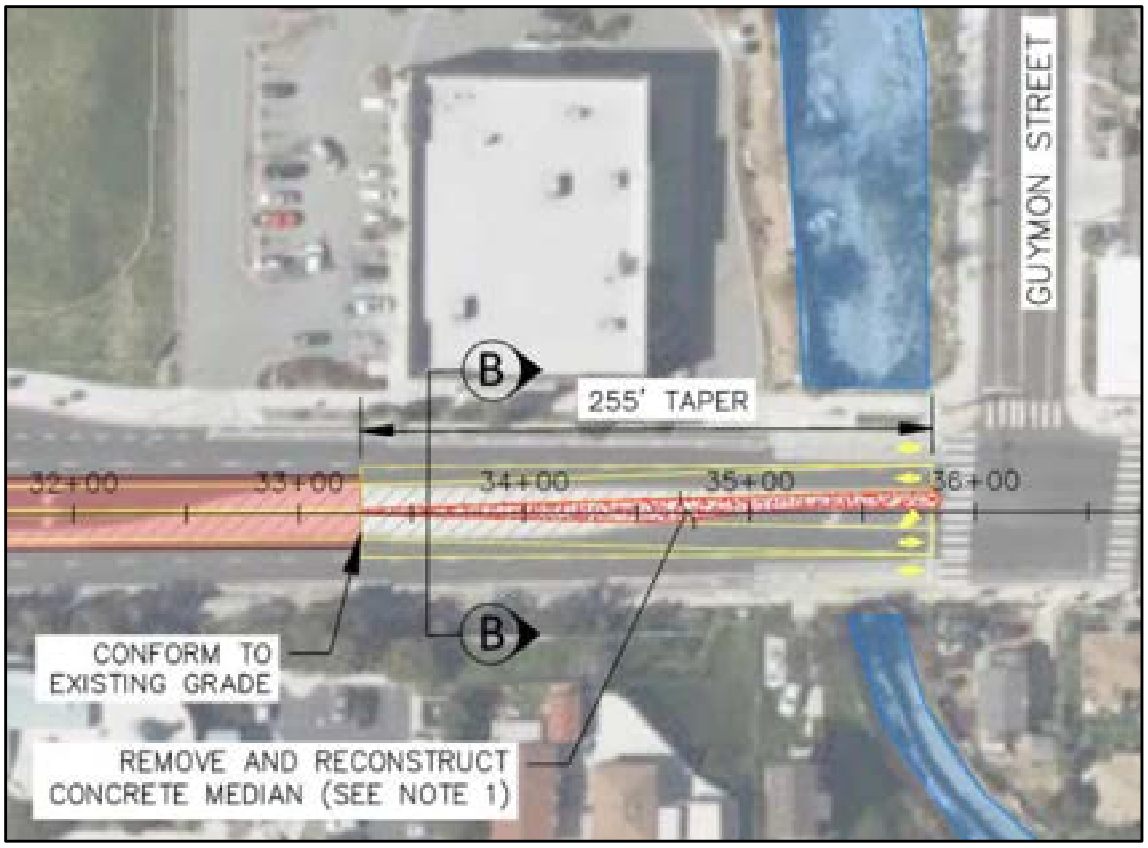
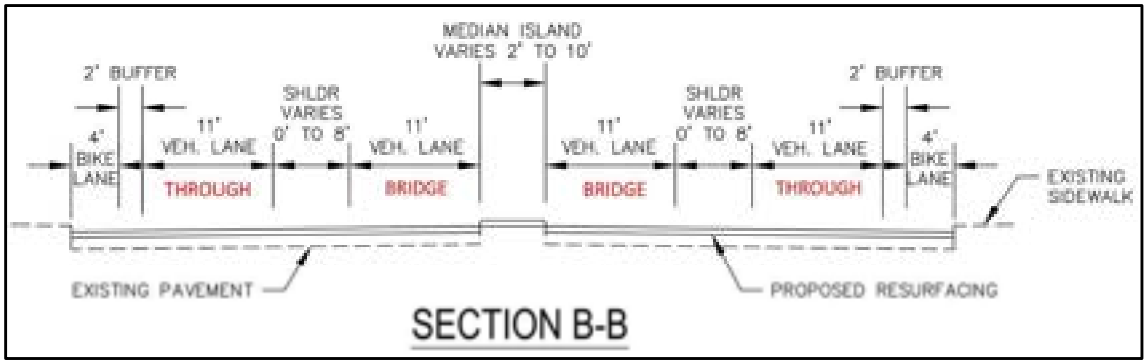


Figure 3-24: Roadway Section B-B Taper Transition

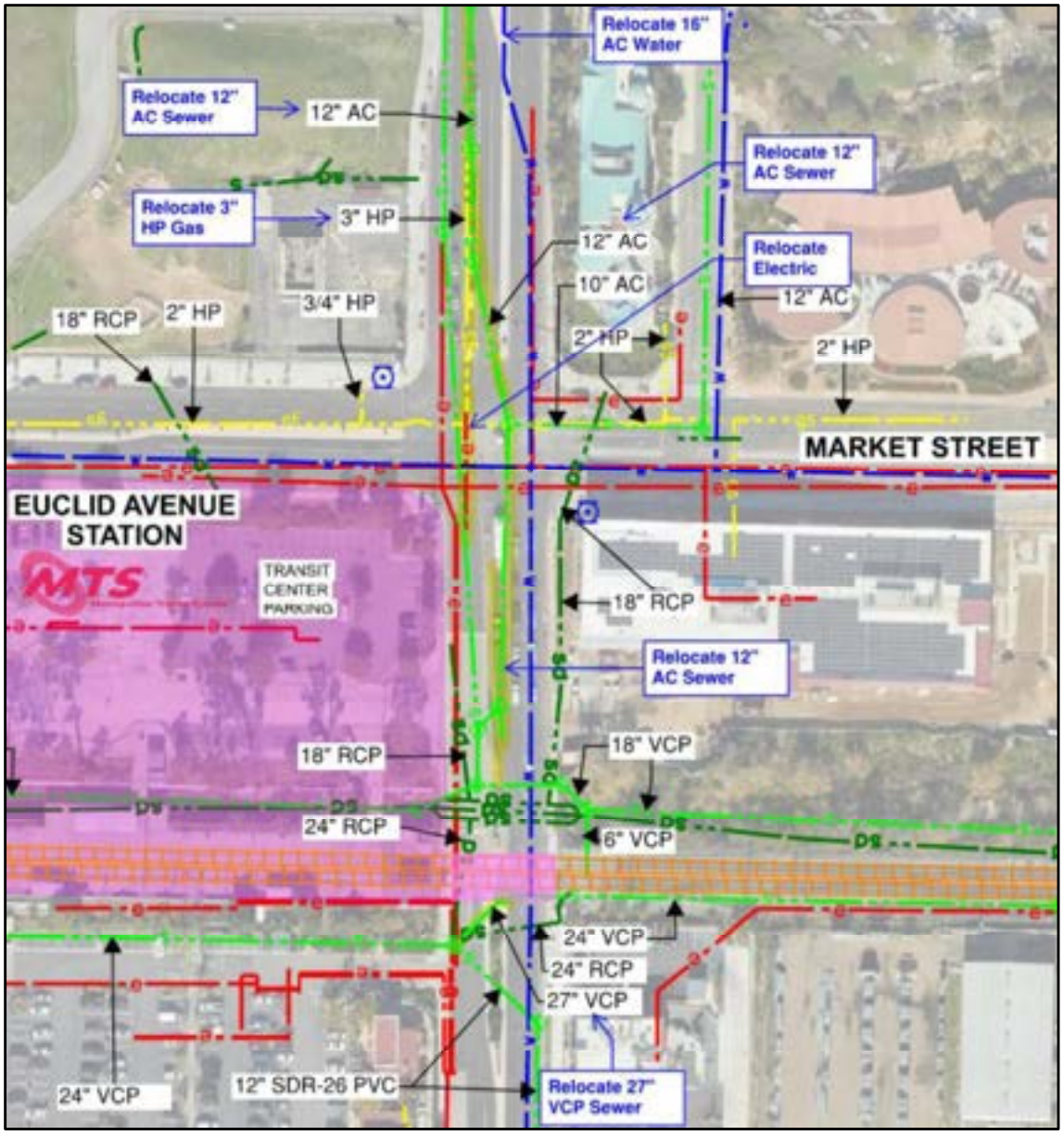


The addition of the 35' wide bridge in the middle of Euclid Avenue will require modification of the traffic signal arms that extend over the left turn lanes at the Market Street and Naranja Street intersections. The traffic signal arms may need to be shorter or lowered to avoid conflict with the bridge structure.

3.6.1.4 Utility Impacts

The bridge columns and foundations have been spaced to avoid conflicts with the creek, street intersections, and utilities where possible. However, water, sewer, gas, and electric utilities that run in or cross the middle of Euclid Avenue will require relocation. Figure 3-25 shows the anticipated utilities that require relocation, based on as-built plans, but potholing and below ground scanning will be needed to verify the number of and extent of the relocations.

Figure 3-25: Anticipated Utility Relocations



3.6.1.5 Drainage and Flooding

Rain captured on the bridge deck will be collected and piped down the columns and ends of the bridge, and directed into the street drainage. Since the bridge is in an existing paved street, there is no increase in impervious surface area. There is a short strip of landscaped median

south of the grade crossing that will need to be removed and replaced with a paved median, however its removal negligibly reduces groundwater infiltration.

Three to four of the bridge columns are in the 100-year floodplain, requiring a FEMA analysis. They are not expected to significantly change the flood maps.

3.6.1.6 Construction Impacts

The construction of Alternative 4 requires permanent removal of the middle two through traffic lanes and the left turn lane on Groveland Drive. Temporary concrete barriers will be needed in the work zone, possibly reducing the exterior traffic lane widths by one to two feet. Temporary falsework bents will be constructed over Naranja Street, the railroad tracks, and Market Street to maintain operation of those crossings. Temporary night closures of the intersection crossings and trolley tracks will occur for the erection and removal of falsework beams, but will otherwise remain in operation during construction. Construction work in the middle of Euclid Avenue will be similar to the Blue Line construction along Genesee Avenue in the University Towne Center (UTC) area of San Diego, where some traffic and pedestrian movements will be maintained around the work as shown in the Figure 3-26:

Figure 3-26: Blue Line Construction on Genesee Avenue

At the Naranja Street intersection, there is not sufficient space for separate left turn lanes, and these movements will likely need to be eliminated during construction to maintain through north-south traffic flow. At the Market Street intersection, where Euclid Avenue is wider, a single left turn lane can be maintained in each direction. Due to falsework span limitations, a falsework bent will need to be maintained in the middle of the Market intersection that will require reducing lane widths on Market Street, and possibly impacting left turn movements on Euclid Avenue.

Construction work is expected to damage the roadway surface, therefore resurfacing the roadway and new striping is assumed in the cost estimate between the curbs from Castana Street at the south end to Guymon Street on the north.

3.6.2 Traffic

Construction Considerations

This alternative proposes raising Euclid Avenue over the Trolley and freight tracks between Groveland Drive and Guymon Street. The bridge will be a two-lane roadway (one lane in each direction) with sufficient clearance to allow traffic on Market Street and Naranja Street to pass below. Neighborhood access to Euclid Avenue will be retained at street level. However, the roadway will be "dead-ended" on either side of the Trolley and freight tracks. Estimates for this alternative indicate the shortest duration in terms of construction schedule. There will be temporary Trolley and freight line closures required for erecting and removing falsework or precast girders over the tracks. This alternative will likely result in temporary bus stops during construction.

City permits are required for construction easements to work in the street and to reconfigure the travel lanes. Euclid Avenue will be reduced to one lane in each direction to accommodate the construction activities including utility relocation. A potential laydown area is being considered on the Northwest corner of Market Street and Euclid Avenue. Detours, lane closures and significant changes to traffic patterns, levels of service, and bus routes are expected in the area. The Trolley station will remain open during construction and access via Market Street will continue unchanged. There may be a need to close the Euclid Avenue access to the Transit Center during construction activities.

Multimodal User Experience

There will be no change in the Trolley service and as there will be no traffic access over the grade crossing. Changes to the bus services are to be determined. However, bus routes 3, 4, and 13, which currently cross the tracks, will require permanent re-routing due to the closure of grade crossing. Northbound and southbound bus routes affected will be required to U-turn at Guymon Street or at intersections further north to access the transit center, or to head south on Euclid Avenue.

Connectivity between bus and rail services may be reduced due to the elimination of bus routes with direct access from Euclid Avenue and the transit center. If buses are rerouted to use the Euclid bridge, routes may become longer.

Trolley services will be improved with the grade separation with fewer stoppages due to traffic. Current security needs will remain and the elevated roadway may need additional security. No reduction in parking is needed with this alternative. Additionally, there will be no changes to accessible service and north-south connectivity may be improved due to the reduced volumes of traffic at street level.

The existing bicyclist and pedestrian crossings over the tracks will be retained and safety will be improved by eliminating vehicular traffic crossing the tracks.

Permanent Traffic Impacts

The overpass will provide shorter journey times for local north-south traffic between Imperial Avenue and State Route 94 (SR-94) since there is no longer a need to traverse two signalized intersections. East-West travel times on Market Street would also be reduced since the northbound and southbound volumes at street level will be significantly lower. The reduction in

northbound and southbound volumes on Euclid Avenue at the Market Street and Naranja Street intersections will significantly improve LOS and delay at these locations. However, there may be a need to accommodate u-turns at upstream and downstream intersections, which would impact LOS and cause delays at those locations. Neighborhood trips that begin or end on Naranja Street, Market Street and Groveland Drive may be impacted as access to Euclid Avenue is no longer possible.

3.6.3 Right-of-Way

There are no permanent property impacts with this alternative as the bridge and improvements are contained within the City street. Temporary construction easements may be needed for equipment access, material storage, and contractor laydown area.

3.6.4 Preliminary Construction Schedule and Cost Estimate

A conceptual construction schedule showing the major items of work was developed and estimates 505 working days or two years for the construction of Alternative 4. The construction cost is estimated at $35 million.

3.6.5 Risks

The significant risks of this alternative include the construction of deep foundations, accurately locating buried utilities, coordinating the utility relocations with the utility agencies, and gaining permit approval for the utility relocations. The risks of the deep foundations are discussed in Alternative 1. Utility relocations can have unknown costs and increase the project schedule in the design and construction phases.

The deep foundation risks are mitigated as discussed in Alternative 1, and the utility relocations are mitigated through accurate field inspection and early coordination with the utility owners and City.

3.6.6 Community Impacts and Opportunities

Customer Experience

Impacts on Bus Operations

Although grade separation is expected to improve bus operations, certain routes may be affected by this alternative. The road over rail concept would remove bus access for buses traveling north on Euclid. Buses would be unable to exit transit center and travel south on Euclid over tracks. Buses would need to be re-routed, and the additional movement may affect travel time. These longer routes will require additional review, and may warrant a Title VI and social equity analysis to assess whether these changes will cause a disproportionate burden on minorities, limited-English proficiency (LEP), and low-income communities.

Community Impacts/Opportunities

Impacts During Construction

Reducing Euclid Avenue to two lanes and temporarily eliminating left turns at Naranja Street during construction will increase traffic congestion and commute times on Euclid Avenue and Market Street. This could affect local communities' ability to access businesses, amenities and key destinations along Euclid Avenue, including the Food 4 Less, the Jacobs Center, the Southeastern Live Well Center, the library and the two elementary schools located within the study area. Pick-up and drop off activities at the two schools may also be gravely impacted by

construction. This can be particularly challenging for people who do not have access to a vehicle and who might depend on some of these affordable retail options or essential services. Road closures should be accompanied by a clear and detailed circulation plan to allow access to these key destinations throughout.

Long-term Impacts on Traffic Flows and Circulation

This alternative will provide an elevated guideway for vehicular traffic over Euclid Avenue. As a result, certain movements that are currently allowed may become prohibited. For example, vehicles will not be able to turn left on Euclid from Groveland, instead being forced to turn right and operate a u-turn to come back. Similarly, vehicles traveling south trying to access amenities such as the Food 4 Less or the Jacobs Center may need to continue past the entrance and come back around.

The new configuration will also bring vehicles off the bridge at Guymon Street, right by Horton Elementary. Students and parents trying to get to the school traveling north on Euclid Avenue will not be able to turn on Guymon to get to the school, and will instead have to travel further up and turn around or use a different route to get to the school. North-South travelers will also need to use alternative routes to access the Southeastern Live Well Center, the library and the Elementary Institute for Science. These various changes may lead to extended travel times for community members.

Safety at Surface Level

The elevated structure over Euclid may create a visual impact for those traveling at grade level. The bridge may create shade and reduce visibility from one side of Euclid to the other. In addition, removing the constant flow of traveling vehicles will also reduce visibility of activity on the street, or “eyes on the street”. This could affect safety and perception of safety for pedestrians and cyclists traveling below the bridge, affecting comfort and the overall traveling experience.

Opportunity to Improve Walking and Biking

In contrast to the potential safety concerns, the elevated guideway is expected to drastically reduce traffic volumes at the Market/Euclid intersection, removing about 900 cars per hour. This will instantly reduce congestion in the area. A potential risk of this relief would be increased recorded speeds from vehicles, as cars tend to move faster through an uncongested intersection. This represents an opportunity to further the efforts adopted by the City to improve walking and biking along Euclid and Market, and implement additional traffic calming measures that mitigate potential increase in speeds and provide an amenable environment for active transportation.

3.6.7 Alternative 4 Grade Separation Modification

Considering complete closure of the railroad grade separation to vehicular traffic has significant negative impacts to the local commuters, MTS bus operations, and emergency service response time, a variation of Alternative 4 is to construct the bridge and maintain the railroad grade crossing. This would maintain most of the current traffic and commuter operations, except left turn access at Groveland Drive, while reducing traffic at Market Street for traffic intending to bypass the intersection. Local traffic would be halted by the crossing of the Trolley, however up to 700 cars at peak periods could bypass the Market intersection, providing some improvements to the level of service. This modified alternative is provided as an item for future consideration and is not compared with the other alternatives as part of this feasibility study.

3.7 Alternative Comparative Scoring and Summary Table

A list of criteria and weighting criteria was developed by the project team to rank the alternatives for performance and their ability to meet the study objectives. The alternatives were also normalized considering the probable construction costs.

Five main project ranking criteria were developed by the project team:

A. Construction considerations
B. Multimodal user experience
C. Community support and benefits
D. Maintenance and operations
E. Right-of-way and utilities

These five criteria where weighted against each other, as some criteria are more important that others and should have a greater weighting on an alternatives score. For example, the multimodal user experience (B), a permanent condition after construction, is more important than the construction considerations (A) that have limited duration.

A matrix of the criteria letters were listed horizontally and vertically with the governing criteria listed at the intersection of two criteria being compared. The weighting percentage is calculated by summing the number of times a letter governs in the matrix, divided by the sum total numbers. Weights and priorities were discussed and decided upon during project development team workshops.. At the end of the weighting, right-of-way and utilities (E) had a weighting of zero. Since this criteria should be considered, 10% was taken from community support and benefits (C) and applied to the right-of-way and utilities (E) criteria. The criteria weighting matrix is shown in Figure 3-27 and a listing of details considered in each of the five criteria are in Figure 3-28.

Figure 3-27: Project Ranking Criteria and Weighting

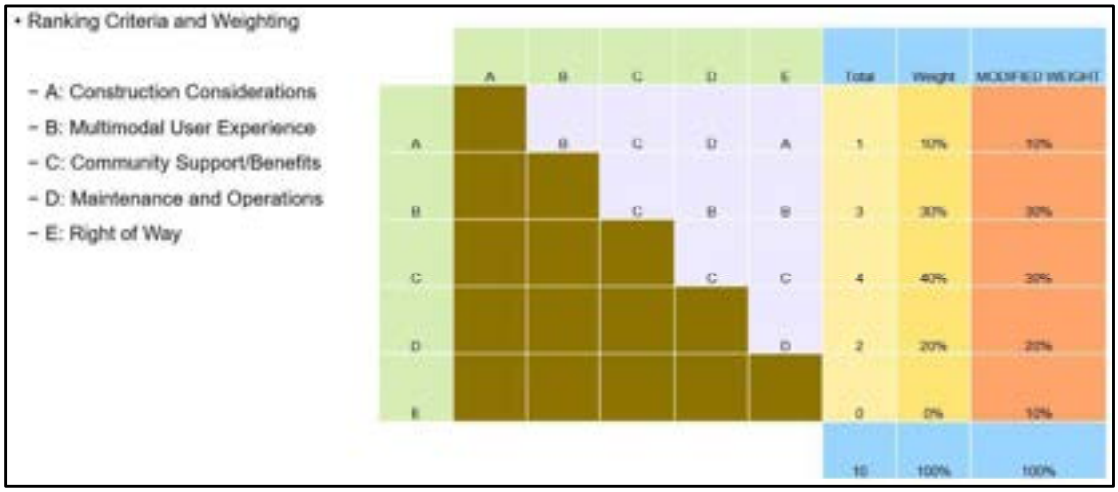


Figure 3-28: Details of Project Criteria

- Ranking Criteria and Weighting -				
10%	30%	30%	20%	10%
A	B	C	D	E
Construction Considerations	**Multimodal User Experience**	**Community Support / Benefits**	**Maintenance / Operations**	**Right-of-Way / Utilities**
Construction schedule	Service reliability	Noise impacts	Additional security needs	Utility impacts
Temporary rail operations	Bike / ped / disabled access	Visual impacts	Additional maintenance requirements	Public ROW impacts
Temporary bus operations	Rail / bus patron safety	Does not preclude planned development	Staffing needs	Property access
Temporary freight operations	Bus / rail connectivity	Effects on drainage / flooding potential	Locomotive needs	Private property acquisitions
Temporary construction easements	Service interruptions	Parking impacts	Bus access (in and out of transit center)	Temporary construction easements
Temporary construction improvements / laydown	Security needs	Reclaim useable area		
Temporary traffic impacts	Parking impacts	Lighting / visibility		
Temporary station accessibility	Potential for accessible service interruption	Sight distance		
		Emergency services / routing		
		Effects on adjacent crossings		

The project team ranked the three viable Alternatives (1, 2, and 4) against each other by discussing the details of the ranking criteria and the alternative's performance. The alternatives were scored against each other from 1 to 3, with 3 being the highest value. If two alternatives are essentially the same, they were given the same number. The three Alternatives were scored as follows:

Construction: For construction impacts, Alternative 4 is considered the least impactful with the shortest duration and minimal impact to Trolley operations and is given a score of 3. Alternatives 1 and 2 are essentially equally impactful and have a score of 1.

Multimodal User Experience: Closing the rail crossing negatively impacts bus operations and requires re-routing of operations and local traffic, therefore Alternative 4 is given a score of 1. Raising the rail is least disruptive to users, except needing to access an elevated station, Alternatives 1 and 2 were given a score of 2.

Community Support / Benefits: Alternatives 1 and 2 will have more noise, visual, and potential flood impacts; however Alternative 4 is more negatively impactful to the community traffic operations, access to local driveways, and some reduced site distances on Euclid Avenue. Raising tracks is considered to have the greatest community benefit. Therefore, Alternatives 1 and 2 are given a score of 2 and Alternative 4 a score of 1.

Maintenance and Operations: Alternatives 1 and 2 are much longer structures, and the elevated station will have elevators and will require more maintenance and security than Alternative 4. Alternative 2 will require more maintenance than Alternative 1 due to additional track running underneath and maintaining the grade crossing signal for freight traffic. Therefore, Alternatives 1, 2, and 4 were given scores of 2, 1, and 3, respectively.

Right-of-Way/Utilities: Only Alternative 2 needs a permanent ROW acquisition and Alternatives 1 and 2 would likely require more temporary construction easements due to their size. Alternative 4

will have the most utility impacts, however these are not expected to be significant. Therefore Alternatives 1, 2, and 4 were given scores of 2, 1, and 3, respectively.

The weighted score of the alternatives is calculated by multiplying the score in each criteria by the weighting percentage and summing the result. The weighted sum is multiplied by 100 to display it is a whole number. The resulting weighted scores are:

- Alternative 1: 190
- Alternative 2: 160
- Alternative 4: 180

Alternative 1, which completely removes the railroad grade crossing and does not change operations on Euclid Avenue, provides the greatest community benefit and scores the highest. However, construction costs should also be considered, To do so, the scores are divided by the estimated construction cost to normalize the scores. Tables 3-1 and 3-2 show the calculations of the weighted and normalized scores with Alternative 4 having the greatest score due to the significantly lower construction cost than Alternatives 1 and 2.

Table 3-1: Alternative Scoring and Weighting

	Construction Considerations		Multimodal User Experience		Community Support / Benefits		Maintenance / Operations		Right-of-Way / Utilities	
	Score	Weight	Score	Weight	Score	Weight	Score	Weight	Score	Weight
Alternative 1	1	10%	2	30%	2	30%	2	20%	2	10%
Alternative 2	1	10%	2	30%	2	30%	1	20%	1	10%
Alternative 4	3	10%	1	30%	1	30%	3	20%	3	10%

Table 3-2: Alternative Weighted, Estimated Cost, and Normalized Scores

	Weighted Score (*100)	Estimated Cost (in $1,000,000s)	Normalized Score
Alternative 1	190	$176.0	1.08
Alternative 2	160	$220.0	0.73
Alternative 4	180	$35.0	5.14

4 Recommendations for Future Study

4.1 Community Outreach and Involvement

The alternatives developed and reviewed as part of this study were discussed and analyzed through a series of workshops that included local stakeholders such as SANDAG, the City of San Diego and MTS staff. Stakeholders identified the user experience and community impacts as key criteria for the evaluation of the alternatives, as discussed in this report. While the needs and priorities of local communities and users of the Euclid Station was front of center in discussions, a robust engagement strategy will be paramount to confirm community concerns, needs and preferences to finalize the selection and design of the preferred concept.

4.2 Environmental Approvals

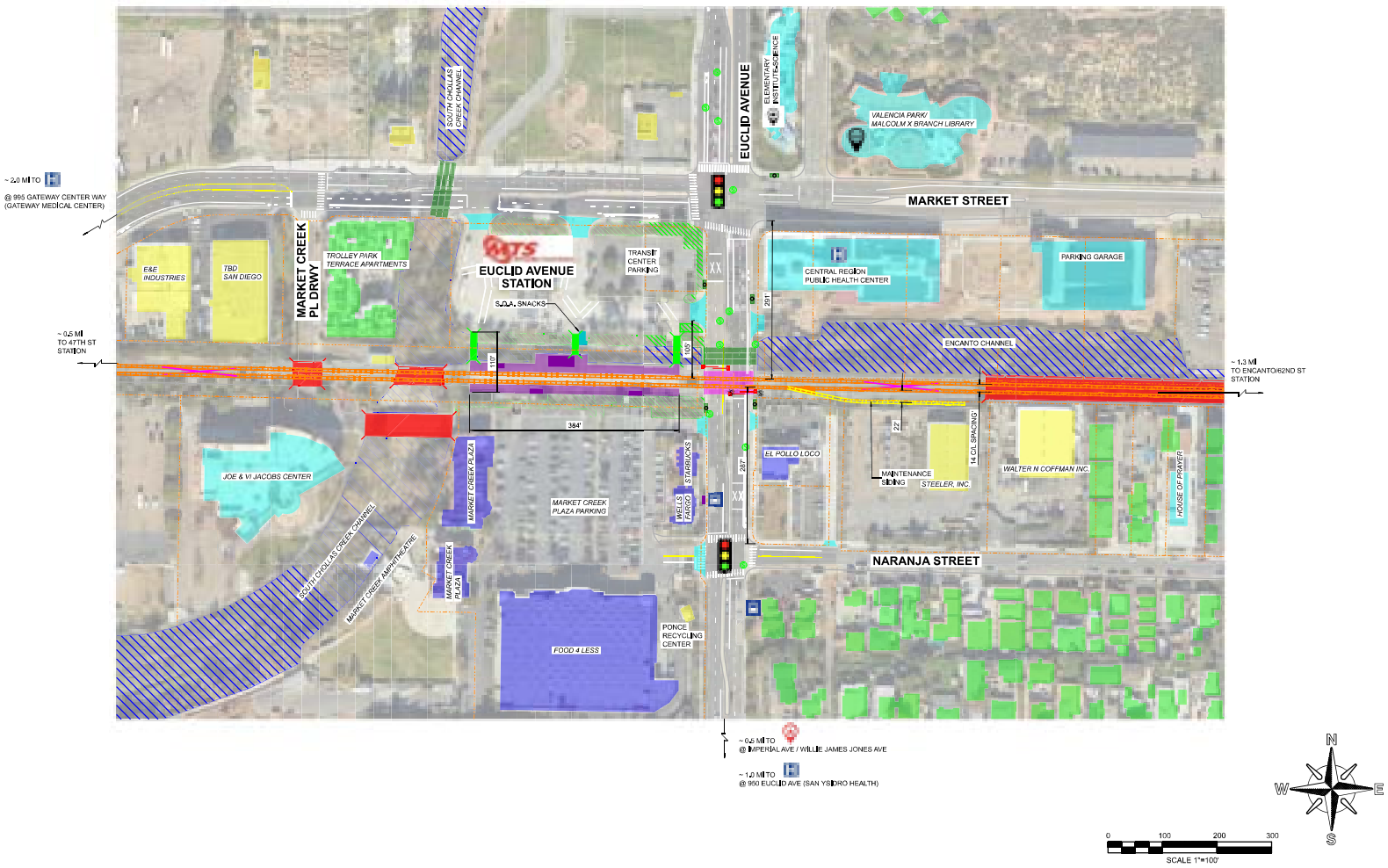
The environmental review process for the project would be the same regardless of which alternative is selected as the preferred alternative. Discretionary projects undertaken by an agency in California would typically be subject to the California Environmental Quality Act (CEQA). However, pursuant to CEQA Guidelines Section 15282, “any railroad grade separation project which eliminates an existing grade crossing” is statutorily exempt from CEQA, meaning that CEQA does not apply. MTS, as the CEQA Lead Agency, would be required to prepare and file a Notice of Exemption for the project. No other CEQA documentation would be required.

If MTS secures federal funds for the project, environmental review under the National Environmental Policy Act (NEPA) would be required. Specific requirements would depend on the federal lead agency dispensing the funds, such as the Federal Transit Administration (FTA), Federal Railroad Administration (FRA), or the Federal Highway Administration (FHWA). Regardless of the federal lead agency, it is anticipated that the project would qualify for a NEPA Categorical Exclusion (CE) pursuant to 23 Code of Federal Regulations (CFR) 117.118 (d)(2), which covers construction of grade separations to replace existing at-grade railroad crossings. Preparation of environmental technical studies to support the NEPA CE may be required related to biological resources, cultural resources, noise and vibration, hydrology and water quality, aesthetics, and hazardous materials.

Regulatory permits may also be required for impacts to jurisdictional waters. Required permits could include a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers, Clean Water Act Section 401 Water Quality Certification from the Regional Water Quality Control Board, and a 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife. Take authorization from the U.S. Fish and Wildlife Service may also be required for impacts to listed species.

Appendix A – Existing Conditions Exhibits and Data

- Existing Conditions Overview
- Existing Utilities
- Environmental Constraints Exhibit
- Existing Floodplain Exhibit
- Existing Traffic and Bus Operations Conditions
- Euclid Avenue Plan and Profile
- Orange Line Plan and Profile
- Euclid Avenue Station Typical Section
- FEMA Flood Insurance Rate Maps
- Transportation Injury Mapping System (TIMS) – 10 year Summary Map
- FRA Highway-Rail Grade Crossing Accident/Incident Report



LEGEND

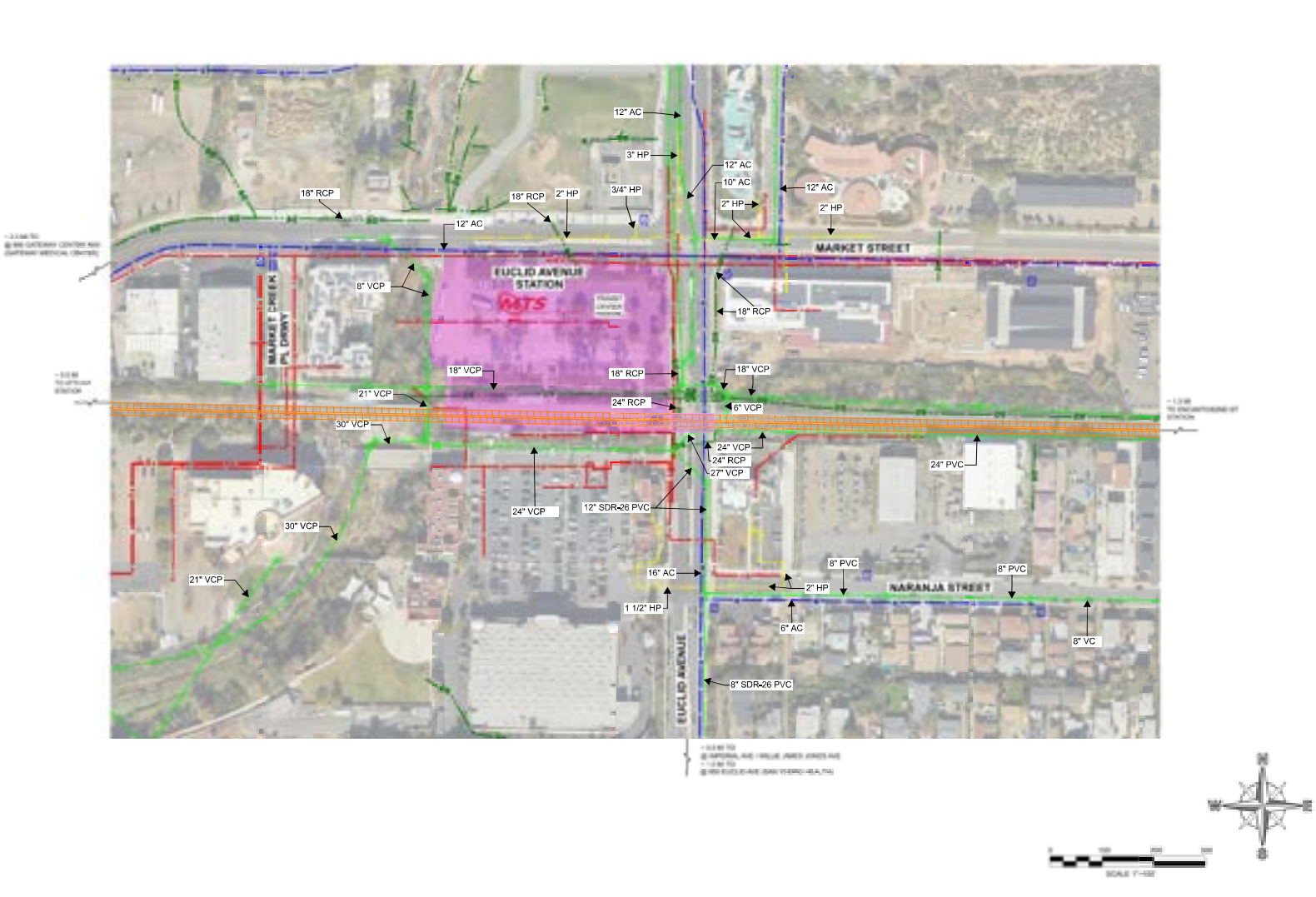
- ORANGE LINE TRACKS
- ROW
- CREEK
- LANDSCAPE
- PLATFORM
- VEHICULAR BRIDGE
- TRANSIT SHELTERS
- PEDESTRIAN BRIDGE
- BUILDING - TRANSIT
- GRADE CROSSING
- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- INSTITUTIONAL
- DRIVEWAY
- RAIL CROSSING
- SIGNALIZED INTERSECTION
- GRADE CROSSING FLASHERS/ GATE ARMS
- IN-LINE BUS STOP
- FIRE STATION
- LIBRARY
- HOSPITAL
- SCHOOL
- SEWER MANHOLE
- ABANDONED MANHOLE
- STORM DRAIN INLET
- 10' X 6' CONCRETE BOX CULVERT

MOTT MACDONALD

MTS

EUCLID AVENUE GRADE SEPARATION STUDY

EXISTING CONDITIONS OVERVIEW



MOTT MACDONALD	MTS	EUCLID AVENUE GRADE SEPARATION STUDY	EXISTING UTILITIES

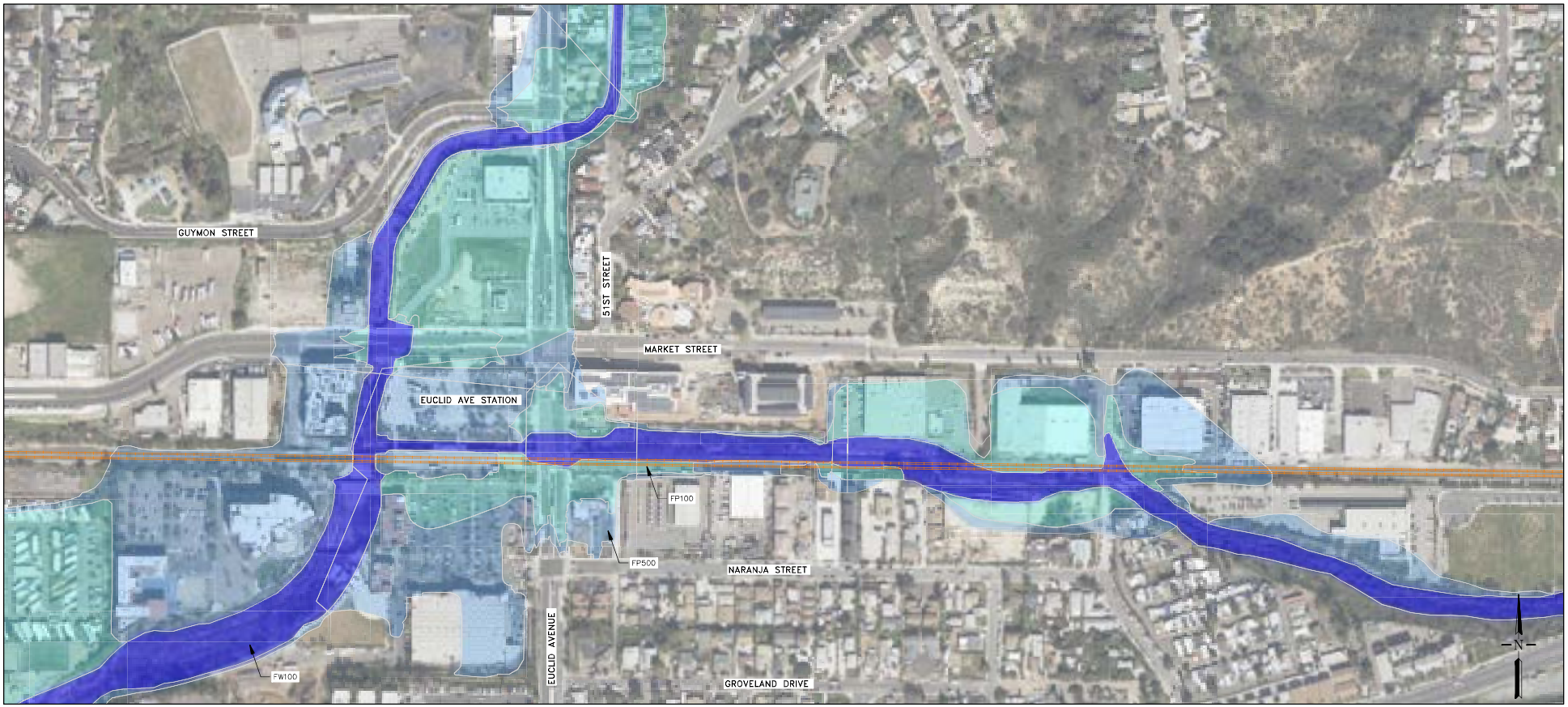
GRAPHIC SCALE
0 50' 150' 300' 450'
IN FEET
1 INCH = 150' FT.

LEGEND:

- HAZARDOUS MATERIALS SITE
- SENSITIVE VEGETATION AREA
- CITY OF SAN DIEGO HABITAT PRESERVE AREA
- EXISTING FAULT LINE (ESTIMATED)
- GEOTECHNICAL BORING

DETAIL A: 10/7/82 LOG OF TEST BORING

MOTT MACDONALD	MTS	EUCLID AVENUE GRADE SEPARATION STUDY	ENVIRONMENTAL CONSTRAINTS EXHIBIT

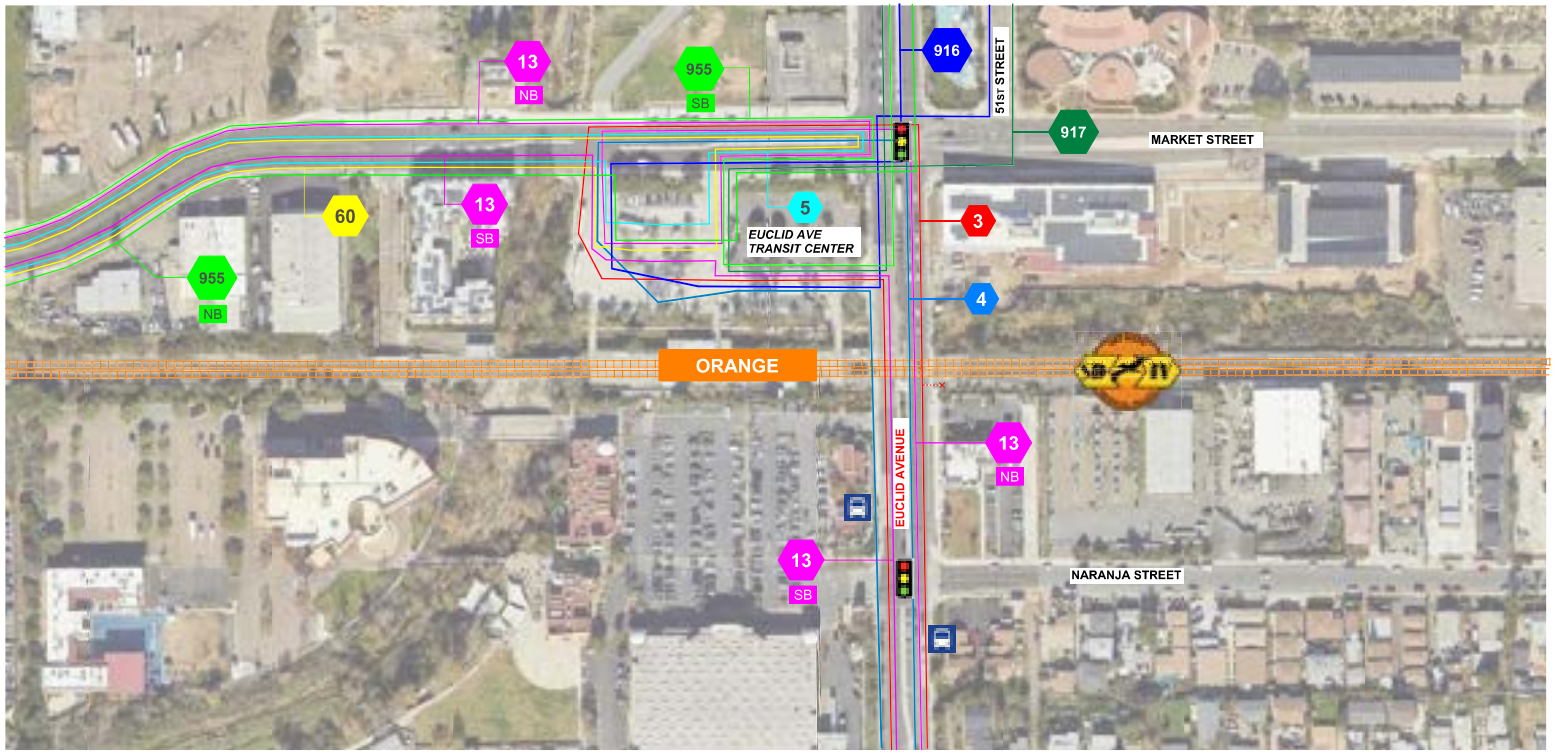


GRAPHIC SCALE
0 50' 150' 300' 450'
IN FEET
1 INCH = 150' FT.

LEGEND:

- 100-YEAR FLOOD PLAIN (1% ANNUAL CHANCE FLOOD EVENT)
- 500-YEAR FLOOD PLAIN (0.2% ANNUAL CHANCE FLOOD EVENT)
- 100-YEAR FLOODWAY

MOTT MACDONALD	MTS	EUCLID AVENUE GRADE SEPARATION STUDY	EXISTING FLOODPLAIN EXHIBIT

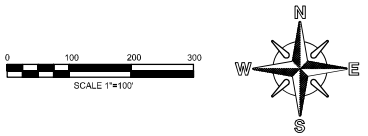


FREIGHT SHORT LINE
San Diego & Imperial Valley (SD&IY)
Schedule: 1 train / week (typically Sunday night)
Loading: 2 locomotives, 3-5 cars
Route: out & back

ROUTE	HEADWAYS (minutes) WEEKDAY 5AM-9AM	8AM-4PM	4PM-8PM	AFTER 8PM
ORANGE	15	15	15	30
3	12	12	12	30
4	15	15	15/30	60
5	15	15	15	30
13	15	12	12	30
60	16/30	N/A	15/30	N/A
916	30	60/33	30/60	60
917	60	60	60	60
955	15	15	15	30

STREET DATA TABLE

STREET NAME	CLASSIFICATION	SPEED (MPH)	ADT (VEHICLES)	R/W (FT)
Euclid Ave	4L Major	35	20,669	85 - 95
Market St (W of Euclid)	4L Major	35	10,000	100
Market St (E of Euclid)	2L Connector	35	11,100	40
Naranja St	Local Street - Comm	20	3,047	60

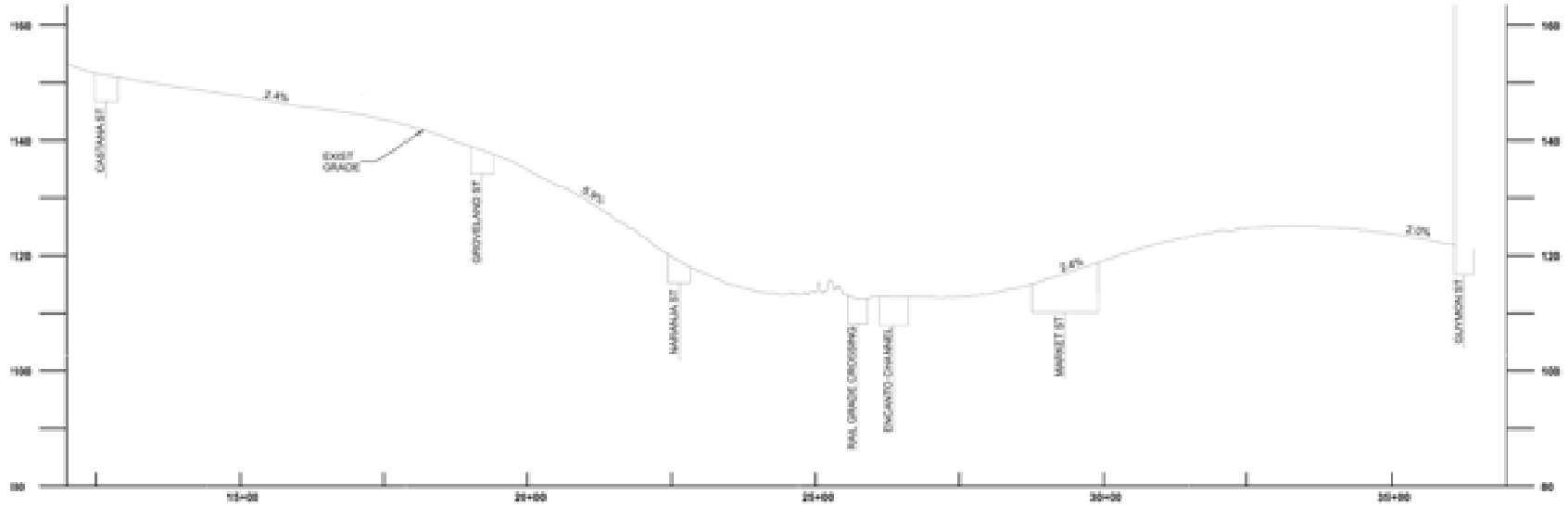


MOTT MACDONALD

MTS

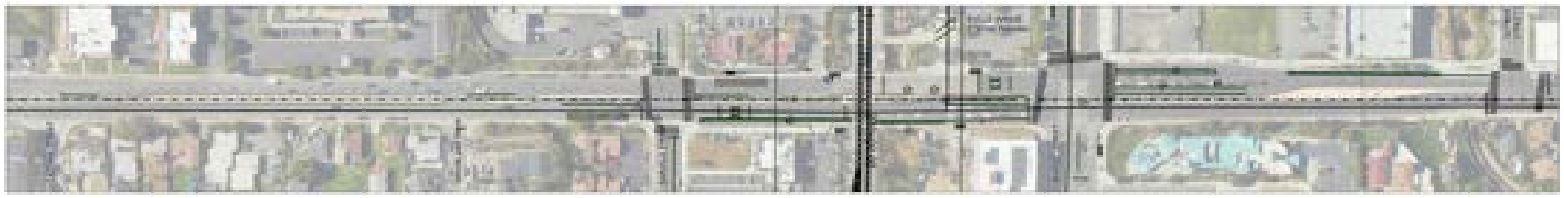
EUCLID AVENUE GRADE SEPARATION STUDY

EXISTING TRAFFIC AND BUS OPERATION CONDITIONS



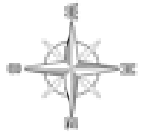
PROFILE VIEW

SCALE 1" = 100' HORIZ, 1"=10' VERT

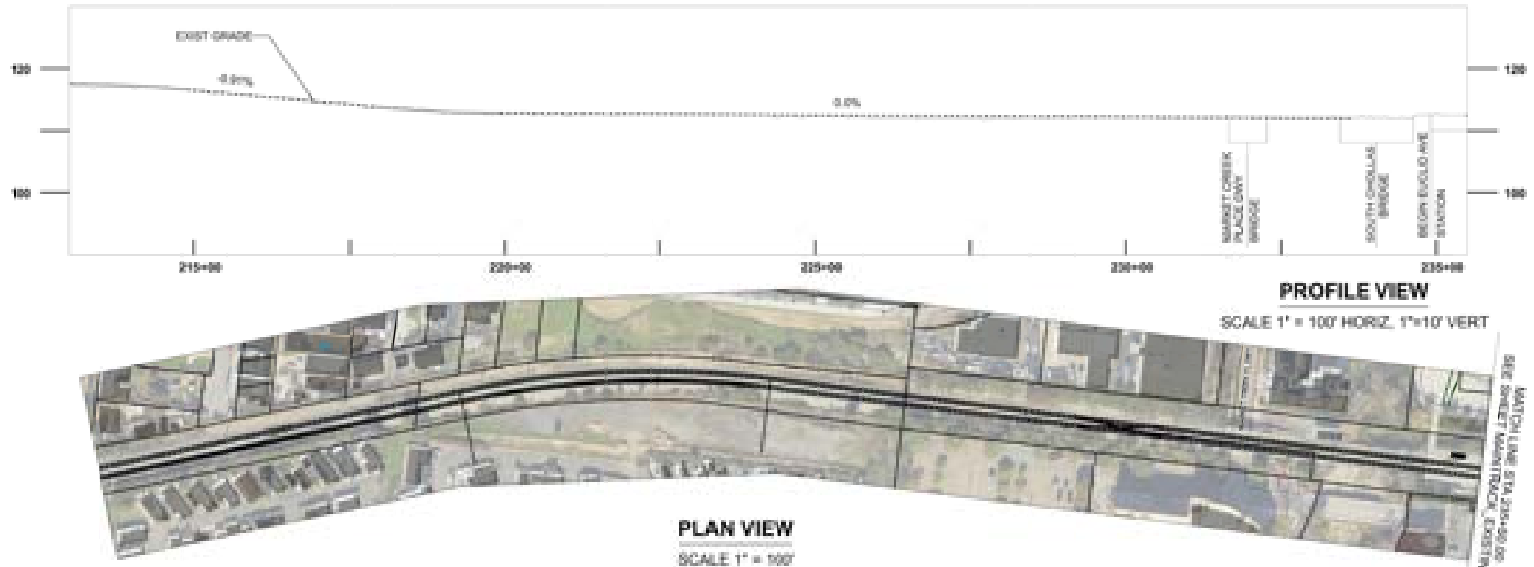


PLAN VIEW

SCALE 1" = 100'



MOTT MACDONALD M M	MTS Metropolitan Transit System	EUCLID AVENUE GRADE SEPARATION STUDY	EUCLID AVENUE PLAN AND PROFILE

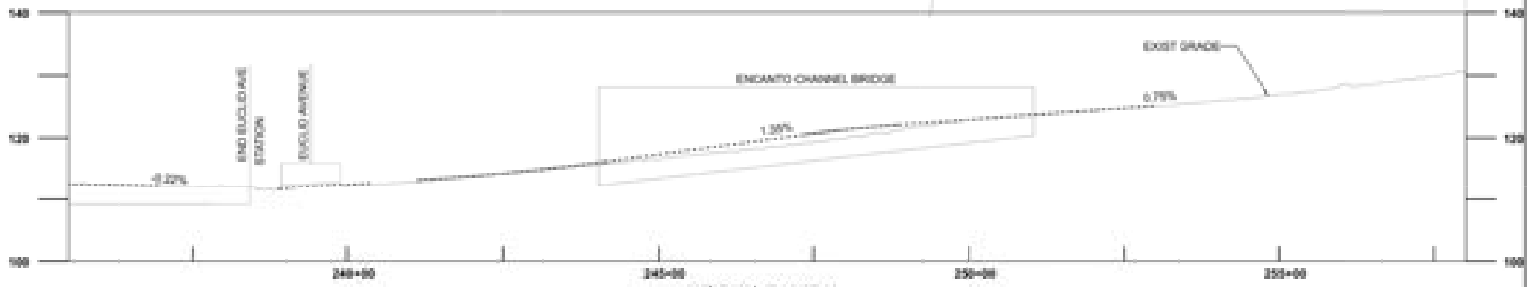


PROFILE VIEW

SCALE 1" = 100' HORIZ, 1"=10' VERT

PLAN VIEW

SCALE 1" = 100'



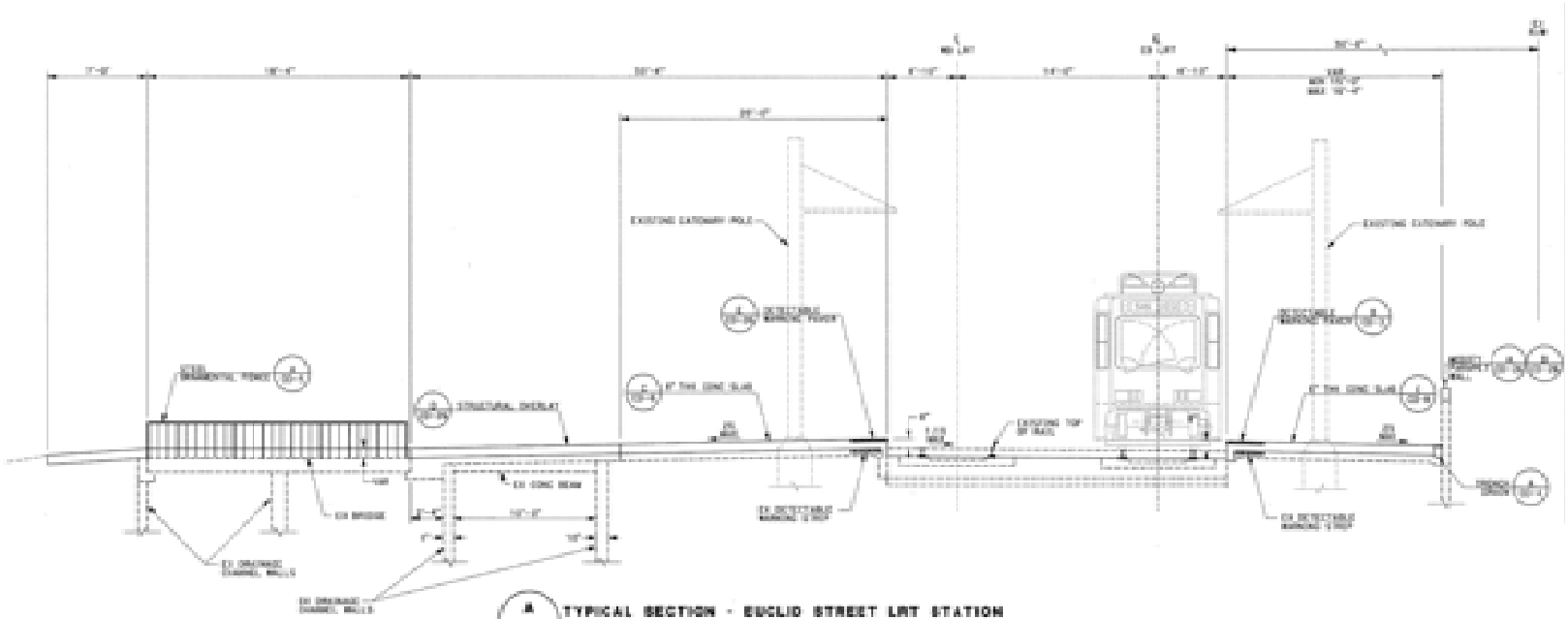
PROFILE VIEW

SCALE 1" = 100' HORIZ, 1"=10' VERT

PLAN VIEW

SCALE 1" = 100'

MOTT MACDONALD	EUCLID AVENUE GRADE SEPARATION STUDY	ORANGE LINE PLAN AND PROFILE



A C-8 TYPICAL SECTION - EUCLID STREET LRT STATION AT EXISTING BRIDGE NO. 2

MOTT MACDONALD M M	MTS Metropolitan Transit System	EUCLID AVENUE GRADE SEPARATION STUDY	EUCLID AVENUE STATION TYPICAL SECTION

Page 1 of 4	Issue Date: April 7, 2023	Effective Date: August 22, 2023	Case No.: 23-09-0195P	LOMR-APP

Follows Conditional Case No.: 19-09-1346R

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT

COMMUNITY AND REVISION INFORMATION		PROJECT DESCRIPTION	BASIS OF REQUEST
COMMUNITY	City of San Diego San Diego County California	FILL	1D HYDRAULIC ANALYSIS UPDATED TOPOGRAPHIC DATA
	COMMUNITY NO.: 060295		
IDENTIFIER	Euclid Suites	APPROXIMATE LATITUDE & LONGITUDE: 32.709, -117.085 SOURCE: USGS QUADRANGLE DATUM: NAD 83	

ANNOTATED MAPPING ENCLOSURES	ANNOTATED STUDY ENCLOSURES
TYPE: FIRM* NO.: 06073C1904G DATE: May 16, 2012	DATE OF EFFECTIVE FLOOD INSURANCE STUDY: March 22, 2022 PROFILE(S): 115P FLOODWAY DATA TABLE: 13

Enclosures reflect changes to flooding sources affected by this revision.
* FIRM - Flood Insurance Rate Map

FLOODING SOURCE(S) & REVISED REACH(ES)

Encanto Branch - From approximately 50 feet downstream of Euclid Avenue to approximately to 240 feet upstream of Euclid Avenue.

SUMMARY OF REVISIONS

Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
Encanto Branch	BFEs*	BFEs	YES	NONE
	ZONE AE	ZONE AE	YES	YES
	ZONE X (SHADED)	ZONE X (SHADED)	YES	YES
	FLOODWAY	FLOODWAY	YES	NONE

* BFEs - Base Flood Elevations

DETERMINATION

This document provides the determination from the Department of Homeland Security's Federal Emergency Management Agency (FEMA) regarding a request for a Letter of Map Revision (LOMR) for the area described above. Using the information submitted, we have determined that a revision to the flood hazards depicted in the Flood Insurance Study (FIS) report and/or National Flood Insurance Program (NFIP) map is warranted. This document revises the effective NFIP map, as indicated in the attached documentation. Please use the enclosed annotated map panels revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals in your community.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on our website at https://www.fema.gov/flood-insurance.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)

COMMUNITY INFORMATION

APPLICABLE NFIP REGULATIONS/COMMUNITY OBLIGATION

We have made this determination pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Pursuant to Section 1361 of the National Flood Insurance Act of 1968, as amended, communities participating in the NFIP are required to adopt and enforce floodplain management regulations that meet or exceed NFIP criteria. These criteria, including adoption of the FIS report and FIRM, and the modifications made by this LOMR, are the minimum requirements for continued NFIP participation and do not supersede more stringent State/Commonwealth or local requirements to which the regulations apply.

We provide the floodway designation to your community as a tool to regulate floodplain development. Therefore, the floodway revision we have described in this letter, while acceptable to us, must also be acceptable to your community and adopted by appropriate community action, as specified in Paragraph 60.3(d) of the NFIP regulations.

COMMUNITY REMINDERS

We based this determination on the 1-percent-annual-chance flood discharges computed in the FIS for your community without considering subsequent changes in watershed characteristics that could increase flood discharges. Future development of projects upstream could cause increased flood discharges, which could cause increased flood hazards. A comprehensive restudy of your community's flood hazards would consider the cumulative effects of development on flood discharges subsequent to the publication of the FIS report for your community and could, therefore, establish greater flood hazards in this area.

Your community must regulate all proposed floodplain development and ensure that permits required by Federal and/or State/Commonwealth law have been obtained. State/Commonwealth or community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction or may limit development in floodplain areas. If your State/Commonwealth or community has adopted more restrictive or comprehensive floodplain management criteria, those criteria take precedence over the minimum NFIP requirements.

We will not print and distribute this LOMR to primary users, such as local insurance agents or mortgage lenders; instead, the community will serve as a repository for the new data. We encourage you to disseminate the information in this LOMR by preparing a news release for publication in your community's newspaper that describes the revision and explains how your community will provide the data and help interpret the NFIP maps. In that way, interested persons, such as property owners, insurance agents, and mortgage lenders, can benefit from the information.

This revision has met our criteria for removing an area from the 1-percent-annual-chance floodplain to reflect the placement of fill. However, we encourage you to require that the lowest adjacent grade and lowest floor (including basement) of any structure placed within the subject area be elevated to or above the Base (1-percent-annual-chance) Flood Elevation.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on our website at https://www.fema.gov/flood-insurance.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)

We have designated a Consultation Coordination Officer (CCO) to assist your community. The CCO will be the primary liaison between your community and FEMA. For information regarding your CCO, please contact:

Kathryn Lipiecki
Director, Mitigation Division
Federal Emergency Management Agency, Region IX
1111 Broadway, Suite 1200
Oakland, CA 94607-4052
(510) 627-7211

STATUS OF THE COMMUNITY NFIP MAPS

We will not physically revise and republish the FIRM and FIS report for your community to reflect the modifications made by this LOMR at this time. When changes to the previously cited FIRM panel(s) and FIS report warrant physical revision and republication in the future, we will incorporate the modifications made by this LOMR at that time.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on our website at https://www.fema.gov/flood-insurance.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

Att. B, Item 05, 04/09/2026

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)

PUBLIC NOTIFICATION OF REVISION

A notice of changes will be published in the *Federal Register*. This information also will be published in your local newspaper on or about the dates listed below, and through FEMA's Flood Hazard Mapping website at https://www.floodmaps.fema.gov/fhm/bfe_status/bfe_main.asp

LOCAL NEWSPAPER

Name: *The San Diego Daily Transcript*
Dates: April 17, 2023 and April 24, 2023

Within 90 days of the second publication in the local newspaper, any interested party may request that we reconsider this determination. Any request for reconsideration must be based on scientific or technical data. Therefore, this letter will be effective only after the 90-day appeal period has elapsed and we have resolved any appeals that we receive during this appeal period. Until this LOMR is effective, the revised flood hazard determination presented in this LOMR may be changed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Mapping and Insurance eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on our website at https://www.fema.gov/flood-insurance.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Encanto Branch								
A	345	31	320	10.9	110.4	110.4	110.8	0.4
B	827	99	852	4.1	115.7	115.7	116.6	0.9
C	1,055	108	803	4.4	115.7	115.7	116.6	0.9
D	1,430	66	313	11.2	122.1	122.1	122.2	0.1
E	1,960	67	380	9.2	127.5	127.5	128.0	0.5
F	2,290	68	512	6.8	131.2	131.2	131.9	0.7
G	2,770	62	368	9.5	132.9	132.9	133.3	0.4
H	3,300	60	331	10.6	137.6	137.6	137.6	0.0
I	4,160	77	280	14.1	144.5	144.5	144.5	0.0

REVISED BY LOMR EFFECTIVE: MAY 30,2017

REVISED DATA

[1] Feet Above Confluence with Las Chollas Creek

REVISED TO REFLECT LOMR EFFECTIVE: August 22, 2023

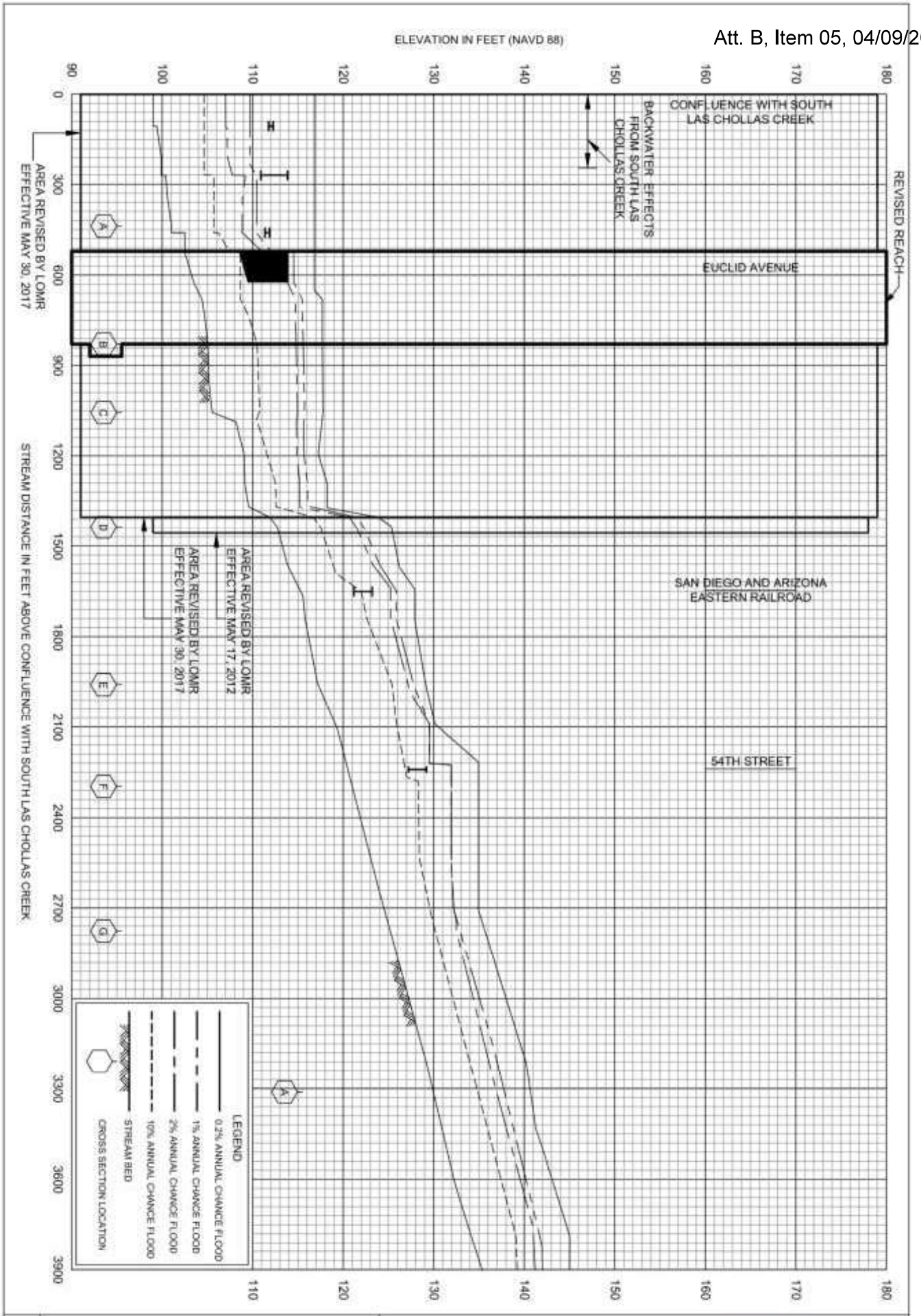
TABLE 13

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN DIEGO COUNTY, CA
AND INCORPORATED AREAS

FLOODWAY DATA

ENCANTO BRANCH



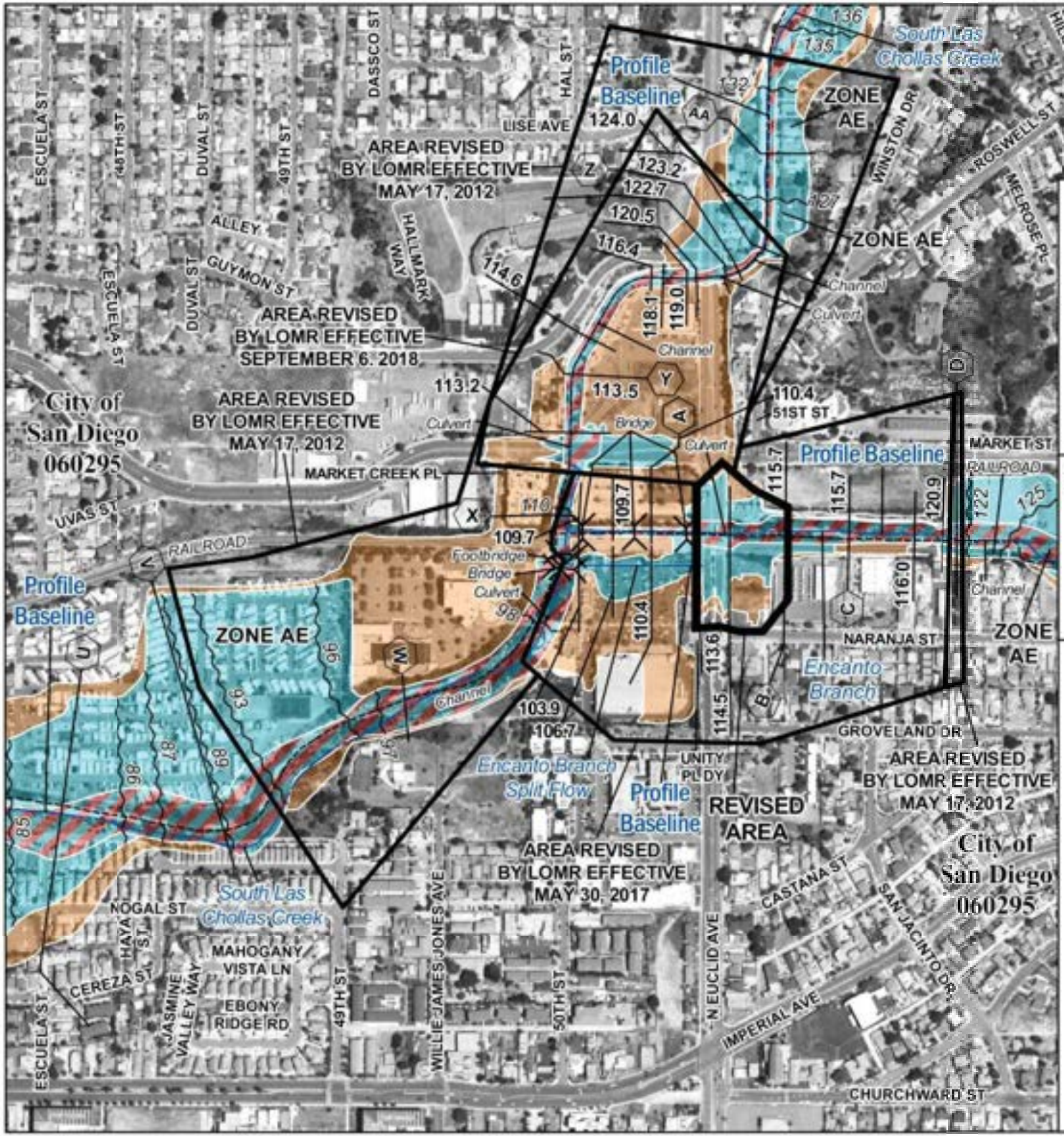
115P

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN DIEGO COUNTY, CA
AND INCORPORATED AREAS

FLOOD PROFILES REVISED TO REFLECT LOMR EFFECTIVE: August 22, 2023

ENCANTO BRANCH



SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) — Zone A, V, A99
- With BFE or Depth — Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile — Zone X
- Future Conditions 1% Annual Chance Flood Hazard — Zone X
- Area with Reduced Flood Risk due to Levee See Notes. — Zone X

OTHER AREAS
- Area of Undetermined Flood Hazard — Zone D

SCALE

Map Projection: NAD 1983 UTM Zone 11N; Western Hemisphere; Vertical Datum: NAVD 88

N

1 inch = 500 feet 1:6,000

0 250 500 1,000 Feet

0 75 150 300 Meters

FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

SAN DIEGO COUNTY, CALIFORNIA and Incorporated Areas

PANEL 1904 of 2375

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
NATIONAL CITY, CITY OF	060293	1904	G
SAN DIEGO, CITY OF	060295	1904	G

REVISED TO REFLECT LOMR EFFECTIVE: August 22, 2023

VERSION NUMBER 2.3.3.0

MAP NUMBER 06073C1904G

MAP REVISED MAY 16, 2012

Att. B, Item 05, 04/09/2026

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION DETERMINATION DOCUMENT

COMMUNITY AND REVISION INFORMATION		PROJECT DESCRIPTION	BASIS OF REQUEST
COMMUNITY	City of San Diego San Diego County California	FILL GRADING	1D HYDRAULIC ANALYSIS FLOODWAY UPDATED TOPOGRAPHIC DATA
	COMMUNITY NO.: 060295		
IDENTIFIER	Creekside Pointe Residences	APPROXIMATE LATITUDE & LONGITUDE: 32.709, -117.081 SOURCE: USGS QUADRANGLE DATUM: NAD 83	

ANNOTATED MAPPING ENCLOSURES	ANNOTATED STUDY ENCLOSURES
TYPE: FIRM* NO.: 06073C1904G DATE: May 16, 2012	DATE OF EFFECTIVE FLOOD INSURANCE STUDY: March 22, 2022 PROFILE(S): 115P FLOODWAY DATA TABLE: 13

Enclosures reflect changes to flooding sources affected by this revision.
* FIRM - Flood Insurance Rate Map

FLOODING SOURCE(S) & REVISED REACH(ES)

Encanto Branch - From approximately 700 feet downstream to approximately 50 feet upstream of 54th Street.

SUMMARY OF REVISIONS

Flooding Source	Effective Flooding	Revised Flooding	Increases	Decreases
Encanto Branch	BFEs*	BFEs	NONE	YES
	ZONE AE	ZONE AE	YES	YES
	ZONE X (SHADED)	ZONE X (SHADED)	YES	YES
	FLOODWAY	FLOODWAY	YES	YES

* BFEs - Base Flood Elevations

DETERMINATION

This document provides the determination from the Department of Homeland Security's Federal Emergency Management Agency (FEMA) regarding a request for a Letter of Map Revision (LOMR) for the area described above. Using the information submitted, we have determined that a revision to the flood hazards depicted in the Flood Insurance Study (FIS) report and/or National Flood Insurance Program (NFIP) map is warranted. This document revises the effective NFIP map, as indicated in the attached documentation. Please use the enclosed annotated map panels revised by this LOMR for floodplain management purposes and for all flood insurance policies and renewals in your community.

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Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)

COMMUNITY INFORMATION

APPLICABLE NFIP REGULATIONS/COMMUNITY OBLIGATION

We have made this determination pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 93-234) and in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, P.L. 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Pursuant to Section 1361 of the National Flood Insurance Act of 1968, as amended, communities participating in the NFIP are required to adopt and enforce floodplain management regulations that meet or exceed NFIP criteria. These criteria, including adoption of the FIS report and FIRM, and the modifications made by this LOMR, are the minimum requirements for continued NFIP participation and do not supersede more stringent State/Commonwealth or local requirements to which the regulations apply.

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Engineering Services Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)

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Kathryn Lipiecki
Director, Mitigation Division
Federal Emergency Management Agency, Region IX
1111 Broadway, Suite 1200
Oakland, CA 94607-4052
(510) 627-7211

STATUS OF THE COMMUNITY NFIP MAPS

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Engineering Services Branch
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION
DETERMINATION DOCUMENT (CONTINUED)

PUBLIC NOTIFICATION OF REVISION

A notice of changes will be published in the *Federal Register*. This information also will be published in your local newspaper on or about the dates listed below, and through FEMA's Flood Hazard Mapping website at https://www.floodmaps.fema.gov/fhm/bfe_status/bfe_main.asp

LOCAL NEWSPAPER

Name: *The San Diego Daily Transcript*
Dates: April 24, 2024 and May 1, 2024

Within 90 days of the second publication in the local newspaper, any interested party may request that we reconsider this determination. Any request for reconsideration must be based on scientific or technical data. Therefore, this letter will be effective only after the 90-day appeal period has elapsed and we have resolved any appeals that we receive during this appeal period. Until this LOMR is effective, the revised flood hazard determination presented in this LOMR may be changed.

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Patrick "Rick" F. Sacbibit, P.E., Branch Chief
Engineering Services Branch
Federal Insurance and Mitigation Administration

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Encanto Branch								
A	345	31	320	10.9	110.4	110.4	110.8	0.4
B	827	99	852	4.1	115.7	115.7	116.6	0.9
C	1,055	108	803	4.4	115.7	115.7	116.6	0.9
D	1,430	66	313	11.2	122.1	122.1	122.2	0.1
E	1,941	74	459	7.6	126.4	126.4	127.4	1.0
F	2,290	68	512	6.8	131.2	131.2	131.9	0.7
G	2,770	62	368	9.5	132.9	132.9	133.3	0.4
H	3,300	60	331	10.6	137.6	137.6	137.6	0.0
I	4,160	77	280	14.1	144.5	144.5	144.5	0.0

REVISED BY LOMR EFFECTIVE: May 30, 2017

REVISED DATA

REVISED BY LOMR EFFECTIVE: August 22, 2023

[1] Feet Above Confluence with South Las Chollas Creek

REVISED TO REFLECT LOMR EFFECTIVE: August 29, 2024

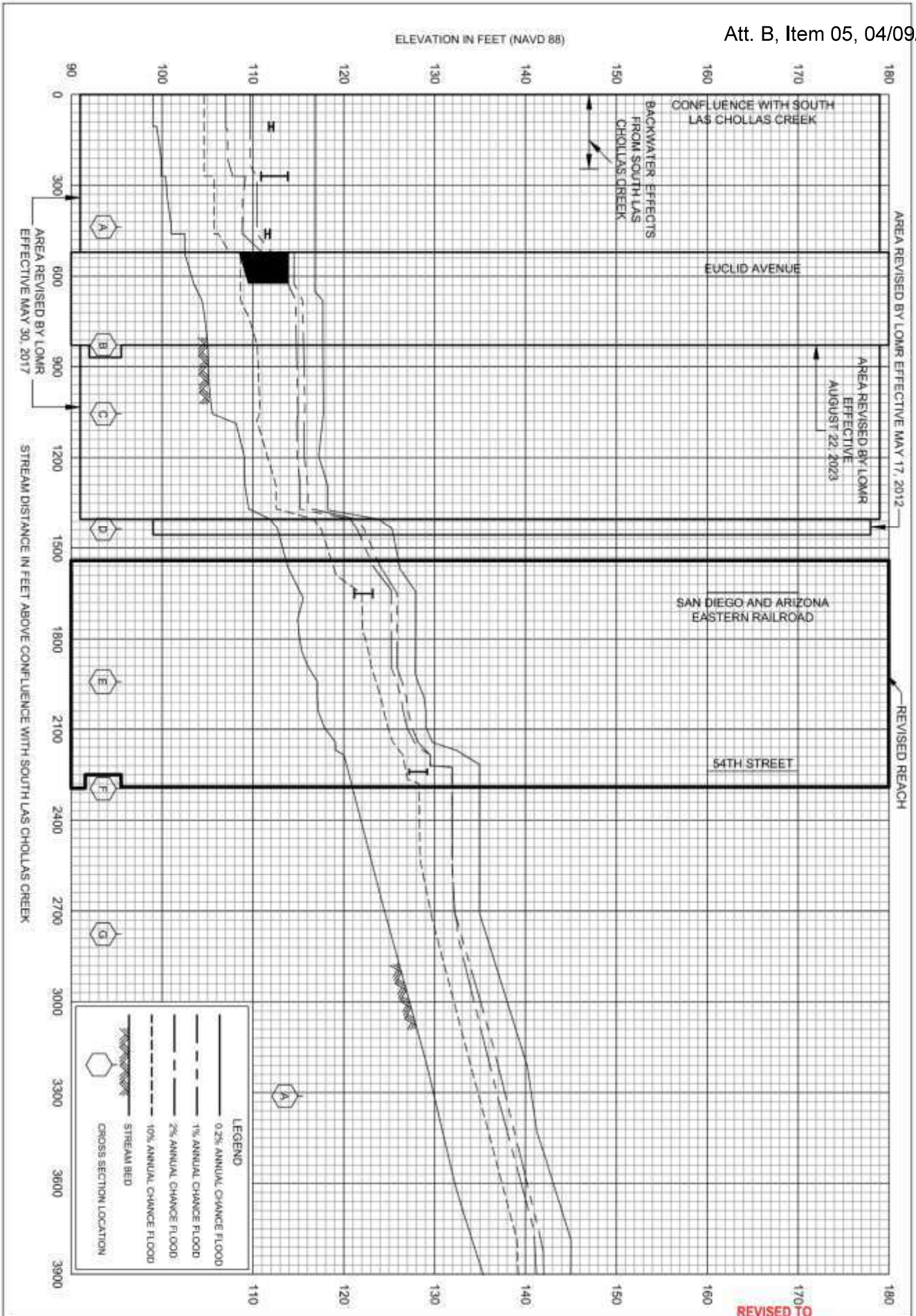
TABLE 13

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN DIEGO COUNTY, CA
AND INCORPORATED AREAS

FLOODWAY DATA

ENCANTO BRANCH



115P

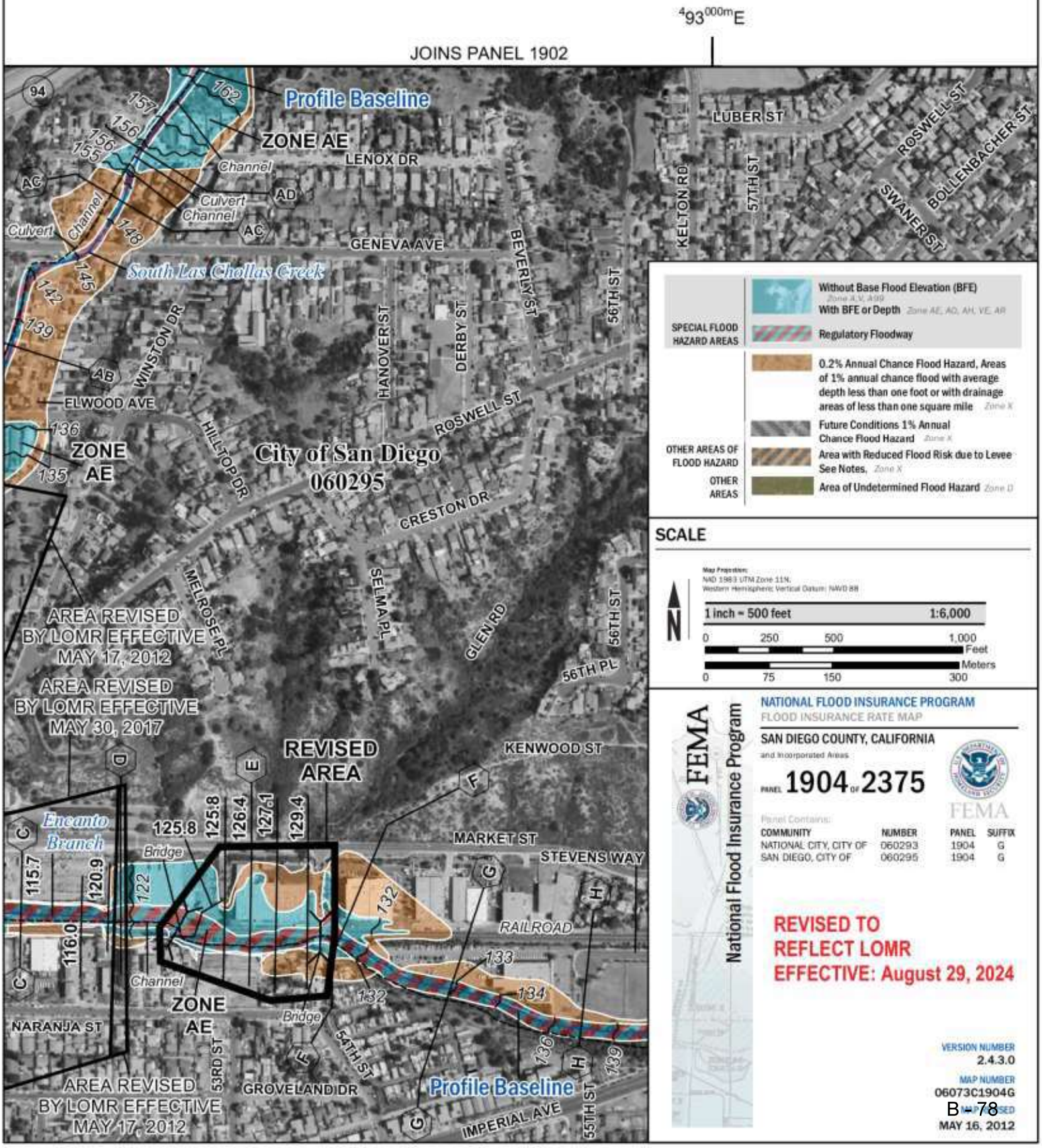
FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN DIEGO COUNTY, CA
AND INCORPORATED AREAS

FLOOD PROFILES

REVISED TO REFLECT LOMR EFFECTIVE: August 29, 2024

ENCANTO BRANCH


4 93 000m E
JOINS PANEL 1902
Profile Baseline
ZONE AE
LENOX DR
Channel
Culvert
Channel
Culvert
Channel
South Las Chollas Creek
GENEVA AVE
LUBER ST
ROSWELL ST
BOLLENBACHER ST
SWANER ST
KELTON RD
57TH ST
BEVERLY ST
56TH ST
HANOVER ST
DERBY ST
WINSTON DR
ELWOOD AVE
HILLTOP DR
ROSWELL ST
City of San Diego
060295
ZONE
AE
CRESTON DR
MELROSE PL
SELMA PL
GLEN RD
56TH ST
56TH PL
AREA REVISED
BY LOMR EFFECTIVE
MAY 17, 2012
AREA REVISED
BY LOMR EFFECTIVE
MAY 30, 2017
REVISED
AREA
KENWOOD ST
Encanto
Branch
Bridge
MARKET ST
STEVENS WAY
RAILROAD
Channel
ZONE
AE
Bridge
NARANJA ST
53RD ST
54TH ST
GROVELAND DR
Profile Baseline
IMPERIAL AVE
55TH ST
AREA REVISED
BY LOMR EFFECTIVE
MAY 17, 2012
SPECIAL FLOOD HAZARD AREAS
Without Base Flood Elevation (BFE)
Zone A,V, A99
With BFE or Depth
Zone AE, AO, AH, VE, AR
Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD
0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile
Zone X
Future Conditions 1% Annual Chance Flood Hazard
Zone X
Area with Reduced Flood Risk due to Levee See Notes,
Zone X
OTHER AREAS
Area of Undetermined Flood Hazard
Zone D
SCALE
Map Projection:
NAD 1983 UTM Zone 11N.
Western Hemisphere; Vertical Datum: NAVD 88
1 inch = 500 feet
1:6,000
0
250
500
1,000
Feet
0
75
150
300
Meters
FEMA
National Flood Insurance Program
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
SAN DIEGO COUNTY, CALIFORNIA
and Incorporated Areas
PANEL 1904 OF 2375
Panel Contains:
COMMUNITY
NUMBER
PANEL
SUFFIX
NATIONAL CITY, CITY OF
060293
1904
G
SAN DIEGO, CITY OF
060295
1904
G
REVISED TO
REFLECT LOMR
EFFECTIVE: August 29, 2024
VERSION NUMBER
2.4.3.0
MAP NUMBER
06073C1904G
MAP REVISED
MAY 16, 2012

Crash Diagram

Primary Street:
Euclid Ave

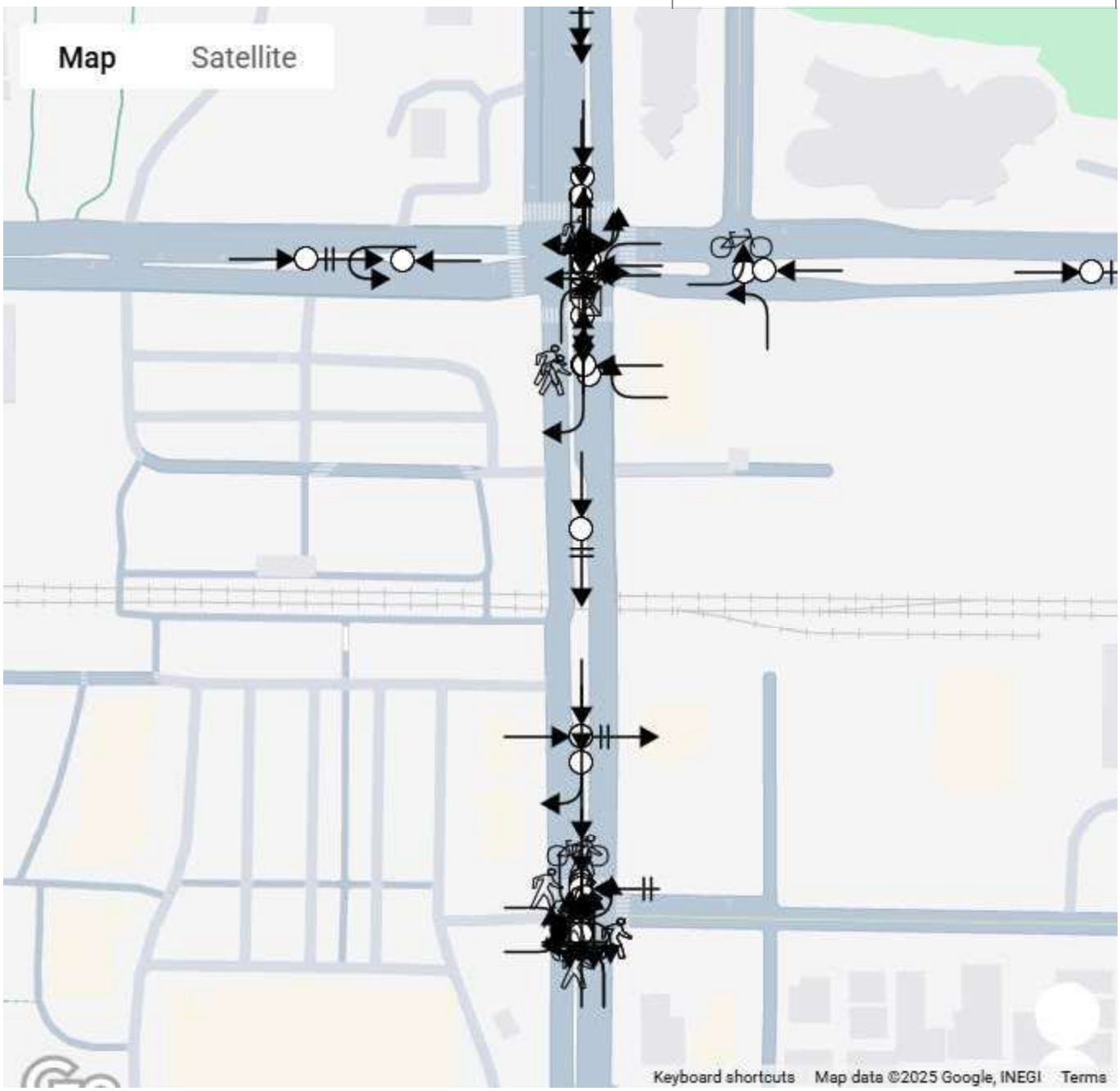
Secondary Street:
Market St

Time Period:
01-01-2013 to 12-31-2024

Agency Name:
Mott MacDonald

Mapping Summary:	
Fatal Crash	0
Injury Crash	51
Mapped	51
Not Drawn	25
Total	76

- Straight
- Left Turn
- Right Turn
- U-Turn
- Overturned
- Ran Off Road
- Stopped
- Parked
- Pedestrian
- Bicycle
- Object
- Fatal Crash
- Injury Crash



Date Created: 06/24/2025

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DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION (FRA)

HIGHWAY-RAIL GRADE CROSSING ACCIDENT/INCIDENT REPORT

OMB Approval No. 2130-0500

1.Name of Reporting Railroad: **San Diego & Imperial Valley [SDIY]**	1a. Alphabetic Code: **SDIY**	1b. Railroad Accident/Incident No.: **SDI691321G**
2.Name of Other Railroad or Other Entity Filling for Equipment Involved in Train Accident/Incident	2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. Name of Railroad or Other Entity Responsible for Track Maintenance *(single entry)*: **San Diego Trolley Incorporated [SDTI]**	3a. Alphabetic Code: **SDTI**	3b. Railroad Accident/Incident No.: **XXXX**
4. U.S. DOT Grade Crossing ID No.: **661903K**	5. Date of Accident/Incident (month/day/year): **0 2 / 1 4 / 2021**	6. Time of Accident/Incident: **11:45** AM ☐ PM ☑
7. Nearest Railroad Station: **SAN DIEGO**	8. Subdivision: **BLUE LINE**	9. County: **SAN DIEGO**
10. State Abbr.: **CA** Code: **06**		
11. City *(if in a city)*: **SAN DIEGO**	12. Highway Name or No.: **EUCLID AVE** Public ☑ Private ☐	

Highway User Involved

13. Type — C. Truck-trailer, F. Bus, J. Other Motor Vehicle; A. Auto, D. Pick-up truck, G. School Bus, K. Pedestrian; B. Truck, E. Van, H. Motorcycle, M. Other *(specify)*. Code: **K**

14. Vehicle Speed *(est. mph at impact)*:

15. Direction *(geographical)* 1. North 2. South 3. East 4. West. Code: **2**

16. Position — 1. Stalled or stuck on crossing; 2. Stopped on Crossing; 3. Moving over crossing; 4. Trapped on crossing by traffic; 5. Blocked on crossing by gates. Code: **3**

20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither. Code: **4**

Rail Equipment Involved

17. Equipment — 1. Train *(units pulling)*; 2. Train *(units pushing)*; 3. Train *(standing)*; 4. Car(s) *(moving)*; 5. Car(s) *(standing)*; 6. Light loco(s) *(moving)*; 7. Light loco(s) *(standing)*; 8. Other *(specify)*; A. Train pulling- RCL; B. Train pushing- RCL; C. Train standing- RCL; D. EMU Locomotive(s); E. DMU Locomotive(s). Code: **1**

18. Position of Car Unit in Train: **1**

19. Circumstance — 1. Rail equipment struck highway user 2. Rail equipment struck by highway user. Code: **1**

20b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither. Code: **4**

20c. State here the name and quantity of the hazardous material released, if any

21. Temperature *(specify if minus)*: **50** °F

22. Visibility *(single entry)* 1. Dawn 2. Day 3. Dusk 4. Dark. Code: **4**

23. Weather *(single entry)* 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow. Code: **1**

24. Type of Equipment Consist *(single entry)* — 1. Freight Train; 2. Passenger Train-Pulling; 3. Commuter Train-Pulling; 4. Work Train; 5. Single Car; 6. Cut of cars; 7. Yard/Switching; 8. Light loco(s); 9. Maint./inspect. car; A. Spec. MoW Equip.; B. Passenger Train-Pushing; C. Commuter Train-Pushing; D. EMU; E. DMU. Code: **1**

25. Track Type Used by Rail Equipment Involved 1. Main 2. Yard 3. Siding 4. Industry. Code: **1**

26. Track Number or Name: **SOUTH MAIN TRACK**

27. FRA Track Class (1-9,X): **3**

28. Number of Locomotive Units: **2**

29. Number of Cars: **5**

30. Consist Speed *(Recorded speed if available)* R. Recorded E. Estimated: **40** mph. Code: **R**

31. Time Table Direction 1. North 2. East 3. South 4. West. Code: **3**

32. Type of Crossing Warning — 1. Gates; 2. Cantilever FLS; 3. Standard FLS; 4. Wig wags; 5. Hwy. traffic signals; 6. Audible; 7. Crossbucks; 8. Stop signs; 9. Watchman; 10. Flagged by crew; 11. Other *(specify)*; 12. None. Code(s): **01 03 06 07**

33. Signaled Crossing Warning (See reverse side for instructions and codes). Code: **1**

34. Roadway Conditions — A. Dry; B. Wet; C.Snow/Slush; D.Ice; E. Sand,Mud,Dirt,Oil,Gravel; F.Water (Standing, Moving). Code: **A**

35. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach. Code: **1**

36. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown. Code: **2**

37. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown. Code: **2**

38. Highway User's Age: **38**

39. Highway User's Gender 1. Male 2. Female. Code: **1**

40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown. Code: **2**

41. Highway User 1. Went around the gate; 2. Stopped and then proceeded; 3. Did not stop; 4. Stopped on crossing; 5. Other *(specify)*; 6. Went around/thru temporary barricade (if yes, see instructions); 7. Went thru the gate; 8. Suicide/Attempted suicide. Code: **1**

42. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown. Code:

43. View of Track Obscured by *(primary obstruction)* 1. Permanent Structure; 2. Standing railroad equipment; 3. Passing Train; 4. Topography; 5. Vegetation; 6. Highway Vehicles; 7. Other (specify); 8. Not Obstructed. Code: **8**

Casualties to:	Killed	Injured
46. Highway-Rail Crossing Users	0	1
49. Railroad Employees	0	0
52. Passengers on Train	0	0

44. Driver was 1. Killed 2. Injured 3. Uninjured

45. Was Driver in the Vehicle? 1. Yes 2. No. Code:

47. Highway Vehicle Property Damage *(est. dollar damage)*: **$0**

48. Total Number of Vehicle Occupants *(including driver)*: **0**

50. Total Number of People on Train *(include passengers and train crew)*: **2**

51. Is a Rail Equipment Accident / Incident Report Being Filed 1. Yes 2. No. Code: **2**

53a. Special Study Block — Video Taken? ☑ Yes ☐ No; Video Used? ☑ Yes ☐ No

53b. Special Study Block

54. Narrative Description *(Be specific, and continue on separate sheet if necessary)*

A TRAIN CREW WAS TRAVELING EASTBOUND ON THE SAN DIEGO TROLLEY LINE. AS THE TRAIN CREW APPROACHED THE EUCLID TROLLEY STATION/EUCLID STREET CROSSING, A TRESPASSER DUCKED UNDER THE GATES AND WALKED IN FRONT OF TRAIN. SUBSEQUENTLY THE TRESPASSER WAS STRUCK BY LEAD LOCOMOTIVE. THE TRAIN CREW NOTIFIED THE TROLLEY CONTROLLER WHO DISPATCHED THE TROLLEY SECURITY TEAM ALONG WITH PARAMEDICS. THE TRESPASSER WAS TRANSPORTED TO HOSPITAL FOR SEVERE INJURIES.

55. Typed Name and Title | 56. Signature | 57. Date

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report...." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

Appendix B – Geotechnical Desktop Study

Geotechnical Desktop Study
San Diego Metropolitan Transit System (MTS) Euclid Grade Study
San Diego, California

Mott MacDonald Group, Inc.
750 B Street, Suite 2880 | San Diego, California 92101

July 29, 2025 | Project No. 109424005

Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore
A SOCOTEC COMPANY

Ninyo & Moore
A SOCOTEC COMPANY

Geotechnical Desktop Study
San Diego Metropolitan Transit System (MTS) Euclid Grade Study
San Diego, California

Mr. Peter Smith
Mott MacDonald Group, Inc.
750 B Street, Suite 2880 | San Diego, California 92101

July 29, 2025 | Project No. 109424005

Christina Tretinjak, PG, CEG
Senior Project Geologist

KWK/GS/CAT/GTF/co

CERTIFIED ENGINEERING GEOLOGIST
Christina A. Tretinjak
No. 2650
STATE OF CALIFORNIA

Gregory T. Farrand, PG, CEG
Principal Geologist

REGISTERED GEOLOGIST
GREGORY T. FARRAND
No. 1017
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

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2 SCOPE OF SERVICES 1
3 SITE AND PROJECT DESCRIPTION 1
4 GEOLOGIC AND SUBSURFACE CONDITIONS 2
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3 – Geology
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1 INTRODUCTION

In accordance with our proposal and your authorization, we have performed a geotechnical desktop study for the Metropolitan Transit System (MTS) Euclid Grade Study in San Diego, California (Figure 1). The purpose of our evaluation was to perform a desktop review of existing information on soil conditions from previous adjacent projects and provide documentation of findings, provide conceptual parameters for input into the feasibility of various structures, and to prepare boring plan recommendations for future subsurface investigations.

2 SCOPE OF SERVICES

Our scope of services for this evaluation included the following:

- Reviewing background information including available geotechnical reports, environmental reports, topographic maps, geologic maps, fault maps, flood zone maps, groundwater data, and aerial photographs.
- Coordinating with the client and the owner to gain access to the site for our personnel.
- Performing a site reconnaissance by an engineering geologist.
- Compiling and performing analyses of the data obtained.
- Preparing this illustrated report to provide our findings and conclusions related to the geologic and geotechnical conditions at the site, and potential geologic and geotechnical constraints for the proposed improvements.

3 SITE AND PROJECT DESCRIPTION

The project site is the Euclid trolley station located southwest of the intersection of Market Street and Euclid Avenue located in the Chollas View neighborhood in San Diego, California (Figure 1). The site consists of the Portland cement concrete (PCC) paved trolley tacks to the south, and PCC and asphalt concrete parking lot to the north. The surrounding area is developed with commercial properties. The site is located within a mapped floodway associated with the Chollas Creek, which is located to the north and west of the station. Additionally, the Encanto Channel passes through a concrete-lined culvert between the trolley tracks and parking lot. The elevation of the site is approximately 110 feet above mean sea level and drainage is to the west. The global coordinates of the project site are approximately 32.7095°N Latitude and 117.0859°W Longitude.

We understand that the project consists of an alternatives analysis for upgrading the Euclid trolley station in order to minimize delays on Euclid Avenue when the trolley passes through. The alternatives being considered for the project include raising the trolley line and freight line over

Euclid Avenue, raising the trolley over Euclid Avenue and maintaining the freight line at grade, and raising Euclid Avenue over the trolley tracks. Each of the proposed alternatives will be supported on deep foundations.

4 GEOLOGIC AND SUBSURFACE CONDITIONS

Our findings regarding regional and site geology at the project location are provided in the following sections.

4.1 Regional Geologic Setting

The project site is situated in the coastal foothill section of the Peninsular Ranges Geomorphic Province. The province encompasses an area that extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California (Norris and Webb, 1990; Harden, 2004). The province varies in width from approximately 30 to 100 miles. In general, the province consists of rugged mountains underlain by Jurassic metavolcanic and metasedimentary rocks, and Cretaceous igneous rocks of the southern California batholith. The portion of the province in western San Diego County that includes the project area consists generally of uplifted and dissected coastal plain underlain by Tertiary-age sedimentary rocks (Figure 3).

The Peninsular Ranges Province is traversed by a group of sub-parallel faults and fault zones trending roughly northwest (Jennings, 2010). Several of these faults are considered to be active. The Elsinore, San Jacinto and San Andreas faults are active fault systems located northeast of the project area and the Rose Canyon, Coronado Bank, San Diego Trough, and San Clemente faults are active faults located southwest of the project area. Major tectonic activity associated with these and other faults within this regional tectonic framework consists primarily of right-lateral, strike-slip movement. The Rose Canyon Fault Zone, the nearest active fault system, has been mapped approximately 4.5 miles west of the project site. Further discussion of faulting relative to the site is provided in the faulting and seismicity section of this report.

4.2 Site Geology

The geology of the site vicinity is shown on Figure 3. Generalized descriptions of the earth units anticipated at the project site and encountered in previous geotechnical evaluations at the site are provided in the subsequent sections.

4.2.1 Fill

Fill materials are anticipated at the site and were encountered in previous borings near the site. The fill materials are generally anticipated to consist of various shades of brown, moist, medium dense, silty and clayey sand. Scattered gravel was encountered in the fill materials. Previous evaluations encountered fill materials to depths up to approximately 5 below the ground surface. Documentation regarding the placement and compaction of these existing fill materials was not available for our review.

4.2.2 Alluvium

Alluvium is mapped at the site and was encountered in previous borings located near the site, underlying the fill materials (Kennedy and Tan, 2008). The alluvium generally consisted of various shades of brown, medium dense, silty sand, clayey sand, and poorly sorted sand. Gravel and cobbles were encountered within the alluvium.

4.2.3 San Diego Formation

Materials of the San Diego Formation are mapped at the site and were encountered in previous borings adjacent to the site (Kennedy and Tan, 2008). The materials of the San Diego Formation generally consisted of yellowish-brown, moist, moderately cemented, clayey, silty, and poorly sorted sandstone. Gravel was encountered within the San Diego Formation.

4.3 Groundwater

Groundwater was encountered in previous exploratory borings during subsurface exploration adjacent to the site at depths of approximately 24 feet (Geosyntec, 2008). Groundwater levels can fluctuate due to seasonal variations, groundwater withdrawal or injection, and other factors. Additionally, due to the proximity of the Chollas Creek and Encanto Channel to the site, shallow groundwater can be expected seasonally.

5 GEOLOGIC HAZARDS

In general, hazards associated with faulting and seismic activity include strong ground motion, ground rupture, and liquefaction. These considerations and other potential geologic hazards such as flooding, tsunamis, and land sliding are discussed in the following sections.

5.1 Faulting and Seismicity

Based on our review of the referenced geologic maps and stereoscopic aerial photographs, as well as on our geologic review, the site is not underlain by known active or potentially active

faults (i.e., faults that exhibit evidence of ground displacement in the last 11,000 years and 2,000,000 years, respectively). The site is not located within a State of California Earthquake Fault Zone (EFZ) (formerly known as an Alquist-Priolo Special Studies Zone) (Hart and Bryant, 2007). However, like the majority of Southern California, the site is located in a seismically active area and the potential for strong ground motion is considered significant during the design life of the proposed structures. Figure 4 shows the approximate site location relative to the major faults in the region. The nearest known active fault is the Rose Canyon fault, located approximately 4.5 miles west of the site. The La Nacion Fault is mapped approximately 600 feet southeast of the site. However, the La Nacion Fault is not considered an active fault by the State of California. Table 1 lists selected principal known active faults that may affect the subject site, the approximate fault to site distance, and the characteristic magnitudes provided by the United States Geological Survey (USGS) National Seismic Hazard Maps – Fault Parameters website (USGS, 2024a) and the USGS Building Seismic Safety Council 2014 Event Set (USGS, 2024b).

Table 1 – Principal Active Faults

Fault	Approximate Fault-to-Site Distance miles (kilometers)	Characteristic Magnitude
Rose Canyon	4.5 (7.2)	7.0
Coronado Bank	15.6 (25.1)	7.3
Newport-Inglewood (Offshore Segment)	36.7 (59.1)	7.4
Elsinore (Julian Segment)	38.9 (62.6)	7.0
Earthquake Valley	43.4 (69.8)	6.7
Elsinore (Temecula Segment)	43.7 (70.3)	7.1
Elsinore (Coyote Mountain Segment)	47.2 (76.0)	6.8
San Jacinto (Coyote Creek Segment)	59.9 (96.4)	7.0
San Jacinto (Borrego Segment)	61.5 (99.0)	6.8

5.1.1 Ground Rupture

Based on our review of the referenced literature and our site reconnaissance, active faults are not known to cross the project vicinity. Therefore, the potential for ground surface rupture due to faulting at the site is considered low. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

5.1.2 Strong Ground Motion

Considering the proximity of the site to active faults capable of producing a maximum moment magnitude of 6.0 or more, the project area has a high potential for experiencing strong ground

motion. The California Building Code (CBC) specifies that the risk-targeted maximum considered earthquake ground motion response accelerations may be used to evaluate seismic loads for design of buildings and other structures. We recommend that ground motion response accelerations be determined in accordance with CBC and American Society of Civil Engineers (ASCE) Publication 7-22.

5.1.3 Liquefaction and Seismically Induced Settlement

Liquefaction of cohesionless soils can be caused by strong vibratory motion due to earthquakes. Research and historical data indicate that loose granular soils and non-plastic silts that are saturated by a relatively shallow groundwater table are susceptible to liquefaction. The site is mapped by the San Diego Seismic Safety Study as Zone 32, defined as a liquefaction hazard area low potential – fluctuating groundwater, minor drainages". "Based on the relatively loose nature of the underlying soils and shallow groundwater, it is our opinion that liquefaction and seismically induced settlement at the subject site are design considerations. We recommend that a liquefaction hazard analysis including subsurface exploration and laboratory testing be performed prior to the design and construction of improvements.

5.2 Flooding

Based on review of Federal Emergency Management Agency (FEMA) Mapping Information Platform website (2024), the site is mapped as being within a flood hazard zone X, which is defined as "between the limits of base flood and 0.2-percent-annual-chance (or 500-year) flood." The site is located adjacent to a the Chollas Creek which is a regulatory floodway as well as the Encanto Channel. The site is not located within a mapped dam inundation area (CDWR, 2024). Based on this review and our reconnaissance, the potential for significant flooding at the site is a design consideration.

5.3 Tsunamis and Seiches

Tsunamis are long wavelength seismic sea waves (long compared to the ocean depth) generated by sudden movements of the ocean bottom during submarine earthquakes, landslides, or volcanic activity. Seiches are similar oscillating waves on inland or enclosed bodies of water. Based on the location and elevation of the site, the potential for a tsunami or seiche to affect the site is not a design consideration.

5.4 Landsliding

Per Tan (1995), the majority of the site is mapped as “generally susceptible” to landsliding. Based on our review of referenced geologic maps, literature, topographic maps, and stereoscopic aerial photographs, as well as our site reconnaissance, no landslides or indications of deep-seated landsliding were noted underlying the project site. As such, the potential for significant large-scale slope instability at the site is not a design consideration.

5.5 Expansive Soils

Expansive soils generally result from specific clay minerals that have the capacity to shrink or swell in response to changes in moisture content. Shrinking or swelling of foundation soils can lead to damage to slabs, foundations, and other engineered structures, including tilting and cracking. Clayey materials were encountered in previous borings adjacent to the project site. The nature and extent of expansive soils within the proposed project limits, along with recommendations for mitigating expansive materials if present, should be evaluated by subsurface investigation and laboratory testing.

5.6 Corrosive Soils

Caltrans (2021) corrosion criteria defines corrosive soils as those possessing a chloride concentration of 500 ppm or greater, a sulfate concentration of 0.15 percent or greater (i.e., 1,500 ppm or greater), a pH value of 5.5 or less, and/or an electrical resistivity of 1,500 ohm-cm or less. The nature and extent of corrosive soils within the project site should be evaluated by subsurface investigation and laboratory testing.

5.7 Erosion

In general, erosion refers to the process by which soil or earth material is loosened or dissolved and removed from its original location. Erosion can occur by varying processes and may occur in the project area where bare soil is exposed to wind or moving water (both rainfall and surface runoff). The processes of erosion are generally a function of material type, terrain steepness, rainfall or irrigation levels, surface drainage conditions, wind velocity, and general land use. Review of geologic maps and previous soil data indicates that surface soils are generally comprised of sandy materials. Based on the soils anticipated to be underlying the project site, the pavement and flatwork coverage, and gentle gradients of the site topography, the potential for water erosion is considered low.

6 CONCLUSIONS

Based on the results of our geological desktop evaluation, it is our opinion that project design and construction of the proposed improvements will be feasible from a geotechnical standpoint. As part of project design, a subsurface geotechnical evaluation should be performed to evaluate site-specific geotechnical conditions and provide recommendations. Geotechnical considerations include the following:

- The site is anticipated to be underlain by fill materials and alluvium and the San Diego Formation at depth.
- Groundwater in the project vicinity has been encountered as shallow as 24 feet below the ground surface. However, fluctuations in the groundwater elevation and the potential for perched water should be anticipated. Groundwater conditions at the site should be evaluated and considered.
- The project area is not located within a State of California Earthquake Fault Zone. Based on our review of published geologic maps and aerial photographs, no known active faults underlie the project site. The probability of surface fault rupture at the project site is considered to be low. However, the site has a high potential for experiencing strong ground motion and we recommend ground motion response accelerations be evaluated in accordance with CBC and ASCE 7-22.
- The project site is located within a mapped liquefaction hazard area. We recommend a liquefaction hazard analysis be performed prior to the design and construction of proposed improvements.
- The site is located within a mapped regulatory floodway associated with the adjacent Chollas Creek. Additionally, the Encanto Channel is located adjacent to the site. Flood hazards are anticipated to be a design consideration for the project.
- Based on the onsite soils, and the site configuration in the area of the proposed improvements, the project is not anticipated to be susceptible to erosion.
- The existing fill materials encountered on-site should be generally excavatable with heavy duty earth moving equipment in good working condition. However, previous evaluations encountered fill materials containing gravel and cobbles and additional efforts including heavy ripping should be anticipated. Additionally, strongly cemented zones, concretions, gravel, cobbles, and/or boulders may be encountered in the alluvium and materials of the San Diego Formation that may require the use of heavy ripping or core barrels for drilling efforts. Excavatability of the underlying materials should be evaluated as part of a subsurface evaluation at the site.
- On-site excavations are anticipated to generate oversize material. Additional processing and handling of these materials, including screening, should be anticipated prior to reuse as engineered fill.

7 POTENTIAL CONSTRUCTION CONSTRAINTS

Based on our review of the referenced background data, it is our opinion that the following geological characteristics of the project site will require specific consideration when designing the project. Fill materials associated with the existing site and underground utilities may be loosely or

inadequately compacted, may contain oversize materials unsuitable for reuse in engineered fills, and may contain unsuitable organic or expansive materials and debris that may preclude their use in engineered fills. Based on our experience with previous work in the project area, some soils at the project site may be expansive and corrosive. The site is mapped in a flood zone associated with the adjacent Chollas Creek and Encanto Branch drainage channel. Alluvial sediments may be subject to seismic settlement and/or liquefaction during a nearby seismic event. Alluvial sediments may be subject to caving during excavation of deep foundations.

8 RECOMMENDATIONS FOR FUTURE INVESTIGATION

We recommend that a subsurface exploration program with associated geotechnical laboratory testing be performed for the selected track and structure construction. We recommend that along the proposed track improvements, one boring be performed for every 100 feet of track length and two borings be performed at the proposed new structure location. In areas where deep foundations are anticipated, we recommend that borings be performed to 10 feet below the anticipated bottom of foundations, depending on soil conditions. In areas where shallow foundations are anticipated, we recommend that borings be performed to 25 feet below the proposed footprint of the structure, depending on soil conditions. We recommend that cone penetration test (CPT) soundings be performed in areas mapped within liquefaction hazard areas to evaluate liquefaction potential. Additionally, CPT soundings may be used to evaluate the change in shearwave velocity of the subsurface materials to provide the basis to evaluate the seismic ground motion response accelerations at the site.

9 LIMITATIONS

The desktop geological assessment and analyses presented in this report have been conducted in accordance with current engineering practice and the standard of care exercised by reputable geotechnical consultants performing similar tasks in this area. No warranty, implied or expressed, is made regarding the conclusions, recommendations, and professional opinions expressed in this report. Variations may exist and conditions not identified or described in this report may be encountered. Our preliminary conclusions and recommendations area based on a review of the reported conditions and the referenced background information. A geologic field reconnaissance of the site to observe site conditions was not performed as part of the preparation of this desktop geological assessment.

The purpose of this study was to evaluate geologic conditions within the project site and to provide a preliminary desktop geological assessment report to assist in the preparation of environmental

impact documents for the project. A comprehensive geotechnical evaluation, including field reconnaissance, subsurface exploration and laboratory testing, should be performed prior to design and construction of structural improvements.

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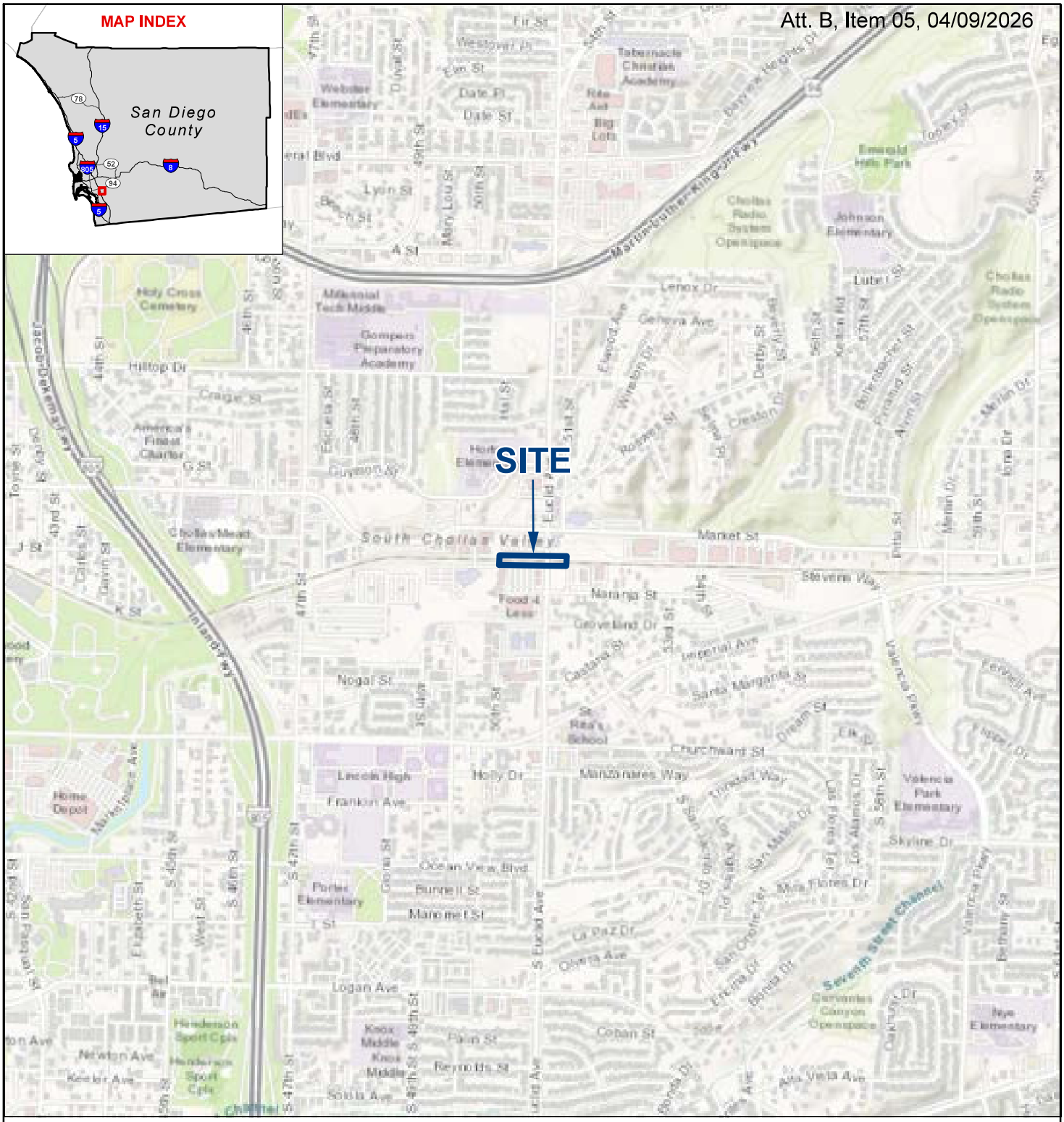
FIGURES



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE. | SOURCE: ESRI WORLD TOPO, 2025

1_109424005_SL_Euclid.mxd 7/17/2025 AOB

FIGURE 1

SITE LOCATION

EUCLID GRADE CROSSING
EUCLID AVENUE STATION
SAN DIEGO, CALIFORNIA

109424005

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

LEGEND

SITE BOUNDARY

N

FEET

0 100 200

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE. | SOURCE: GOOGLE EARTH, 2025

2_109424005_ASP_Euclid.mxd 7/24/2025 AOB

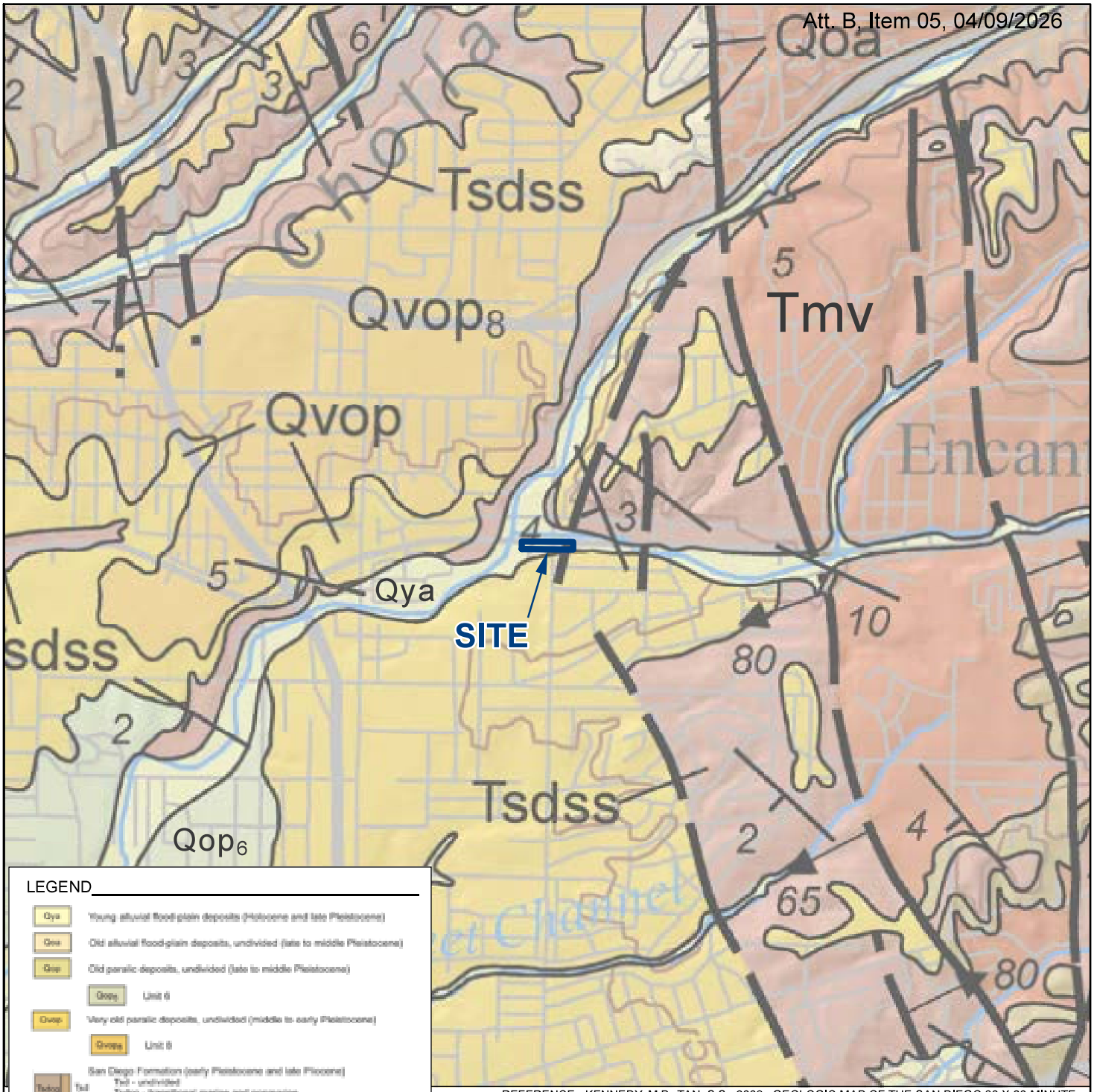
FIGURE 2

AERIAL SITE PLAN

EUCLID GRADE CROSSING
EUCLID AVENUE STATION
SAN DIEGO, CALIFORNIA

109424005 | 7/25

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants



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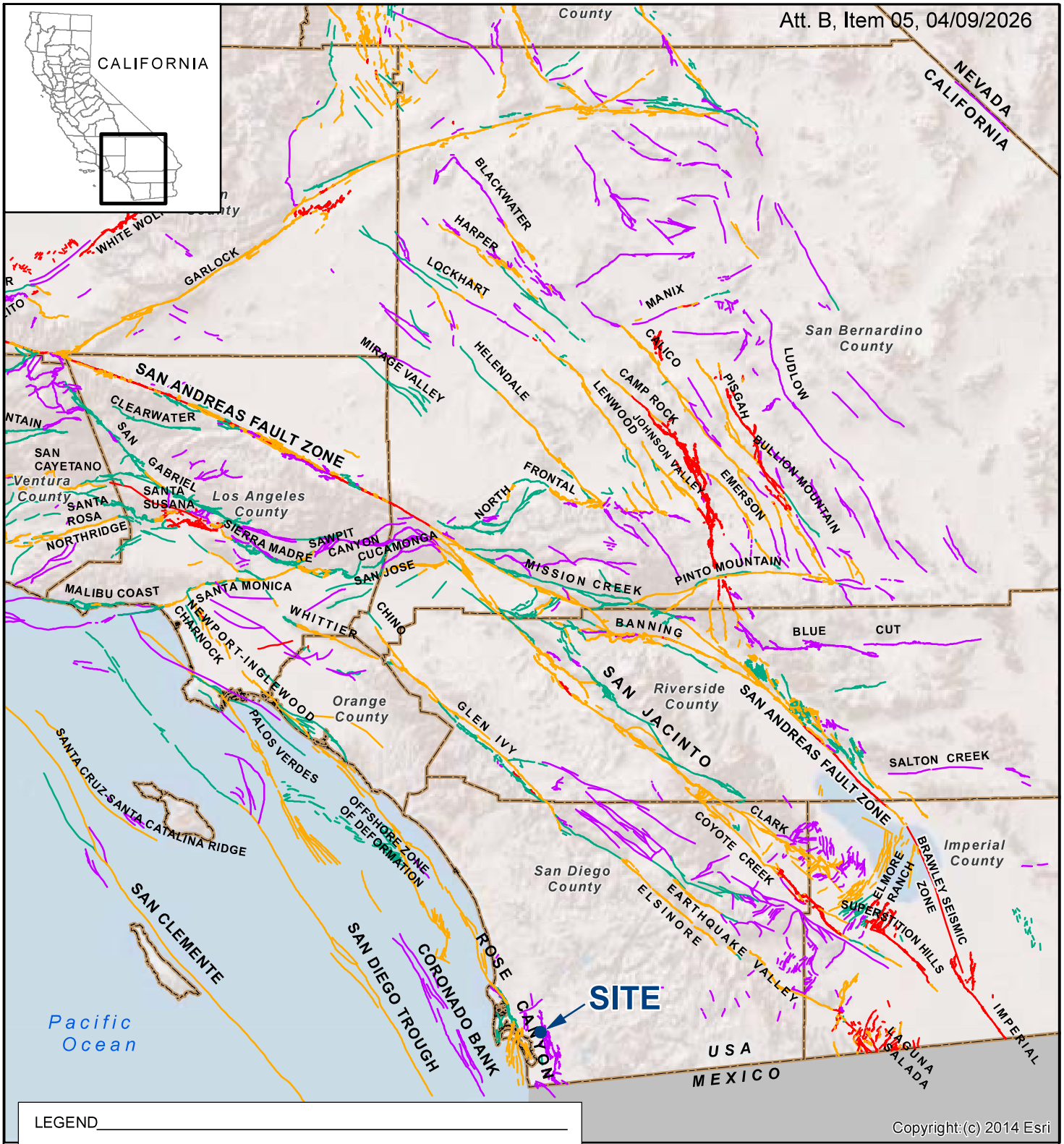
NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

3_109424005_G_Euclid.mxd 7/17/2025 AOB

FIGURE 3

GEOLOGY
EUCLID GRADE CROSSING
EUCLID AVENUE STATION
SAN DIEGO, CALIFORNIA
109424005

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants



LEGEND

CALIFORNIA FAULT ACTIVITY

- HISTORICALLY ACTIVE
- HOLOCENE ACTIVE
- LATE QUATERNARY (POTENTIALLY ACTIVE)
- QUATERNARY (POTENTIALLY ACTIVE)
- STATE/COUNTY BOUNDARY

SOURCE: U.S. GEOLOGICAL SURVEY AND CALIFORNIA GEOLOGICAL SURVEY, 2006, QUATERNARY FAULT AND FOLD DATABASE FOR THE UNITED STATES.

N

MILES

0 30 60

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

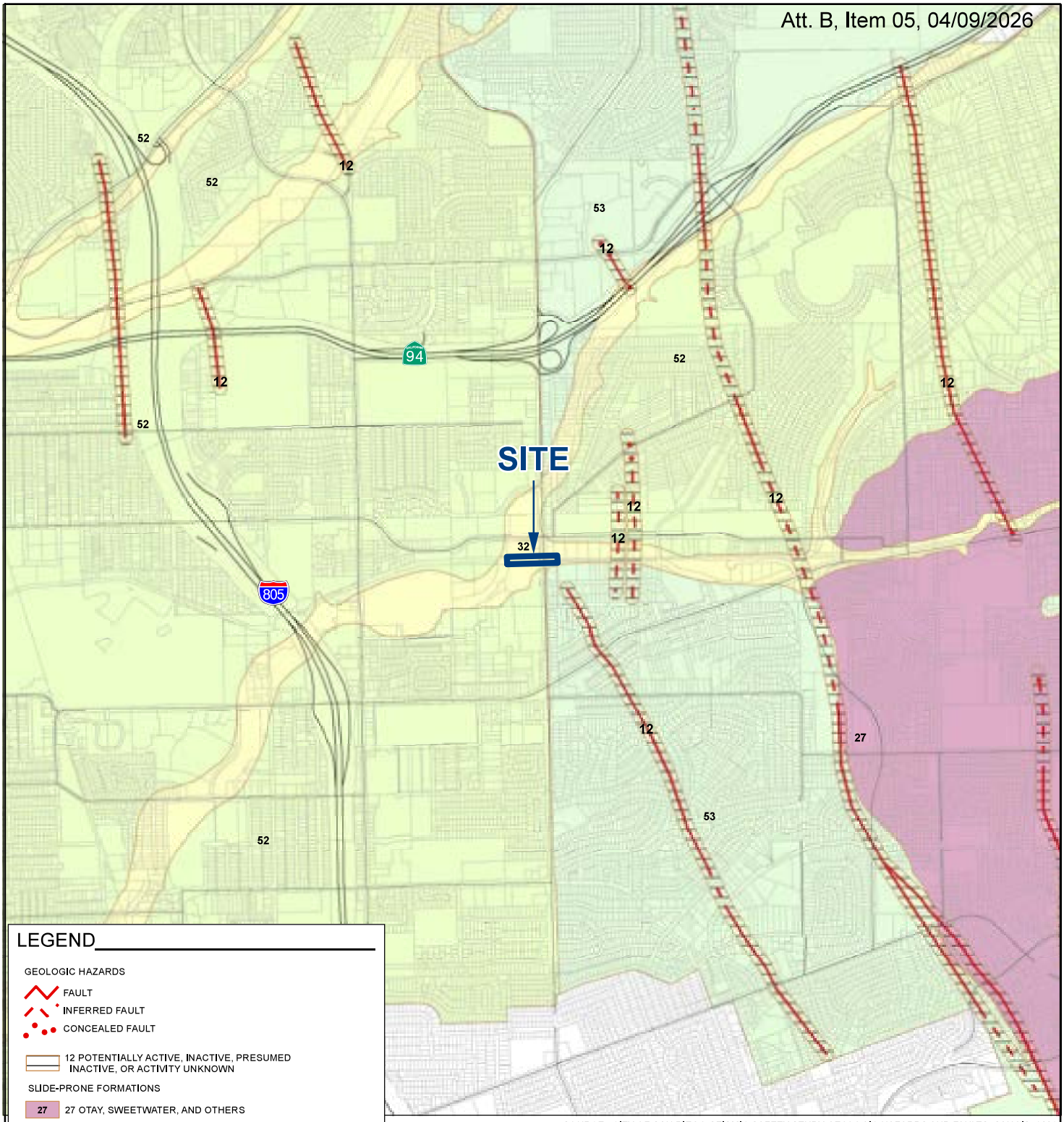
4_109424005_FL_Euclid.mxd 7/17/2025 AOB

FIGURE 4

FAULT LOCATIONS
EUCLID GRADE CROSSING
EUCLID AVENUE STATION
SAN DIEGO, CALIFORNIA

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

109424005



LEGEND

GEOLOGIC HAZARDS

FAULT

INFERRED FAULT

CONCEALED FAULT

12 POTENTIALLY ACTIVE, INACTIVE, PRESUMED INACTIVE, OR ACTIVITY UNKNOWN

SLIDE-PRONE FORMATIONS

27 — 27 OTAY, SWEETWATER, AND OTHERS

LIQUEFACTION

32 — 32 LOW POTENTIAL -- FLUCTUATING GROUNDWATER MINOR DRAINAGES

OTHER TERRAIN

52 — 52 OTHER LEVEL AREAS, GENTLY SLOPING TO STEEP TERRAIN, FAVORABLE GEOLOGIC STRUCTURE, LOW RISK

53 — 53 LEVEL OR SLOPING TERRAIN, UNFAVORABLE GEOLOGIC STRUCTURE, LOW TO MODERATE RISK

SOURCE: CITY OF SAN DIEGO SEISMIC SAFETY STUDY GEOLOGIC HAZARDS AND FAULTS, SANGIS, 2008

N

FEET

0 2,000 4,000

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

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FIGURE 5

GEOLOGIC HAZARDS
EUCLID GRADE CROSSING
EUCLID AVENUE STATION
SAN DIEGO, CALIFORNIA

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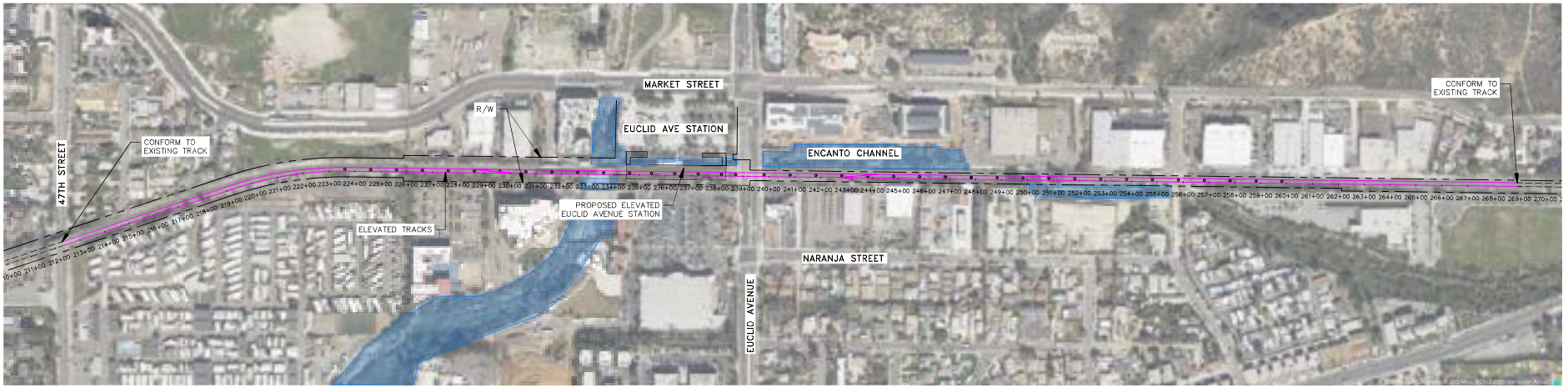
Appendix C – Alternatives 1, 2, & 4 Exhibits, Schedules, and Cost Estimates

- Plan and Profile Exhibits
- Construction Schedules
- Construction Cost Estimates



PLAN

GRAPHIC SCALE
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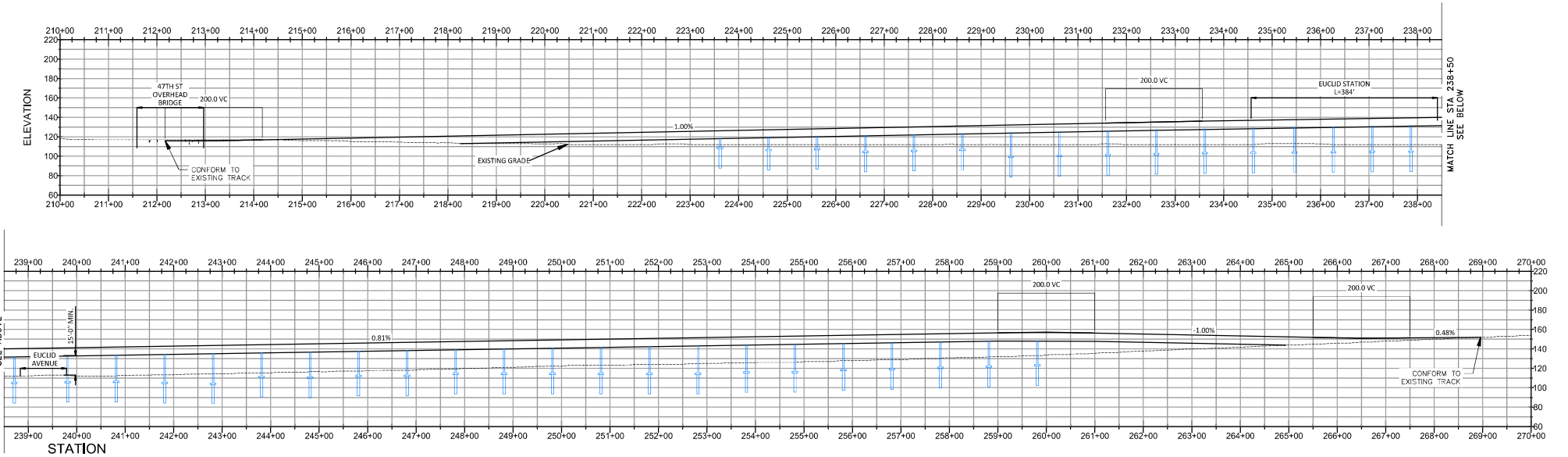
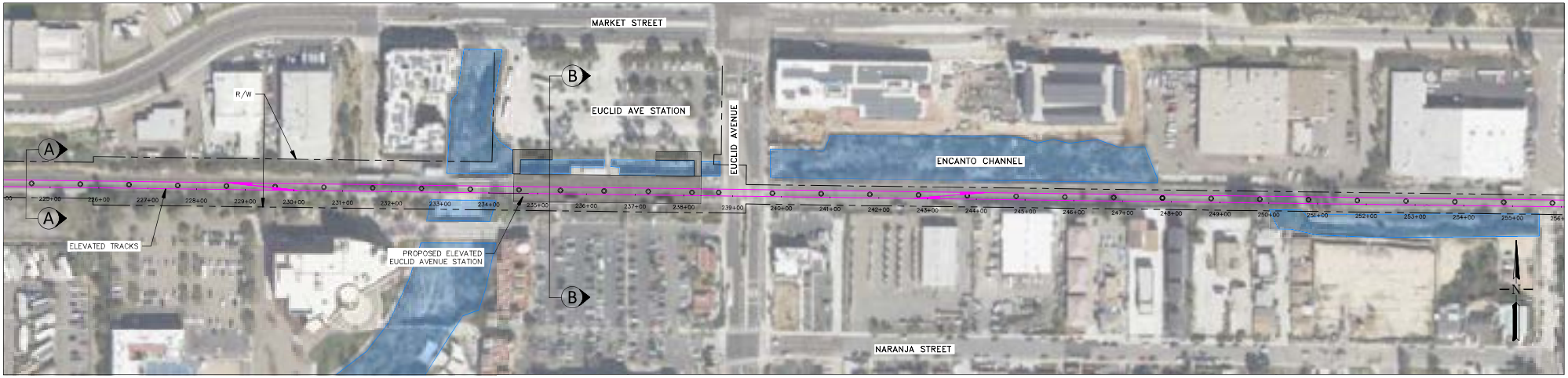
IN FEET
1 INCH = 200 FT.

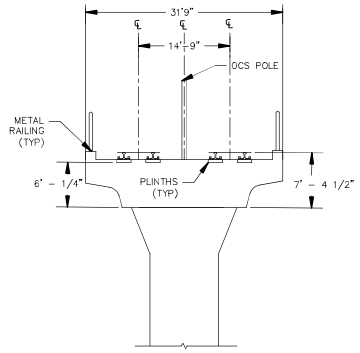


GRAPHIC SCALE
0 50' 100' 200' 300'
IN FEET
1 INCH = 100 FT.

PROFILE

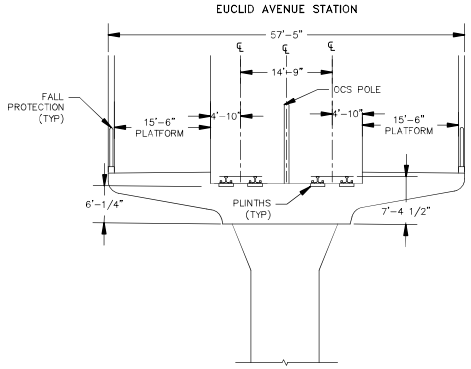
MOTT MACDONALD M M	MTS	EUCLID AVENUE GRADE SEPARATION STUDY	ALTERNATIVE 1 - RAIL ABOVE EUCLID AVENUE





SECTION A-A

EUCLID AVENUE STATION

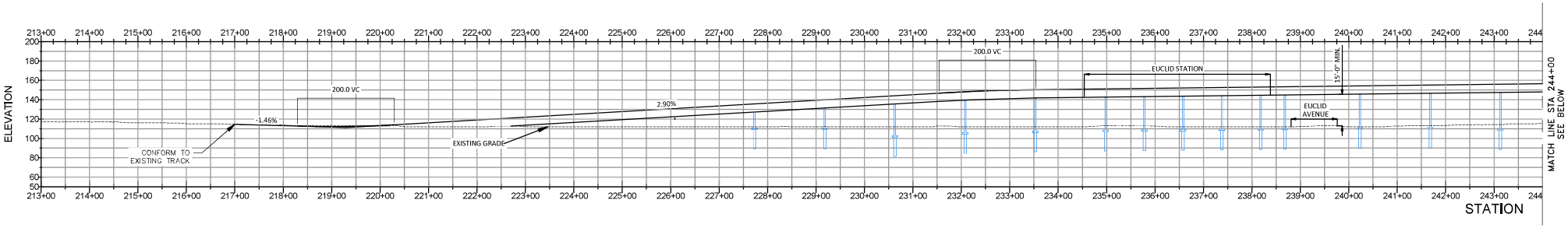


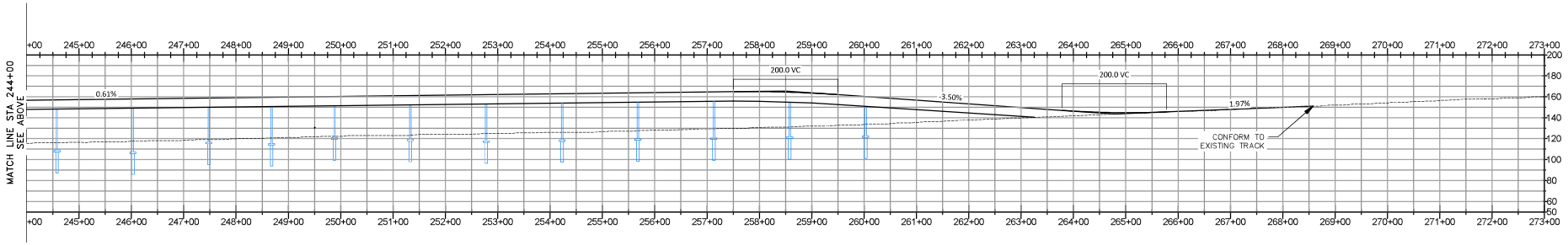
SECTION B-B

MOTT MACDONALD	MTS	EUCLID AVENUE GRADE SEPARATION STUDY	ALTERNATIVE 1 - RAIL ABOVE EUCLID AVENUE

PLAN

GRAPHIC SCALE
0 100' 200' 400' 600'
IN FEET
1 INCH = 200 FT.

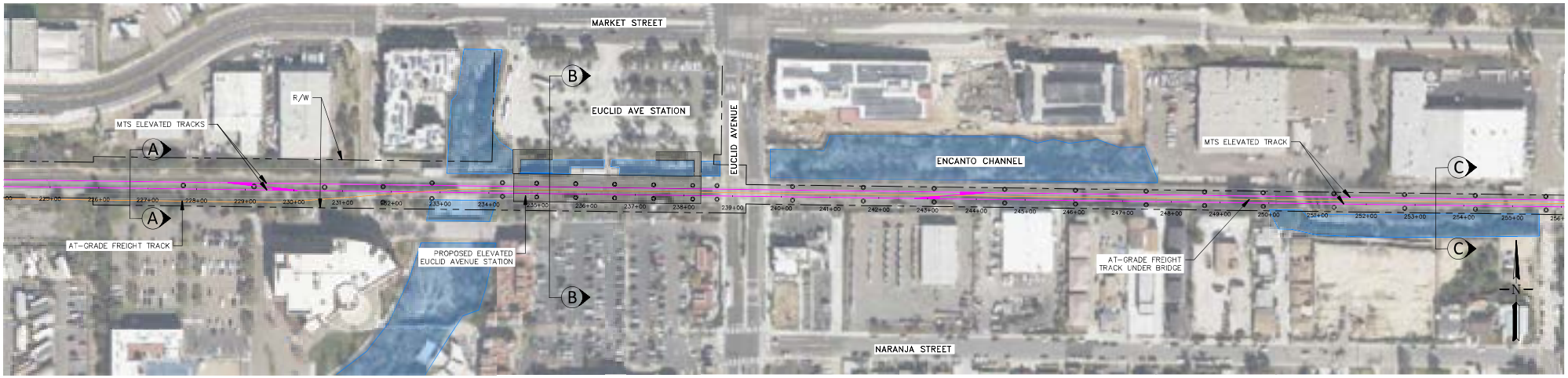


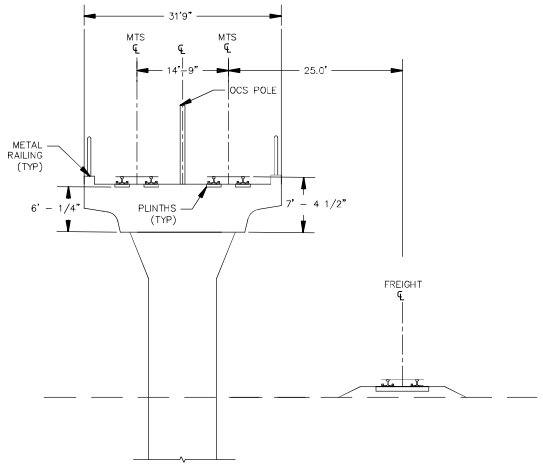


PROFILE

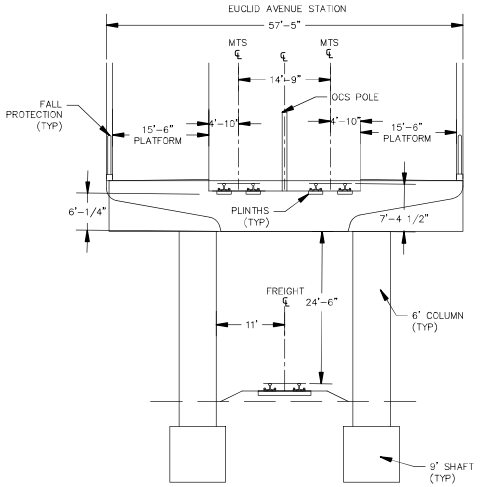
GRAPHIC SCALE
0 50' 100' 200' 300'
IN FEET
1 INCH = 100 FT.

MOTT MACDONALD	MTS	EUCLID AVENUE GRADE SEPARATION STUDY	ALTERNATIVE 2 - MTS RAIL ABOVE EUCLID AVENUE, FREIGHT REMAINS AT-GRADE

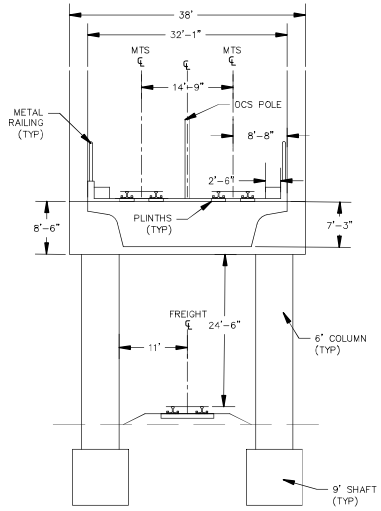




SECTION A-A

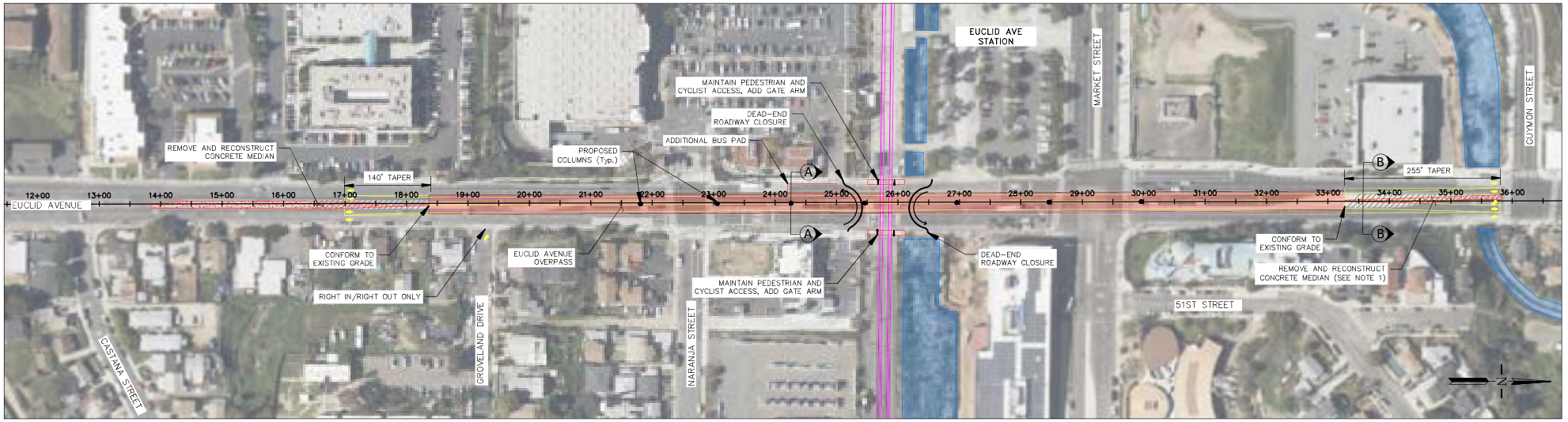


SECTION B-B

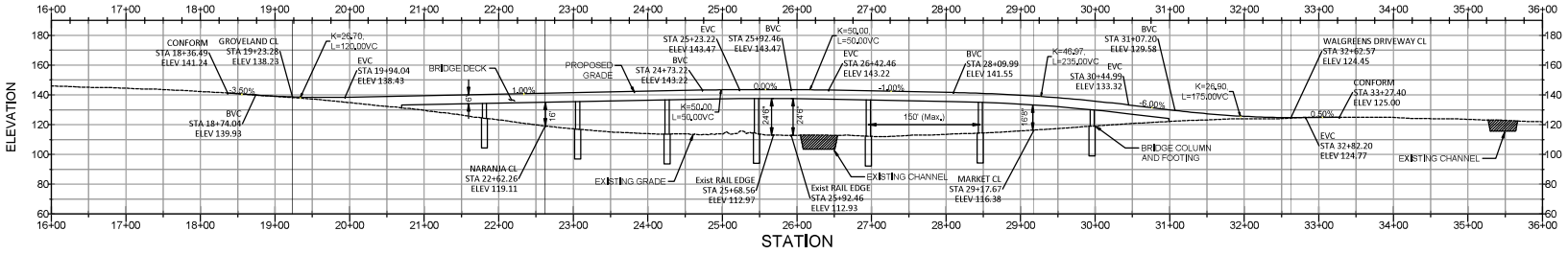


SECTION C-C

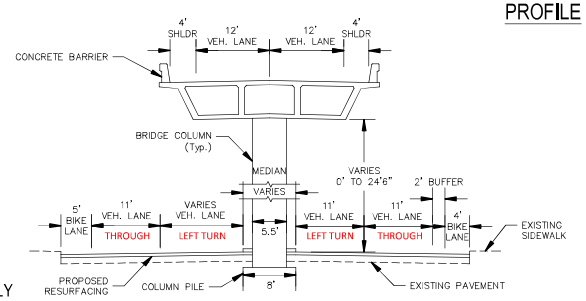
MOTT MACDONALD	MTS	EUCLID AVENUE GRADE SEPARATION STUDY	ALTERNATIVE 2 - MTS RAIL ABOVE EUCLID AVENUE, FREIGHT REMAINS AT-GRADE



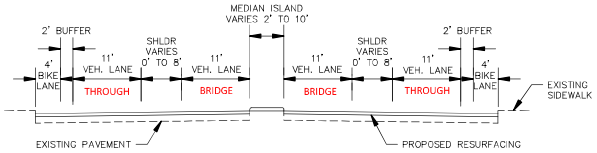
PLAN



PROFILE



SECTION A-A



SECTION B-B

GRAPHIC SCALE
0 40' 80' 160' 240'
IN FEET
1 INCH = 80 FT.

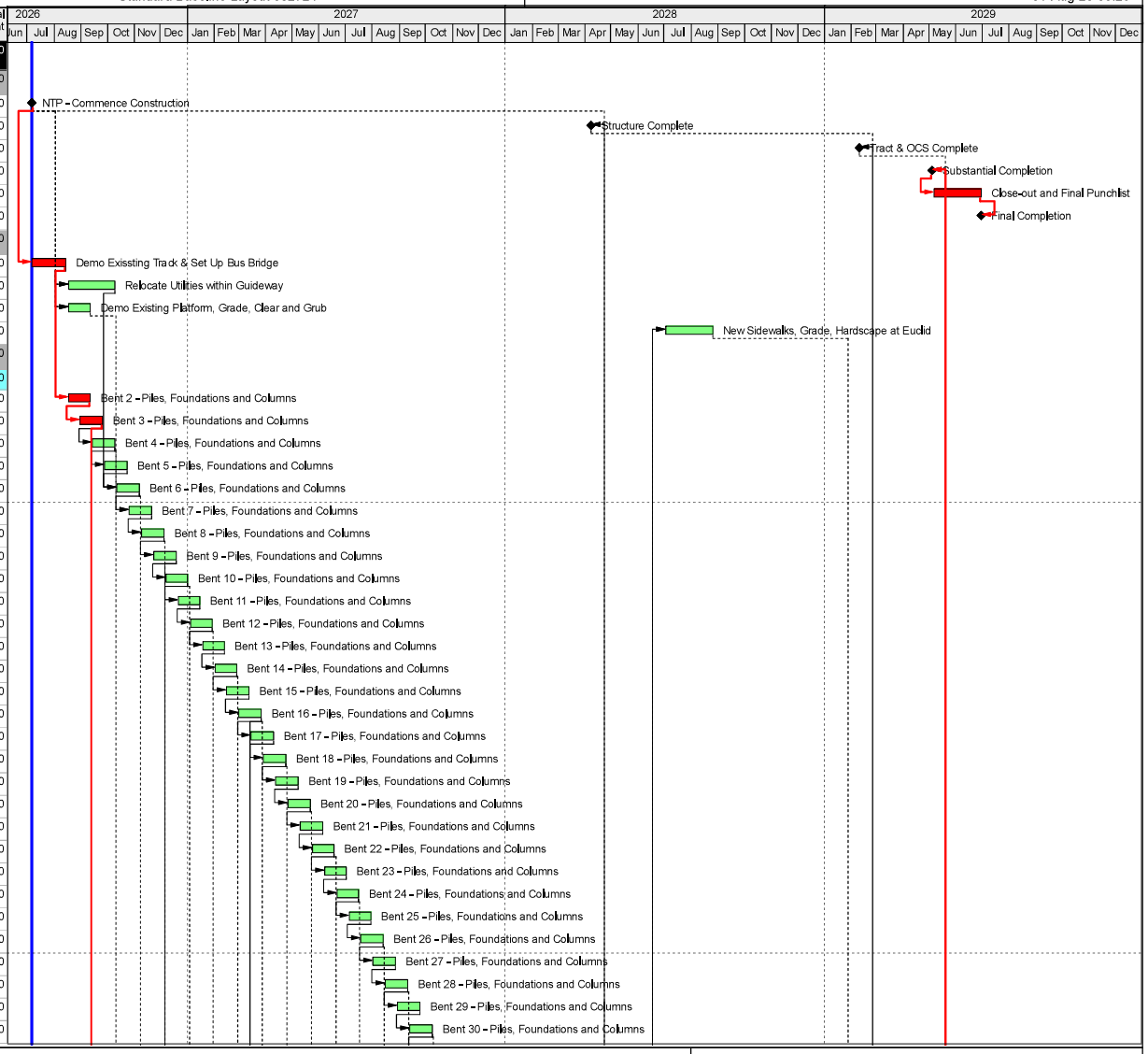
NOTES

1. NORTHBOUND LEFT TURN POCKET TO BE ACCESSED FROM OVERPASS ONLY

MOTT MACDONALD	MTS	EUCLID AVENUE GRADE SEPARATION STUDY	ALTERNATIVE 4 - EUCLID AVENUE RAISED ABOVE RAIL

ALTERNATIVE 1 - RAIL ABOVE EUCLID AVENUE | Standard Baseline Layout 062724 | 01-Aug-25 08:29

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
ALTERNATIVE 1 - RAIL ABOVE EUCLID AVEI		780	06-Jul-26	29-Jun-29	0
Milestones		780	06-Jul-26	29-Jun-29	0
M1000	NTP - Commence Construction	0	06-Jul-26		0
M1010	Structure Complete	0		07-Apr-28	280
M1020	Tract & OCS Complete	0		09-Feb-29	60
M1030	Substantial Completion	0		04-May-29	0
M1040	Close-out and Final Punchlist	40	07-May-29	29-Jun-29	0
M1050	Final Completion	0		29-Jun-29	0
Utilities, Demolition, and Roadwork		560	06-Jul-26	25-Aug-28	120
U1000	Demo Exissting Track & Set Up Bus Bridge	30	06-Jul-26	14-Aug-26	0
U1010	Relocate Utilities within Guideway	40	17-Aug-26	09-Oct-26	10
U1020	Demo Existing Platform, Grade, Clear and Grub	20	17-Aug-26	11-Sep-26	40
U1030	New Sidewalks, Grade, Hardscape at Euclid	40	03-Jul-28	25-Aug-28	120
Structure		430	17-Aug-26	07-Apr-28	280
Piles, Foundations,and Columns		370	17-Aug-26	14-Jan-28	20
B0002	Bent 2 - Piles, Foundations and Columns	20	17-Aug-26	11-Sep-26	0
B0003	Bent 3 - Piles, Foundations and Columns	20	31-Aug-26	25-Sep-26	0
B0004	Bent 4 - Piles, Foundations and Columns	20	14-Sep-26	09-Oct-26	10
B0005	Bent 5 - Piles, Foundations and Columns	20	28-Sep-26	23-Oct-26	10
B0006	Bent 6 - Piles, Foundations and Columns	20	12-Oct-26	06-Nov-26	10
B0007	Bent 7 - Piles, Foundations and Columns	20	26-Oct-26	20-Nov-26	10
B0008	Bent 8 - Piles, Foundations and Columns	20	09-Nov-26	04-Dec-26	10
B0009	Bent 9 - Piles, Foundations and Columns	20	23-Nov-26	18-Dec-26	10
B0010	Bent 10 - Piles, Foundations and Columns	20	07-Dec-26	01-Jan-27	10
B0011	Bent 11 - Piles, Foundations and Columns	20	21-Dec-26	15-Jan-27	10
B0012	Bent 12 - Piles, Foundations and Columns	20	04-Jan-27	29-Jan-27	10
B0013	Bent 13 - Piles, Foundations and Columns	20	18-Jan-27	12-Feb-27	10
B0014	Bent 14 - Piles, Foundations and Columns	20	01-Feb-27	26-Feb-27	10
B0015	Bent 15 - Piles, Foundations and Columns	20	15-Feb-27	12-Mar-27	10
B0016	Bent 16 - Piles, Foundations and Columns	20	01-Mar-27	26-Mar-27	10
B0017	Bent 17 - Piles, Foundations and Columns	20	15-Mar-27	09-Apr-27	10
B0018	Bent 18 - Piles, Foundations and Columns	20	29-Mar-27	23-Apr-27	10
B0019	Bent 19 - Piles, Foundations and Columns	20	12-Apr-27	07-May-27	10
B0020	Bent 20 - Piles, Foundations and Columns	20	26-Apr-27	21-May-27	10
B0021	Bent 21 - Piles, Foundations and Columns	20	10-May-27	04-Jun-27	10
B0022	Bent 22 - Piles, Foundations and Columns	20	24-May-27	18-Jun-27	10
B0023	Bent 23 - Piles, Foundations and Columns	20	07-Jun-27	02-Jul-27	10
B0024	Bent 24 - Piles, Foundations and Columns	20	21-Jun-27	16-Jul-27	10
B0025	Bent 25 - Piles, Foundations and Columns	20	05-Jul-27	30-Jul-27	10
B0026	Bent 26 - Piles, Foundations and Columns	20	19-Jul-27	13-Aug-27	10
B0027	Bent 27 - Piles, Foundations and Columns	20	02-Aug-27	27-Aug-27	10
B0028	Bent 28 - Piles, Foundations and Columns	20	16-Aug-27	10-Sep-27	10
B0029	Bent 29 - Piles, Foundations and Columns	20	30-Aug-27	24-Sep-27	10
B0030	Bent 30 - Piles, Foundations and Columns	20	13-Sep-27	08-Oct-27	10



Remaining Level of Effort | Remaining Work
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

ALTERNATIVE 1 - RAIL ABOVE EUCLID AVENUE

TASK filter: All Activities
1 of 3

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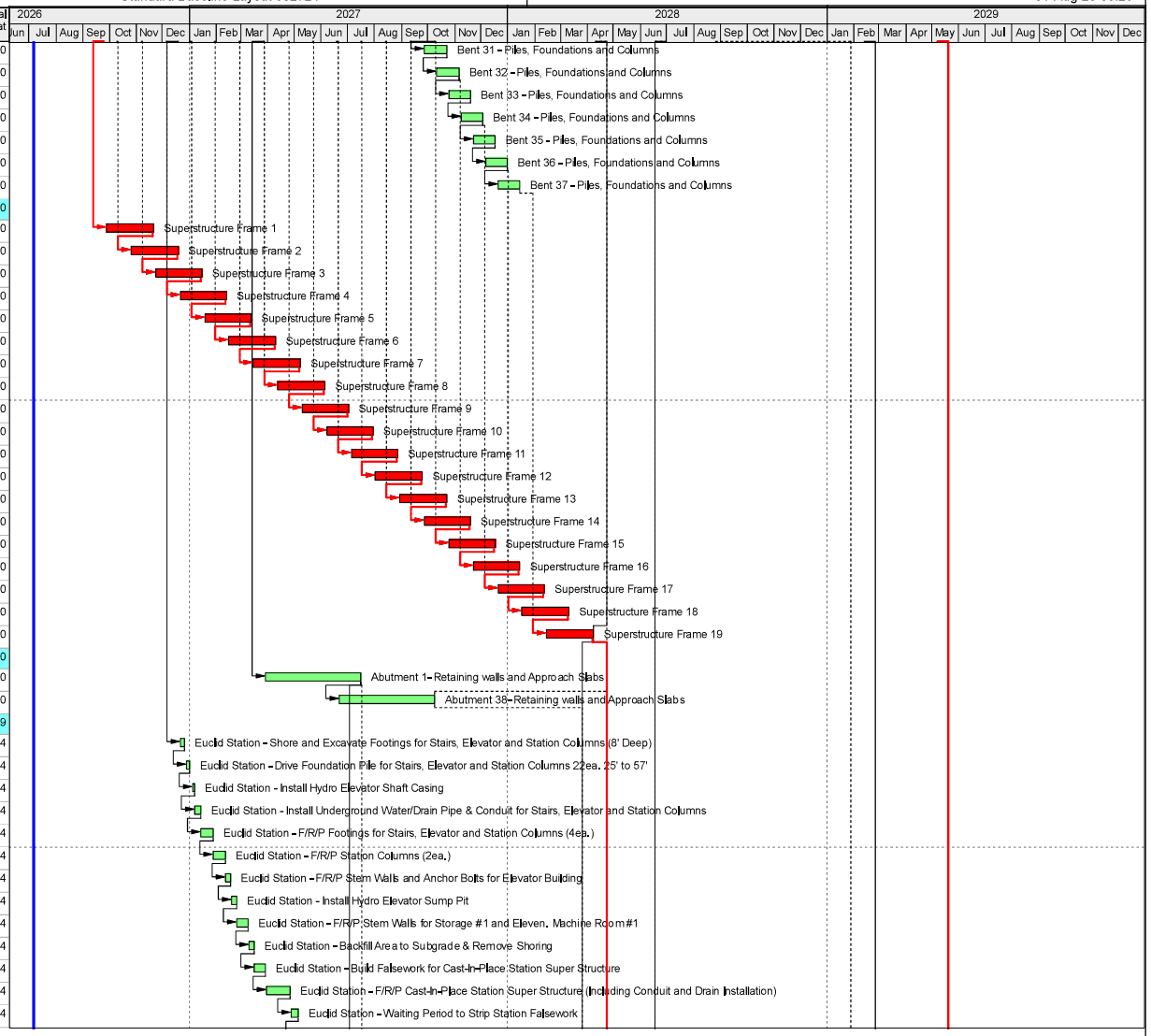
ALTERNATIVE 1 - RAIL ABOVE EUCLID AVENUE | Standard Baseline Layout 062724 | 01-Aug-25 08:29

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
B0031	Bent 31 - Piles, Foundations and Columns	20	27-Sep-27	22-Oct-27	10
B0032	Bent 32 - Piles, Foundations and Columns	20	11-Oct-27	05-Nov-27	10
B0033	Bent 33 - Piles, Foundations and Columns	20	25-Oct-27	19-Nov-27	10
B0034	Bent 34 - Piles, Foundations and Columns	20	08-Nov-27	03-Dec-27	10
B0035	Bent 35 - Piles, Foundations and Columns	20	22-Nov-27	17-Dec-27	10
B0036	Bent 36 - Piles, Foundations and Columns	20	06-Dec-27	31-Dec-27	10
B0037	Bent 37 - Piles, Foundations and Columns	20	20-Dec-27	14-Jan-28	20
Superstructure		400	28-Sep-26	07-Apr-28	0
F001	Superstructure Frame 1	40	28-Sep-26	20-Nov-26	0
F002	Superstructure Frame 2	40	26-Oct-26	18-Dec-26	0
F003	Superstructure Frame 3	40	23-Nov-26	15-Jan-27	0
F004	Superstructure Frame 4	40	21-Dec-26	12-Feb-27	0
F005	Superstructure Frame 5	40	18-Jan-27	12-Mar-27	0
F006	Superstructure Frame 6	40	15-Feb-27	09-Apr-27	0
F007	Superstructure Frame 7	40	15-Mar-27	07-May-27	0
F008	Superstructure Frame 8	40	12-Apr-27	04-Jun-27	0
F009	Superstructure Frame 9	40	10-May-27	02-Jul-27	0
F010	Superstructure Frame 10	40	07-Jun-27	30-Jul-27	0
F011	Superstructure Frame 11	40	05-Jul-27	27-Aug-27	0
F012	Superstructure Frame 12	40	02-Aug-27	24-Sep-27	0
F013	Superstructure Frame 13	40	30-Aug-27	22-Oct-27	0
F014	Superstructure Frame 14	40	27-Sep-27	19-Nov-27	0
F015	Superstructure Frame 15	40	25-Oct-27	17-Dec-27	0
F016	Superstructure Frame 16	40	22-Nov-27	14-Jan-28	0
F017	Superstructure Frame 17	40	20-Dec-27	11-Feb-28	0
F018	Superstructure Frame 18	40	17-Jan-28	10-Mar-28	0
F019	Superstructure Frame 19	40	14-Feb-28	07-Apr-28	0
Abutment		140	29-Mar-27	08-Oct-27	250
A1000	Abutment 1 - Retaining walls and Approach Slabs	80	29-Mar-27	16-Jul-27	10
A1010	Abutment 38 - Retaining walls and Approach Slabs	80	21-Jun-27	08-Oct-27	250
Euclid Station Access Structure		301	21-Dec-26	14-Feb-28	319
S1000	Euclid Station - Shore and Excavate Footings for Stairs, Elevatc	5	21-Dec-26	25-Dec-26	284
S1010	Euclid Station - Drive Foundation Pile for Stairs, Elevator and St	5	28-Dec-26	01-Jan-27	284
S1020	Euclid Station - Install Hydro Elevator Shaft Casing	3	04-Jan-27	06-Jan-27	284
S1030	Euclid Station - Install Underground Water/Drain Pipe & Conduit	5	07-Jan-27	13-Jan-27	284
S1040	Euclid Station - F/R/P Footings for Stairs, Elevator and Station C	10	14-Jan-27	27-Jan-27	284
S1050	Euclid Station - F/R/P Station Columns (2ea.)	10	28-Jan-27	10-Feb-27	284
S1060	Euclid Station - F/R/P Stem Walls and Anchor Bolts for Elevator	5	11-Feb-27	17-Feb-27	284
S1070	Euclid Station - Install Hydro Elevator Sump Pit	4	18-Feb-27	23-Feb-27	284
S1080	Euclid Station - F/R/P Stem Walls for Storage #1 and Eleven. M	10	24-Feb-27	09-Mar-27	284
S1090	Euclid Station - Backfill Area to Subgrade & Remove Shoring	4	10-Mar-27	15-Mar-27	284
S1100	Euclid Station - Build Failsework for Cast-In-Place Station Super	10	16-Mar-27	29-Mar-27	284
S1110	Euclid Station - F/R/P Cast-In-Place Station Super Structure (Inc	20	30-Mar-27	26-Apr-27	284
S1120	Euclid Station - Waiting Period to Strip Station Failsework	7	27-Apr-27	05-May-27	284



Remaining Level of Effort | Remaining Work
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

ALTERNATIVE 1 - RAIL ABOVE EUCLID AVENUE

TASK filter: All Activities
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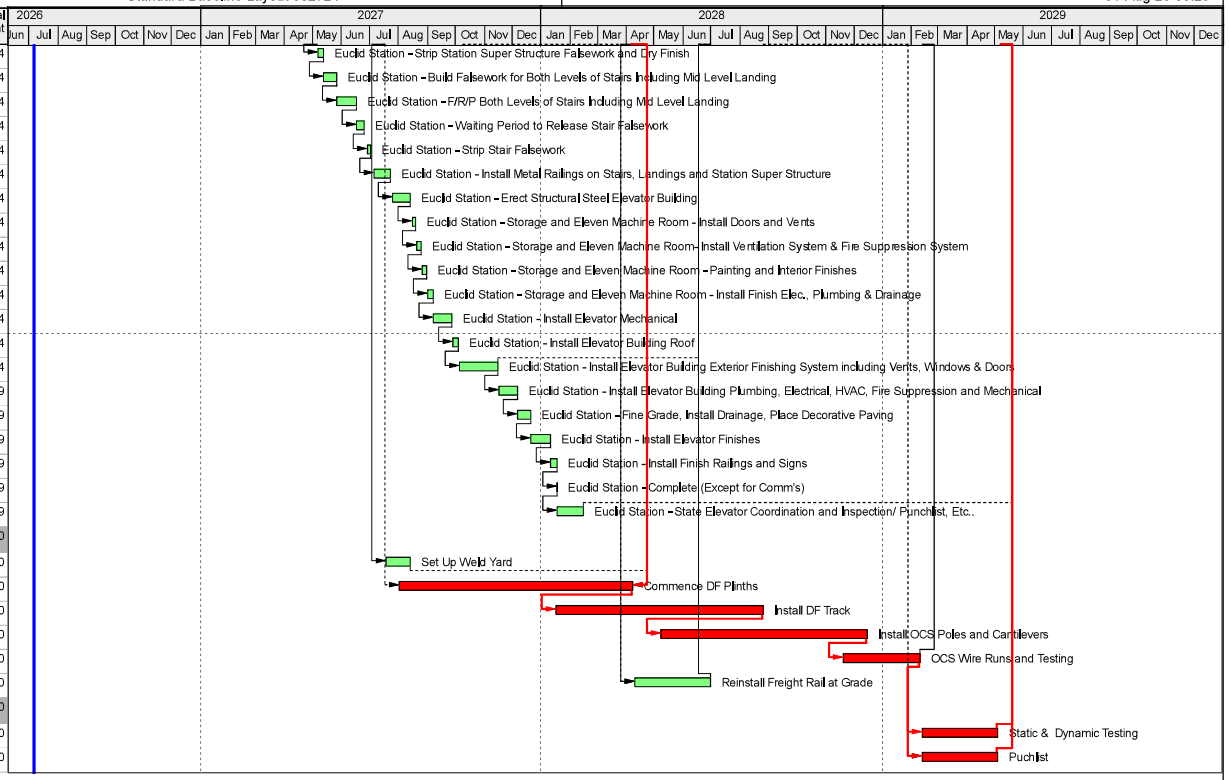
ALTERNATIVE 1 - RAIL ABOVE EUCLID AVENUE | Standard Baseline Layout 062724 | 01-Aug-25 08:29

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
S1130	Euclid Station - Strip Station Super Structure Falsework and Dry	5	06-May-27	12-May-27	284
S1140	Euclid Station - Build Falsework for Both Levels of Stairs Includir	10	13-May-27	26-May-27	284
S1150	Euclid Station - F/R/P Both Levels of Stairs Including Mid Level I	15	27-May-27	16-Jun-27	284
S1160	Euclid Station - Waiting Period to Release Stair Falsework	7	17-Jun-27	25-Jun-27	284
S1170	Euclid Station - Strip Stair Falsework	5	28-Jun-27	02-Jul-27	284
S1180	Euclid Station - Install Metal Railings on Stairs, Landings and St	15	05-Jul-27	23-Jul-27	284
S1190	Euclid Station - Erect Structural Steel Elevator Building	15	26-Jul-27	13-Aug-27	284
S1200	Euclid Station - Storage and Eleven Machine Room - Install Doc	4	16-Aug-27	19-Aug-27	284
S1210	Euclid Station - Storage and Eleven Machine Room- Install Vent	4	20-Aug-27	25-Aug-27	284
S1220	Euclid Station - Storage and Eleven Machine Room - Painting a	4	26-Aug-27	31-Aug-27	284
S1230	Euclid Station - Storage and Eleven Machine Room - Install Fini	4	01-Sep-27	06-Sep-27	284
S1240	Euclid Station - Install Elevator Mechanical	15	07-Sep-27	27-Sep-27	284
S1250	Euclid Station - Install Elevator Building Roof	5	28-Sep-27	04-Oct-27	284
S1260	Euclid Station - Install Elevator Building Exterior Finishing Syster	30	05-Oct-27	15-Nov-27	284
S1270	Euclid Station - Install Elevator Building Plumbing, Electrical, HV	15	16-Nov-27	06-Dec-27	319
S1280	Euclid Station - Fine Grade, Install Drainage, Place Decorative F	10	07-Dec-27	20-Dec-27	319
S1290	Euclid Station - Install Elevator Finishes	15	21-Dec-27	10-Jan-28	319
S1300	Euclid Station - Install Finish Railings and Signs	5	11-Jan-28	17-Jan-28	319
S1310	Euclid Station - Complete (Except for Comm's)	0	18-Jan-28	18-Jan-28	319
S1320	Euclid Station - State Elevator Coordination and Inspection/ Pur	20	18-Jan-28	14-Feb-28	319
Trackwork & OCS		410	19-Jul-27	09-Feb-29	0
T1000	Set Up Weld Yard	20	19-Jul-27	13-Aug-27	170
T1010	Commence DF Plinths	180	02-Aug-27	07-Apr-28	0
T1020	Install DF Track	160	17-Jan-28	25-Aug-28	0
T1030	Install OCS Poles and Cantilevers	160	08-May-28	15-Dec-28	0
T1040	OCS Wire Runs and Testing	60	20-Nov-28	09-Feb-29	0
T1050	Reinstall Freight Rail at Grade	60	10-Apr-28	30-Jun-28	120
Testing, Cutover and Punchlist		60	12-Feb-29	04-May-29	0
P1000	Static & Dynamic Testing	60	12-Feb-29	04-May-29	0
P1010	Puchlist	60	12-Feb-29	04-May-29	0



Remaining Level of Effort | Remaining Work
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

ALTERNATIVE 1 - RAIL ABOVE EUCLID AVENUE

TASK filter: All Activities
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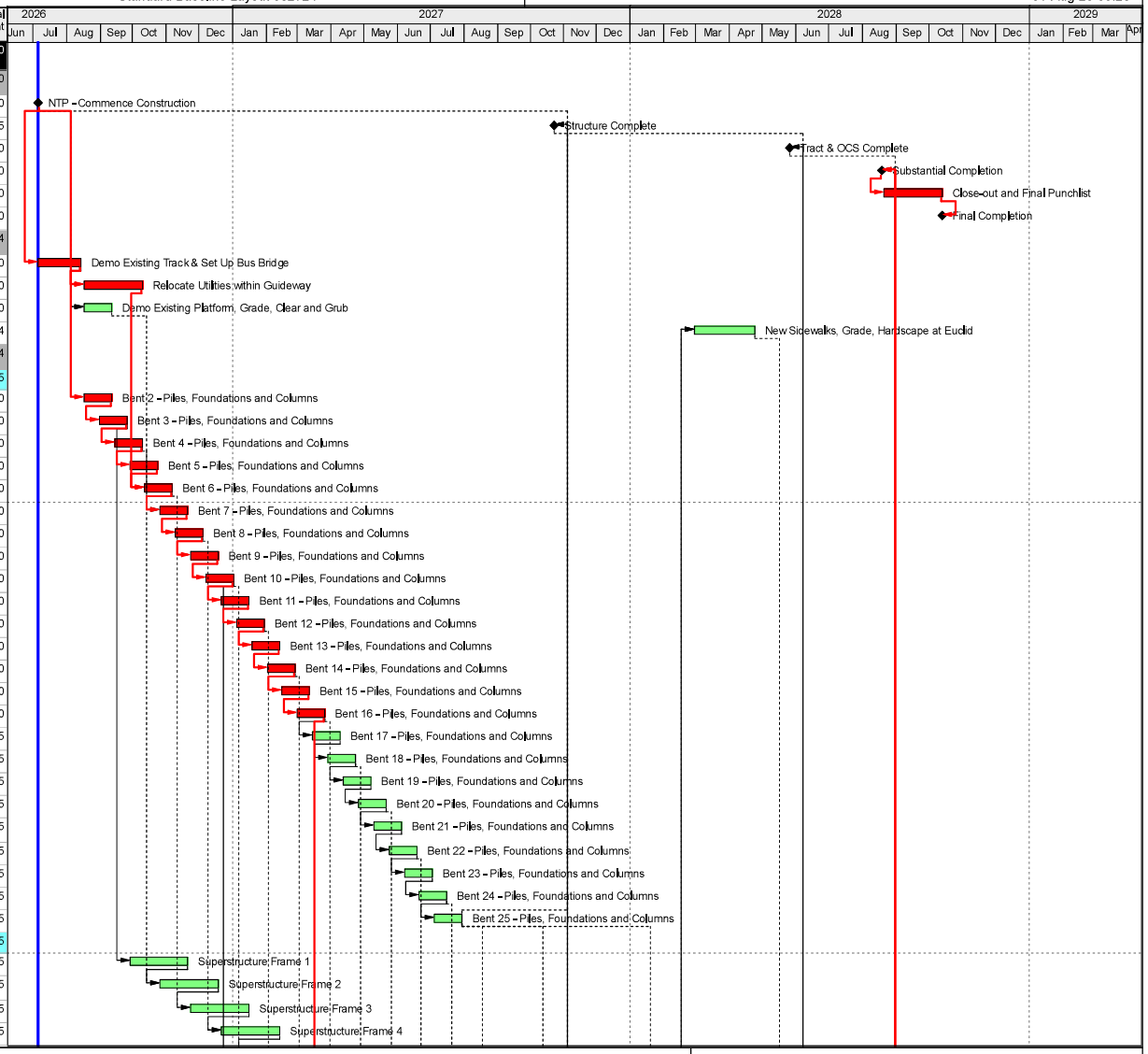
ALTERNATIVE 2 - MTS RAIL ABOVE EUCLID AVENUE, FREIGHT REMAINS AT-GRADE | Standard Baseline Layout 062724 | 01-Aug-25 08:26

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
ALTERNATIVE 2 - MTS RAIL ABOVE EUCLID ,		595	06-Jul-26	13-Oct-28	0
Milestones		595	06-Jul-26	13-Oct-28	0
M1000	NTP - Commence Construction	0	06-Jul-26		0
M1010	Structure Complete	0		22-Oct-27	215
M1020	Tract & OCS Complete	0		26-May-28	60
M1030	Substantial Completion	0		18-Aug-28	0
M1040	Close-out and Final Punchlist	40	21-Aug-28	13-Oct-28	0
M1050	Final Completion	0		13-Oct-28	0
Utilities, Demolition, and Roadwork		471	06-Jul-26	24-Apr-28	24
U1000	Demo Existing Track & Set Up Bus Bridge	30	06-Jul-26	14-Aug-26	0
U1010	Relocate Utilities within Guideway	40	17-Aug-26	09-Oct-26	0
U1020	Demo Existing Platform, Grade, Clear and Grub	20	17-Aug-26	11-Sep-26	30
U1030	New Sidewalks, Grade, Hardscape at Euclid	40	29-Feb-28	24-Apr-28	24
Structure		401	17-Aug-26	28-Feb-28	24
Piles, Foundations,and Columns		250	17-Aug-26	30-Jul-27	75
B0002	Bent 2 - Piles, Foundations and Columns	20	17-Aug-26	11-Sep-26	0
B0003	Bent 3 - Piles, Foundations and Columns	20	31-Aug-26	25-Sep-26	0
B0004	Bent 4 - Piles, Foundations and Columns	20	14-Sep-26	09-Oct-26	0
B0005	Bent 5 - Piles, Foundations and Columns	20	28-Sep-26	23-Oct-26	0
B0006	Bent 6 - Piles, Foundations and Columns	20	12-Oct-26	06-Nov-26	0
B0007	Bent 7 - Piles, Foundations and Columns	20	26-Oct-26	20-Nov-26	0
B0008	Bent 8 - Piles, Foundations and Columns	20	09-Nov-26	04-Dec-26	0
B0009	Bent 9 - Piles, Foundations and Columns	20	23-Nov-26	18-Dec-26	0
B0010	Bent 10 - Piles, Foundations and Columns	20	07-Dec-26	01-Jan-27	0
B0011	Bent 11 - Piles, Foundations and Columns	20	21-Dec-26	15-Jan-27	0
B0012	Bent 12 - Piles, Foundations and Columns	20	04-Jan-27	29-Jan-27	0
B0013	Bent 13 - Piles, Foundations and Columns	20	18-Jan-27	12-Feb-27	0
B0014	Bent 14 - Piles, Foundations and Columns	20	01-Feb-27	26-Feb-27	0
B0015	Bent 15 - Piles, Foundations and Columns	20	15-Feb-27	12-Mar-27	0
B0016	Bent 16 - Piles, Foundations and Columns	20	01-Mar-27	26-Mar-27	0
B0017	Bent 17 - Piles, Foundations and Columns	20	15-Mar-27	09-Apr-27	65
B0018	Bent 18 - Piles, Foundations and Columns	20	29-Mar-27	23-Apr-27	65
B0019	Bent 19 - Piles, Foundations and Columns	20	12-Apr-27	07-May-27	65
B0020	Bent 20 - Piles, Foundations and Columns	20	26-Apr-27	21-May-27	65
B0021	Bent 21 - Piles, Foundations and Columns	20	10-May-27	04-Jun-27	65
B0022	Bent 22 - Piles, Foundations and Columns	20	24-May-27	18-Jun-27	65
B0023	Bent 23 - Piles, Foundations and Columns	20	07-Jun-27	02-Jul-27	65
B0024	Bent 24 - Piles, Foundations and Columns	20	21-Jun-27	16-Jul-27	65
B0025	Bent 25 - Piles, Foundations and Columns	20	05-Jul-27	30-Jul-27	75
Superstructure		280	28-Sep-26	22-Oct-27	55
F001	Superstructure Frame 1	40	28-Sep-26	20-Nov-26	55
F002	Superstructure Frame 2	40	26-Oct-26	18-Dec-26	55
F003	Superstructure Frame 3	40	23-Nov-26	15-Jan-27	55
F004	Superstructure Frame 4	40	21-Dec-26	12-Feb-27	55



Remaining Level of Effort | Remaining Work
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

ALTERNATIVE 2 - MTS RAIL ABOVE EUCLID AVENUE...

TASK filter: All Activities
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ALTERNATIVE 2 - MTS RAIL ABOVE EUCLID AVENUE, FREIGHT REMAINS AT-GRADE | Standard Baseline Layout 062724 | 01-Aug-25 08:26

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
F005	Superstructure Frame 5	40	18-Jan-27	12-Mar-27	55
F006	Superstructure Frame 6	40	15-Feb-27	09-Apr-27	55
F007	Superstructure Frame 7	40	15-Mar-27	07-May-27	55
F008	Superstructure Frame 8	40	12-Apr-27	04-Jun-27	55
F009	Superstructure Frame 9	40	10-May-27	02-Jul-27	55
F010	Superstructure Frame 10	40	07-Jun-27	30-Jul-27	55
F011	Superstructure Frame 11	40	05-Jul-27	27-Aug-27	55
F012	Superstructure Frame 12	40	02-Aug-27	24-Sep-27	55
F013	Superstructure Frame 13	40	30-Aug-27	22-Oct-27	55
Abutment		140	29-Mar-27	08-Oct-27	75
A1000	Abutment 1 - Retaining walls and Approach Slabs	80	29-Mar-27	16-Jul-27	0
A1010	Abutment 26 - Retaining walls and Approach Slabs	80	21-Jun-27	08-Oct-27	75
Euclid Station Access Structure		301	04-Jan-27	28-Feb-28	24
S1000	Euclid Station - Shore and Excavate Footings for Stairs, Elevatc	5	04-Jan-27	08-Jan-27	24
S1010	Euclid Station - Drive Foundation Pile for Stairs, Elevator and St	5	11-Jan-27	15-Jan-27	24
S1020	Euclid Station - Install Hydro Elevator Shaft Casing	3	18-Jan-27	20-Jan-27	24
S1030	Euclid Station - Install Underground Water/Drain Pipe & Conduit	5	21-Jan-27	27-Jan-27	24
S1040	Euclid Station - F/R/P Footings for Stairs, Elevator and Station C	10	28-Jan-27	10-Feb-27	24
S1050	Euclid Station - F/R/P Station Columns (2ea.)	10	11-Feb-27	24-Feb-27	24
S1060	Euclid Station - F/R/P Stem Walls and Anchor Bolts for Elevator	5	25-Feb-27	03-Mar-27	24
S1070	Euclid Station - Install Hydro Elevator Sump Pit	4	04-Mar-27	09-Mar-27	24
S1080	Euclid Station - F/R/P Stem Walls for Storage #1 and Eleven. M	10	10-Mar-27	23-Mar-27	24
S1090	Euclid Station - Backfill Area to Subgrade & Remove Shoring	4	24-Mar-27	29-Mar-27	24
S1100	Euclid Station - Build Falsework for Cast-In-Place Station Super	10	30-Mar-27	12-Apr-27	24
S1110	Euclid Station - F/R/P Cast-In-Place Station Super Structure (Inc	20	13-Apr-27	10-May-27	24
S1120	Euclid Station - Waiting Period to Strip Station Falsework	7	11-May-27	19-May-27	24
S1130	Euclid Station - Strip Station Super Structure Falsework and Dry	5	20-May-27	26-May-27	24
S1140	Euclid Station - Build Falsework for Both Levels of Stairs Includir	10	27-May-27	09-Jun-27	24
S1150	Euclid Station - F/R/P Both Levels of Stairs Including Mid Level I	15	10-Jun-27	30-Jun-27	24
S1160	Euclid Station - Waiting Period to Release Stair Falsework	7	01-Jul-27	09-Jul-27	24
S1170	Euclid Station - Strip Stair Falsework	5	12-Jul-27	16-Jul-27	24
S1180	Euclid Station - Install Metal Railings on Stairs, Landings and St	15	19-Jul-27	06-Aug-27	24
S1190	Euclid Station - Erect Structural Steel Elevator Building	15	09-Aug-27	27-Aug-27	24
S1200	Euclid Station - Storage and Eleven Machine Room - Install Doc	4	30-Aug-27	02-Sep-27	24
S1210	Euclid Station - Storage and Eleven Machine Room- Install Vent	4	03-Sep-27	08-Sep-27	24
S1220	Euclid Station - Storage and Eleven Machine Room - Painting a	4	09-Sep-27	14-Sep-27	24
S1230	Euclid Station - Storage and Eleven Machine Room - Install Fini	4	15-Sep-27	20-Sep-27	24
S1240	Euclid Station - Install Elevator Mechanical	15	21-Sep-27	11-Oct-27	24
S1250	Euclid Station - Install Elevator Building Roof	5	12-Oct-27	18-Oct-27	24
S1260	Euclid Station - Install Elevator Building Exterior Finishing Syster	30	19-Oct-27	29-Nov-27	24
S1270	Euclid Station - Install Elevator Building Plumbing, Electrical, HV	15	30-Nov-27	20-Dec-27	24
S1280	Euclid Station - Fine Grade, Install Drainage, Place Decorative F	10	21-Dec-27	03-Jan-28	24
S1290	Euclid Station - Install Elevator Finishes	15	04-Jan-28	24-Jan-28	24
S1300	Euclid Station - Install Finish Railings and Signs	5	25-Jan-28	31-Jan-28	24

Remaining Level of Effort | Remaining Work
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

ALTERNATIVE 2 - MTS RAIL ABOVE EUCLID AVENUE...

TASK filter: All Activities
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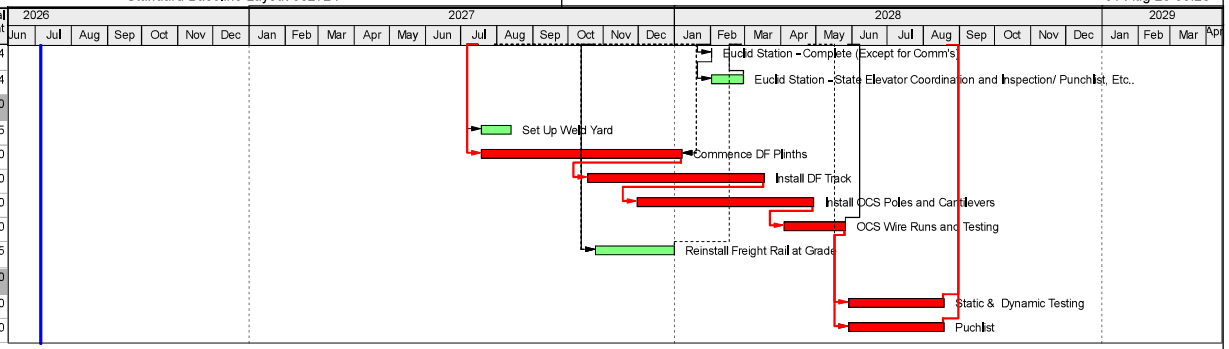
ALTERNATIVE 2 - MTS RAIL ABOVE EUCLID AVENUE, FREIGHT REMAINS AT-GRADE | Standard Baseline Layout 062724 | 01-Aug-25 08:26

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
S1310	Euclid Station - Complete (Except for Comm's)	0	01-Feb-28	01-Feb-28	24
S1320	Euclid Station - State Elevator Coordination and Inspection/ Pur	20	01-Feb-28	28-Feb-28	24
Trackwork & OCS		225	19-Jul-27	26-May-28	100
T1000	Set Up Weld Yard	20	19-Jul-27	13-Aug-27	305
T1010	Commence DF Plinths	125	19-Jul-27	07-Jan-28	0
T1020	Install DF Track	110	18-Oct-27	17-Mar-28	0
T1030	Install OCS Poles and Cantilevers	110	29-Nov-27	28-Apr-28	0
T1040	OCS Wire Runs and Testing	40	03-Apr-28	26-May-28	0
T1050	Reinstall Freight Rail at Grade	50	25-Oct-27	31-Dec-27	65
Testing, Cutover and Punchlist		60	29-May-28	18-Aug-28	0
P1000	Static & Dynamic Testing	60	29-May-28	18-Aug-28	0
P1010	Puchlist	60	29-May-28	18-Aug-28	0



Remaining Level of Effort | Remaining Work
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

ALTERNATIVE 2 - MTS RAIL ABOVE EUCLID AVENUE...

TASK filter: All Activities
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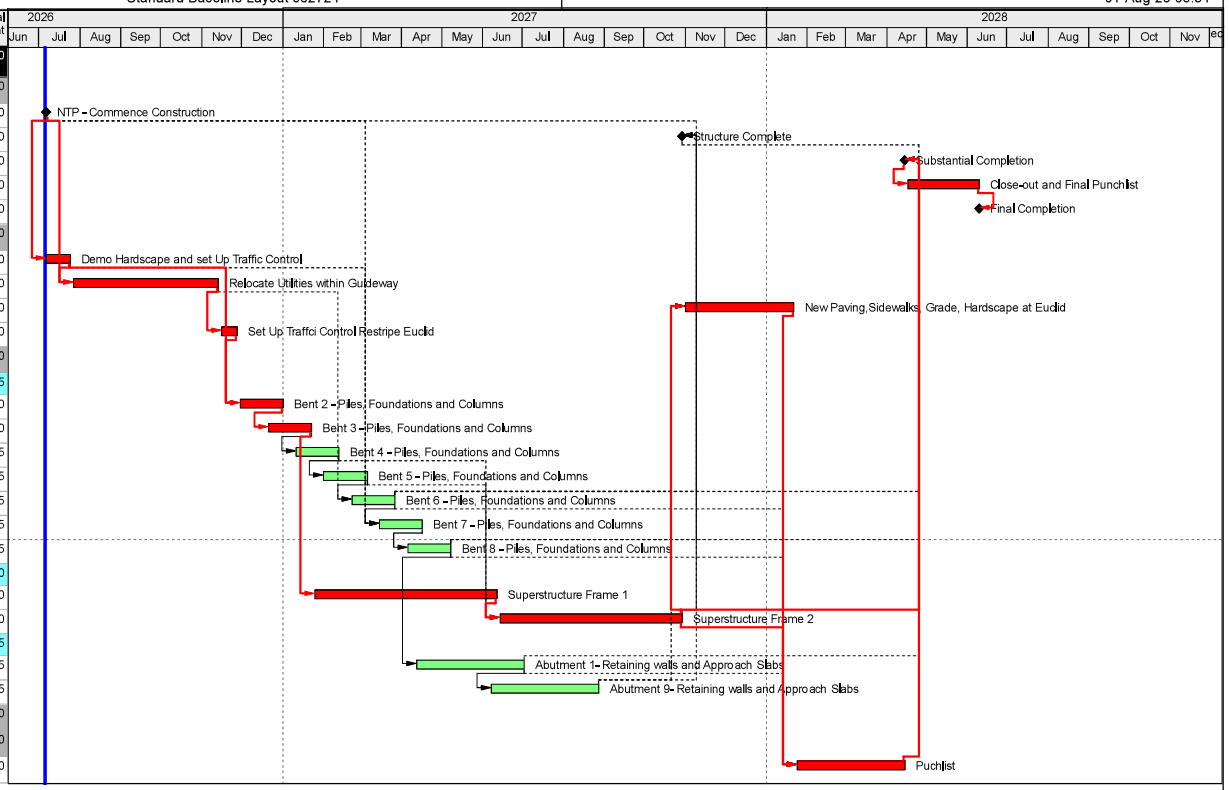
ALTERNATIVE 4 - EUCLID AVENUE RAISED ABOVE RAIL | Standard Baseline Layout 062724 | 01-Aug-25 08:34

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
ALTERNATIVE 4 - EUCLID AVENUE RAISED A		505	06-Jul-26	09-Jun-28	0
Milestones		505	06-Jul-26	09-Jun-28	0
M1000	NTP - Commence Construction	0	06-Jul-26		0
M1010	Structure Complete	0		29-Oct-27	120
M1030	Substantial Completion	0		14-Apr-28	0
M1040	Close-out and Final Punchlist	40	17-Apr-28	09-Jun-28	0
M1050	Final Completion	0		09-Jun-28	0
Utilities, Demolition, and Roadwork		405	06-Jul-26	21-Jan-28	0
U1000	Demo Hardscape and set Up Traffic Control	15	06-Jul-26	24-Jul-26	0
U1010	Relocate Utilities within Guideway	80	27-Jul-26	13-Nov-26	0
U1030	New Paving,Sidewalks, Grade, Hardscape at Euclid	60	01-Nov-27	21-Jan-28	0
U1040	Set Up Traffci Control Restripe Euclid	10	16-Nov-26	27-Nov-26	0
Structure		240	30-Nov-26	29-Oct-27	0
Piles, Foundations,and Columns		115	30-Nov-26	07-May-27	45
B0002	Bent 2 - Piles, Foundations and Columns	25	30-Nov-26	01-Jan-27	0
B0003	Bent 3 - Piles, Foundations and Columns	25	21-Dec-26	22-Jan-27	0
B0004	Bent 4 - Piles, Foundations and Columns	25	11-Jan-27	12-Feb-27	45
B0005	Bent 5 - Piles, Foundations and Columns	25	01-Feb-27	05-Mar-27	45
B0006	Bent 6 - Piles, Foundations and Columns	25	22-Feb-27	26-Mar-27	45
B0007	Bent 7 - Piles, Foundations and Columns	25	15-Mar-27	16-Apr-27	45
B0008	Bent 8 - Piles, Foundations and Columns	25	05-Apr-27	07-May-27	45
Superstucture		200	25-Jan-27	29-Oct-27	0
F001	Superstructure Frame 1	100	25-Jan-27	11-Jun-27	0
F002	Superstructure Frame 2	100	14-Jun-27	29-Oct-27	0
Abutment		100	12-Apr-27	27-Aug-27	45
A1000	Abutment 1- Retaining walls and Approach Slabs	60	12-Apr-27	02-Jul-27	45
A1010	Abutment 9- Retaining walls and Approach Slabs	60	07-Jun-27	27-Aug-27	45
Trackwork & OCS		0			0
Testing, Cutover and Punchlist		60	24-Jan-28	14-Apr-28	0
P1010	Puchlist	60	24-Jan-28	14-Apr-28	0



Remaining Level of Effort | Remaining Work
Actual Level of Effort | Critical Remaining Work
Actual Work | Milestone

ALTERNATIVE 4 - EUCLID AVENUE RAISED ABOVE RAIL

TASK filter: All Activities
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Euclid Avenue Grade Separation - Alternative 1					
CONSTRUCTION COST ESTIMATE					
Line No.	**Item Description**	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
	TEMPORARY TRAFFIC CONTROL				
1	Temporary Traffic Control	1	LS	$ 216,000.00	$ 216,000.00
				SUBTOTAL TEMPORARY TRAFFIC CONTROL	$ 216,000.00
	CIVIL				
2	New Elevated Platform	6284	SF	$ 250.00	$ 1,571,000.00
				SUBTOTAL CIVIL	$ 1,571,000.00
	TRACK				
3	Demo Existing Track	11,368	TF	$125.00	$ 1,421,000.00
4	New Track on Structure	7,500	TF	$1,180.00	$ 8,850,000.00
5	#10 Turn Outs	4	EA	$312,000.00	$ 1,248,000.00
6	New Track on Grade	3868	TF	$590.00	$ 2,282,120.00
7	Remove Grade Crossing	1	LS	$100,000.00	$ 100,000.00
				SUBTOTAL TRACK	$ 13,901,120.00
	OCS				
8	Catenary System -Center Poles	5684	LF	$1,180.00	$ 6,707,120.00
9	Traction Electrification System	5684	LF	$550.00	$ 3,126,200.00
10	Duct Banks	11368	LF	$215.00	$ 2,444,120.00
				SUBTOTAL OCS	$ 12,277,440.00
	RAIL SYSTEMS				
11	Signalization	5684	LF	$ 860.00	$ 4,888,240.00
				SUBTOTAL RAIL SYSTEMS	$ 4,888,240.00
	BRIDGE STRUCTURES				
12	Concrete Bridge Deck	128920	SF	$ 700.00	$ 90,243,846.00
13	Concrete Retaining Wall	22717	SF	$ 115.00	$ 2,612,397.50
14	Structure Concrete Column (5'-6" x 8'-0") (included in item 12)	627	LF		$ -
15	10' Dia. CIDH Concrete Pile (included in item 12)	2280	LF		$ -
16	Bridge Railing (included in item 12)	11368	LF		$ -
17	Station Shelters	6	EA	$ 7,750.00	$ 46,500.00
18	Elevators	2	LS	$ 461,250.00	$ 922,500.00
19	Stairs	2	LS	$ 75,000.00	$ 150,000.00
				SUBTOTAL STRUCTURES	$ 93,975,243.50
	MOBILIZATION AND CONTINGENCY				
				SUBTOTAL CONSTRUCTION COST	$ 126,829,043.50
				10% MOBILIZATION	$ 14,092,115.94
				25% CONTIENGENCY	$ 35,230,289.86
	TOTAL CONSTRUCTION COST (rounded to nearest million)				**$ 176,000,000.00**

Euclid Avenue Grade Separation - Alternative 2					
CONSTRUCTION COST ESTIMATE					
Line No.	**Item Description**	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
	TEMPORARY TRAFFIC CONTROL				
1	Temporary Traffic Control	1	LS	$ 216,000.00	$ 216,000.00
				SUBTOTAL TEMPORARY TRAFFIC CONTROL	$ 216,000.00
	CIVIL				
2	New Elevate Platform (Area: 6,284-sqft)	6284	SF	$ 250.00	$ 1,571,000.00
				SUBTOTAL CIVIL	$ 1,571,000.00
	TRACK				
3	Demo Existing Track	10,300	LF	$125.00	$ 1,287,500.00
4	New Track on Structure	6,700	TF	$1,180.00	$ 7,906,000.00
5	#10 Turn Outs	7	EA	$312,000.00	$ 2,184,000.00
6	New Track on Grade	8750	TF	$590.00	$ 5,162,500.00
7	Rebuild Grade Crossing	1	LS		$ -
				SUBTOTAL TRACK	$ 16,540,000.00
	OCS				
8	Catenary System -Center Poles	5150	LF	$1,180.00	$ 6,077,000.00
9	Traction Electrification System	5150	LF	$1,130.00	$ 5,819,500.00
10	Duct Banks	10300	LF	$215.00	$ 2,214,500.00
				SUBTOTAL OCS	$ 14,111,000.00
	860				
11	Signalization on Structure for Trolley	6,700	LF	$ 860.00	$ 5,762,000.00
12	Signalization on Grade for Freight and Trolley	8750	LF	$ 860.00	$ 7,525,000.00
				SUBTOTAL RAIL SYSTEMS	$ 13,287,000.00
	BRIDGE STRUCTURES				
13	Concrete Bridge Deck	154897	SF	$ 700.00	$ 108,428,022.50
14	Concrete Retaining Wall	24360	SF	$ 115.00	$ 2,801,400.00
15	Structure Concrete Column (5'-6" x 8'-0") (included in item 13)	92.00	LF		$ -
16	Structure Concrete Column (6' Dia.) (included in item 13)	1472	LF		$ -
17	9' Dia. CIDH Concrete Pile (included in item 13)	240	LF		$ -
18	10' Dia. CIDH Concrete Pile (included in item 13)	2760	LF		$ -
19	Bridge Railing (included in item 13)	10300	LF		$ -
20	Station Shelters	6	LS	$ 7,750.00	$ 46,500.00
21	Elevators	2	LS	$ 461,250.00	$ 922,500.00
22	Stairs	2	LS	$ 75,000.00	$ 150,000.00
				SUBTOTAL STRUCTURES	$ 112,348,422.50
	MOBILIZATION AND CONTINGENCY				
				SUBTOTAL CONSTRUCTION COST	$ 158,073,422.50
				10% MOBILIZATION	$ 17,563,713.61
				25% CONTIENGENCY	$ 43,909,284.03
	TOTAL CONSTRUCTION COST (rounded to nearest million)				**$ 220,000,000.00**

Euclid Avenue Grade Separation - Alternative 4					
CONSTRUCTION COST ESTIMATE					
Line No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
	TEMPORARY TRAFFIC CONTROL				
1	Temporary Traffic Control	1	LS	$ 564,000.00	$ 564,000.00
				SUBTOTAL TEMPORARY TRAFFIC CONTROL	$ 564,000.00
	CIVIL				
2	Resurface Pavement	131140	SF	$ 27.00	$ 3,540,780.00
3	Concrete Median	6206	SF	$ 22.00	$ 136,521.66
4	Traffic Striping	9124	LF	$ 4.00	$ 36,494.56
5	Relocate Signals at Naranja & Euclid	2	LS	$ 210,000.00	$ 420,000.00
6	Relocate Signals at Market & Euclid	2	LS	$ 210,000.00	$ 420,000.00
5	Street Demolition	156800	SF	$ 25.00	$ 3,920,000.00
				SUBTOTAL CIVIL	$ 8,473,796.22
	UTILITIES				
6	Relocate Gas Line	216	LF	$ 30.00	$ 6,470.40
7	Relocate Sewer Line	776	LF	$ 280.00	$ 217,339.64
8	Relocate Electric Line	163	LF	$ 215.00	$ 35,058.55
				SUBTOTAL UTILITIES	$ 258,868.59
	TRACK				
9	Modify Grade Crossing	1	LS	$90,000.00	$ 90,000.00
				SUBTOTAL TRACK	$ 90,000.00
	RAIL SYSTEMS				
10	New Pedestrian/Bike Gates	1	LS	$ 213,000.00	$ 213,000.00
				SUBTOTAL RAIL SYSTEMS	$ 213,000.00
	BRIDGE STRUCTURES				
11	Concrete Bridge Deck	42857	SF	$ 350.00	$ 15,000,048.00
12	Concrete Retaining Wall	4197	SF	$ 115.00	$ 482,711.12
13	Structure Concrete Column (5'-6" Dia.) (included in item 11)	147	LF		$ -
14	8' Dia. CIDH Pile (included in item 11)	420	LF		$ -
15	Bridge Railing (included in item 11)	2982	LF		$ -
				SUBTOTAL STRUCTURES	$ 15,482,759.12
	MOBILIZATION AND CONTINGENCY				
				SUBTOTAL CONSTRUCTION COST	$ 25,082,423.93
				10% MOBILIZATION	$ 2,786,935.99
				25% CONTIENGENCY	$ 6,967,339.98
	TOTAL CONSTRUCTION COST (rounded to nearest million)				**$ 35,000,000.00**

Appendix D – Workshop #1 & #2 Meeting Minutes

MOTT MACDONALD

Record of meeting

Project title Euclid Avenue Grade Separation

Subject Alternatives Analysis (AA) Workshop #1

Location 1255 Imperial Ave, 9th Floor / MS Teams

Date/time of meeting April 15, 2025, 1:00 p.m.

Project number WOA354-AE-38 (MM #504101624)

Recorded by Conor Atkinson

Attendees

Name	Organization	Role	Email Address
Gabe McKee	MTS	MTS Project Manager (PM)	gabriel.mckee@sdmts.com
Brent Boyd	MTS	Planning & Scheduling Director	Brent.boyd@sdmts.com
Alex Pereyra	MTS	Maintenance of Way Director	Alex.pereyra@sdmts.com
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Beverly Neff	MTS	Sr. Transportation Planner	Beverly.neff@sdmts.com
Larry Renteria Luna	MTS	Assoc. Transportation Planner	Larry.renterialuna@sdmts.com
Fabeann Soberg	MTS	Rail System Safety Manager	Fabeann.soberg@sdmts.com
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Teferi Abere	MM	Roadway Design Lead	Teferi.abere@mottmac.com
John Schnurbusch	MM	Systems Design Lead	John.schnurbusch@mottmac.com
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Pete Bassford	MM	Constructability Lead	Pete.bassford@mottmac.com
Catherine Thibault	MM	Planning / Social Outcomes Lead	Catherine.thibault@mottmac.com
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Christina Tretinjak	Ninyo & Moore	Geotechnical Lead	ctretinjak@ninyoandmoore.com
Renee Baur	Bender Rosenthal, Inc.	ROW / Real Property Lead	r.baur@benderrosenthal.com

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Cecily Taylor	SANDAG	Sr. Regional Planner	Cecily.taylor@sandag.org
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Maureen Gardiner	City	Planning Dept. Sr. Traffic Engr.	MGardiner@sandiego.gov
Donald Pornan	City	Interagency Liaison	DPornan@sandiego.gov

CC'ed

Name	Organization		Email Address
Charles Perry	MTS	Track & Structure Manager	Charles.perry@sdmts.com

Discussion

Item	Text
1	**Safety moment / housekeeping** Robert shared a safety moment related to airplane safety. Gabe pointed out the exits and bathroom locations for all attendees.
2	**Introductions** All attendees introduced themselves and their role on the project (see "Attendees" table above)
3	**Process / existing conditions overview** Project background: Bethany introduced the purpose of the workshop, which is to look at alternatives for grade separating Euclid Avenue from the Orange Line trolley tracks. MTS has received an FTA grant to perform this and another planning study along the Orange Line trolley corridor. Brent added that MTS has received several public requests for grade separation along the Orange Line, particularly at Euclid Avenue, which is adjacent to a very busy transit center with seven or eight bus routes in addition to the trolley. Euclid Avenue itself is a very busy commercial corridor with a high traffic volume. Alternatives Analysis (AA) process: Bethany walked through the AA process the group will complete over the course of two workshops. Today, the following steps will be covered:

Item	Text
	1. Developing a purpose and need statement 2. Identifying and selecting the evaluation criteria for analyzing and comparing the alternatives. 3. Weighting the evaluation criteria 4. Identifying and agreeing on the alternatives to be analyzed. The evaluation criteria will be key considerations specific to this project – for example constructability, accessibility, etc. Between workshops 1 and 2, the design team will develop the alternatives and analyze their performance against the agreed upon evaluation criteria. We will also develop rough order of magnitude (ROM) costs and approximate construction durations. Additional data requests may arise during this workshop, and we'll ask that responses are returned within two weeks. At workshop 2, the design team will present the features of the alternatives and findings of the various analyses performed. Then, as a group, we will comparatively score the alternatives against the criteria. Before we adjourn, we will ensure all attendees agree on the final scoring. After the workshops, the design team will document the AA process and incorporate it into a Project Study Report (PSR), which they will present to MTS for review and approval. Existing Conditions: Bethany presented a Google Earth fly-through of the project site, highlighted key features such as the Orange Line platforms, Euclid Ave Transit Center, Market Creek Plaza, Market St / Euclid Ave intersection ~300 ft to the north, and the Naranja St / Euclid Ave intersection <300 ft to the south. Both intersections are signalized and interconnected with the crossing. The group spent a few minutes reviewing exhibits displaying the existing infrastructure and land uses, utilities, environmental constraints, flood plain limits, traffic volumes, and transit operations. *Existing conditions exhibits are combined into a file called, "**MTS Euclid Ave GS-Existing Conditions Exh.pdf**."* Bethany pointed out the three existing bus routes that traverse the grade crossing and added that even those routes not crossing the tracks are impacted during preemption events (when trolleys approach and the gate arms are down at the crossing). Buses make uncontrolled left turns onto Market Street from the west side of the transit center. Euclid Avenue and Market St. west of Euclid are classified as 4-lane majors, Market St. east of Euclid is a 2-lane collector, and Naranja is a local street zoned commercial or mixed-use. Maureen advised the design team to review the City's bike master plan to verify whether a cycle track or separated bike lanes are planned. Cecily added that SANDAG is currently in the planning phase of a new Rapid route that would travel north-south along Euclid Ave and stop at the transit station. Genesee & Wyoming operates the SD&IY short line freight on these tracks. They operate one train per week (typically Sunday night) for one customer, and it consists of two locomotives and three to five cars. Traffic: Phil walked through the traffic counts taken on 2/4/25 and the Synchro analysis completed with that data. He highlighted the peak hour of concern, which is the AM peak at the Euclid / Market intersection. Here the analysis showed a LOS E and a 55-second delay primarily due to queuing of the northbound left turn, which extends south through the grade crossing. Phil also pointed out that pedestrians are impacted by the preemption cycle that is triggered whenever a trolley approaches the crossing at the Euclid / Market intersection, which happens approximately every 2.5 to 3 minutes. Along the east leg, they immediately receive a stop walk

Item	Text
	sign when the preemption cycle is triggered, which could leave them stranded. The same happens at Naranja Street. Utilities: Utilities primarily run parallel to the tracks or stop at the tracks, with the exception of storm drain and electrical, which cross them. Three large box culverts convey the channel flow under Euclid Ave immediately north of the tracks. Environmental conditions: Tim summarized the existing constraints. Chollas Creek and Encanto Creek are the primary constraints, with the tracks crossing each of them nearby the crossing. Their associated FEMA floodways and flood zones are represented on the exhibit as well. There is wetland vegetation within both creeks, along with some upland sensitive vegetation on the undeveloped hillside next to the Malcom X Library. This means there is also the potential for sensitive wildlife species, such as gnatcatchers, Least Bell's Vireo, and Southwestern Willow Flycatcher. The City's MHPA (habitat preserve) is northeast of the project area, and it also supports species. There are two recorded archeological sites near the project area, but they have likely been destroyed with the development in the area. The tracks themselves are part of the SD&AE / La Mesa branch line, which may also be a historical resource. There are a few hazardous material sites with open status case listings that are associated with soils in the area. Bethany added that the creeks flooded during the previous winter, causing severe damage to MTS's tracks and corridor. Christina explained that the soils information collected near the project site indicates alluvium soil, which often comes with shallow groundwater. These soils on top of consolidated soils creates the possibility of liquefaction.
4	**Purpose and Need** Bethany shared the project objectives and deficiencies that were included in the grant proposal: • Provide safety and operational enhancements allowing for improved service, including reduced travel times and reliability. • Inform MTS on how to best proceed with long-term, significant infrastructure investments on the Orange Line with focus on grade separation opportunities near Euclid Avenue. • Better serve lower-income communities that have been historically underinvested. The group discussed the typical purpose grade separations can serve, which is improving safety, operational reliability for the bus routes crossing the tracks, and reduced traffic queuing. Trolley operations are not affected by grade separating, since they have transit priority at the crossing.
5-6	**Discussion of possible evaluation criteria / selection** Bethany explained the importance of all stakeholders and various subject matter experts participating in the process, so that none of the key considerations are left out or incorrectly prioritized. There are at least five ways the crossing could be grade separated, and going through the environmental analysis and preliminary engineering of all five of them would be a lengthy and expensive endeavor. The purpose of going through a robust AA is to follow a formal, defensible process to eliminate alternatives before the environmental phase, so the findings can stand up legally if later challenged by the public or funding sources. The group brainstormed key considerations for the project and developed a list of 32 items. With more discussion, these items were grouped into the following categories:

Item	Text
	A. Construction considerations B. Multimodal user experience C. Community support / benefits D. Maintenance / operations E. Right-of-way & utility impacts Bethany explained there are two ways construction cost can be considered in the evaluation: 1. It can be a stand-alone criterion 2. Remove it as a criterion, then divide each alternative's score by its respective ROM construction cost at the end. She recommended the latter, as this method serves to "normalize" the scores in terms of fundability. The group agreed to use this method. *The criteria categories and individual criteria are listed in the "Criteria" tab of the AA Evaluation spreadsheet, "**MTS Euclid Ave GS-AA Matrix.xlsx**."*
7	**Weighting of evaluation and pass/fail criteria** The group then weighted the five criteria by considering each criterion's importance vs. each other criterion's, counting the number of times each criterion "won," and then dividing by the total number of "contests" to determine the weight of each one. The following chart displays the outcome of this weighting: The group discussed these results and concluded "Right-of-way & utility impacts" (E) should be included and "Community support / benefits" should not receive almost half the weight. The group agreed on the following adjusted weights:

	A	B	C	D	E	Total	Weight
A		B	C	D	A	1	10%
B			C	B	B	3	30%
C				C	C	4	40%
D					D	2	20%
E						0	0%
						10	100%

Item	Text
	<table><tr><th>A</th><th>B</th><th>C</th><th>D</th><th>E</th></tr><tr><td>10%</td><td>30%</td><td>30%</td><td>20%</td><td>10%</td></tr></table> This table can also be found on the “Weighting” tab of the AA Evaluation spreadsheet. The group then discussed potential pass/fail criteria. Bethany reminded the team that all streets involved will be designed per the City’s Street Design Manual and the track and trolley station per SANDAG’s LRT Design Criteria. The group discussed the accessibility and connectivity issues that would arise from disconnecting Market Street from Euclid and concluded that they must remain at grade with each other. Lester offered more information on the creeks and box culverts, stating that they are severely undersized from a hydraulic perspective. He advised against reducing their capacity. Additionally, since the crossing is in a floodplain, lowering the elevation of either the tracks or roadway would be inadvisable. Bethany pulled up the Euclid Ave. profile and pointed out that the crossing is at a low point in the road, which is fairly steep south of the tracks. This contributes to the flooding issue. Lester added that the City typically pushes to have as much of the runoff treated as possible. Amanda directed the design team to review the City’s Drainage Design Manual and BMP Design Manual as well for stormwater treatment requirements. Bethany added that it would be beneficial for the design team to meet with a City Stormwater expert to discuss the requirements and their applicability to each alternative. Lester added that the City would be against adding a pump station at this location, as the lifecycle maintenance costs are too great. Discussion concluded with the group agreeing on the following pass/fail criteria for the alternatives: 1. Meets purpose & need of the project 2. Required grade separation of Euclid Avenue from Market Street 3. Reduces the hydraulic capacity of either the creeks or culverts 4. Requires city-maintained pump station.
8	**Discussion / identification of alternatives** The group discussed the potential alternatives for grade separation, including some that would reprofile the tracks and some that would reprofile the road. Bethany presented typical sections for five of the six alternatives identified by the group. The design team will also analyze an alternative that pushes the roadway down and the tracks up, essentially “splitting the difference.” The six alternatives to be developed to conceptual design level are: 1. Raise tracks over Euclid Ave. 2. Raise LRT tracks over Euclid Ave., keep one track at-grade for freight 3. Lower tracks below Euclid Ave. 4. Raise Euclid Ave. over the tracks 5. Lower Euclid Ave. below the tracks

Item	Text
	6. Raise tracks partially and lower Euclid Ave. partially to achieve required vertical clearance John asked if the design team should consider a realignment of the Orange Line to avoid the existing crossing location altogether, such as the Market Street R/W. The city and MTS agreed such an alternative need not be considered, as the R/W costs would be prohibitively expensive, and the public would likely not support it. *Typical sections for all proposed alternatives can be found in the file titled*, "***Euclid Ave GS Proposed Alternatives.pdf.***"
9	**Next steps / action items** Bethany reiterated that the design team will now go to work developing conceptual designs for the six alternatives, completing analyses, and gathering data to support the evaluation of the alternatives against the five agreed-upon criteria. This group will reconvene in approximately one month, mid-May, to review and score the alternatives. In the meantime, the following action items will be completed: 1. **Design team** to schedule a meeting with City Stormwater expert to discuss treatment requirements. 2. **City** to gather roadway and storm drain as-builts for Euclid Avenue and Market Street. 3. **Design team** to review Chollas Creek Park Master Plan and City Bike Master Plan to ensure proposed alternatives do not preclude planned community improvements. 4. **SANDAG** to verify preliminary plans for Rapid route 625 and share with design team. **All action items are due on Tuesday, April 29, 2025.** *Action item matrix can be found in file titled, "**MTS Euclid GS AA - Action Items.xlsx**."* Bethany quickly summarized the planned activities for Workshop 2, which include the design team presenting the alternatives and their comparative performance against each of the evaluation criteria, followed by the group working together to score the alternatives. She emphasized that the conclusion will be a ranked set of alternatives recommended to advance to the environmental study phase. The top ranked alternative will not be considered "preferred" until it has undergone public review and been selected by the community.

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MOTT MACDONALD

Record of meeting

Project title Euclid Avenue Grade Separation

Subject Alternatives Analysis (AA) Workshop #2

Location 1255 Imperial Ave, 9th Floor / MS Teams

Date/time of meeting June 24, 2025, 1:30 p.m.

Project number WOA354-AE-38 (MM #504101624)

Prepared by Peter Smith

Attendees

Name	Organization	Role	Email Address
Heather Fury	MTS	Director of Capital Projects	Heather.Furey@sdmts.com
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Teferi Abere	MM	Roadway Design Lead	Teferi.abere@mottmac.com
John Schnurbusch	MM	Systems Design Lead	John.schnurbusch@mottmac.com
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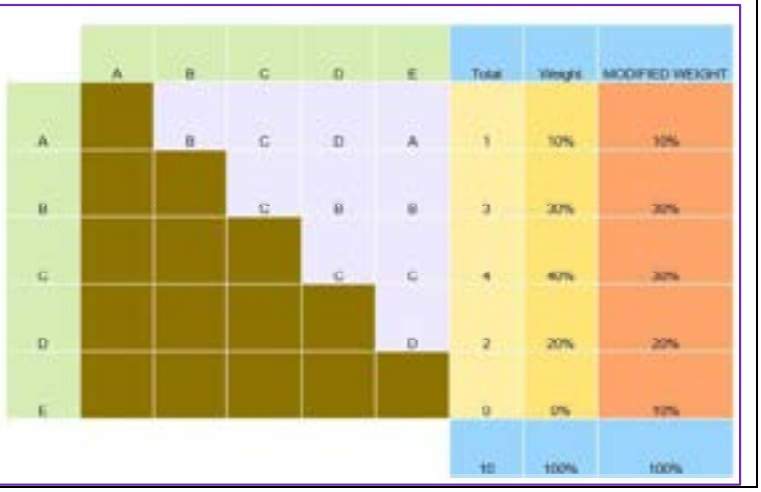
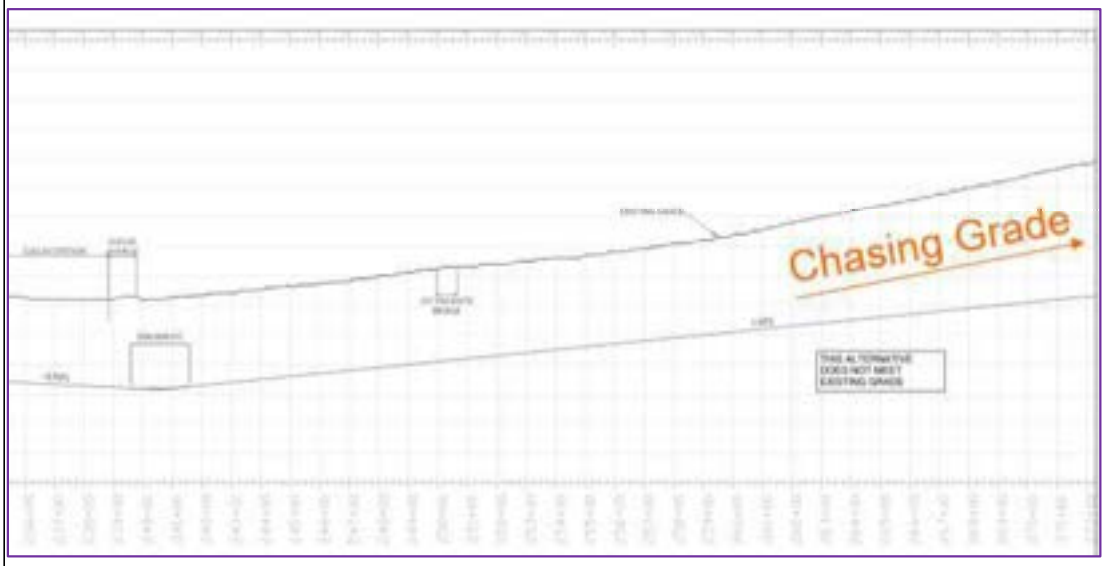
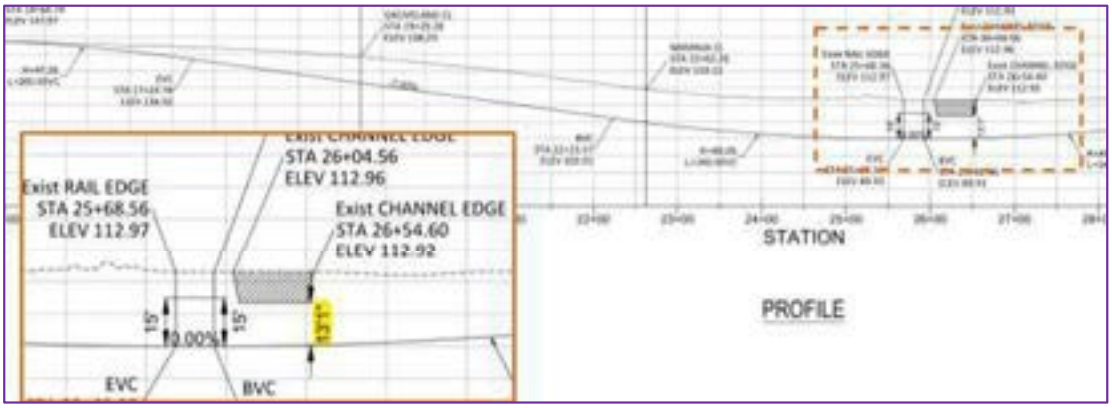
Maureen Gardiner	City of San Diego	Planning Dept. Sr. Traffic Engr.	MGardiner@sandiego.gov
Donald Pornan	City of San Diego	Interagency Liaison	DPornan@sandiego.gov
Philip Wragg	STC	Traffic Engineering	philip.wragg@stctraffic.com

Discussion

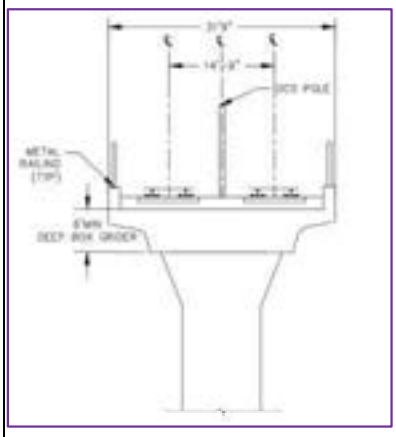
Item	Text
1	**Safety moment / housekeeping** Peter shared a safety moment to avoid taking calls while driving; even if “hands free”. Peter pointed out the exits and bathroom locations for the in-person attendees.
2	**Introductions** All attendees introduced themselves and their role on the project (see “Attendees” table above)

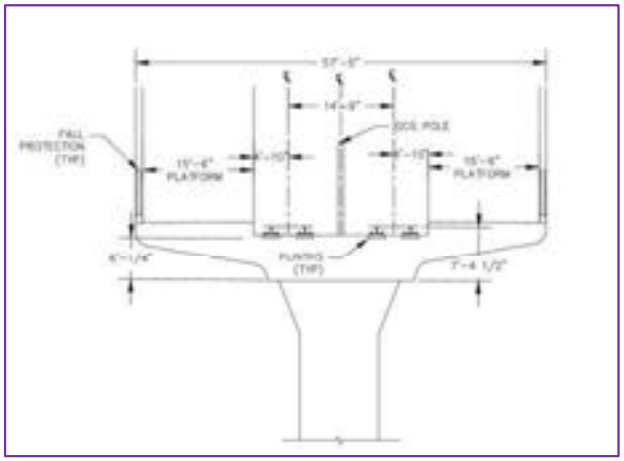
Item	Text
3	**Recap Workshop #1** Purpose & Need: The project will evaluate alternatives to improve safety, MTS operations, pedestrian/community experience, and reduce traffic delays in grade separation of the rail and vehicular traffic. Site Constraints: The site is highly constrained with narrow MTS right-of-way, heavy development on both sides of tracks, utilities under and above the street, and the presence of the Chollas Creek and Encanto Channel, which pose flooding, regulatory, and environmental challenges. Euclid & Market is a busy intersection with a low level of service. Grade Separation Alternatives: Five initial alternatives were discussed, including raising or lowering the rail tracks or roadway, and a sixth alternative involving partial raising or lowering of both the rail and road. 1. Raise MTS and freight rail above Euclid Avenue. 2. Raise MTS rail above Euclid Avenue, freight at-grade. 3. Lower all rail below Euclid Avenue. 4. Raise Euclid Avenue above all rail. 5. Lower Euclid Avenue below all rail. 6. *Extra WS#1 Alternative: Split the difference – partial raising and lowering of rail and/or road* Ranking Criteria and Weighting: Five criteria for evaluating the alternatives against each other where developed along with a relative weighting for what the group decided were most important to the community: • Ranking Criteria and Weighting – A: Construction Considerations – B: Multimodal User Experience – C: Community Support/Benefits – D: Maintenance and Operations – E: Right of Way 

Item	Text
	• Ranking Criteria and Weighting After the criteria and weighting were developed the group discussed pass/fail criteria that could be used to eliminate alternatives: 1. Alternative must meet Purpose and Need 2. Alternative must not grade separate the Euclid and Market intersection 3. Alternative must not reduce the hydraulic capacity of the channels or culverts 4. Alternative must not require maintenance of pump station(s)
4	**Eliminated Alternatives** After Workshop #1 Mott MacDonald staff reviewed the feasibility of the alternatives and decided some should be eliminated due to significant engineering challenges, cost, or not meeting the pass/fail criteria. Due to the large flood plain widths, proximity to channels, and that both the street and rail cross the channel, any alternative that involves lowering the profile was eliminated. Lowering would require permanent pumping equipment for water infiltration, potential floodwalls which would increase flood plain widths, or tunneling under the creek crossings which will significantly increase cost and require fire life-safety, ventilation, and air handling requirements. *For these reasons Alternatives 3, 5, and 6 were eliminated from further study.* For Alternative 3 lowering the profile has an additional issue with coming back to grade east of Euclid Avenue as the ground rises faster than typical railroad grades:

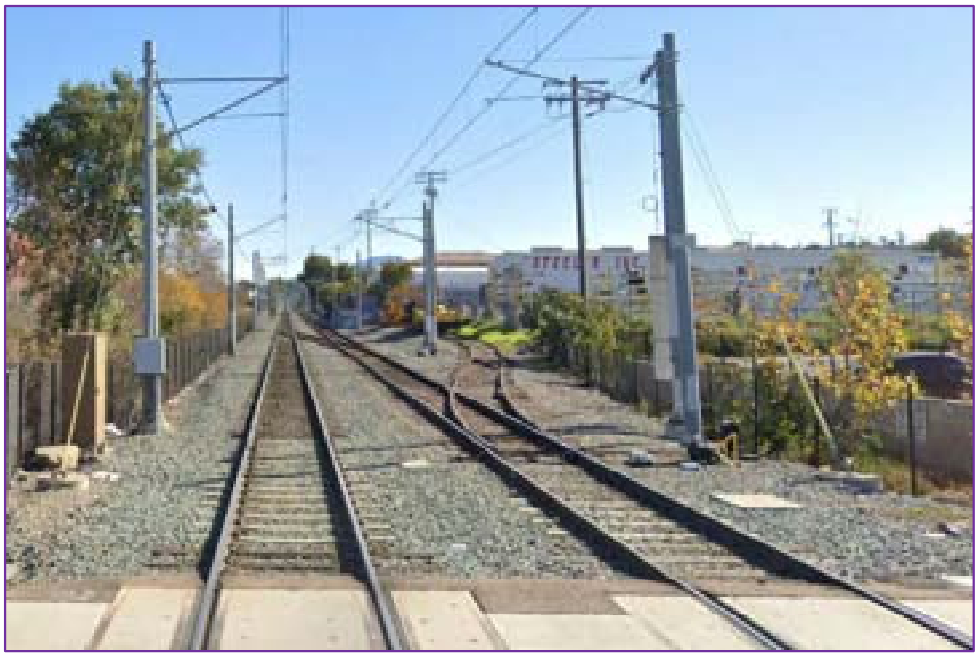
Item	Text
	 For Alternative 5 the road profile was set to the steepest grade allowed by City standards and there would be insufficient clearance (less than 15') under the channel and at the Market Street intersection: 
5	**Viable Alternatives for Study** Alternatives 1, 2, and 4 are the viable alternatives for grade separation. <u>Alternative 1 – Raise MTS and freight rail above Euclid Avenue:</u> See exhibit "Euclid-GS_Alternative01.pdf" This alternative involves raising both tracks on a long viaduct supported on columns and deep foundations. The Euclid Station would be elevated and use stairs, elevators, and bridges like other elevated stations on the MTS Blue and Green lines. The rail crossing at Euclid Avenue would be removed eliminating the possibility of trolley/vehicle conflicts, improving safety, and reducing delays at the nearby intersections due to the trolley preemption. The viaduct could be contained within the existing MTS right-of-way. The viaduct columns would be in the floodplain requiring a CLOMR/LOMR (Conditional Letter of Map Revision/Letter of Map Revision) analysis

Item	Text
	and approval from FEMA to determine if flood boundaries and insurance rate maps need revision.

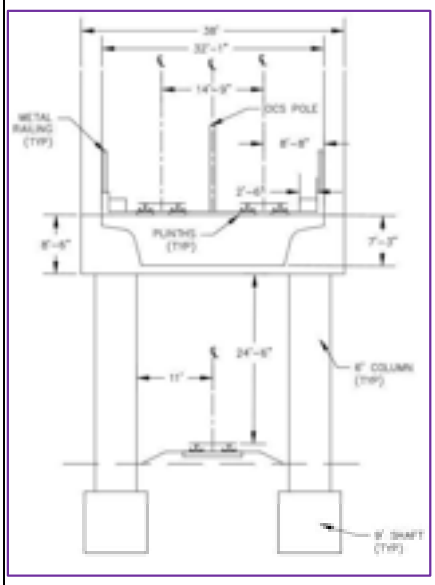
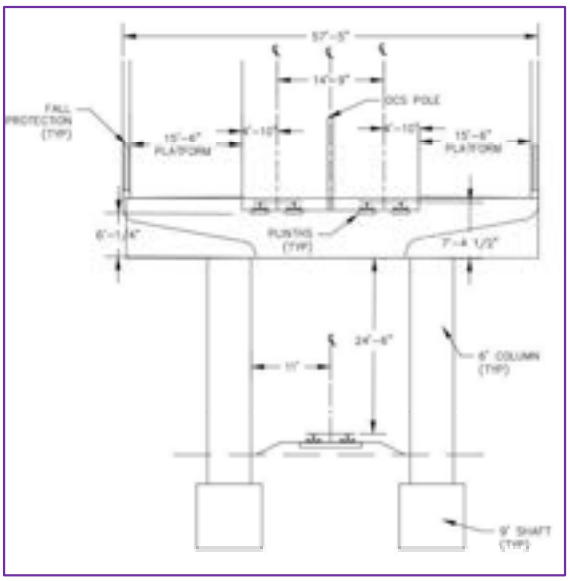


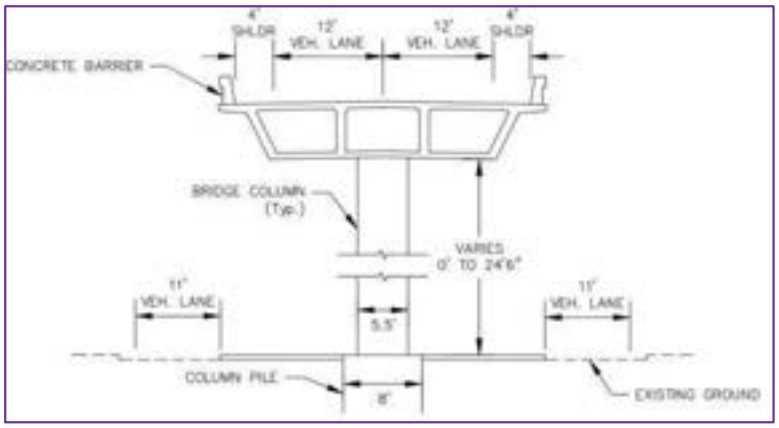


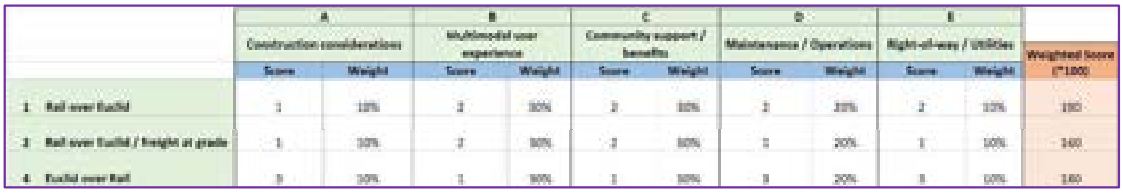
Due to the narrow right-of-way, it is not feasible to construct the viaduct and elevated station in halves and maintain trolley or freight rail service. Construction of the viaduct will require large cranes and equipment to drill deep foundations and install 60'-80' long rebar cages and it is not possible to safely perform this work next to live electrical overhead wires that power the trolley. Complete closure of the existing trolley tracks and system is required. Below is an image of the narrow ROW east of Euclid Avenue:



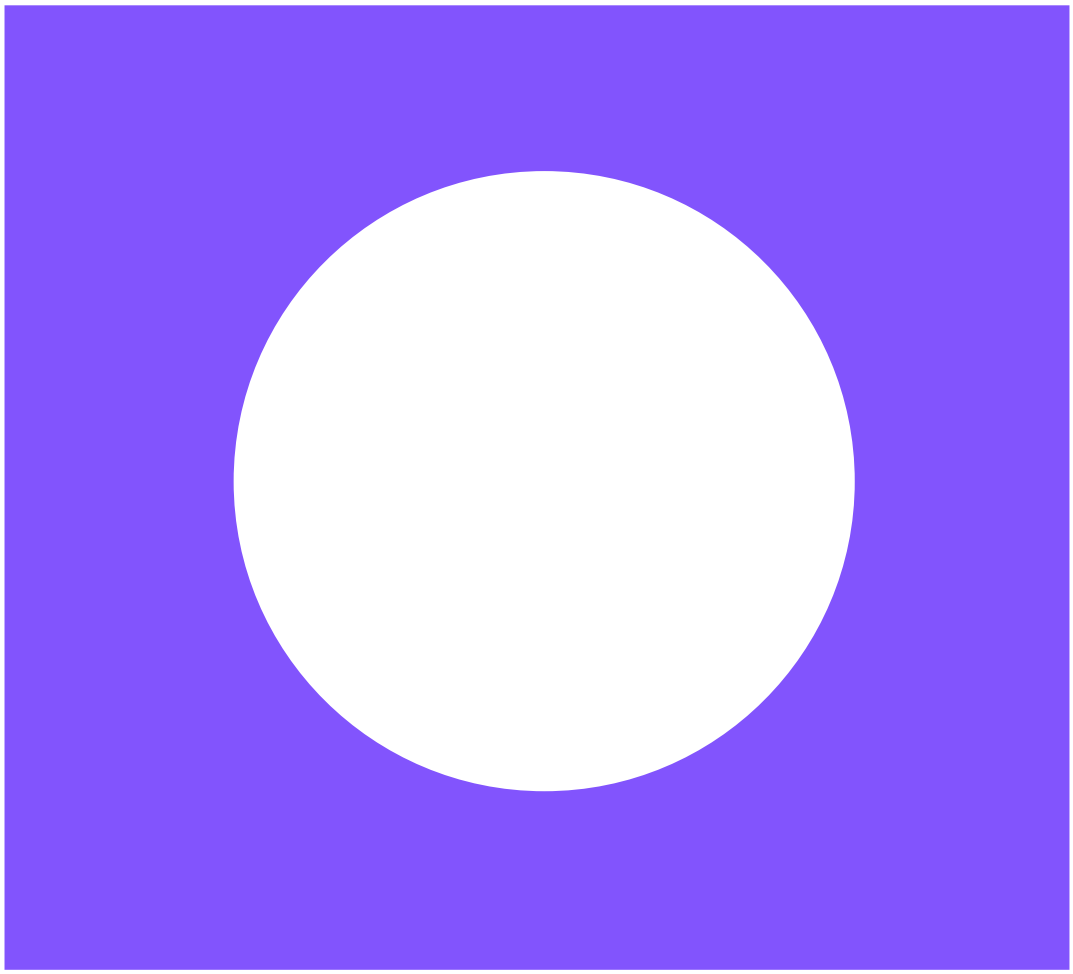
A track shoefly to temporarily move the track out of the MTS ROW is not feasible as this would require acquiring several private properties and permitting new bridges over the creek crossings on the south of the ROW. A shoefly down Market Street is also not feasible due to

Item	Text
	the complexity of running the trolley in the street, the street narrows to 2 lanes east of Euclid Avenue, and property acquisition would be needed to bring the trolley back to the MTS ROW. To accommodate the track shutdown during construction buses will be needed to provide service and trucking for the freight train deliveries. Shutting down trolley service is expected to significantly reduce ridership, increase commute times, and increase vehicular traffic on the local streets. In addition, the temporary shutdown eliminates trolley operational redundancy forcing East County trains to take the longer Green Line route through Mission Valley, along I-5, and through downtown to return to the 12th & Imperial maintenance facility. Alternative 2 – Raise MTS above Euclid Avenue, freight at-grade: See exhibit "Euclid-GS_Alternative02.pdf" This alternative involves raising the trolley tracks on a long viaduct, like Alternative 1, while maintaining another set of tracks to keep the freight traffic at-grade and maintaining the Euclid Avenue rail crossing in operation. The freight train currently runs once a week and has minimal disruption at the current crossing. The viaduct would have an elevated station with stairs, elevators, and bridges like Alternative 1. To maintain a freight rail at grade, a track will need to branch off the alignment at each end of the viaduct before the trolley grade can be lifted. After there is sufficient vertical clearance the freight track will diverge and run under the viaduct. This alternative will mostly be contained within the MTS ROW. At the west end the freight track divergence can be maintained in the MTS ROW. At the east end a permanent ROW acquisition will be needed near or at the U.S. Post Office property and/or Stevens Way.   Since this alterative use 2 columns to provide space for running freight underneath, it will have a greater impact in the floodplain and CLOMR/LOMR analysis. Similar to Alternative 1 a shutdown of the rail will be needed during construction having the same impacts to ridership and operations.

Item	Text
	Alternative 4 – Raise Euclid Avenue above the rail: See exhibit "Euclid-GS_Alternative04.pdf" Euclid Avenue is a 4-lane street and this alternative involves raising the 2 middle lanes of Euclid Avenue on a bridge over the rail crossing and creating dead-end road closures on either side of the crossing. The bridge would extend from Overland Drive to Guymon Street. A special pedestrian and bicycle only crossing would be maintained over the tracks. Once the dead-end closures are in place the trolley preemption of the traffic signals could be removed and will improve traffic and pedestrian operation at the intersections. Raising the two middle lanes maintains the outer lanes for access to local streets, driveways, and businesses. The proposed bridge is intended only for vehicular traffic with 2-lanes and shoulders. The bridge would restrict some left turn movements on and off Euclid Avenue at Groveland Drive and Guymon Street potentially impacting traffic to an elementary school. The proximity of the bridge columns within the floodplain require a CLOMR/LOMR analysis but the change is expected to be less impactful than Alternatives 1 and 2.  Construction impacts would require only short shutdowns of the trolley for installing and removing beams for construction and reconfiguring the crossing signals. This alternative is least impactful to trolley operations. There would be temporary impacts in the street to traffic flow and relocation of gas, sewer, and electrical lines in the street. Closing the rail crossing to vehicular traffic will require coordination with City emergency services (police, fire, ambulance) and rerouting some MTS bus routes. Buses that currently cross the tracks would need a new bus stop on the south side of the crossing. One variant of this alternative would be to maintain the rail crossing, along with the new bridge, as this would benefit the community in maintaining current operations but possibly reduce traffic by an estimated 1000 vehicles/hour that can bypass the Market/Euclid intersection. However, the trolley preemption of the signals would need to be maintained and there may be little traffic and pedestrian improvements at the intersections. Crash data from the Transportation Injury Mapping System (TIMS) for the area was reviewed that displays data for the past 10 years, see TIMS – Crash Diagram_Euclid 10 yr_v2.pdf. There are no reported fatalities and no incidents involving the trolley or the rail crossing. MTS will be implementing an advanced preemption system on the Orange Line in the next few years that will not trigger a sudden do not walk signal and allow pedestrians to complete crossing the intersections when a trolley triggers the signal.

Item	Text
6	**Ranking Alternatives** The rankings, details of the ranking criteria, and key considerations are in the spreadsheet "MTS Euclid Ave GS-AA Matrix.xlsx" Key considerations are details of the ranking criteria input by the members of the design team. These details can be used in assisting with the scoring of the 3 viable alternatives against each other. The alternatives are scored against each other from 1 to 3 with the 3 being the highest value. If 2 alternatives are essentially the same, they are given the same number. The meeting attendees scored the 3 Alternatives as follows: Construction: For construction impacts Alternative 4 is considered the least impactful with the shortest duration and minimal impact to trolley operations and is given a score of 3. Alternatives 1 and 2 are essentially equally impactful and have a score of 1. Multimodal User Experience: Closing the rail crossing negatively impacts bus operations and requires re-routing of operations and local traffic, therefore Alternative 4 is given a score of 1. Raising the rail is least disruptive to users, except needing to access an elevated station, Alternatives 1 and 2 were given a score of 2. Community Support / Benefits: Alternatives 1 and 2 will have more noise, visual, and potential flood impacts; however Alternative 4 is more negatively impactful to the community traffic operations, access to local driveways, and some reduced site distances on Euclid Avenue. Raising tracks is considered to have the greatest community benefit. Therefore Alternatives 1 and 2 are given a score of 2 and Alternative 4 a score of 1. Maintenance and Operations: Alternatives 1 and 2 are much longer structures and the elevated station will have elevators and will require more maintenance and security than Alternative 4. Alternative 2 will require some amount of increased maintenance than Alternative 1 due to more viaduct columns and an an additional track running underneath. Therefore Alternatives 1, 2, and 4 were given scores of 2, 1, and 3, respectively. Right-of-Way/Utilities: Only Alternative 2 needs a permanent ROW acquisition and Alternatives 1 and 2 would likely require more temporary construction easements due to their size. Alternative 4 will have the most utility impacts, however these are not expected to be significant. Therefore Alternatives 1, 2, and 4 were given scores of 2, 1, and 3, respectively. The final weighted score is below with all 3 alternatives being approximately equal:  After the construction cost estimates are prepared the weighted scores will be divided by the respective cost to obtain the normalized score. By inspection Alternative 4 will have a

Item	Text
	significantly less construction cost than Alternatives 1 and 2 and will have the highest normalized score. The normalized score will be shown in the PSR.
7	**Next Steps** Peter will coordinate with the discipline leads and start writing the PSR document in the month of July with an anticipated submittal of the draft report in early August. The PSR will have a discussion for community engagement to understand their concerns and to aid decision makers in future analysis of one of the alternatives or a different alternative to improve the crossing. *Action Items:* • Peter to prepare meeting minutes and send links to Workshop files. • Peter to prepare an outline of PSR and send to Heather for review. • Peter to coordinate with discipline leads for sections of PSR writing.



Metropolitan Transit System

Baltimore Junction and Euclid Grade Separation Planning Study Results

Executive Committee

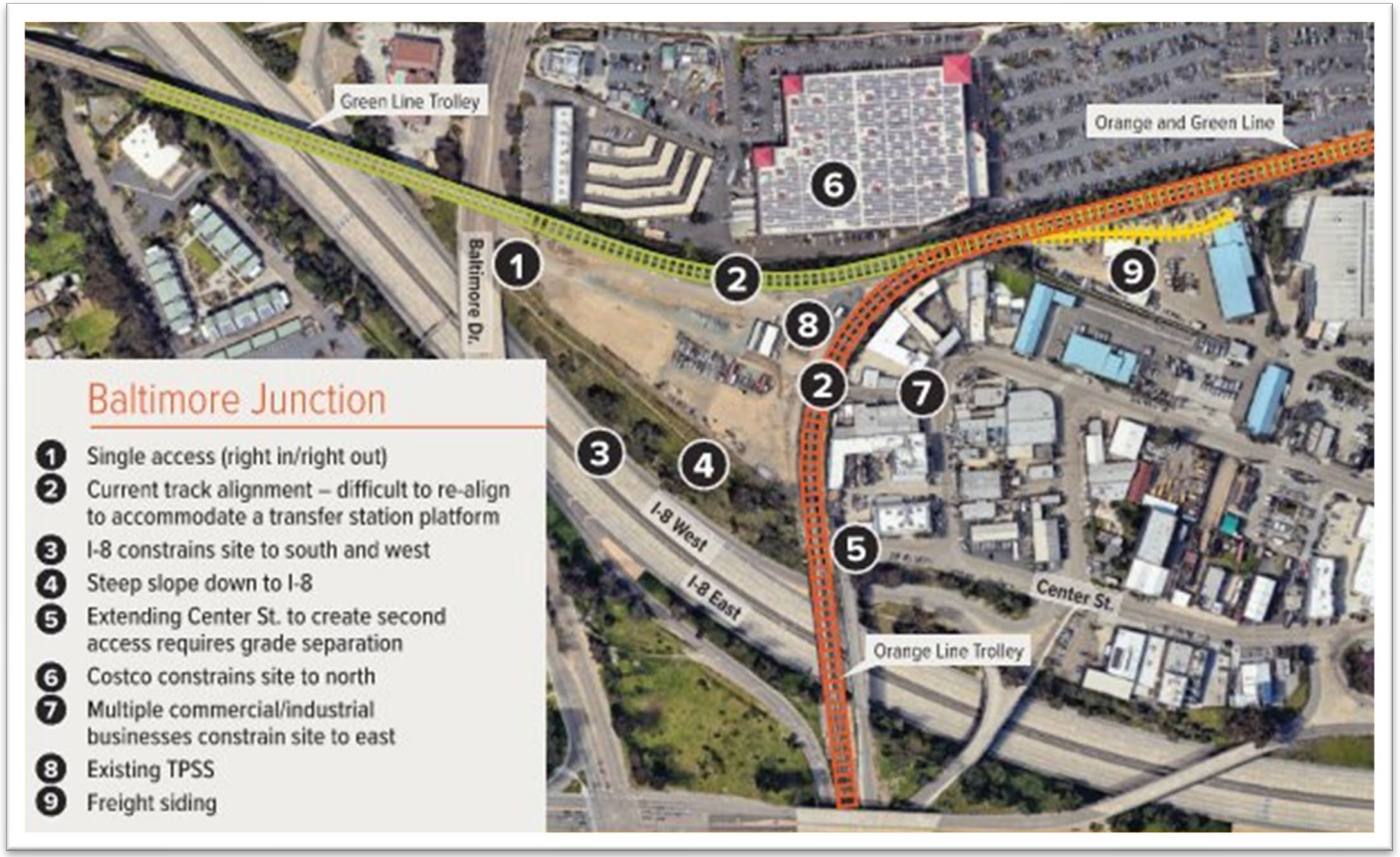
Baltimore Junction and Euclid Grade Separation Planning Study Background

- In September 2022, MTS received a $750,000 FTA grant for planning studies along the Orange Line, at Baltimore Junction and at Euclid Avenue.
- Baltimore Junction was studied to evaluate additional wye, passenger transfer station, and development opportunities
- Euclid Avenue grade crossing evaluated to develop alternatives for grade separation

Baltimore Junction Study

Existing Conditions:

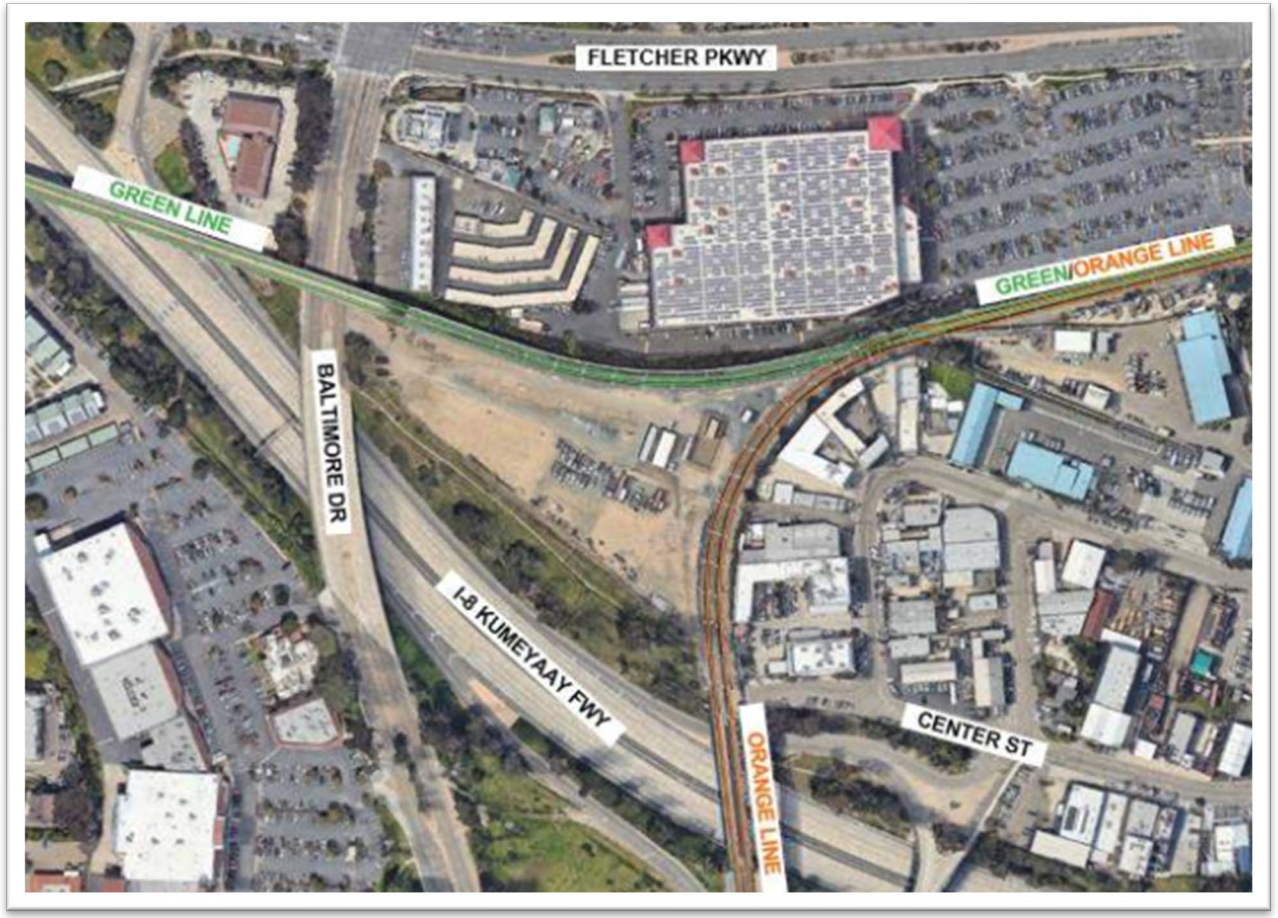
- 5.5-acre MTS owned property, bound by Green Line, Orange Line, Baltimore Drive and I-8 Freeway in La Mesa
- Existing Track geometry evaluated for additional wye and possible passenger transfer station
- Assess opportunity for development on remainder of parcel



Baltimore Junction Study

Existing Conditions:

- The site is relatively flat. A traction power substation (TPSS) is located on the site to power the Trolleys and a portion of the site is currently leased to a private entity
- Substantial grade differences to the North (30’) and south (6’)

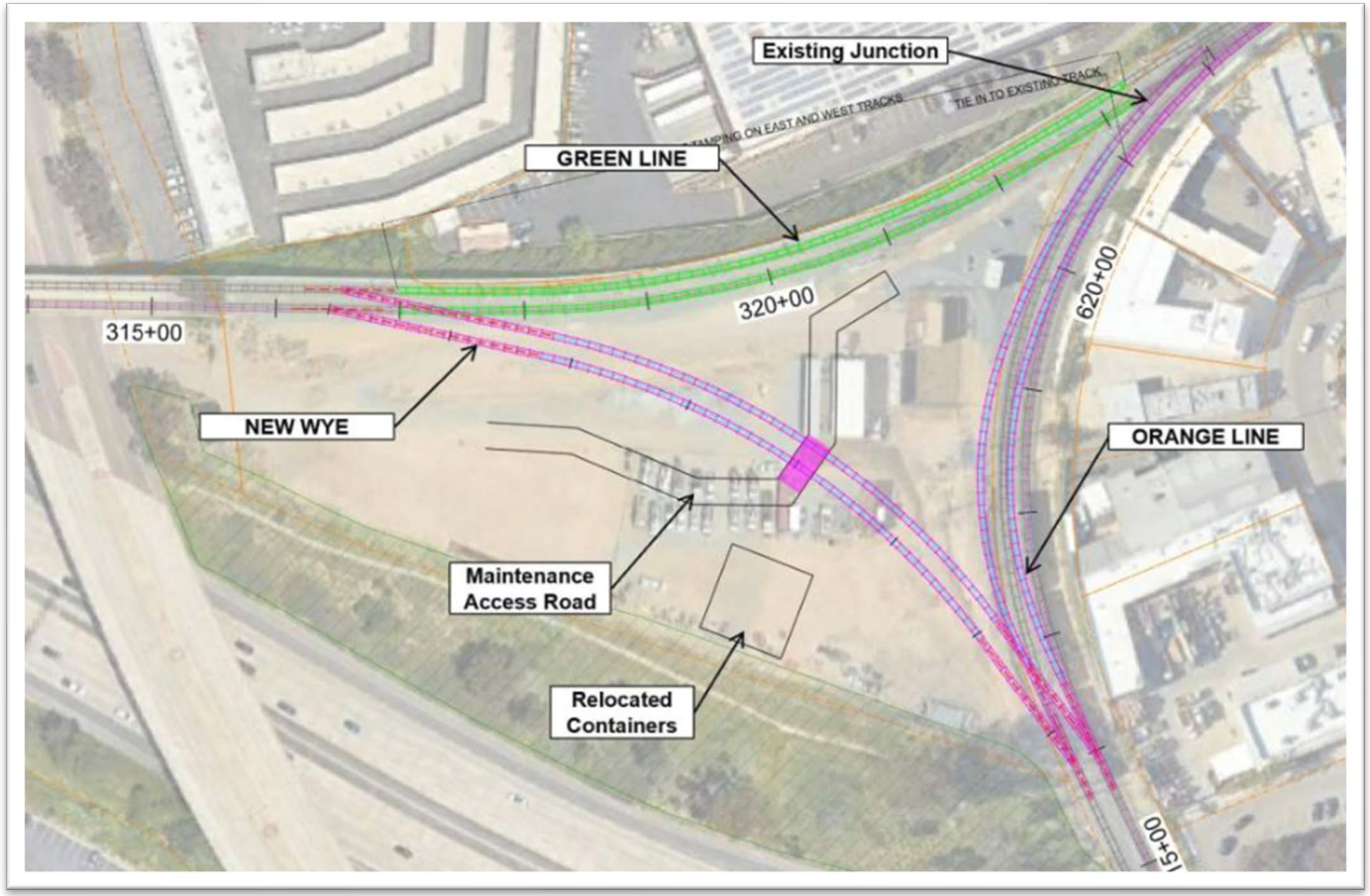


Baltimore Junction Study

- Design Requirements:
  - Full Wye for improved operational flexibility
  - Within existing MTS ROW
  - Maintain Orange Line freight operations
  - Provide station platforms of at least 360’
  - Comply with LRT Design Criteria

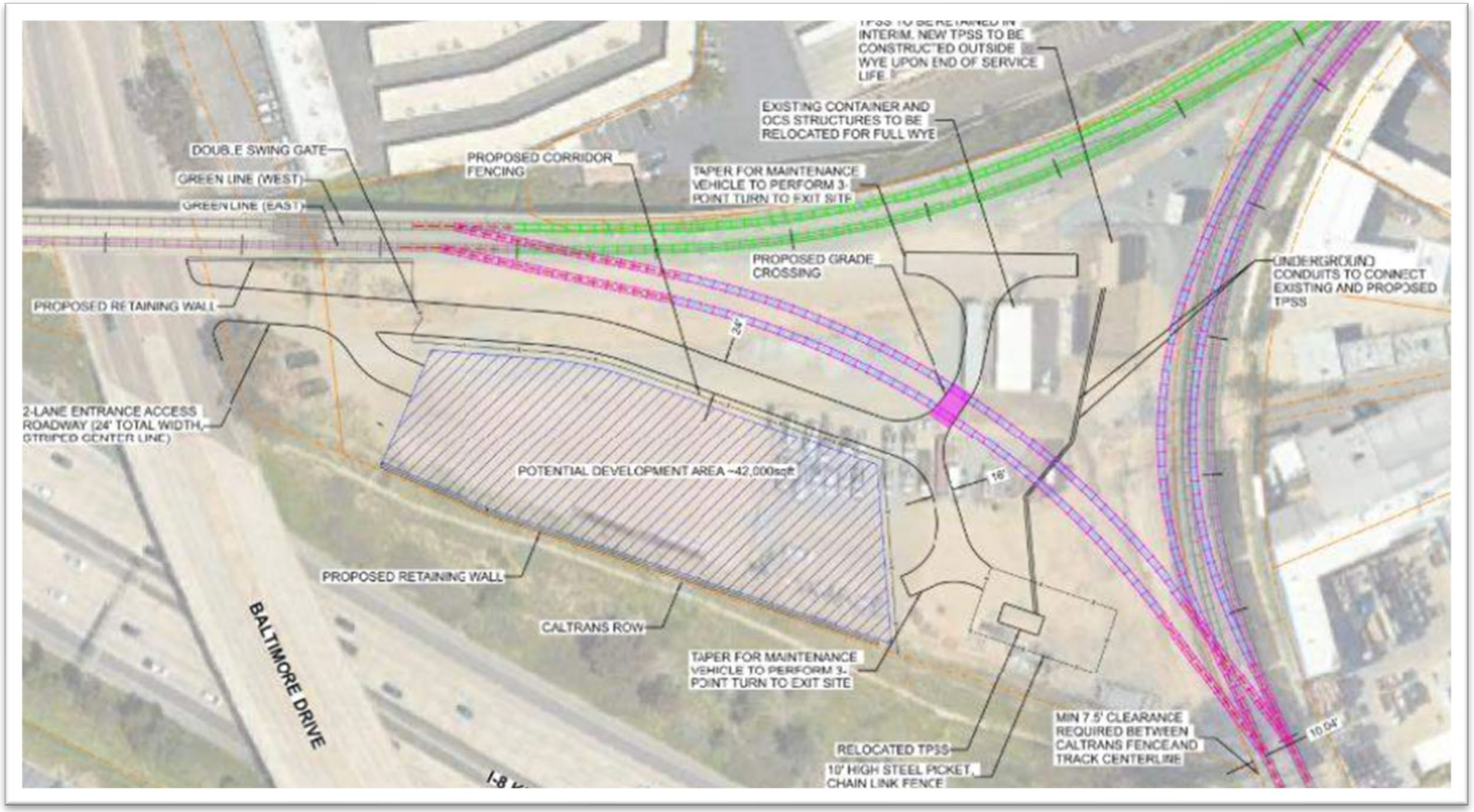
Baltimore Junction Study

- Study Results:
  - Full Wye is feasible, passenger transfer platform not viable
  - Speed restrictions required due to curve geometry
  - Project Cost $12 – 14M and requires:
    - reconstruction of segments of Green and Orange Line,
    - installation of new and modification to existing RR signaling
    - MTS Maintenance-only grade crossing to access TPSS
    - Impact to existing private tenants



Baltimore Junction Study

- Site Development:
  - Approx Area of 42,000sf
  - MTS maintenance access must remain
  - Requires:
    - Preservation of space for new TPSS
    - Crane access to install new TPSS
    - Retaining walls to support access roadway and southern property edge



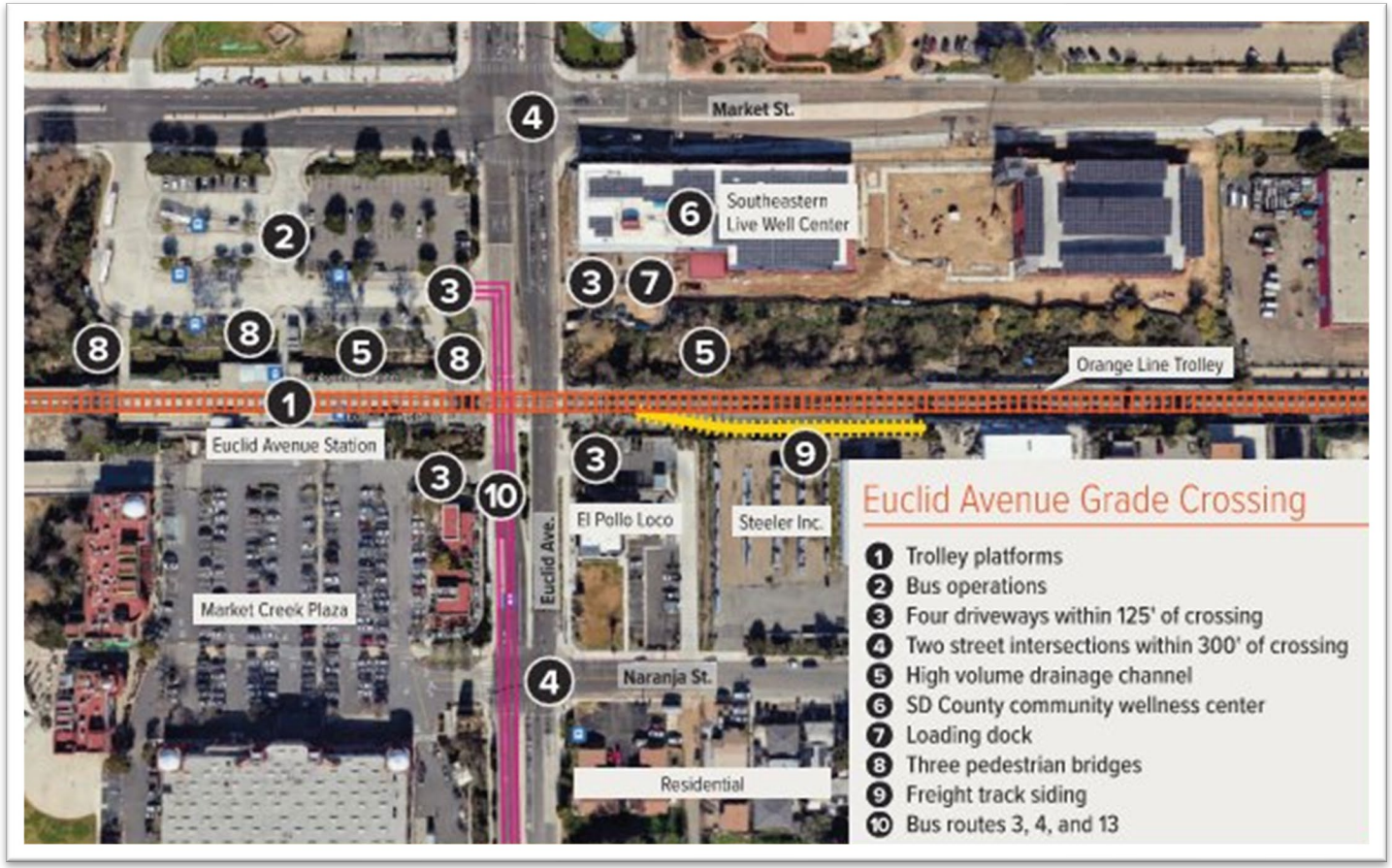
Baltimore Junction Study

- Next Steps:
  - At this time, staff does not foresee need to invest in the track and signaling modifications required to incorporate the additional Wye into the trolley network.
  - MTS staff will refer to study results to ensure future development is designed to accommodate a future wye in this location

Euclid Grade Separation Study

Existing Conditions:

- Existing roadway and trolley/freight tracks crossing was studied to develop alternatives for grade separation
- Grade separation could eliminate RR crossing gates and reduce delays for personal vehicles traveling in the area.
- Planning effort included agency staff from MTS, SANDAG and the City of San Diego



Euclid Grade Separation Study

Existing Conditions:

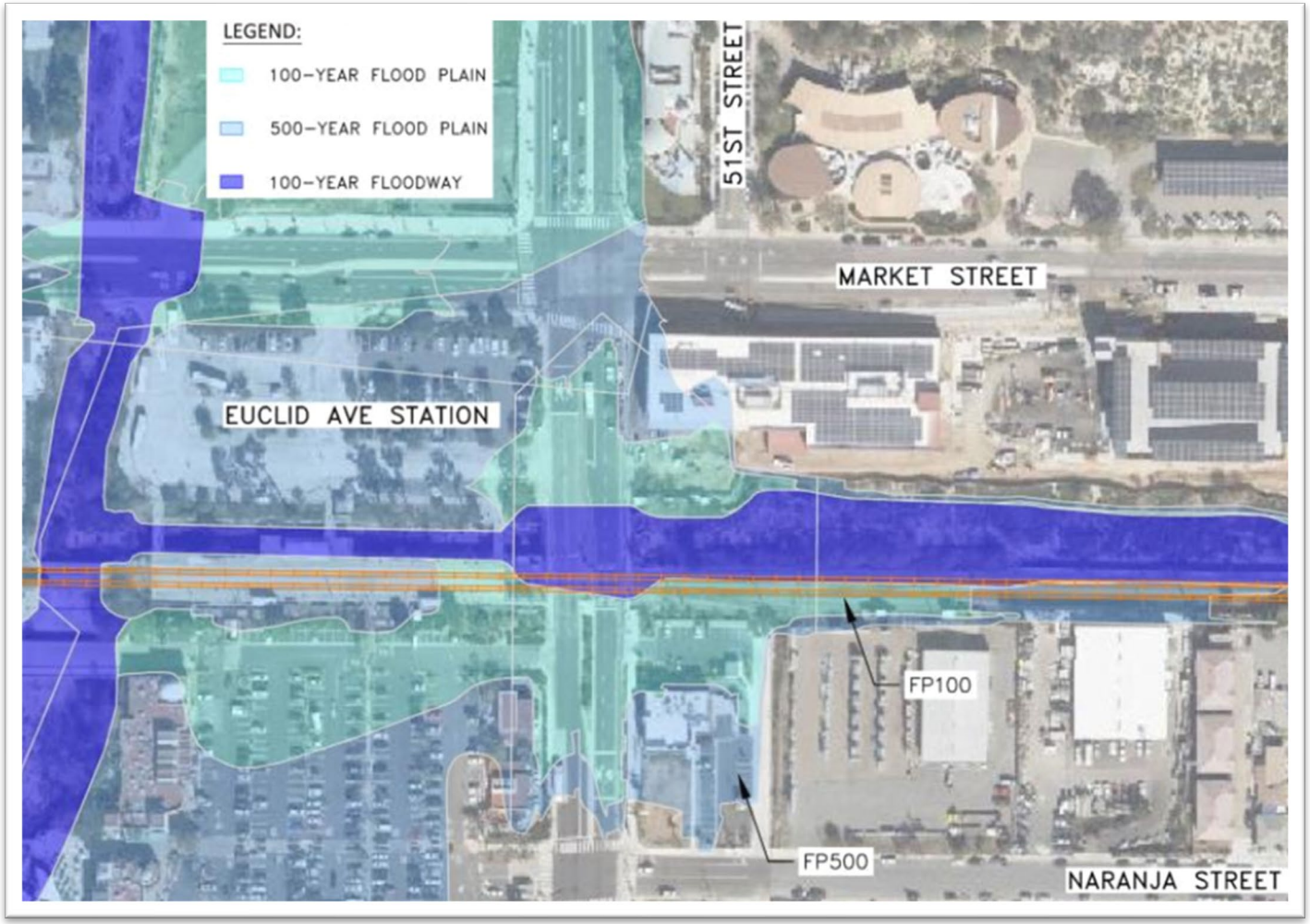
- Euclid Transit Center is busiest Orange Line station outside of downtown San Diego, serving 7 local and one express bus route
- Orange Line trains operate at 15 minute headways and RR crossing gates deployed eight times per hour

Euclid Grade Separation Study

Existing Conditions:

- Daily traffic volumes on Euclid between Market and Naranja are approximately 21,000.
- Largest impact during AM peak
- The grade crossing and surrounding streets are located in FEMA flood plains

ID	Intersection	Existing Conditions			
		AM		PM	
		Delay (seconds)	LOS	Delay (seconds)	LOS
1	Euclid Ave / Market St	**55.3**	**E**	33.9	C
2	Euclid Ave / Naranja St	18.1	B	20.8	C



Euclid Grade Separation Study

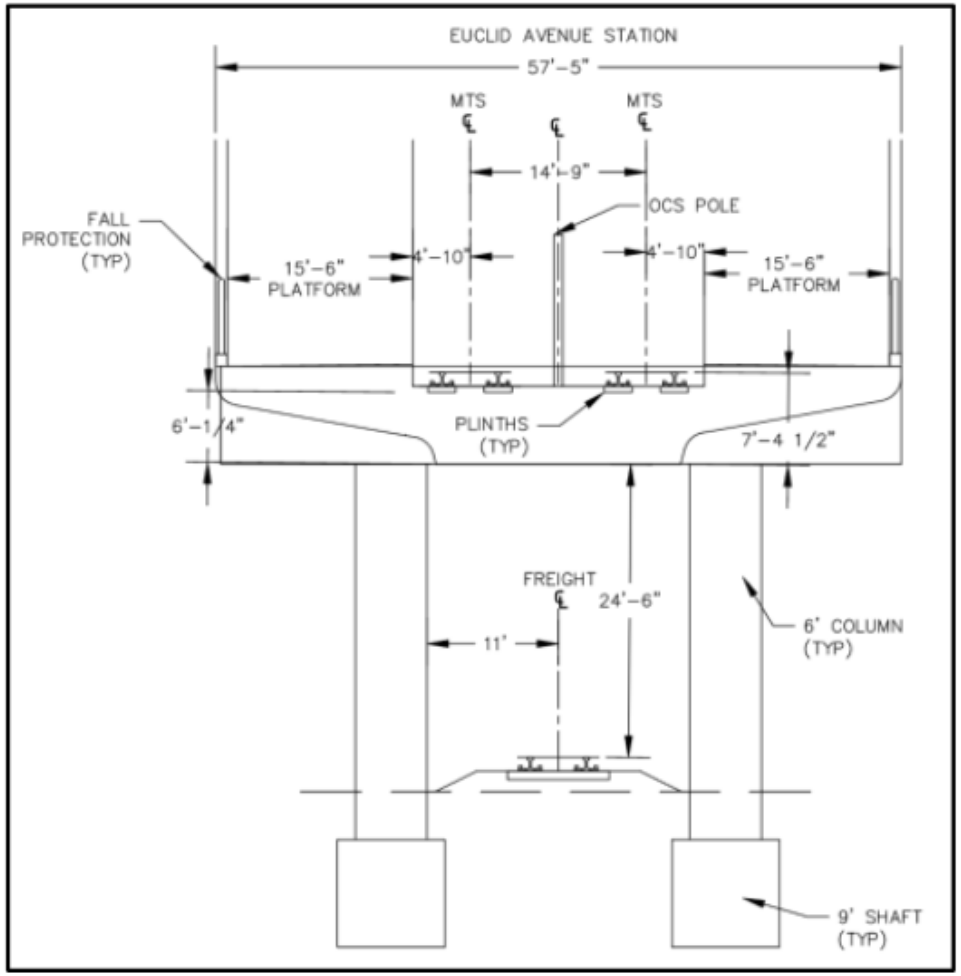
- Design Requirements:
  - Maintain Market Street and Euclid Avenue Intersection
  - Must not disrupt flow of Encanto Channel and Chollas Creek, causing a revision to flood maps
- Project Alternatives:
  1. Raise MTS and Freight tracks over Euclid Avenue
  2. Raise MTS tracks over Euclid Avenue
  3. *Lower MTS/Freight Tracks Under Euclid Avenue*
  4. Raise Euclid Avenue over Tracks
  5. *Lower Euclid Avenue under tracks*
  6. *Partially Raise and Lower Tracks and Roadway*
- *Alternatives 3, 5 and 6 eliminated due to proximity to floodplain and increasing flood risk at adjacent properties*

Euclid Grade Separation Study

- Alternative 1:
  - Elevates both MTS and Freight tracks above Euclid Avenue
  - Reconstruction of Euclid Trolley station in an elevated configuration, similar to the Executive Drive Station on the Blue Line, pictured here
  - Narrow railroad ROW in this area (40’ immediately east of Euclid Avenue) would require an extended Trolley shutdown for construction
  - Construction estimated to take three years at a cost of $176 million

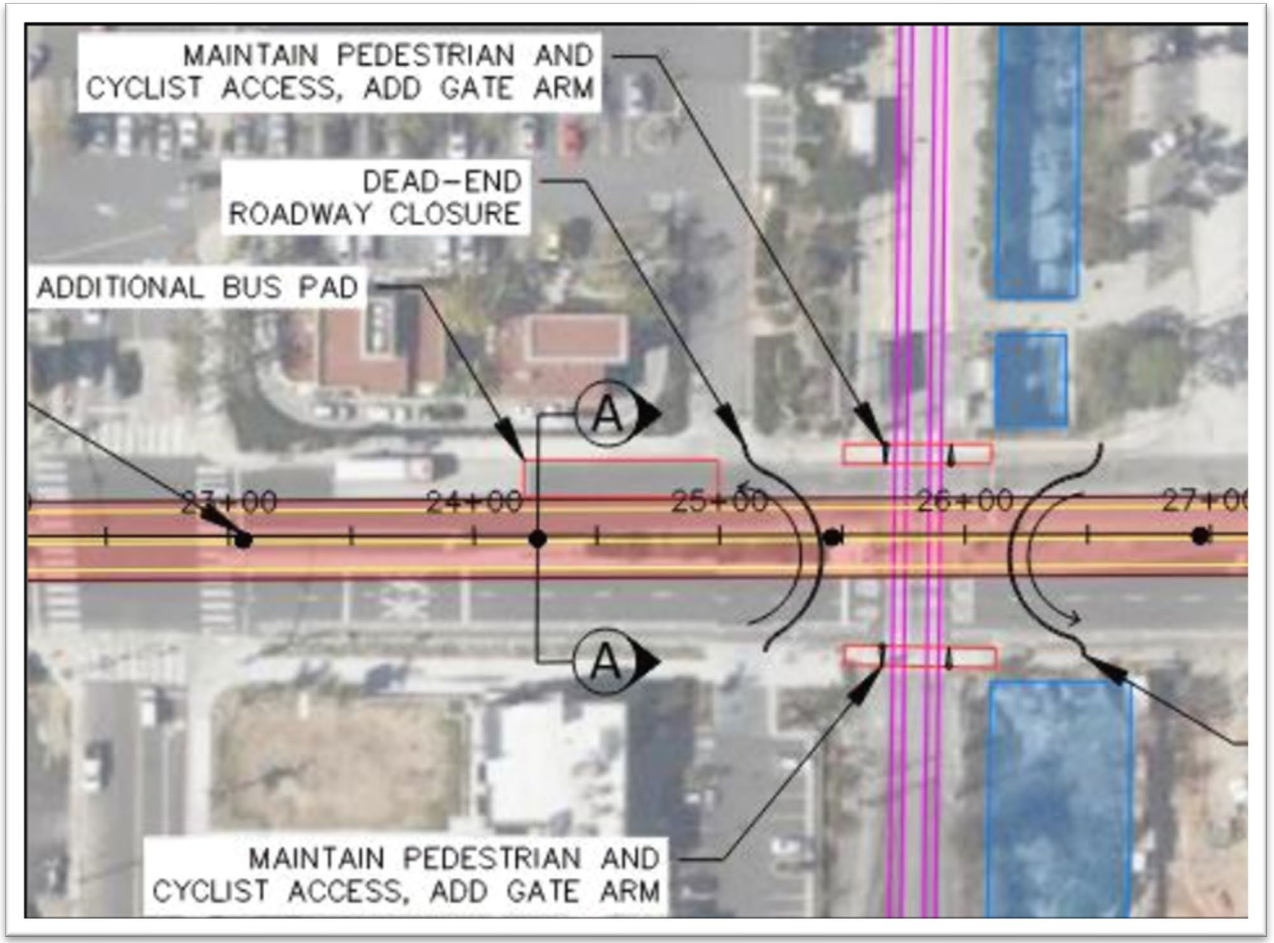
Euclid Grade Separation Study

- Alternative 2:
  - Elevates both MTS tracks above Euclid Avenue, freight tracks remain at grade
  - Reconstruction of Euclid Trolley station in an elevated configuration
  - New freight spur required to run parallel to trolley tracks until sufficient height allows freight to run underneath viaduct
  - Similar to Alt. #1, ROW constraints require an extended trolley shutdown for construction
  - Construction estimated to take slightly longer than three years at a cost of $220 million



Euclid Grade Separation Study

- Alternative 4:
  - Elevates Euclid Avenue above MTS/freight tracks
  - Grade crossing closed to vehicular traffic, with signal gates for pedestrian and cyclists
  - 2 of 4 lanes elevated with exterior lanes at grade to access residential and commercial driveways and cross streets
  - MTS Bus routes 3, 4 and 13 will need alternate routings
  - Construction estimated to take two years at a cost of $35 million



Euclid Grade Separation Study

- Project Ranking Criteria, Weighting and Results

- Ranking Criteria and Weighting -				
10%	30%	30%	20%	10%
A	B	C	D	E
Construction Considerations	Multimodal User Experience	Community Support / Benefits	Maintenance / Operations	Right-of-Way / Utilities
Construction schedule	Service reliability	Noise impacts	Additional security needs	Utility impacts
Temporary rail operations	Bike / ped / disabled access	Visual impacts	Additional maintenance requirements	Public ROW impacts
Temporary bus operations	Rail / bus patron safety	Does not preclude planned development	Staffing needs	Property access
Temporary freight operations	Bus / rail connectivity	Effects on drainage / flooding potential	Locomotive needs	Private property acquisitions
Temporary construction easements	Service interruptions	Parking impacts	Bus access (in and out of transit center)	Temporary construction easements
Temporary construction improvements / laydown	Security needs	Reclaim useable area		
Temporary traffic impacts	Parking impacts	Lighting / visibility		
Temporary station accessibility	Potential for accessible service interruption	Sight distance		
		Emergency services / routing		
		Effects on adjacent crossings		

	Weighted Score (*100)	Estimated Cost (in $1,000,000s)	Normalized Score
Alternative 1	190	$176.0	1.08
Alternative 2	160	$220.0	0.73
Alternative 4	180	$35.0	5.14

Euclid Grade Separation Study

- Next Steps:
  - Stakeholders at MTS, SANDAG and the City of San Diego completed the evaluation of alternatives based on the engineering viability of the alternatives. The stakeholder group identified user experience and community impacts as key criteria for continued evaluation of alternatives.
  - SANDAG is kicking off a regional assessment/prioritization of potential grade separations along all Trolley, Sprinter, and Coaster lines. The work is scheduled to start Summer 2026 and be complete by Fall 2027.

Questions/Comments

Agenda Item No. 06

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
EXECUTIVE COMMITTEE

April 9, 2026

SUBJECT:

E Street Affordable Component Transit-Oriented Development (TOD) Project (E St TOD Project) – Disposition and Development Agreement (Karen Landers)

RECOMMENDATION:

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

1) Authorize the Chief Executive Officer to execute a Disposition and Development Agreement with Bayview Family Housing LP for the E St TOD Project (DDA); and

2) Authorize the Chief Executive Officer to take all actions necessary to fulfill MTS's obligations under the DDA, including, but not limited to, executing a Ground Lease and related regulatory agreements for the project.

Budget Impact

Under MTS's TOD program, the ground lease rent for an affordable housing project is generally limited because of the restricted rents built into the program and the various public subsidies used to construct the project. If the DDA and resulting Ground Lease is executed, the project would be constructed at no cost to MTS, with annual ground lease rent for the residential project after construction is complete generally being in the range of 5% of net income from the development (often under $50,000 per year).

DISCUSSION:

History

On December 18, 2018, MTS and the City of Chula Vista (City) formalized a partnership to seek a developer for a joint TOD on the City-owned 707 F Street and MTS-owned 750 E Street properties. Subsequently, on April 18, 2019, the City released a Joint Request for Qualifications/Request for Proposals (RFQ/RFP) solicitation to identify the most qualified development teams that would develop a high-quality project with seamless planning and design across the nearly ten acres. The schedule required submittals by July 2019 with evaluations and subsequent interviews with development teams taking place thereafter.

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for nine cities.

During the RFQ/RFP solicitation period, Assembly Bill 1486, which amended the Surplus Land Act (SLA), was signed into law. Under AB 1486, the SLA requires specific noticing practices for the disposition of surplus land, minimum affordable housing requirements, and that public agencies must first make surplus land available to affordable housing developers. After discussions with the SLA oversight agency, the California Department of Housing and Community Development, it was determined that the City and MTS would either have to restart the Joint RFQ/RFP solicitation or pursue a legislative amendment.

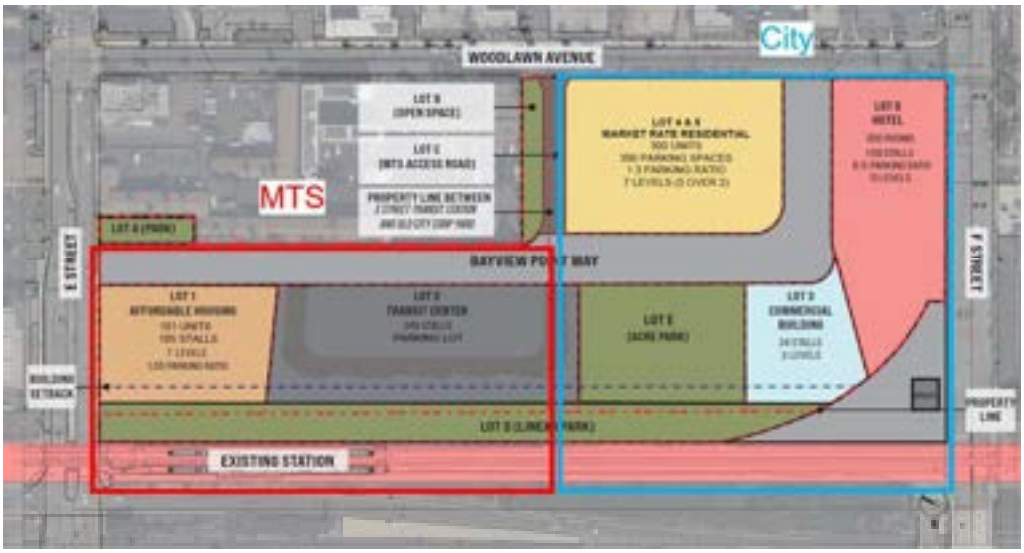
In 2021 and 2024 MTS and the City worked with the state legislature to amend the SLA to allow the City and MTS to continue their joint solicitation as long as they meet the following statutory requirements:

- At least 100 residential units on the overall site
- At least 25% of the total residential units to be reserved for affordable housing
- A DDA must be in place by December 31, 2027

Through actions on October 18, 2022 (City) and November 10, 2022 (MTS Agenda Item (AI) 21), the City and MTS selected Bayview Point LLC (BVP) as the master developer and entered into an Exclusive Negotiation Agreement (MTS Doc. No. G2699.0-23 as amended). Originally BVP had Chelsea Investment Corporation (Chelsea) as the developer responsible for the affordable housing portion of the master development. As the project progressed, BVP and Chelsea parted ways and BVP brought in Eden Housing Inc. (Eden) in 2025 to perform the affordable housing component of the project. Eden has developed or acquired more than 12,500 affordable homes in 51 cities providing homes for more than 65,000 people. While this is MTS' first project with Eden, they have a proven track record of developing affordable housing in California.

Master Planned Project Overview

Combined, the City and MTS own 10 acres of land on and adjacent to the E Street Trolley Station (Station). During the solicitation process, the City expressed a desire for redevelopment with office, hotel and retail as the top priorities, while MTS' desire was for affordable and market rate housing. BVP was able to satisfy both requirements with a mix of uses described and shown below.



Lot 1 – Affordable housing with 101 units and 105 residential parking stalls
Lot 2 – MTS bus loop and parking deck with 240 transit only parking stalls
Lot 3 – Commercial building with amenities integrated with the Hotel (i.e. spa, gym, rooftop restaurant)
Lot 4 & 5 – Market rate residential with 300 units and 390 residential parking stalls
Lot 6 – 300 key hotel companion to Gaylord hotel
Parks – Lot E / 1 ac park, Lot D / Linear Park, Lot A / dog park

Affordable Component of Master Planned Project

Eden will deliver the affordable housing component through a single purpose limited partnership, Bayview Family Housing LP. Eden is proposing 100 affordable units and one unrestricted manager unit for a total of 101 units and 176 bedrooms. The building will be 7 floors with one floor below grade for residential parking. There will be 105 residential parking stalls for a parking ratio of 1.05 stalls/unit.

The affordable component will be built on Lot 1 which is currently transit parking. To accommodate the affordable component, all or a portion of Bayview Point Way will need to be constructed before or at the time of the affordable component. Depending on the final affordable component footprint, alignment of Bayview Point Way, and the construction phasing of the park space in Lot A, the affordable component will displace 100 to 119 transit parking stalls. In order to preserve the park and ride transit connection, BVP has committed to replacing the transit stalls lost in the affordable component temporarily on City property in approximately the location shown below.

The temporary transit replacement parking will be paved, striped, will include lighting and security cameras, will meet the requirements of the Americans with Disabilities Act, and comply with the appropriate stormwater quality measures. MTS will work with Eden and BVP to ensure transit patrons are notified of the upcoming parking change and that signage is in place to direct patrons to the temporary transit replacement parking area.

As the temporary transit replacement parking and the construction of some or a portion of Bayview Point Way are required elements with the affordable component, the DDA will condition the approval of the future Ground Lease on the completion of the temporary transit replacement parking and installation of Bayview Point Way. The Eden project cannot start construction until the temporary transit replacement parking is completed, and a Bayview Point Way phasing plan is approved by MTS.

It is important to note that the affordable component will satisfy the amended SLA. By moving forward with the affordable component first or early in the project build out, MTS and the City meet the statutory SLA requirements, including the 100 residential units requirement and the 25% ratio of affordable to market rate residential units. If the City, MTS and BVP were to miss the milestones set out in the amended SLA, the entire project would have to be noticed via the traditional SLA process, and a new RFQ/P would be necessary. City is continuing negotiations with BVP for the separate hotel, park, and market rate housing projects that will be constructed

on the City parcel. Future agreements with MTS will relate to replacement transit parking, various site infrastructure and interior roads, and utilities that will be on both the MTS and City parcels.

MTS, the City and BVP recognize that funding for affordable housing is currently in short supply. By approving the proposed Eden DDA, the Board will allow Eden to meet the May 2026 Affordable Housing and Sustainable Communities (AHSC) application window. If Eden were to receive an AHSC award it would fund three years of transit passes for residents. Additionally, Eden has already applied for the City administered Housing and Community Development Trust Fund. The City administered Trust Fund awards will be announced around May 2026.

Ground Lease Material Terms

The DDA locks in the material terms of a Ground Lease that would be executed by the CEO once the Developer has finalized its financing, grants, and building permits. The material terms include the following:

1. Term. The term of the Ground Lease shall be 99 years.
2. Density. The Project shall consist of approximately 101 residential units with an estimated bedroom count of 176 and estimated occupancy of 264 (based on 1.5 residents per bedroom). Any deviation of less than ten percent (10%) from the estimated bedroom count shall not be considered a material change under **Section 305(b) of the DDA**.
3. Affordability. In compliance with Government Code section 54222.5, at least 25% of the units shall be at affordable rent, as defined in Section 50053 of the Health and Safety Code, to lower income households, as defined in Section 50079.5 of the Health and Safety Code. Rental units shall remain affordable to, and occupied by, lower income households for a period of at least 55 years. All units shall be rent restricted according to TCAC or CalHFA program requirements, except for one (1) staff units.
4. Replacement Parking. Developer, either directly or through agreements with Bayview Point LLC or others, shall cause to be constructed the Transit Parking Facilities substantially in conformance with a Site Plan and Scope of Work approved MTS Chief Executive Officer, with approximately 240 total parking stalls available for MTS's exclusive use in the final Site Plan. The replacement parking can be constructed on the Residential Apartments Site, the MTS Transit Center Site, on the City Property designated as Lot E, or on a combination of locations approved by the MTS Chief Executive Officer.
5. Rent. Developer shall pay to MTS as rent, in arrears, on an annual basis an amount equal to five percent (5%) of Developer's annual Net Cash Flow (as defined below) from the operation of the Project during the prior calendar year (the "**Base Rent**"). Base Rent will be determined and paid, without any prior demand within one hundred twenty days (120) days after the last day of each calendar year and calculated based on the Gross Income received by Developer from operating the Project during the prior calendar year. For purposes of this Lease, "Net Cash Flow" shall mean all (A) cash receipts from the residential and non-residential components of the Project, including rental receipts from the lease of the Residential Apartments, and any other cash received by Developer derived from the Premises, but excluding (i) insurance proceeds or condemnation proceeds; (ii) security deposits or other tenant deposits; (iii) interest earned on project reserves; (iv) proceeds of loans or capital contributions; and (v) releases of funds from any operating or capital replacement reserves less (B) debt services, operating expenses and other expenses as detailed in the Ground Lease. Base Rent shall not commence until recordation of the Certificate of Compliance (the

"**Rent Commencement Date**"). No Base Rent will be due by Lessee for any calendar years before the year in which the Rent Commencement Date occurs.

6. The Ground Lease shall include typical rights and protections for any leasehold mortgagees.
7. Construction Timeline. Construction of the Project is scheduled to take thirty (30) months after construction commencement to achieve substantial completion, subject to extension for "Force Majeure".
8. AB 1486 Compliance. Prior to close of escrow on the Ground Lease, if required by the State, MTS may record a restrictive covenant on the Site that documents compliance with the Surplus Land Act.
9. Prevailing Wage and Skilled Labor Requirements. Developer's Project construction activities shall comply with paragraphs C(7) and C(8) of MTS Policy No. 18:

   C(7): All projects approved pursuant to the program shall be considered public works for purposes of Chapter 1 (commencing with Section 1720) of Part 7 of Division 2 of the Labor Code, regardless of whether an exemption under Section 1720 of the Labor Code applies to the project.

   C(8): A joint development agreement between MTS and a private entity shall include a requirement that the developer's construction comply with Public Utilities Code section 120221.5.

Overall Project Update

MTS and the City continue to work BVP on the full project build out. Currently, all parties are reviewing financial pro formas for the various elements of the project. It is anticipated that the Hotel component will move forward in 2026, but exact timing has not yet been determined. MTS, the City and BVP are reviewing the agreement structures for future project phases and working through potential land swaps. 240 exclusive transit patron parking stalls are required at the final build out. Before any temporary transit replacement parking is removed, the final 240 transit patron parking stalls will be provided in a parking deck or garage within the existing bus loop as shown in the overall site plan in Lot 2.

Staff Recommendation

Today's proposed action would have the Executive Committee forward a recommendation to the MTS Board of Directors:

1) Authorize the Chief Executive Officer to execute a DDA with Bayview Family Housing LP for the E St TOD Project; and

2) Authorize the Chief Executive Officer to take all actions necessary to fulfill MTS's obligations under the DDA, including, but not limited to, executing a Ground Lease and related regulatory agreements for the project.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Metropolitan Transit System

E Street TOD - Disposition and Development Agreement

Executive Committee Meeting

Joint Development with City of Chula Vista

- 2018 / 2019 MTS and City of Chula Vista (CV) partner for a Joint TOD
  - Unified design and circulation w/ mix of uses
  - High density given proximity to Chula Vista Bayfront Redevelopment area
  - MTS Goal to “create vibrant, transit-oriented communities that offer a range of housing types, job opportunities, and services centered around public transit facilities.”
- *2020-2021 SLA Compliance Pause*
- 2022 ENA with master developer Bayview Point (BVP)
- 2026 BVP partners with Eden Housing to complete affordable component

Surplus Land Act (SLA) Exception

- AB 1486 (Ting 2019) – Amended SLA to require public agencies to first offer property for development of affordable housing before proceeding with sale or ground lease for other purposes.
  - Applied to any property not under contract by September 30, 2019.

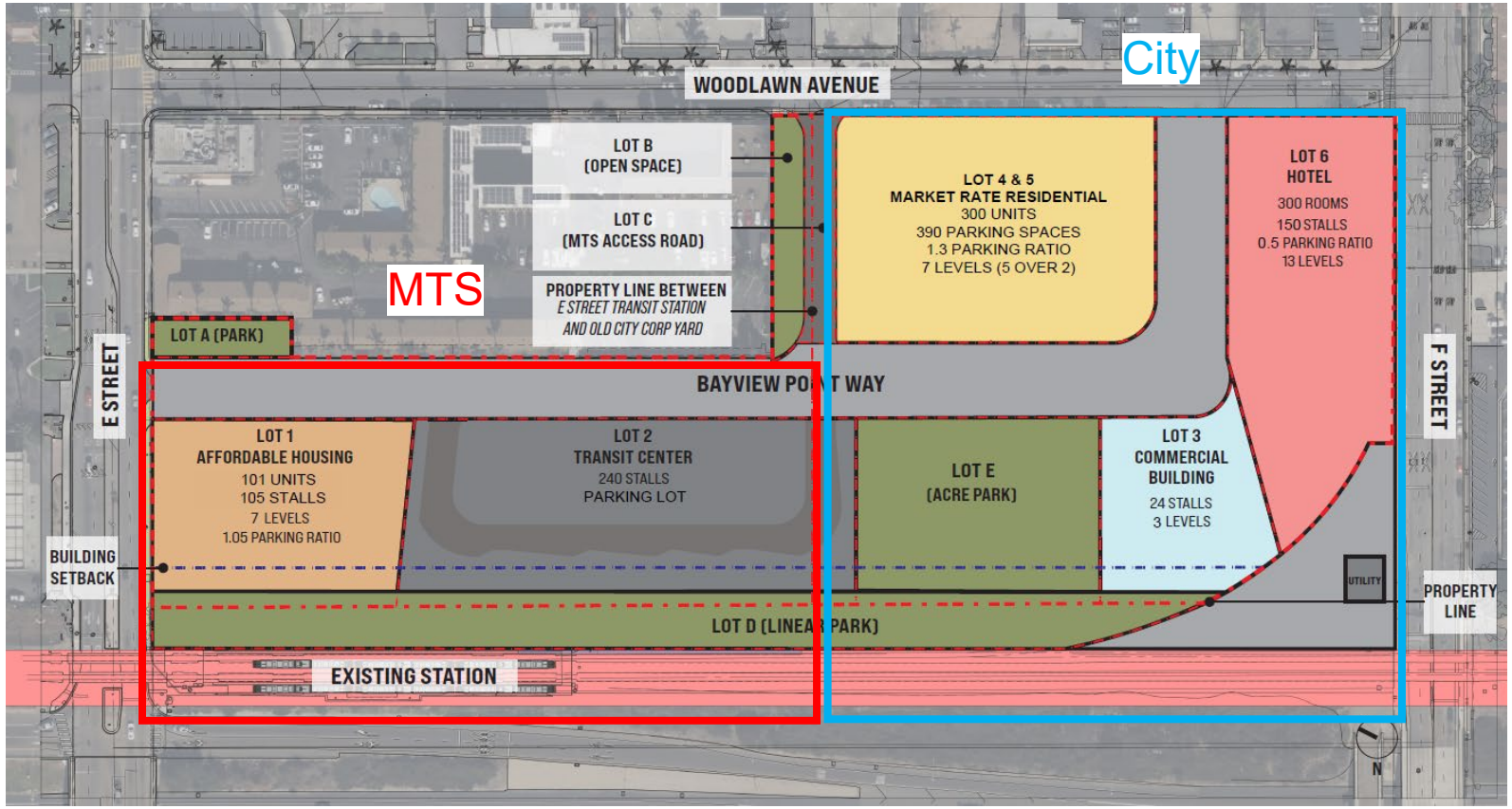
  →*Would have prevented MTS/CV solicitation from moving forward and required two projects to separately comply with SLA*
- MTS/CV sponsored legislation to create an exception
  - SB 9 (Durazo 2020); SB 51 (Durazo 2021)
  - AB 480 (Ting 2023) → modified deadlines
- **SLA Exception Applicable to MTS/CV E Street TOD**
  - **Joint Project/Footprint**
  - **Minimum 100 residential units; minimum 25% affordable**
  - **DDAs executed by December 31, 2027**

Joint RFP Status

- ENA with Bayview Point LLC since November 2022
  - Negotiating different project elements
  - MTS transit requirements
  - Interior circulation
  - Affordable component
  - City Parcels: Hotel, Market Rate Housing, Commercial, Park, Parking, Circulation
  - MTS Parcel: Affordable Housing, Transit Center, Parking, Circulation
- **Affordable Component of Project Ready to Move Forward (Today's Proposed Action)**
- CV finalizing deal terms with BVP for Hotel project and other components (DDA approval no later than 12/31/2027)

Joint TOD Project Components

- Affordable Housing
  - 101 units
  - 105 parking stalls
  - *Meets minimum SLA exemption*
- Hotel
  - 300 Keys
  - Companion, not competitor, to Gaylord
- Market Rate Residential
  - Max 300 units per SLA exemption



Amenities and Features:

- Linear Park, 1 Ac Park, & Dog Park
- Rooftop dining, Spa, Gym, Meeting Rooms
- 86% Transit Parking Replacement (240 out of 278)
- Bus only lanes and priority features
- Design maintains future grade separation

Eden Housing – Affordable Component

- Qualified, Established Development Partner for BVP: Eden has developed or acquired more than 12,500 affordable homes in 51 cities providing homes for more than 65,000 people

- E St Transit Center Development Details
  - 101 units / 176 total bedrooms
  - 105 parking stalls
  - 7 floors / 1 below grade

- Proposed DDA Terms:
  - MTS Standard Affordable Project Terms:
    - 99-year ground lease
    - Affordability covenant
    - >10% reduction in density = material change
    - 5% net cash flow rent formula (*de minimus*)
    - Transit Parking Replacement Rqmts
    - Prevailing Wage/Skilled Labor Rqmts

Project Phasing – MTS Requirements

- <u>Phase 1A – Affordable Housing</u>
  - Proves joint project *complies with SLA exception* (at least 100 housing units and 25% affordable → unlocks maximum housing of 400 units with 300 market rate/100 affordable)
  - DDA approval in April 2026 will allow Eden to apply for AHSC funding with May 2026 round
    - Goal: funding within 18-24 month period; break ground in 2028
    - Construction may need to trail behind site infrastructure work (roads, grading, temporary replacement transit parking)
  - **Condition Precedent to Ground Lease Closing: Replacement Transit Parking**
    - Affordable Project displaces ~119 transit parking stalls → BVP to fulfill MTS parking obligation
    - Likely will require future agreement between MTS, CV, & BVP to make this an enforceable commitment
      - temporary parking on CV lot to maintain 240 transit stalls ***before*** Affordable Housing breaks ground; parking garage on MTS transit center as part of future Market Rate Project on CV parcel
      - BVP will provide interior circulation plan for MTS approval ***before*** Ground Lease execution
        - Required to ensure transit patron parking, efficient bus operations, construction site access and to avoid adverse impacts to E St traffic

Project Phasing – CV Phases

- Phase 1B – Hotel
  - Companion hotel to Bayfront Convention Center/Gaylor property
  - Hotel moving forward in parallel with Eden affordable project
  - City and BVP reviewing financial pro forma
  - DDA expected well in advance of December 31, 2027 SLA deadline
- Phase 2 – Market Residential Housing, Retail & Parks
  - DDA covering material terms to develop between CV and BVP would be required by December 31, 2027 SLA deadline
  - Exact phasing for construction TBD – market conditions not supportive at this time
  - Final 240 transit parking stalls to be in parking deck or garage within bus loop (Lot 2)

Staff Recommendation

Forward a recommendation to the Board of Directors to:

1. Authorize the Chief Executive Officer to execute a DDA with Bayview Family Housing LP for the TOD Project; and
2. Authorize the Chief Executive Officer to take all actions necessary to fulfill MTS's obligations under the DDA, including, but not limited to, executing a Ground Lease and related regulatory agreements for the project.

Agenda Item No. 07

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
JOINT AUDIT OVERSIGHT AND EXECUTIVE COMMITTEE

April 9, 2026

SUBJECT:

Real Estate and Joint Development Program Status Update (Sean Myott)

INFORMATIONAL ONLY

Budget Impact

None

DISCUSSION:

Staff will present a briefing on historical, current, and prospective joint development projects.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.

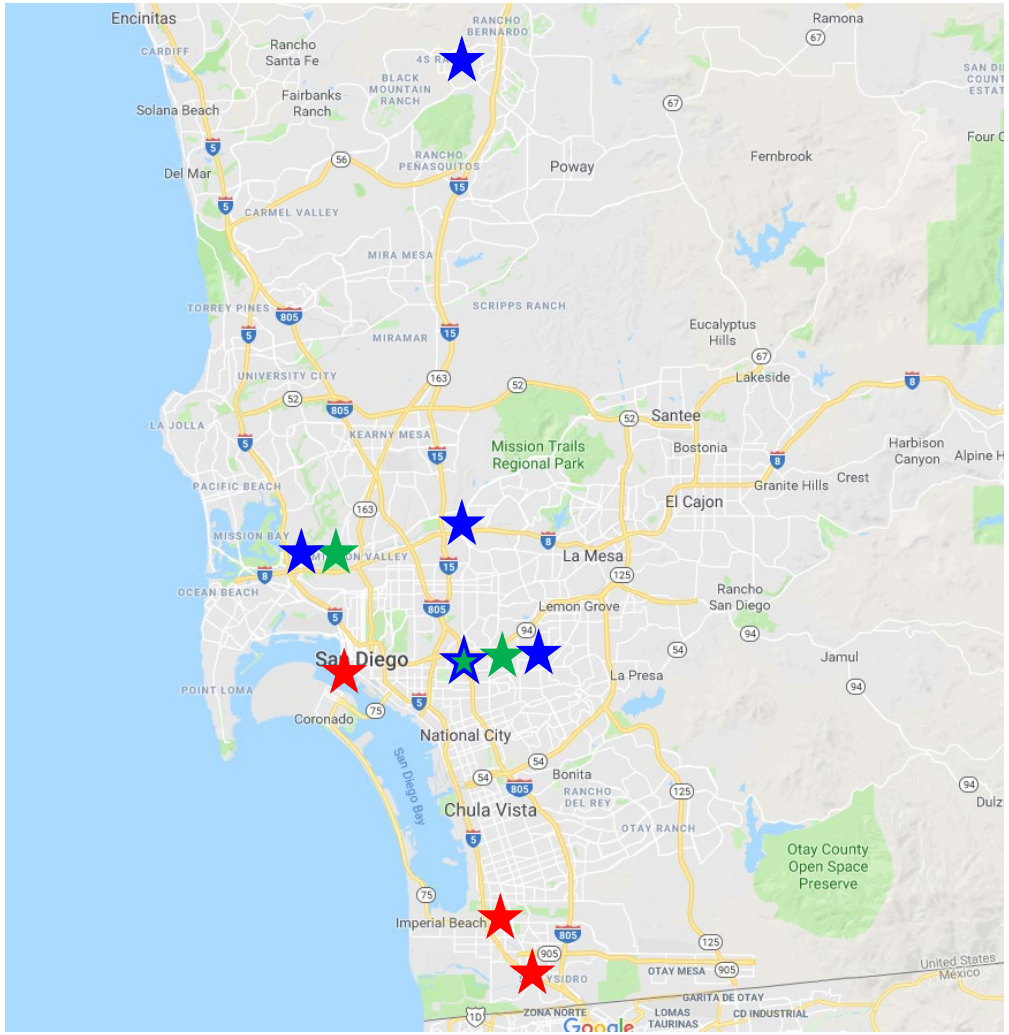
Metropolitan Transit System

Joint Development Program Status Update

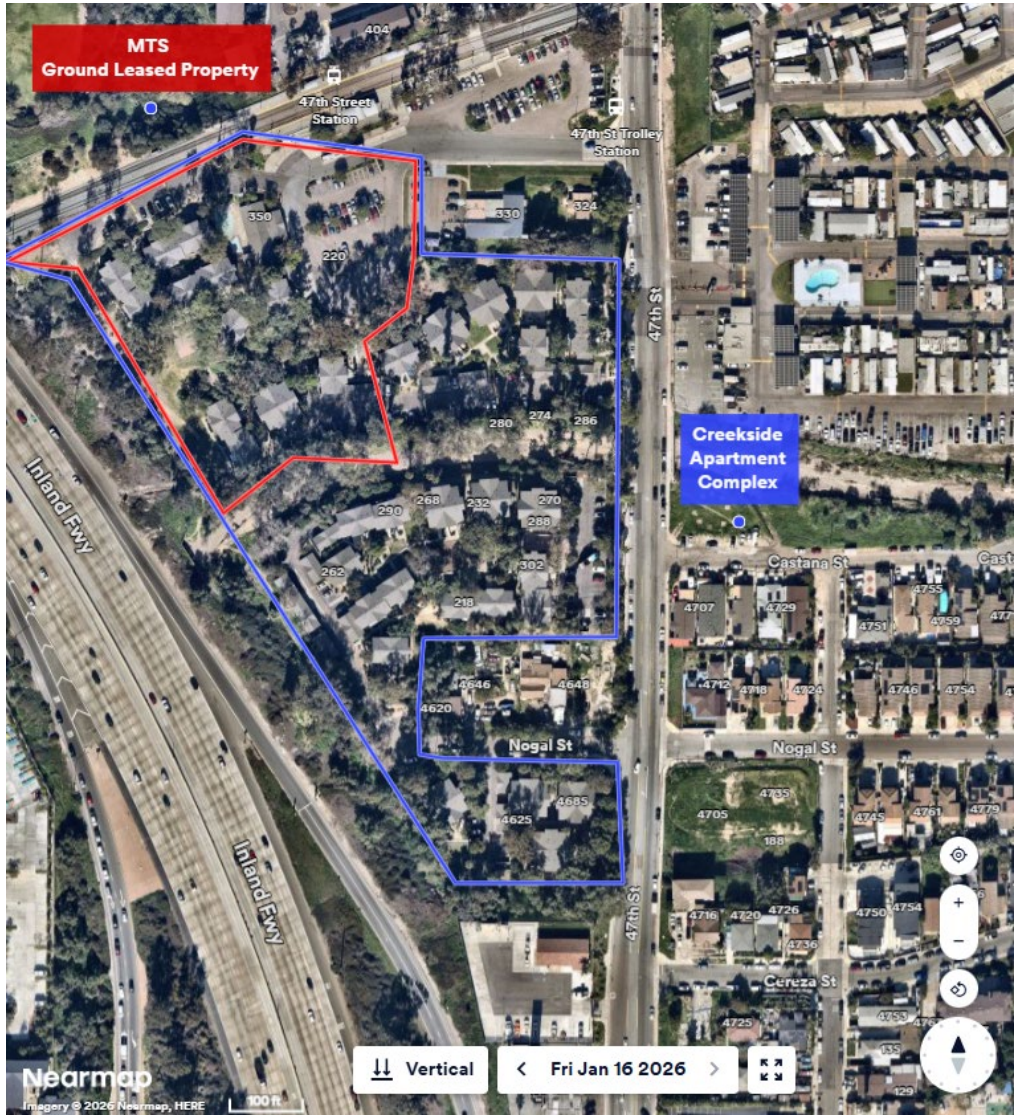
Executive Committee

City of San Diego TOD Sites

- ★ **Completed**
  - 47th Street
  - Morena Linda Vista
  - Encanto / 62nd St
  - Grantville
  - Rancho Bernardo
- ★ **Under Contract**
  - 12th and Imperial
  - Beyer Blvd
  - Palm Ave
- ★ **Opportunity Site**
  - Euclid (2.5 ac)
    - Significant transit center needs
  - 47th Street (4 ac)
    - Over transit parking area
  - Riverwalk (13.7 ac)
    - Dependent on Riverwalk development & MTS transit needs

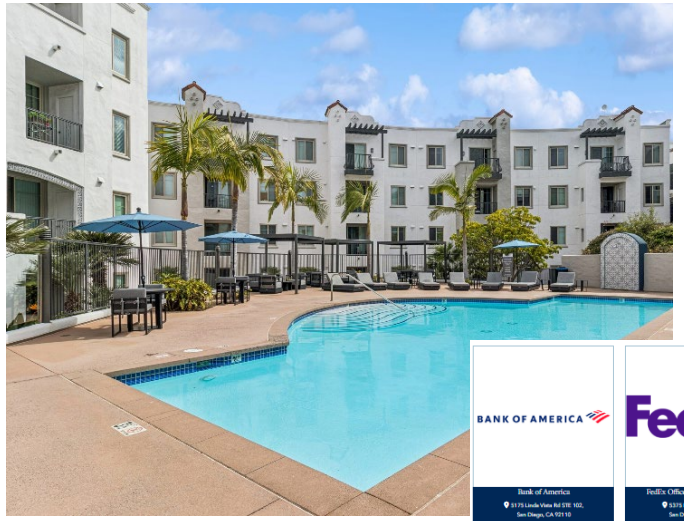


47th St / Creekside Apartments (1987)

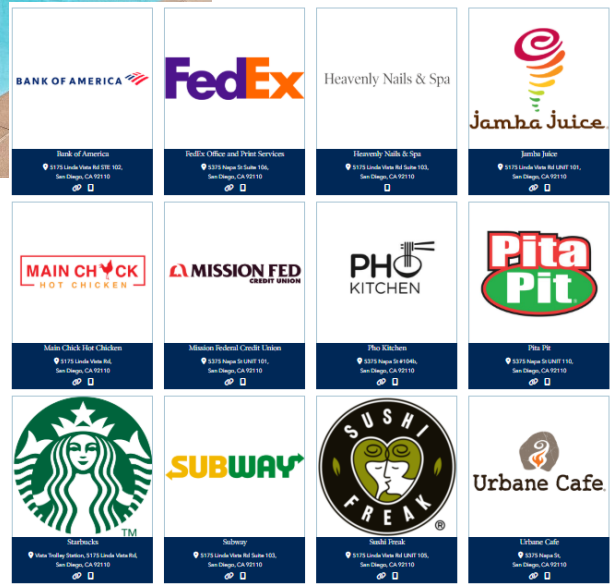


- Spread across MTS and private land
- 144 homes in complex, 44 on MTS land
- ~10 acres, 2 story, low density
- 52 year ground lease expires 2039
- MTS and new ownership in lease extension negotiations
- $112K/yr rent in 2025

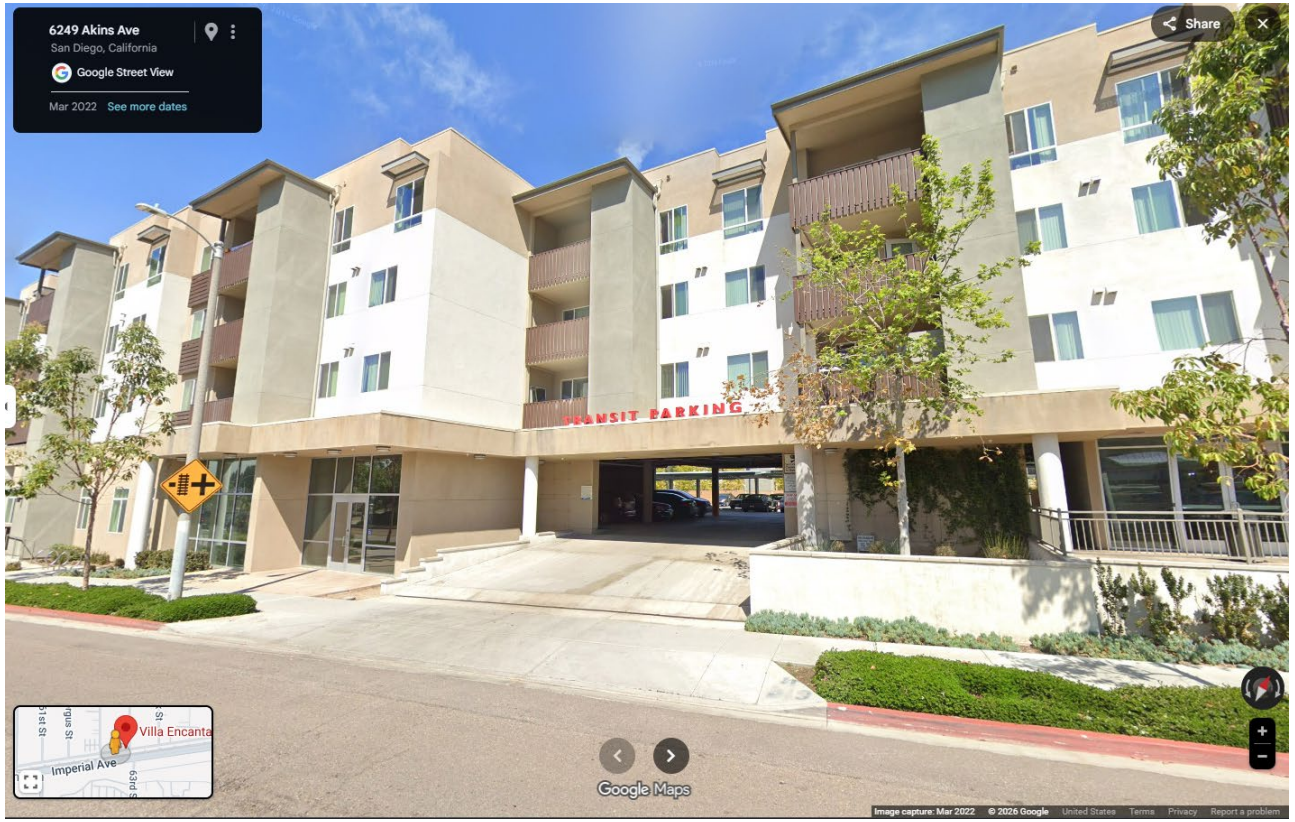
Morena Linda Vista / Arrive Mission Valley(2007)



- 167 Market + 18 Affordable Homes + Retail
- $240K/yr base rent + overage ~$100K/yr



Encanto-62nd St / Villa Encantada (2018)



- 67 affordable homes
- 100 transit parking spaces
- 99 year term
- $1M one time payment in 2016
- $3.3M promissory note due in 2073

Grantville / ShoreLine & Union Grantville (2023/4)

- 100% Affordable
- Opened February 2024
- 126 homes
- $1.4M grant for landscaping & paint refresh
- $0 rent in 2025

- Market Rate
- Open Aug 2023
- 250 homes, $566K rent to MTS in 2025
- 100 transit replacement parking spaces

TOD & Ridership - Grantville

2023 to 2024 ridership increased

39% or 440 Additional Persons / Weekday*

This increase is holding steady

**This includes going from zero to 100 transit spaces and adding 376 apartment homes*

Timeline

- Mid 2021 approx. 250 transit parking spaces
- Construction Start Mid 2021
- Aug 2023 Union Grantville Opens
    - + 100 Transit Parking Spaces
- Feb 2024 ShoreLINE Opens

Rancho Bernardo / SkyLine (2026)

- Affirmed Housing SkyLine
  - 100 homes + 14k SF office
  - Resident move-in started in December 2025
  - Parking: 84 transit reserved, 38 office, 76 resident parking spaces
  - $31K/yr office rent revenue to MTS
  - *De minimis* residential rent

March station ridership up 9% year-over-year

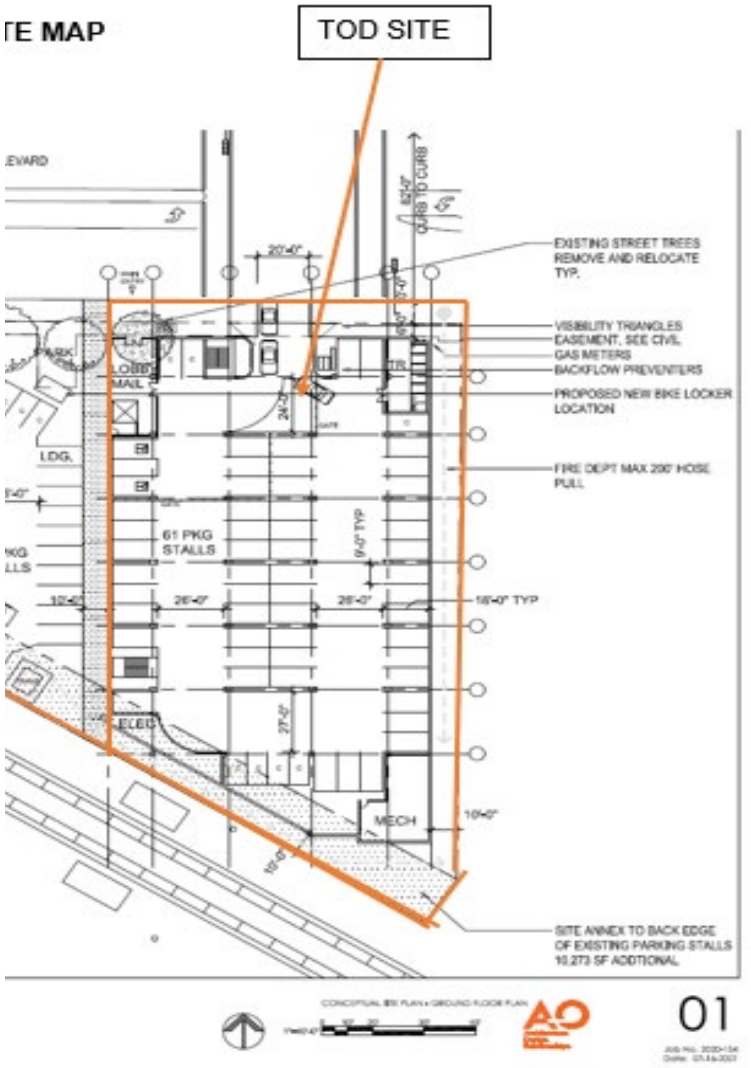
12th & Imperial Ave Transit Center & TOD

- Triggered by 12th & Imperial Transit Center Expansion Project
- Partnership with the San Diego Foundation (SDF)
- Board approved DDA October 2025
- North Project – Cypress Equities
  - Approx. 160 homes / 280 bedrooms
  - Mix of 1 to 3 bedroom homes
  - AMI 40% - 80% / Deed Restricted
  - Some resident parking
- South Project Concept Goals
  - High density / 20 stories
  - “Missing Middle” income band
- Significant utility challenges may require redesign
- Estimated *de minimis* residential rent for North Phase. South Phase TBD

Beyer Boulevard

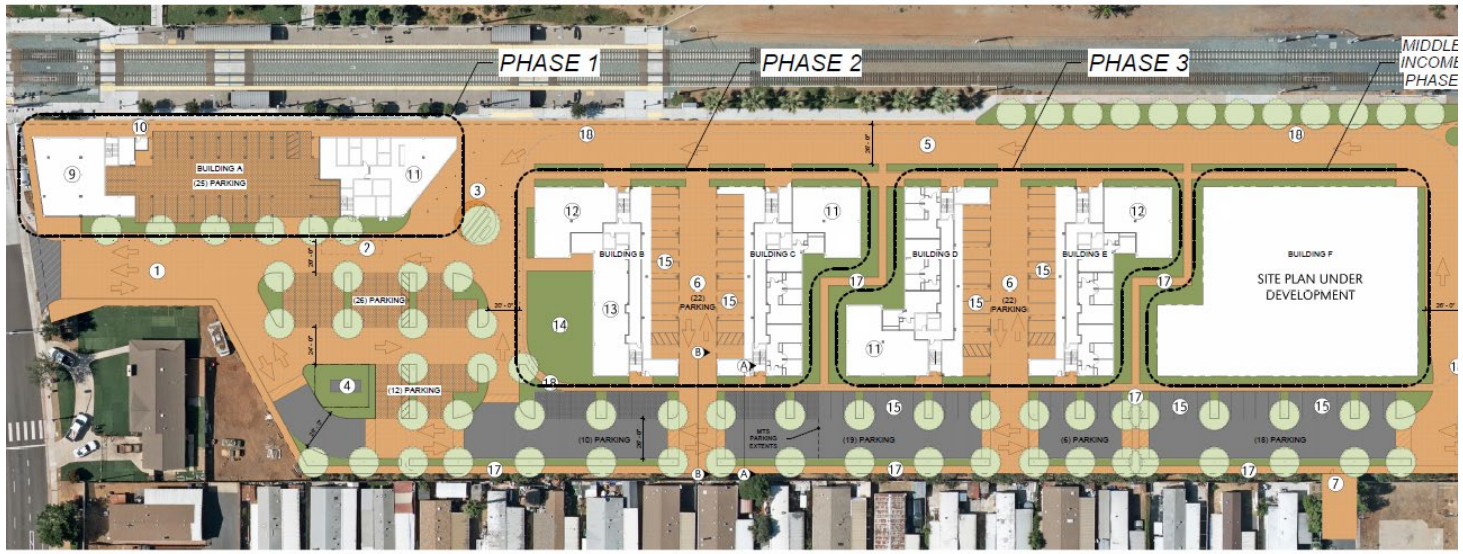
- Affirmed Housing
  - 100 homes, DDA Approved May 2022
  - Construction dependent on funding
    - SDHC voucher extension
    - Mixed Income Program funding application results in May
  - Parking:
    - ~74 transit reserved in western surface lot
    - ~60 resident parking spaces in building
  - Estimated *de minimis* residential rent

AFFIRMED HOUSING



Palm Avenue Station

- National CORE and Malick Infill Development Team
- DDA Amended in December 2023
  - Increased density (+16 homes)
- Child Care Facility (Phase 2)
- Micro-grid battery electric storage
- Solar panels on building sides
- Transit Patron Restroom (Phase 1)
- Significant utility upgrade required
  - Infill and Infrastructure Grant funding neighborhood utility upgrade
- In Construction
  - Water/Sewer on Hollister St
  - On site grading starts April
- Estimated *de minimis* residential rent for Phase 1-3. Phase 4 TBD.



MALICK INFILL DEVELOPMENT

NATIONAL CORE

Building	Homes / Units
A	79 (Studio/1BR/ 2BR/3BR)
B	54 (Studio/1BR/ 2BR/3BR)
C	57 (Studio/1BR/ 2BR/3BR)
D	57 (Studio/1BR/ 2BR/3BR)
E	57 (Studio/1BR/ 2BR/3BR)
F	102 (Studio/1BR)
TOTAL	406

South Bay TOD Sites

National City

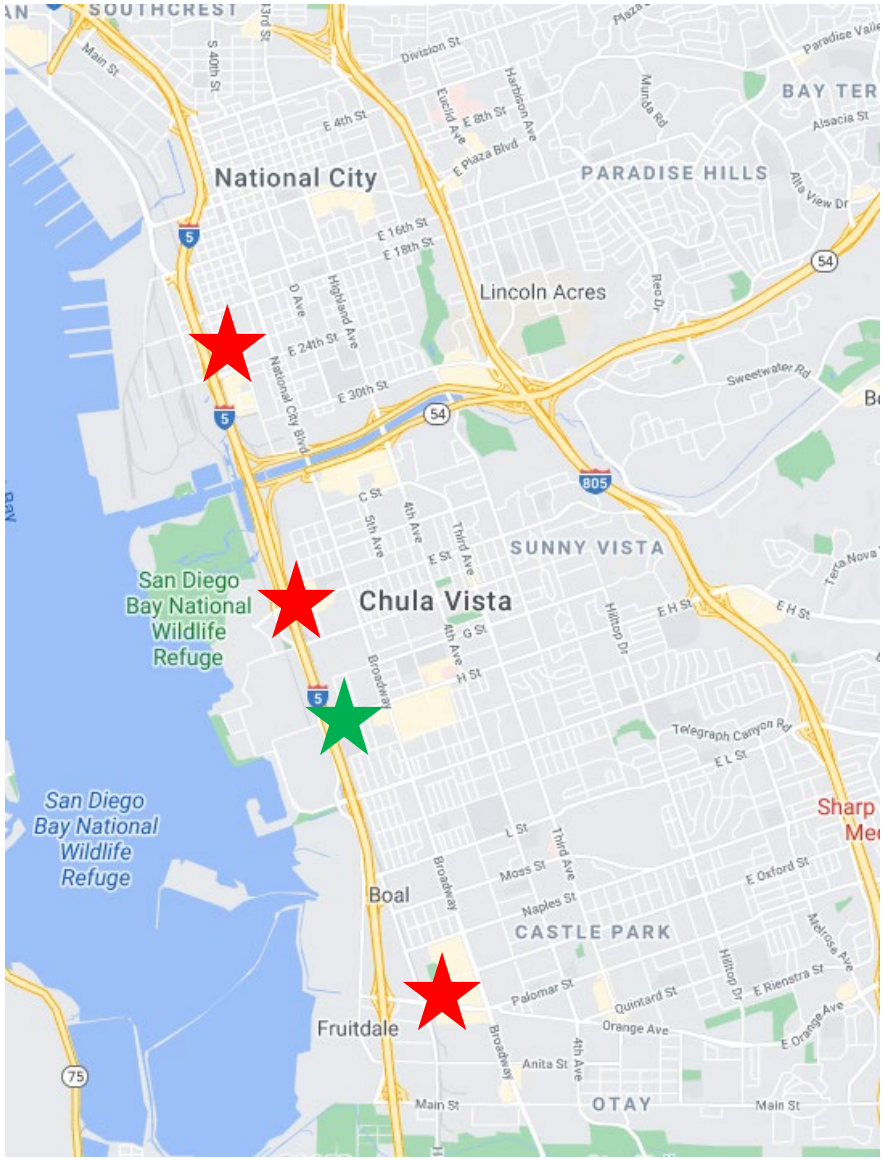
- 24th Street (3.6 ac)
  - Notice of Interest from National CORE/Malick Team

Chula Vista

- E Street (4.1 ac)
  - Joint Development with City
  - Bayview Point Selected as Developer
- H Street (3.1 ac)
  - Significant parking needs
  - Requires SLA Notice
- Palomar (5.0 ac)
  - Notice of Interest from National CORE/Malick Team

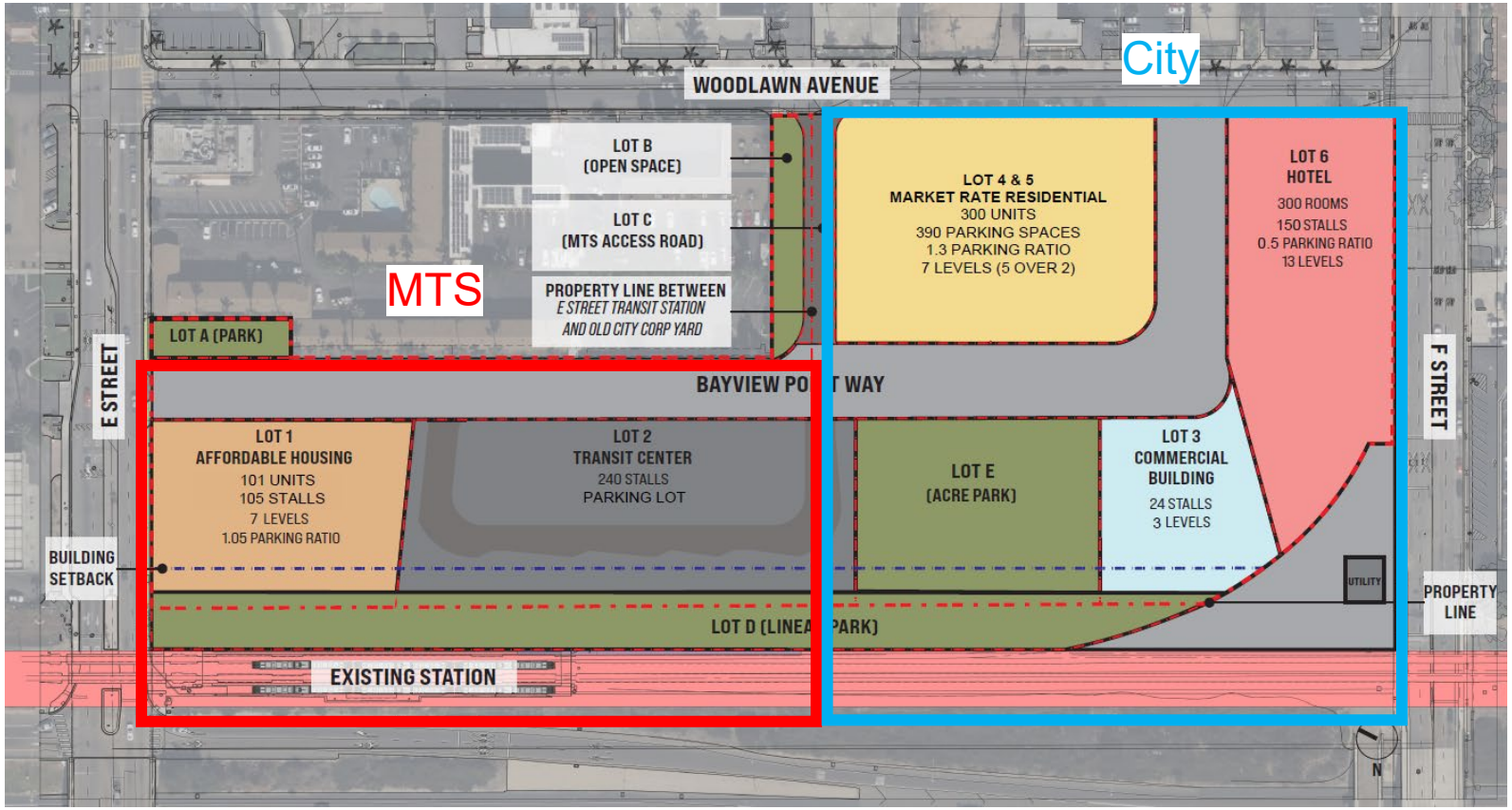
Key:

- Opportunity Site
- Under Contract



E Street / Bayview Point

- Joint RFQ/P with City of Chula Vista
- <u>Affordable – Eden Housing</u>
  - 100 units
  - 105 parking stalls
  - Meets minimum SLA carve out
  - City HCD Housing Trust Fund in Jan, AHSC in May
  - Estimated *de minimis* residential rent
- <u>Hotel</u>
  - 300 Keys
  - Companion, not competitor, to Gaylord
- <u>Market Rate Residential</u>
  - Max 300 units



<u>Amenities and Features</u>:

- Linear Park, 1 Ac Park, & Dog Park
- Rooftop dining, Spa, Gym, Meeting Rooms
- 100% Transit Parking Replacement
- Bus only lanes and priority features
- Maintains future grade separation

East County TOD Sites

El Cajon

- El Cajon Transit Center
  - Joint Development with El Cajon
  - 7.2 ac / Largest MTS Site

La Mesa

- Grossmont
- 70th Street
- Spring Street
- Amaya

Lemon Grove

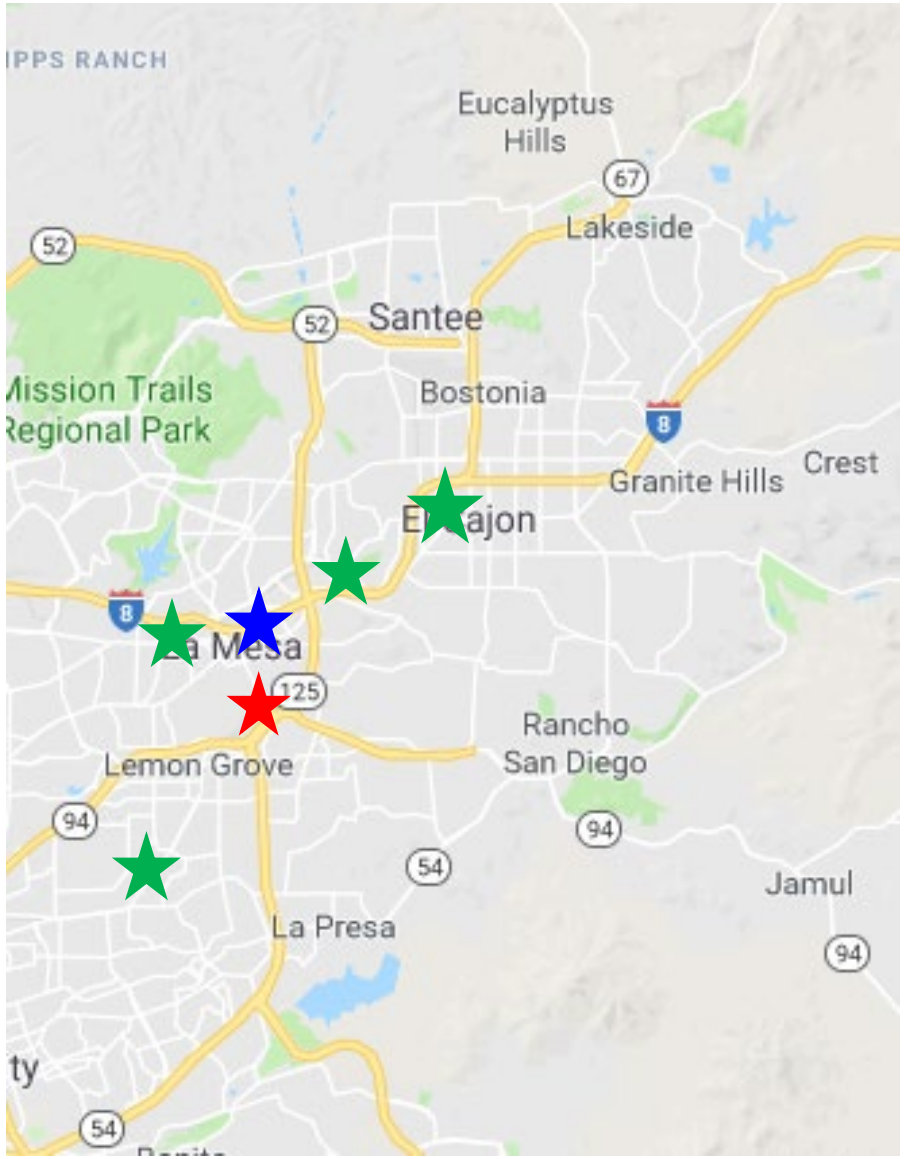
- Massachusetts

Key:

★ Completed

★ Opportunity Site

★ Under Contract



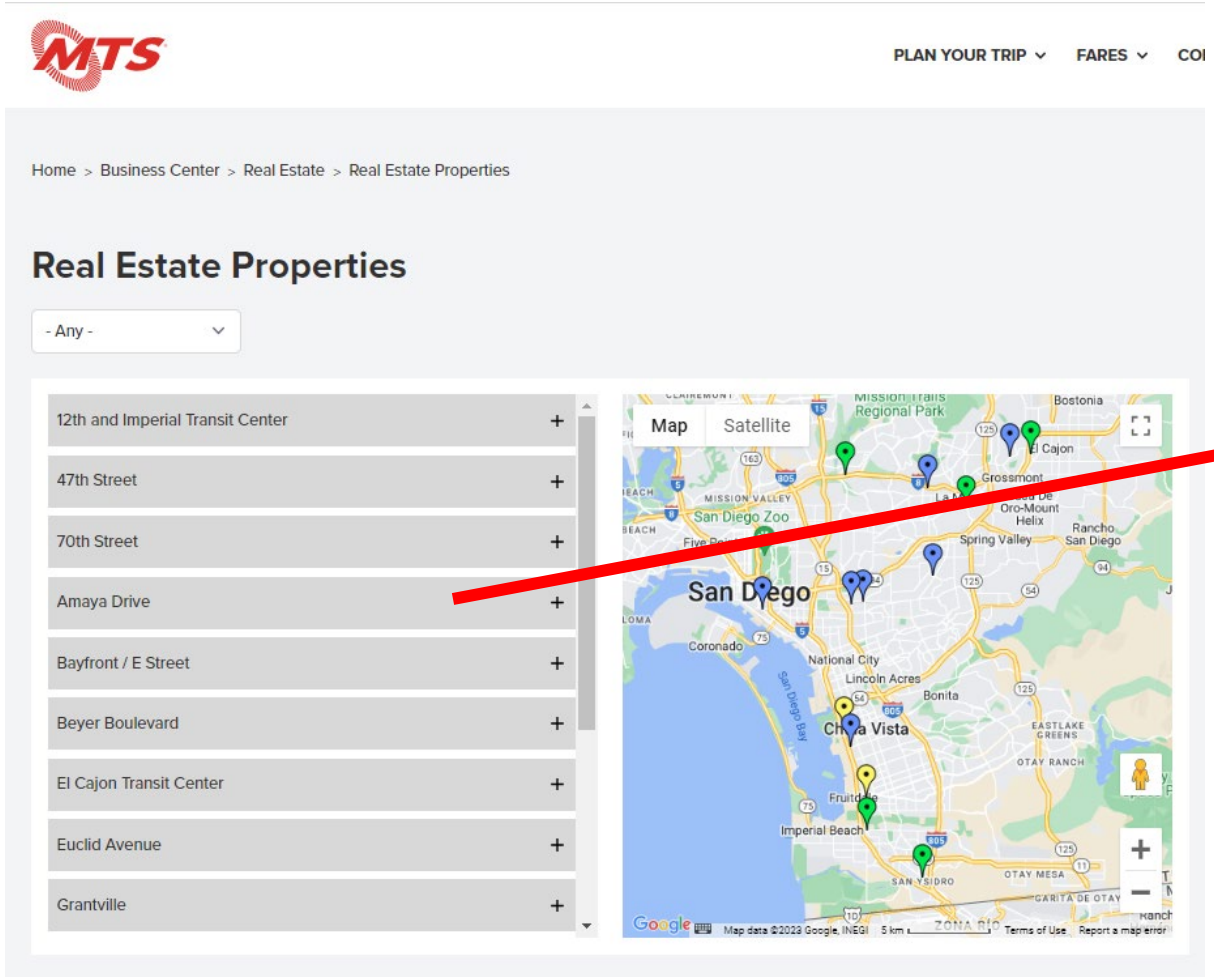
Grossmont / The District (2010)

- 447 Market + 80 Affordable Homes
- ~$300K/yr rent
- 600 Transit Patron Parking Stalls
  - Excess parking leased to neighboring buildings

Spring Street

- Affirmed Housing
  - 152 homes (277 bedrooms)
  - DDA executed Oct 2023
  - 159 transit parking spaces
  - 53 resident parking spaces
  - Includes construction and maintenance of transit patron restroom and bus driver break area
  - Construction to begin June 2026
  - Construction will close parking lot for 18-24 months
    - MTS messaging plan to suggest alternative parking locations at Grossmont & Massachusetts Trolley Stations
  - Estimated *de minimis* residential rent

Publicly Available Data



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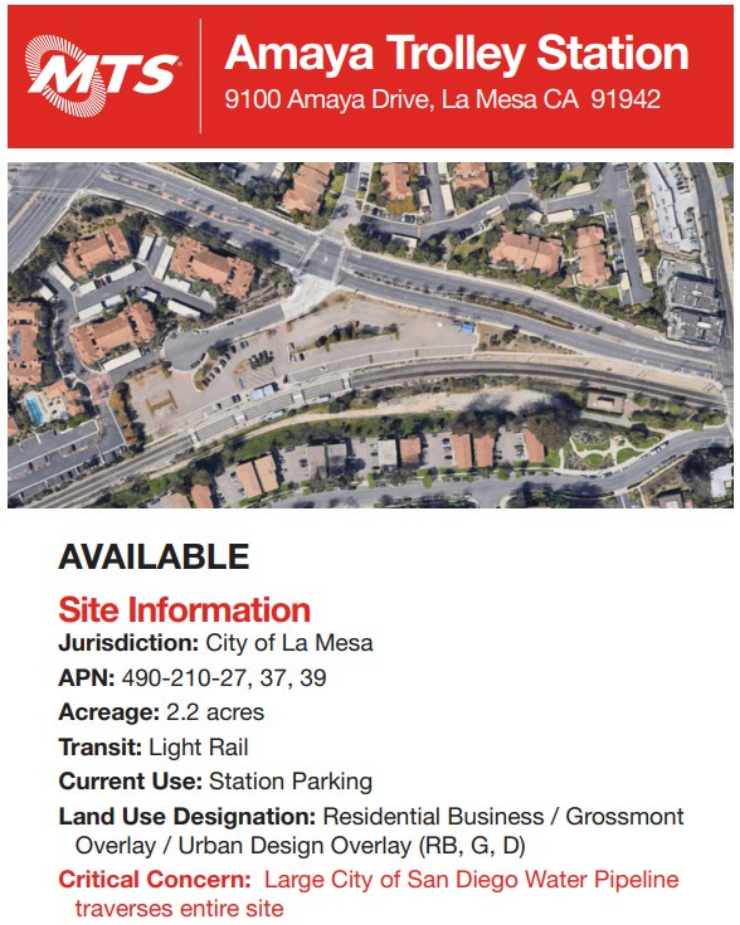

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MTS Transit-Oriented Development Program

Residential Home/Unit and Revenue Totals

MTS TOD Projects (date opened)	Revenue	Complete	Under Construction	Under DDA	Under Negotiation	Future Sites	# of Rent Restricted Units*
47th St aka Creekside Apts., San Diego (1987)	$112K/yr	44**			44		0
Morena Linda Vista Station, San Diego (2007)	~$340K/yr	185					18
Grossmont Station, San Diego (2010)	~$300K/yr	527					80
Encanto / 62nd Street Station, San Diego (2018)	***	67					67
Grantville, San Diego - Greystar (2023)	$566K/yr	250					5
Grantville, San Diego - Affirmed (2024)		126					125
Palm Avenue, San Diego - National CORE and Malick Infill			Infrastructure	406			406
Beyer Boulevard Station, San Diego - Affirmed				100			99
Rancho Bernardo Station, San Diego – Affirmed (2026)	$31K/yr	100					99
E Street Station/Joint RFP with City of CV, Chula Vista				101	341		100
Spring Street Station, La Mesa				147			145
Palomar Station, Chula Vista					XXX		
24th Street Station, National City					XXX		
12th & Imperial Expansion Site, San Diego – Phase I					161		160
12th & Imperial Expansion Site, San Diego – Phase II						?	
70th Street Station, La Mesa						?	
Amaya Station, La Mesa						?	
Massachusetts Ave Station, Lemon Grove						?	
H Street, Chula Vista						?	
El Cajon Transit Center, El Cajon						?	
TOTALS	**$1.349M/yr**	1,299	0	754	502		**1,304**
						GRAND TOTAL UNITS	**2,555**

* Most 100% affordable projects include one market rate manager's unit; exact count confirmed at construction stage
** 44 of 144 homes in Creekside Apt. complex on MTS land. Counted in “Complete” column only
*** One time $1M payment to MTS in 2016 and $3.3M promissory note due on 2073

Questions/Comments

Board of Directors

Agenda

April 16, 2026 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 March 19, 2026 Board of Directors meeting minutes.	Approve
4.	**CEO Report**	Informational
5.	**Centralized Train Control (CTC) System Maintenance Agreement – Work Order Agreement (WOA)** Action would authorize the Chief Executive Officer (CEO) to execute WOA 8 to MTS Doc. No. L1607.0-22 with Wabtec, in the amount of not-to-exceed $639,396.87 for Cybersecurity and Infrastructure Security Agency (CISA) Remediation.	Approve
6.	**Pest Control Services – Contract Award** Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G3106.0-26, with Bashir Family Investment Inc., DBA: Pestmaster of San Diego (Bashir Family) for pest control services for five (5) years totaling $269,775.80.	Approve
7.	**PRONTO Fare Collection System – Contract Amendment** Agenda Item will be provided prior to Board Meeting.	Approve

DRAFT

8. **Bus Fleet Seat Upholstery Replacement and Repair Services - Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. B0785.0-26, with Molina Manufacturing, LLC (Molina), for Bus Fleet Seat Upholstery Replacement and Repair Services for five (5) years in the amount of $426,784.39 (inclusive of 7.75% CA sales tax).

9. **Train Operator Uniforms – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. L1708.0-26, with Ace Uniforms in the amount of $470,034.34 (inclusive of CA sales tax), for five (5) years effective May 1, 2026 for the purchase of Train Operator Uniforms.

10. **Security and Sign Out Booth Replacement at Imperial Avenue Division (IAD) Bus Maintenance Facility – Work Order Agreement** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute Work Order No. MTSJOC441-03 under MTS Doc. PWG441.0-25, with ABC General Contractor, Inc. (ABCGC), in the amount of $141,374.65 for the replacement of the security and bus driver sign-out booths at the IAD bus maintenance facility.

11. **A and C Building Heating, Ventilation, and Air Conditioning (HVAC) Replacement – Work Order Agreement** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute Work Order No. MTSJOC441-04 under MTS Doc. PWG441.0-25, with ABC General Contractor, Inc. (ABCGC), in the amount of $208,130.66 for the replacement and needed addition of HVAC for the MTS Trolley Facilities Buildings A and C.

12. **Maintenance of Wayside (MOW) Signal and Track Inspection Cloud Software Solution – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to: 1) Execute MTS Doc No. L1690.0-25, with TekTracking LLC (TekTracking), to provide Signal and Track Inspection Cloud Software Solution in the amount of $2,480,001.07 for a three (3) year base period with (2) two 1-year options, for a total of five (5) years; and 2) Exercise the option years at the CEO's discretion.

13. **Old Town Transit Center Wayfinding (OTTC) Signage Design Services – Work Order Agreement** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute Work Order No. WOA355-AE-75, under MTS Doc No. PWL355.0-22, with Psomas, in the amount of $422,506.60 to prepare Plans, Specifications, and Estimate (PS&E) for the OTTC Wayfinding Signage Design Services.

14. **Purchase of Solar-Powered Waste Compactors – Contract Award** — Approve

Action would the Chief Executive Officer (CEO) to execute MTS Doc. No. L1711.0-26 (in substantially the same format as Attachment A) with Big Belly Solar, LLC for the purchase of eighty-four (84) solar-powered waste compactors in the amount of $496,274.71 (inclusive of shipping and taxes).

DRAFT

15. **Roadway Worker Early Warning (Zoneguard) - Sole Source Award** — Approve
Agenda Item will be provided prior to Board Meeting.

DISCUSSION ITEMS

16. **Fiscal Year (FY) 2027 Operating Budget Discussion (Gordon Meyer)** — Possible Action

Agenda Item will be provided prior to Board Meeting.

17. **Recommended Changes to the Regional Comprehensive Fare Ordinance (Mark Olson)** — Approve
Agenda Item will be provided prior to Board Meeting.

18. **E Street Affordable Component Transit-Oriented Development (TOD) Project (E St TOD Project) – Disposition and Development Agreement (Karen Landers)** — Approve
Agenda Item will be provided prior to Board Meeting.

19. **Fiscal Year (FY) 2025 Annual Performance Monitoring Report (Brent Boyd and Matthew Grace)** — Informational
Agenda Item will be provided prior to Board Meeting.

OTHER ITEMS

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

21. **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.

22. **Next Meeting Date**
The next Board of Director's meeting is scheduled for May 21, 2026 at 9:00am.

ADJOURNMENT

23. **Adjournment**

DRAFT

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 4/9/2026

Agenda Item No. 04

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

April 16, 2026

SUBJECT:

Chief Executive Officer's (CEO) Report

AGENDA ITEM WILL BE PROVIDED BEFORE BOARD MEETING

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 4/9/2026

Agenda Item No. 05

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

April 16, 2026

SUBJECT:

Centralized Train Control (CTC) System Maintenance Agreement – Work Order Agreement (WOA)

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute WOA 8 to MTS Doc. No. L1607.0-22 (in substantially the same format as Attachment E) with Wabtec, in the amount of not-to-exceed $639,396.87 for Cybersecurity and Infrastructure Security Agency (CISA) Remediation.

Budget Impact

The total cost of this amendment is estimated to be $639,396.87, and the total contract cost is estimated to be $4,652,829.34 (inclusive of this amendment). This project is funded by Capital Improvement Project (CIP) 2008118101 – Wabtec Integrations.

The contract summary is shown below:

Date Issued	Board Approval	Document	Description	Amount
1/1/2022	12/16/2021 Agenda Item (AI) 21	L1607.0-22	CTC System Maintenance	$1,568,916.00
5/1/2022	12/16/2021 AI 21	WOA 1	Various System Integrations	$452,000.00
		WOA 1	Portion of project came in below budget. MTS received a credit of $2,077.00. (Credit #1)	($2,077.00)
5/9/2022	9/15/22 AI 7	WOA 1.1	Add Beech Street Interlocking Field Integration Testing	$72,003.50
6/24/2022	CEO Policy 41	L1607.1-22	Recognized assignment from ARINC to Wabtec; updated Federal Requirements language	n/a

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.

9/15/2022	9/15/22 AI 7	L1607.2-22	Travel Expense. Reimbursements to be paid during the contract.	$15,000.00
9/15/2022	9/15/22 AI 7	WOA 1.2	Final Acceptance of Beech Street Double Crossover	$55,130.00
9/15/2022	9/15/22 AI 7	WOA 2	SANDAG – Mid Coast existing Task Orders # 33 (SANDAG Traction power substations (TPSS) point-to-point testing and Global Positioning System (GPS) and #34 (SANDAG Field Integration testing TPSS, Stations and warranty). MTS takes on these Task Orders using Addendum 17 SOW 105, and will be reimbursed by SANDAG.	$297,555.00
9/15/2022	9/15/22 AI 7	WOA 3	Medium Voltage Frequency Inverter MVW Signal, IMT Double Track, and El Cajon Third Track Upgrades	$1,222,599.00
9/15/2022	9/15/22 AI 7	WOA 5	Server and Sonicwall SecurID Token Upgrades	$27,817.00
		WOA 1	Portion of project came in below budget. MTS received a credit of $2,155.00. (Credit #2)	($2,155.00)
6/8/2023	5/18/23 AI 5	WOA 6	Imperial Terminal Yard 25 INTL option associated with the IMTDT upgrade project.	$161,687.00
			Subtotal	*$3,868,475.50*
Contract Actions since last Board Approval on 5/18/23 (AI 7)				
9/20/2023	CEO Policy 41	*WOA 3.1*	*Revised milestones due to schedule*	*n/a*
2/15/2024	CEO Policy 41	*WOA 3.2*	*Revised milestones due to schedule*	*n/a*
8/14/2025	CEO Policy 41	*L1607.3-22*	*Source code escrow with NCC*	*n/a*
8/15/2025	CEO Policy 41	*WOA 7*	*Park Blvd Grade Crossing Upgrade*	*$144,956.97*
TBD	*Today's Proposed Board action*	*WOA 8*	*CISA Remediation*	*$639,396.87*
			Total Contract Amount after Board Approval	**$4,652,829.34**

DISCUSSION:

In December 2007, the San Diego Association of Governments (SANDAG) initiated a competitive Request for Proposals (RFP) process, resulting in Agreement No. 5000786 with ARINC Inc., a predecessor of Wabtec. This agreement focused on the design, fabrication, installation, integration, implementation, and testing of a comprehensive CTC System, an essential information system for MTS Rail Operations.

This project had multiple phases, each with warranty and maintenance services. The final phase ran from January 1, 2017 to December 31, 2021. As this contract came to an end, SANDAG and MTS management recognized the need for a shift in oversight. Given that the operations of the CTC System align more closely with the ongoing operational needs of MTS, it was determined that MTS should take the lead in managing and overseeing future contracts related to the CTC system.

On December 16, 2021 (AI 21), the MTS Board of Directors approved a sole-source contract with Wabtec valued at $2,020,916.00 for CTC service maintenance and special projects. This contract includes five (5) years of general maintenance for the CTC system and permits the issuance of work orders for any future CTC-related needs.

In addition to the regular maintenance services, the Wabtec contract allows MTS to issue a Work Order Amendment (WOA) to Wabtec for special projects that require integration with or changes to the CTC system. This covers work such as new systems, maintenance obligations or integration of new MTS projects into current systems. When the need arises, MTS provides Wabtec with the specifics of the needed CTC-related services, and Wabtec submits a proposal to MTS to perform such work using the negotiated rates in the contract. Individual or cumulative WOAs exceeding the MTS CEO's authority under Board Policy 41 (currently $150,000.00) are brought to the Board for approval. The original contract approval established that WOAs that are within the CEO's Board Policy 41 limits do not require Board approval prior to execution.

On September 15, 2022 (AI 7), the Board approved several additional WOAs and other contract expenses, as detailed in the chart above. On May 18, 2023 (AI 5), WOA 6 was approved by the Board. Since the May 18, 2023 Board meeting, the following WOAs and contract amendments have been issued under the CEO's Policy 41 authority:

<u>WOA 3.1 and 3.2:</u>
Amendments 1 and 2 to WOA 3, in the amount of $0.00, to update the schedule of services, milestones, and deliverables on the MVW Signal, IMT Double Track, and El Cajon Third Track Upgrades project (Attachments A and B).

<u>Amendment 3 (L1607.3-22):</u>
This Amendment was made to clarify the escrow language related to the source code (Attachment C).

<u>WOA 7:</u>
WOA 7 for the Park Boulevard Grade Crossing Upgrade and CTC Integration, in the amount of $144,956.97 (Attachment D).

Today's Proposed Action – WOA 8

Today's proposed action would approve WOA 8 in the amount of $639,396.87. (Attachment E). This amendment is intended to remediate CISA-identified cybersecurity findings in the MTS CTC system by implementing enhancements to access controls, network segmentation, configuration management, and disaster recovery for the SDMTS rail system, in line with CISA and National Institute of Standards and Technology (NIST) recommendations. (Attachment E).

Therefore, staff recommends that the Board of Directors authorize the CEO to execute MTS WOA 8 to Doc. No. L1607.4-22 (in substantially the same format as Attachment E) with Wabtec, in the amount of not-to-exceed $639,396.87.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachments: A. WOA 3.1
B. WOA 3.2
C. Amendment 3, MTS Doc. No. L1607.3-22
D. WOA 7
E. Draft WOA 8

Metropolitan Transit System

Work Order Agreement (WOA) 3 – Amendment 1

September 20, 2023 MTS Doc No. L1607.0-22

CENTRALIZED TRAIN CONTROL (CTC) SYSTEM MAINTENANCE AGREEMENT

Wabtec Transportation Systems, LLC
Jill Olivas
Project Manager
5140 W. Goldleaf Circle, Suite 300
Los Angeles CA, 90056

This shall serve as Amendment No.1 to the original agreement L1607.0-22 – WOA 3 as further described below.

SCOPE

The Schedule of Services, Milestones, and Deliverables shall be updated with the following:

Milestone – CURRENT	Due Date (Subject to Change)	Invoice Amount (USD)
Mission Valley West SCADA Factory Acceptance Test	6/16/2023	$244,309.00
Imperial Double-track Factory Acceptance Test		

Milestone – REVISED	Due Date (Subject to Change)	Invoice Amount (USD)
Mission Valley West SCADA Factory Acceptance Test	6/16/2023	$81,436.00
Imperial Double-track Factory Acceptance Test	10/15/2023	$162,873.00

All other Schedule of Services, Milestones, and Deliverables shall stay as is.

SCHEDULE

There are no changes to the termination date of the overall agreement which remains December 31, 2026.

PAYMENT

The overall contract amount shall remain the same of $3,868,475.50. This amount shall not be exceeded without prior written approval from MTS.

CONTRACT SUMMARY

To-date, the contract summary is as shown below:

Date Issued	Document	Description	Amount
1/1/2022	Agreement	CTC System Maintenance	$1,568,916.00
5/1/2022	WOA 1	Various System Integrations	$452,000.00
	WOA 1	Project came in below budget.	($2,077.00)
5/9/2022	WOA 1.1	Beech Street Interlocking Field Integration Testing (FIT)	$72,003.50
9/15/2022	Amendment 2	Travel Expense. Reimbursements to be paid during the contract.	$15,000.00
9/15/2022	WOA 1.2	Final Acceptance of Beech Street Double Crossover	$55,130.00
9/15/2022	WOA 2	SANDAG – Mid Coast existing Task Orders # 33 (SANDAG TPSS point-to-point testing and GPS) and #34 (SANDAG Field Integration testing TPSS, Stations and warranty). MTS takes on these Task Orders using Addendum 17 SOW 105, and will be reimbursed by SANDAG.	$297,555.00
9/15/2022	WOA 3	MVW Signal, IMT Double Track, and El Cajon Third Track Upgrades	$1,222,599.00
9/15/2022	WOA 5	Server and Sonicwall SecurID Token Upgrades	$27,817.00
	Regarding WOA 1 (Blue Line)	Project came in below budget.	($2,155.00)
6/8/2023	WOA 6	Imperial Terminal Yard 25 INTL option associated with the IMTDT upgrade project.	$161,687.00
		Total Contract Amount	**$3,868,475.50**

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:

Hira Bhangu, Program Management
Wabtec Transportation Systems, LLC

Date: Oct 3, 2023

Metropolitan Transit System

Work Order Agreement (WOA) 3 – Amendment 2

February 15, 2024 MTS Doc No. L1607.0-22

CENTRALIZED TRAIN CONTROL (CTC) SYSTEM MAINTENANCE AGREEMENT

Wabtec Transportation Systems, LLC
Hira Bhangu
Program Management
5140 W. Goldleaf Circle, Suite 300
Los Angeles CA, 90056

This shall serve as Amendment No.2 to the original agreement L1607.0-22 – WOA 3 as further described below.

SCOPE

The Schedule of Services, Milestones, and Deliverables shall be updated with the following:

Milestone – CURRENT	Due Date (Subject to Change)	Invoice Amount (USD)
Mission Valley West SCADA Deployment & Cutover	7/14/2023	183,974.00
Imperial Double-track Deployment & Cutover		

Milestone – REVISED	Due Date (Subject to Change)	Invoice Amount (USD)
Mission Valley West SCADA Deployment & Cutover	1/30/24	$122,650.00
Imperial Double-track Deployment & Cutover	6/27/24	$61,324.00

All other Schedule of Services, Milestones, and Deliverables shall stay as is.

SCHEDULE

There are no changes to the termination date of the overall agreement which remains December 31, 2026.

PAYMENT

The overall contract amount shall remain the same of $3,868,475.50. This amount shall not be exceeded without prior written approval from MTS.

CONTRACT SUMMARY

To-date, the contract summary is as shown below:

Date Issued	Document	Description	Amount
1/1/2022	Agreement	CTC System Maintenance	$1,568,916.00
5/1/2022	WOA 1	Various System Integrations	$452,000.00
	WOA 1	Project came in below budget.	($2,077.00)
5/9/2022	WOA 1.1	Beech Street Interlocking Field Integration Testing (FIT)	$72,003.50
9/15/2022	Amendment 2	Travel Expense. Reimbursements to be paid during the contract.	$15,000.00
9/15/2022	WOA 1.2	Final Acceptance of Beech Street Double Crossover	$55,130.00
9/15/2022	WOA 2	SANDAG – Mid Coast existing Task Orders # 33 (SANDAG TPSS point-to-point testing and GPS) and #34 (SANDAG Field Integration testing TPSS, Stations and warranty). MTS takes on these Task Orders using Addendum 17 SOW 105, and will be reimbursed by SANDAG.	$297,555.00
9/15/2022	WOA 3	MVW Signal, IMT Double Track, and El Cajon Third Track Upgrades	$1,222,599.00
9/15/2022	WOA 5	Server and Sonicwall SecurID Token Upgrades	$27,817.00
	Regarding WOA 1 (Blue Line)	Project came in below budget.	($2,155.00)
6/8/2023	WOA 6	Imperial Terminal Yard 25 INTL option associated with the IMTDT upgrade project.	$161,687.00
		Total Contract Amount	**$3,868,475.50**

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:

Jeyaramesh Balasubramaniam, Director - Program Management
Wabtec Transportation Systems, LLC

Date: 03/06/2024

Metropolitan Transit System

Amendment 3

Date: August 14, 2025 MTS Doc No. L1607.3-22

CENTRALIZED TRAIN CONTROL (CTC) SYSTEM MAINTENANCE AGREEMENT – SOURCE CODE ESCROW

Wabtec Transportation Systems, LLC
Hira Bhangu
Program Management
5140 W. Goldleaf Circle, Suite 300
Los Angeles CA, 90056

This shall serve as Amendment No.3 to the original agreement L1607.0-22 as further described below.

SCOPE

This Amendment updates the agreement to include the following provision:

Source Code Escrow

Contractor and NCC (formerly Iron Mountain) have entered into Three-Party Master Depositor Escrow Service Agreement ("Escrow Agreement") which includes Beneficiary Enrollment for MTS as a beneficiary to this Escrow Agreement. No later than sixty (60) days after execution of the escrow agreement, Contractor shall deposit the source code related to the executed Advanced Information Management (AIM) Software License Agreement #19M0015 dated 3 October, 2019; and shall deposit subsequent upgrades or modifications purchased or owed to Customer for the AIM Products as purchased within a reasonably period after their release (collectively "Source Materials"), for the operation, maintenance and repair of the AIM Products, including the hardware components of the AIM Products, only upon the occurrence of an Escrow Event as defined below.

A. CUSTOMER is, and shall be, responsible for all fees or other charges associated with the establishment and maintenance of the Beneficiary Enrollment under the Escrow Agreement with NCC Group, for the Term of the Contract. The obligation of the Contractor with regard to any aspect of the escrow account or the Source Materials terminates at the end of the MSA Term. The escrow account fees for the remaining contract period are as follows and will be paid by CUSTOMER directly to NCC via a separate purchase order.

B. An "Escrow Event" shall be the bankruptcy, insolvency or dissolution of Contractor or the failure of Contractor to exist as an on-going business concern. Contractor's obligation to deposit the

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for nine cities.

aforementioned Source Materials into escrow applies only to the extent, and for those products for which, Contractor and MTS have existing and valid Software License Agreements.

Except as may be otherwise expressly provided in a Software License Agreement or other document, the parties agree that the escrow provisions contained in the foregoing paragraphs apply to the Source Materials.

SCHEDULE

There are no changes to the termination date of the overall agreement which remains December 31, 2026.

PAYMENT

This is a no-cost Amendment. The overall contract amount shall remain the same of $3,868,475.50, illustrated in the contract summary section below. This amount shall not be exceeded without prior written approval from MTS.

CONTRACT SUMMARY

To-date, the contract summary is as shown below:

Date Issued	Document	Description	Amount
1/1/2022	Agreement	CTC System Maintenance	$1,568,916.00
5/1/2022	WOA 1	Various System Integrations	$452,000.00
	WOA 1	Project came in below budget.	($2,077.00)
5/9/2022	WOA 1.1	Beech Street Interlocking Field Integration Testing (FIT)	$72,003.50
6/24/2022	Amendment 1	Recognized assignment from ARINC to Wabtec; updated Federal Requirements language	$0.00
9/15/2022	Amendment 2	Travel Expense. Reimbursements to be paid during the contract.	$15,000.00
9/15/2022	WOA 1.2	Final Acceptance of Beech Street Double Crossover	$55,130.00
9/15/2022	WOA 2	SANDAG – Mid Coast existing Task Orders # 33 (SANDAG TPSS point-to-point testing and GPS) and #34 (SANDAG Field Integration testing TPSS, Stations and warranty). MTS takes on these Task Orders using Addendum 17 SOW 105, and will be reimbursed by SANDAG.	$297,555.00
9/15/2022	WOA 3	MVW Signal, IMT Double Track, and El Cajon Third Track Upgrades	$1,222,599.00
9/15/2022	WOA 5	Server and Sonicwall SecurID	$27,817.00

		Token Upgrades	
	Regarding WOA 1 (Blue Line)	Project came in below budget.	($2,155.00)
6/8/2023	WOA 6	Imperial Terminal Yard 25 INTL option associated with the IMTDT upgrade project.	$161,687.00
9/20/2023	WOA 3.1	Revised milestones due to schedule	$0.00
2/15/2024	WOA 3.2	Revised milestones due to schedule	$0.00
8/14/2025	Amendment 3	Source code escrow with NCC	$0.00
		Total Contract Amount	**$3,868,475.50**

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:

Nima Tehrani

Nima Tehrani (Aug 25, 2025 10:28:42 MDT)

Wabtec Transportation Systems, LLC

Name: Nima Tehrani

Title: Group VP S&S NAM

Date: 08/25/2025

Metropolitan Transit System

Work Order Agreement No. 7 (WOA 7)

Date: August 15, 2025 MTS Doc No. L1607.0-22

CENTRALIZED TRAIN CONTROL (CTC) SYSTEM MAINTENANCE AGREEMENT – WOA 7

Wabtec Transportation Systems, LLC
Hira Bhangu
Program Management
5140 W. Goldleaf Circle, Suite 300
Los Angeles CA, 90056

This shall serve as WOA 7 to the original agreement L1607.0-22 as further described below.

SCOPE

The scope of work for this WOA 7 is for Park Blvd Grade Crossing Upgrade CTC Intregration, and as further detailed in Attachment A.

SCHEDULE

The schedule is as shown in Attachment A.

There are no changes to the termination date of the overall agreement which remains December 31, 2026.

PAYMENT

The cost for this WOA 7 shall not exceed $144,956.97, as shown in Attachment A.

The total value of this agreement, including this WOA, shall be in the amount of $4,013,432.47 ($3,868,475.50 + $144,956.97), illustrated in the contract summary section below. This amount shall not be exceeded without prior written approval from MTS.

CONTRACT SUMMARY

To-date, the contract summary is as shown below:

Date Issued	Document	Description	Amount
1/1/2022	Agreement	CTC System Maintenance	$1,568,916.00
5/1/2022	WOA 1	Various System Integrations	$452,000.00
	WOA 1	Project came in below budget.	($2,077.00)
5/9/2022	WOA 1.1	Beech Street Interlocking Field Integration Testing (FIT)	$72,003.50

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for nine cities.

6/24/2022	Amendment 1	Recognized assignment from ARINC to Wabtec; updated Federal Requirements language	$0.00
9/15/2022	Amendment 2	Travel Expense. Reimbursements to be paid during the contract.	$15,000.00
9/15/2022	WOA 1.2	Final Acceptance of Beech Street Double Crossover	$55,130.00
9/15/2022	WOA 2	SANDAG – Mid Coast existing Task Orders # 33 (SANDAG TPSS point-to-point testing and GPS) and #34 (SANDAG Field Integration testing TPSS, Stations and warranty). MTS takes on these Task Orders using Addendum 17 SOW 105, and will be reimbursed by SANDAG.	$297,555.00
9/15/2022	WOA 3	MVW Signal, IMT Double Track, and El Cajon Third Track Upgrades	$1,222,599.00
9/15/2022	WOA 5	Server and Sonicwall SecurID Token Upgrades	$27,817.00
	Regarding WOA 1 (Blue Line)	Project came in below budget.	($2,155.00)
6/8/2023	WOA 6	Imperial Terminal Yard 25 INTL option associated with the IMTDT upgrade project.	$161,687.00
9/20/2023	WOA 3.1	Revised milestones due to schedule	$0.00
2/15/2024	WOA 3.2	Revised milestones due to schedule	$0.00
8/14/2025	Amendment 3	Source code escrow with NCC	$0.00
8/15/2025	WOA 7	Park Blvd Grade Crossing Upgrade	$144,956.97
		Total Contract Amount	**$4,013,432.47**

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:

Hira Bhangu, Program Management
Wabtec Transportation Systems, LLC

Date: Digitally signed by Hira Bhangu
Date: 2025.08.26 10:05:18 -04'00'

Attachment:

A. WOA 7 Proposal

Wabtec Corporation
Digital Intelligence

Hira Bhangu
Senior Manager, Program Management
Mobile: 416-826-0007
Email: hira.bhangu@wabtec.com

San Diego Metropolitan Transit System
Heather Furey
Director of Capital Projects
1225 Imperial Ave., Suite 1000
San Diego CA 92101-7490

August 13, 2025

REF: Park Boulevard Upgrades, Rev. 1.0
Proposal Number: 225278

Dear Ms. Furey,

Wabtec Transportation Systems, LLC ("**Wabtec**") is pleased to provide the attached proposal ("**Proposal**") to San Diego Metropolitan Transit System (SDMTS) (**"Customer"**) for efforts required to implement **Park Boulevard Upgrades.**

This Proposal is based on *Park Blvd – Phase 2 – Plans – 20230630_sealed.pdf*, *Park SCADA Controls & indications.xlsx*, *B120V1_01.doc*, and clarification responses from SDMTS. This is a revised copy of the proposal submitted on May 30, 2025 following feedback received from SDMTS on August 13, 2025.

Wabtec welcomes the opportunity to provide this Proposal. If you have any questions or require any further assistance, please feel free to contact us.

Thank you,

Hira Bhangu
Wabtec Corporation

CC: David Urbaez
Ed Graham
Alex Pereyra
Ali Eshraghi
Jill Olivas

IMPORTANT NOTICE REGARDING PROPOSAL

1. **Confidentiality.** Customer and Wabtec acknowledge that Customer is a public agency subject to the California Public Records Act (CPRA) (California Government Code §§ 6250through 6276.48) and other applicable laws. This Proposal and any agreement entered into between Customer and Wabtec will be considered a public record and subject to disclosure in compliance with the CPRA. Notwithstanding the above, this Proposal is for Customer only and not for the benefit of any third party. Customer acknowledges and agrees that during the course of the work conducted by Wabtec, Customer may be provided with Wabtec's confidential and proprietary or trade secret information that is not subject to disclosure under the CPRA or other applicable law. Such information will be clearly marked as "Confidential and Proprietary". Customer shall maintain such Confidential and Proprietary documents as confidential and shall not disclose them to third parties unless required to do so by applicable law, rule or regulation. In the event a request for Wabtec's Confidential and Proprietary documents is received by Customer, whether under the CPRA, subpoena, or other method, Customer will provide Wabtec with an opportunity to review the request, and at Wabtec's sole cost, to defend or pursue an action to protect such Confidential and Proprietary documents from disclosure. Customer shall not be required to incur legal fees and costs to protect Wabtec's Confidential and Proprietary documents from disclosure under state or federal law.

2. **Not an offer.** This Proposal is for discussion purposes only, and Customer shall not rely on this Proposal. This Proposal is not an offer capable of acceptance. Wabtec and Customer shall not be bound in relation to the subject of this Proposal unless and until Wabtec and Customer sign a mutually agreed, written contract. Should Wabtec and Customer mutually agree to proceed, the final contract signed by Wabtec and Customer will be the entire agreement, superseding this Proposal. This Proposal is given based on the terms and conditions of the referenced agreement. Any deviation from such terms and conditions in the final signed written contract may impact price, schedule and other terms in Wabtec's sole discretion.

3. **Wabtec may withdraw Proposal.** Wabtec may modify or withdraw this Proposal without liability any time prior to both Wabtec and the Customer's execution of the Definitive Agreement.

4. **No liability for costs of Proposal**. Wabtec shall have no liability for costs incurred by Customer in reviewing this Proposal.

5. **Validity.** This Proposal is valid for sixty (60) days from the date of the Proposal, unless withdrawn or extended in a writing signed by Wabtec prior to that time.

6. **Structural Considerations.** Wabtec may have one or more of Wabtec's affiliated entities enter into the Definitive Agreement and/or provide some or all of Wabtec's offerings described in this Proposal. In this Proposal, references to Wabtec mean Wabtec and/or one or more of Wabtec's affiliated entities.

7. **Statements as to future.** In this Proposal, any information regarding Wabtec's roadmaps and future product plans are indicative only of Wabtec's current plans and are not binding. Plans are subject to Wabtec internal approvals, and plans may change, in Wabtec's sole discretion. Commitments and binding representations as to the future are expressly disclaimed. Customer must not rely on such information and plans in deciding whether to proceed with the Definitive Agreement.

Proposal for Park Boulevard Upgrades

Wabtec Proposal Number 225278 dated August 13, 2025

1. Contents

1.1 This Proposal is comprised of the following:

Section 1: Contents

Section 2: Scope of Wabtec Offerings

Section 3: Customer Responsibilities

Section 4: Delivery Schedule

Section 5: Fees

Section 6: Price Escalation

Appendix A: Description of Offerings

1.2 In this Proposal, except where the context requires otherwise, all references to Sections and Appendices are to Sections and Appendices of this Proposal.

1.3 If Customer wishes to proceed with the Wabtec offerings described in this Proposal, it must provide written notice of same to Wabtec, and Wabtec will provide for the Customer's review and execution, the proposed Definitive Agreement which will likely come in the form of a Statement of Work to the Maintenance Agreement.

2. Scope of Wabtec Offerings

2.1 This Proposal is for Wabtec to implement the **Park Boulevard Upgrades** as described below:

2.2 Wabtec is to produce and furnish Park Boulevard Gate Crossing updates to the existing AIM Centralized Train Control (CTC) dispatching system. for use by SDMTS.

2.3 Full life-cycle development, including:

(a) Design
(b) Design review with SDMTS
(c) Displays, database, and any programming
(d) Factory verification
(e) Factory customer validation
(f) Deployment
(g) Field verification
(h) Site acceptance testing
(i) Cutover

2.4 Documentation, including:

(a) Schedule
(b) Display Design Change Form
(c) Factory test procedure results
(d) Site acceptance procedure results

2.5 Assumptions, including:

(a) The work is to align with the existing SDMTS CTC maintenance agreement release schedule. Wabtec does not need to provide a separate release specific to these changes.

(b) The work is to align with existing TWC loop and TPSS from the existing SDMTS CTC production system with no required changes to be included as part of Park Boulevard update.

(c) The work is to align with security standards as covered under the existing SDMTS CTC maintenance and other project agreements. Corrective actions for this work are only applicable to changes made as a direct resolve of the modifications made to support Park Boulevard

(d) The green gate crossing in the drawings aligns with previous conversations with SDMTS such that that it will be added as part of phase 2 and at this time there will be no additional controls, indications, or graphic updates required to depict this crossing as it is to be managed by BNSF.

(e) The code chart received is inclusive of all approved changes to input and output received from the SDMTS SCADA field to satisfy the needs of the Park Boulevard related works as to integrate with the existing CTC.

3. Customer Responsibilities

3.1 Customer will be responsible for review and approval of design changes, test procedures and transition plan.

3.2 Customer will be responsible for providing access to the Centralized Train Control (CTC) system and SDMTS network.

3.3 Customer will be responsible for providing a witness to support and testing and cutover efforts and result approval.

4. Anticipated Delivery Schedule

4.1 Upon NTP Wabtec will develop a project schedule that includes providing an engineering release to SDMTS to provide sufficient time for integration testing prior to cutover. Previously planned October 2025 cutover date may need to be revised based on the NTP date.

4.2 The anticipated schedule is indicative only. Actual times may vary. Further, timely delivery of Wabtec's offerings is dependent on Customer's timely discharge of Customer's responsibilities, as identified in this Proposal and in the Definitive Agreement.

5. Fees

5.1 The fees for the scope of Wabtec's offerings as described in this Proposal (the "**Fees**") are as follows.

(a) $144,956.97

(b) The fees are broken down as follows:

Activity	Amount
Program Management & Execution	$ 33,906.66
Requirements and Design	$ 28,246.99
Configuration & Installation & Integration	$ 38,518.63

Development	$ 5,135.82
Testing	$ 38,005.05
Travel	$ 1,143.82

5.2 The Fees will be invoiced at the following times assuming an August 2025 NTP:

Description	**NTP+** (months)	**Price**
Mobilization Payment	0	$ 43,487.09
Design review complete	1	$ 50,734.94
Factory acceptance testing complete	2	$ 36,239.24
Site acceptance testing complete	3	$ 14,495.70
Total		**$ 144,956.97**

5.3 The Fees are subject to the following qualifications:

(a) All Fees are stated and will be paid in United States dollars.

(b) All on-going (recurring) Fees are subject to Wabtec's standard escalation terms listed below in section 6.

(c) Fees are NET 30 and are exclusive of all taxes, customs, duties, levies, tariffs, government permits, and the cost of third-party licenses.

(d) Delays caused by Customer or delays for which Customer is responsible will incur additional charges based on costs incurred by Wabtec and Wabtec's standard administration fee.

(e) Any deviations from the terms and conditions referenced in the Maintenance Agreement may incur an additional risk premium, which will be added to the Fees, in Wabtec's sole discretion.

6. Price Escalation

6.1 All pricing will be adjusted annually throughout the term of the Definitive Agreement, with each January 1st being an "**Adjustment Date**". The first adjustment, if required in the event of a period of performance extension, will be January 1st, 2026. Each annual adjustment shall be made in accordance with the following formula:

$$P\,(Adjusted) = P \times \frac{Index_A}{Index_E}$$

Where:

P is the pricing specified in Section **Error! Reference source not found.** – Pricing Breakdown.

The “Labor Index” is the “Total compensation for Private industry workers in Professional, scientific, and technical services, Index” (CIU2015400000000I (B)) as determined Quarterly by the Bureau of Labor Statistics of the U.S Department of Labor.

Index$_A$ is the latest **Labor Index** (final or preliminary) published as of each respective **Adjustment Date.**

Index$_E$ is the latest **Labor Index** (final or preliminary) published as of January 1, 2024.

Metropolitan Transit System

Work Order Agreement No. 8 (WOA 8)

April 16, 2026 MTS Doc No. L1607.0-22

CENTRALIZED TRAIN CONTROL (CTC) SYSTEM MAINTENANCE AGREEMENT – WOA 8: CISA REMEDIATION

Wabtec Transportation Systems, LLC
Hira Bhangu
Program Management
5140 W. Goldleaf Circle, Suite 300
Los Angeles CA, 90056

This shall serve as WOA 8 to the original agreement L1607.0-22 as further described below.

SCOPE

This WOA 8 is to include remediation of Cybersecurity and Infrastructure Security Agency (CISA) and National Institute of Standards and Technology (NIST) identified cybersecurity findings within the CTC system. The work shall include implementation of enhancements to access controls, network segmentation, configuration management, and disaster recovery for the SDMTS rail system, as further detailed in Attachment A.

SCHEDULE

The contract schedule is extended from December 31, 2026, to April 30, 2027.

PAYMENT

This WOA shall authorize additional costs not to exceed $639,396.87. The total value of this contract including this WOA shall be in the amount of $4,652,829.34 ($4,013,432.47 + $639,396.87), illustrated in the contract summary section below. This amount shall not be exceeded without prior written approval from MTS.

CONTRACT SUMMARY

To-date, the contract summary is as shown below:

Date Issued	Document	Description	Amount
1/1/2022	Agreement	CTC System Maintenance	$1,568,916.00
5/1/2022	WOA 1	Various System Integrations	$452,000.00
	WOA 1	Project came in below budget.	($2,077.00)
5/9/2022	WOA 1.1	Beech Street Interlocking Field Integration Testing (FIT)	$72,003.50

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for nine cities.

6/24/2022	Amendment 1	Recognized assignment from ARINC to Wabtec; updated Federal Requirements language	$0.00
9/15/2022	Amendment 2	Travel Expense. Reimbursements to be paid during the contract.	$15,000.00
9/15/2022	WOA 1.2	Final Acceptance of Beech Street Double Crossover	$55,130.00
9/15/2022	WOA 2	SANDAG – Mid Coast existing Task Orders # 33 (SANDAG TPSS point-to-point testing and GPS) and #34 (SANDAG Field Integration testing TPSS, Stations and warranty). MTS takes on these Task Orders using Addendum 17 SOW 105, and will be reimbursed by SANDAG.	$297,555.00
9/15/2022	WOA 3	MVW Signal, IMT Double Track, and El Cajon Third Track Upgrades	$1,222,599.00
9/15/2022	WOA 5	Server and Sonicwall SecurID Token Upgrades	$27,817.00
	Regarding WOA 1 (Blue Line)	Project came in below budget.	($2,155.00)
6/8/2023	WOA 6	Imperial Terminal Yard 25 INTL option associated with the IMTDT upgrade project.	$161,687.00
9/20/2023	WOA 3.1	Revised milestones due to schedule	$0.00
2/15/2024	WOA 3.2	Revised milestones due to schedule	$0.00
8/14/2025	Amendment 3	Source code escrow with NCC	$0.00
8/15/2025	WOA 7	Park Blvd Grade Crossing Upgrade	$144,956.97
4/16/2026	WOA 8	CISA Remediation	$639,396.87
		Total Contract Amount	**$4,652,829.34**

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:

Hira Bhangu, Program Management
Wabtec Transportation Systems, LLC

Date: _____

Attachment:
A. CISA Remediation Proposal

Wabtec Corporation
Digital Intelligence

Hira Bhangu
Senior Manager, Program Management
Mobile: 416-826-0007
Email: hira.bhangu@wabtec.com

San Diego Metropolitan Transit System
Heather Furey
Director of Capital Projects
1225 Imperial Ave., Suite 1000
San Diego CA 92101-7490

January 20, 2025

REF: CISA VADR Audit - Combined Solution, Rev. 1.8
Proposal Number: 224822

Dear Ms. Furey,

Wabtec Transportation Systems, LLC ("**Wabtec"**) is pleased to provide the attached proposal ("**Proposal"**) to San Diego Metropolitan Transit System (SDMTS) (**"Customer"**) for efforts required to implement **CISA VADR Audit Solutions.**

This Proposal is based on SDMTS' response to the Cybersecurity and Infrastructure Security Agency (CISA) Audit Proposals dated 9/13/23, the CISA Validated Architecture Design Review (VADR) Audit Report received on 7/18/23 and SDMTS feedback from 2/6/24, 6/5/24, 9/18/24, 12/12/24, 3/11/25, 4/22/25, 6/19/25 and 8/4/25. All the offered features described in this Proposal assume compliance with the assumption and exclusions identified in Section 9 of Appendix A.

Wabtec welcomes the opportunity to provide this Proposal. If you have any questions or require any further assistance, please feel free to contact us.

Thank you,

Hira Bhangu
Wabtec Corporation

CC:

David Urbaez	Mark Casas
Ed Graham	Brian Riley
Larry Marinesi	Cristian Jimenez
Ernesto Garcia	Awa Gon
Dennis Conzemius	Ali Eshraghi

IMPORTANT NOTICE REGARDING PROPOSAL

1. **Confidentiality.** Customer and Wabtec acknowledge that Customer is a public agency subject to the California Public Records Act (CPRA) (California Government Code §§ 6250 through 6276.48) and other applicable laws. This Proposal and any agreement entered into between Customer and Wabtec will be considered a public record and subject to disclosure in compliance with the CPRA. Notwithstanding the above, this Proposal is for Customer only and not for the benefit of any third party. Customer acknowledges and agrees that during the course of the work conducted by Wabtec, Customer may be provided with Wabtec's confidential and proprietary or trade secret information that is not subject to disclosure under the CPRA or other applicable law. Such information will be clearly marked as "Confidential and Proprietary". Customer shall maintain such Confidential and Proprietary documents as confidential and shall not disclose them to third parties unless required to do so by applicable law, rule or regulation. In the event a request for Wabtec's Confidential and Proprietary documents is received by Customer, whether under the CPRA, subpoena, or other method, Customer will provide Wabtec with an opportunity to review the request, and at Wabtec's sole cost, to defend or pursue an action to protect such Confidential and Proprietary documents from disclosure. Customer shall not be required to incur legal fees and costs to protect Wabtec's Confidential and Proprietary documents from disclosure under state or federal law.

2. **Discussion purposes.** This Proposal is for discussion purposes only. Neither Wabtec nor Customer shall be bound in relation to the subject of this Proposal unless and until Wabtec and Customer sign a mutually agreed, written contract or contracts relating to the Wabtec offerings described in this Proposal (collectively, the "**Definitive Agreement**"). Should Wabtec and Customer mutually agree to proceed, the Definitive Agreement will be the entire agreement, superseding this Proposal. This Proposal is given based on the Maintenance Service Agreement (Contract L1607.0-22) dated June 9, 2022, between Wabtec Transportation Systems, LLC, as a successor in interest to ARINC Incorporated, and San Diego Metropolitan Transit System (the "Maintenance Agreement"). Any deviation from such terms and conditions in the Definitive Agreement may impact price, schedule and other terms in Wabtec's sole discretion.

3. **Wabtec may withdraw Proposal.** Wabtec may modify or withdraw this Proposal without liability any time prior to both Wabtec and the Customer's execution of the Definitive Agreement.

4. **No liability for costs of Proposal**. Wabtec shall have no liability for costs incurred by Customer in reviewing this Proposal.

5. **Validity.** This Proposal is valid for sixty (60) days from the date of the Proposal, unless withdrawn or extended in a writing signed by Wabtec prior to that time.

6. **Structural Considerations.** Wabtec may have one or more of Wabtec's affiliated entities enter into the Definitive Agreement and/or provide some or all of Wabtec's offerings described in this Proposal. In this Proposal, references to Wabtec mean Wabtec and/or one or more of Wabtec's affiliated entities.

7. **Statements as to future.** In this Proposal, any information regarding Wabtec's roadmaps and future product plans are indicative only of Wabtec's current plans and are not binding. Plans are subject to Wabtec internal approvals, and plans may change, in Wabtec's sole discretion. Commitments and binding representations as to the future are expressly disclaimed. Customer must not rely on such information and plans in deciding whether to proceed with the Definitive Agreement.

Proposal for CISA VADR Audit - Combined Solution, Rev. 1.7

Wabtec Proposal Number 224822 dated January 16, 2025

1. Contents

1.1 This Proposal is comprised of the following:

Section 1: Contents

Section 2: Scope of Wabtec Offerings

Section 3: Customer Responsibilities

Section 4: Delivery Schedule

Section 5: Fees

Section 6: Price Escalation

Appendix A: Description of Offerings

1.2 In this Proposal, except where the context requires otherwise, all references to Sections and Appendices are to Sections and Appendices of this Proposal.

1.3 If Customer wishes to proceed with the Wabtec offerings described in this Proposal, it must provide written notice of same to Wabtec, and Wabtec will provide for the Customer's review and execution, the proposed Definitive Agreement which will likely come in the form of a Statement of Work to the Maintenance Agreement.

2. Scope of Wabtec offerings

2.1 This Proposal is for Wabtec to implement the **CISA VADR Audit - Combined Solution, Rev. 1.7** as described in Appendix A.

3. Customer responsibilities

3.1 Customer will be responsible for providing access to the Centralized Train Control (CTC) system and SDMTS network.

4. Anticipated delivery schedule

4.1 We anticipate the delivery schedule as identified in Section 8 of Appendix A.

4.2 The anticipated schedule is indicative only. Actual times may vary. Further, timely delivery of Wabtec's offerings is dependent on Customer's timely discharge of Customer's responsibilities, as identified in this Proposal and in the Definitive Agreement.

5. Fees

5.1 The fees for the scope of Wabtec's offerings as described in this Proposal (the "**Fees**") are as follows.

(a) Firm fixed costs of $531,483.03

(b) Recurring monthly costs of $8,992.82

5.2 The Fees will be invoiced at the following times:

(a) The fees will be invoiced as identified in Section 11 of Appendix A.

5.3 The Fees are subject to the following qualifications:

(a) All Fees are stated and will be paid in United States dollars.

(b) All on-going (recurring) Fees are subject to Wabtec's standard escalation terms.

(c) Fees are NET 30 and are exclusive of all taxes, customs, duties, levies, tariffs, government permits, and the cost of third-party licenses.

(d) Delays caused by Customer or delays for which Customer is responsible will incur additional charges based on costs incurred by Wabtec and Wabtec's standard administration fee.

(e) Any deviations from the terms and conditions referenced in the Maintenance Agreement may incur an additional risk premium, which will be added to the Fees, in Wabtec's sole discretion.

6. Price Escalation

6.1 All pricing except the monthly recurring OS patching price will be adjusted annually throughout the term of the Definitive Agreement, with each January 1st being an "**Adjustment Date**". The first adjustment, if required in the event of a period of performance extension, will be January 1st, 2026. Each annual adjustment shall be made in accordance with the following formula:

$$P\,(Adjusted) = P \times \frac{Index_A}{Index_E}$$

Where:

P is the pricing specified in Section 10 – Pricing Breakdown.

The "Labor Index" is the "Total compensation for Private industry workers in Professional, scientific, and technical services, Index" (CIU2015400000000I (B)) as determined Quarterly by the Bureau of Labor Statistics of the U.S Department of Labor.

$Index_A$ is the latest **Labor Index** (final or preliminary) published as of each respective **Adjustment Date**.

$Index_E$ is the latest **Labor Index** (final or preliminary) published as of January 1, 2024.

Appendix A: Description of Offerings

CISA VADR Audit - Combined Solution, Rev. 1.7

REVISION	DESCRIPTION	DATE
1.0	Initial Version	June 2024
1.1	Updated per SDMTS review comments dated 10/3/24	November 2024
1.2	Updated per SDMTS review comments dated 12/4/24	December 2024
1.3	Updated per SDMTS review comments dated 3/11/25	April 2025
1.4	Updated per SDMTS review comments dated 4/22/25	May 2025
1.5	Updated per SDMTS review comments dated 6/19/25	July 2025
1.6	Updated per discussion with SDMTS on 8/4/25	July 2025

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10.1 Access Control ..... **Error! Bookmark not defined.**
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11. PAYMENT MILESTONES 32

1. OVERVIEW

Wabtec will perform the work defined in the subsections below. Wabtec defines “support” as providing standby engineering services during MTS led activities involving the AIM system.

1.1 Access Control

Wabtec proposes to update the Metropolitan Transit System (MTS) Centralized Train Control (CTC) system with the implementation of an access control strategy, as recommended in the CISA audit section NIST SP 800--53 Security Control Category: Access Control AC-5 Separation of Duties.

1.2 Backup Configuration

Wabtec proposes to inform MTS IT on what to update and verify to support backups via the SDMTS enterprise backup and retention strategy as recommended in the Cybersecurity and Infrastructure Security Agency (CISA) audit section NIST SP 800--53 Security Control Category: CP-9 System Backup.

1.3 Disaster Recovery

Wabtec proposes to support SDMTS business continuity with the development of a disaster recovery plan as recommended in the CISA audit section NIST SP 800--53 Security Control Category, Contingency Planning, CP-2 Contingency Plan.

1.4 Document And Asset Inventory

Wabtec proposes to develop documentation for the SDMTS organization in support of the Supervisory Control and Data Acquisition (SCADA) systems, networking, IT, and other groups as recommended in the CISA audit section NIST SP 800--53 Security Control Category Configuration Management CM-2 Baseline Configuration.

Wabtec proposes to provide software and hardware inventory data for input into FreshService (or other tools of MTS selection) to track all components of the SCADA and CTC system, as recommended in the CISA audit section NIST SP 800--53 Security Control Category Configuration Management CM-8 System Component Inventory.

1.5 Network Reconfiguration

Wabtec proposes to support SDMTS activities to reconfigure the SDMTS CTC network and implement a demilitarized zone (DMZ), as recommended in the CISA audit section System and Services Acquisition SA-22 Unsupported System Components and System and Communications Protection SC-7 Boundary Protection. Wabtec will also provide details of existing firewall configuration to the MTS IT group.

1.6 MS OS and MSSQL Express Patching

Wabtec proposes to support SDMTS activities to update the SDMTS Centralized Train Control (CTC) system servers and workstations located in the Operations Control Center (OCC) and Imperial Avenue Division (IAD) server rooms for the operation of the Advanced Information Management (AIM) Centralized Train Control (CTC) system with the implementation of Microsoft Operating System (MS OS) & MSSQL Patching, as recommended in the CISA audit section NIST

SP 800--53 Security Control Category: CISA audit findings NIST SP 800--53 Security Control Category, System and Information Integrity, SI-2 Flaw Remediation.

This Proposal price provides a monthly cost of Patching support with full length of support to be calculated based on NTP until December 31st 2026 to coincide with the end of the period of performance of the Maintenance Agreement.

1.7 System Monitoring

SDMTS will update the SDMTS CTC system with the installation of System Monitoring tool suite components as recommended in the CISA audit section NIST SP 800--53 Security Control Category: System and Information Integrity: SI-4 System Monitoring.

1.8 VMWare Version Updates

Wabtec proposes to support SDMTS transition for VMWare updates.

1.9 AIM Operating Systems Certification

Wabtec proposes to certify SDMTS provided operating system images for both AIM workstations and AIM servers. These images will be certified to the latest Microsoft Operating Systems for these components, which at the time of this proposal is Windows 11 Enterprise for the AIM workstations and Windows Server 2022 Standard for the AIM servers.

2. BACKGROUND

2.1 Access Control

SDMTS currently has no integrated strategy for Access Control for the AIM CTC SCADA network Usernames and passwords are managed in the AIM application and SDMTS uses Wabtec to administrate the CTC system.

Wabtec proposes to update the authentication and access to the SCADA system through user account management in Active Directory (AD). The update can use MTS's central AD or use the SCADA domain AD for management of the access control to the CTC and SCADA will be under the control of SDMTS within a centrally managed authentication system, leveraging controls & expertise already held within the internal IT group.

2.2 Backup Configuration

SDMTS currently has no backups for the CTC applications.
Wabtec to document and identify all important business data (and where it is located) for SDMTS IT team. All backups will follow SDMTS standard backup and retention policy.

2.3 Disaster Recovery

A Disaster Recovery plan needs to be developed through multi-discipline collaboration and documented in a living format, tested through exercises and improved through lessons-learned and systems change processes. Coordination with related groups is needed to better understand each group's needs and help prioritize limited available resources. Coordination with related parties/groups is essential for planning, preparation, and testing of asset operation recovery in the event of some type of disaster.

In the event of a disaster, the organization may not be able to sustain or recover operational capability in a reasonable timeframe. In a disaster, groups may have different priorities or fewer resources than expected.

Wabtec will support SDMTS in the preparation of a Disaster Recovery plan that provides business continuity in the operation of the rail system, with a focus on the recovery of AIM CTC and SCADA data centers**. Wabtec will provide this support by providing working instructions that guide authorized personnel in how to use the AIM Failover capability, and the backup IAD equipment, to recover CTC dispatching capability of the system at IAD. Working instructions will also be provided on how to roll-back control to the primary OCC.**

Wabtec will participate annually in SDMTS Disaster Recovery tabletop exercises.

2.4 Document And Asset Inventory

Documentation of the SCADA and CTC systems requires updates. Detailed diagrams defining the interfaces of the system and its interconnections to others are not current. Current set of documentation of the baseline configuration of the system or network is inaccurate and/or missing.

Audit Finding:

- Responding to events or planning and executing troubleshooting activities will be hampered if Industrial Control Systems (ICS) system configuration documentation is incorrect.

Solution:

- Wabtec proposes to develop detailed documentation of as-built SCADA systems, networking, IT (HW and SW Inventory, drawings, diagrams, etc.).

Audit Finding:

- A detailed system component inventory is not established. Without an inventory, system administrators do not have a clear understanding of what assets they must maintain or protect. ... “A comprehensive ICS asset list is highly recommended to support continuing evaluation for known vulnerabilities, patching status, network communication addressing, and critical asset analysis. As a result, the ICS asset list is a very sensitive document and should be protected as a critical asset itself.”

Solution:

- Wabtec will provide a spreadsheet for asset inventory management to establish an inventory system to track all components of the SCADA and CTC system. This inventory system should be readily accessible to those with a need to know. Inventory should contain enough detail to identify the component, its value, location, and current use.

2.5 Network Reconfiguration

SDMTS utilizes a virtual private network (VPN) for controlled remote access to the AIM CTC servers and workstations on the CTC network.

The CTC network has no DMZ established between control system subnets and the enterprise network.

Without DMZ segmentation, network traffic is either passed or blocked. With time, a malicious party could determine what devices are allowed to communicate to devices on another network and learn to bypass the security afforded by single layer.

Wabtec proposes to remotely support SDMTS activities to establish DMZ segmentation by creating an enclave zone between enterprise and control system elements. Access Control Lists (ACL) on both sides of the connection will restrict the flow and direction of traffic. Traffic should not be able to flow from enterprise to DMZ to control system without the intent of SDMTS. Data could be pushed to the DMZ by a control system element, and then an enterprise device must request it be moved from the DMZ.

In the design being proposed, the data moving from DMZ to enterprise will not be initiated from the DMZ in either case, limiting the flow of data. Wabtec recommends SDMTS to acquire and setup jump servers to fit the model by requiring separate authentication prior to changing networks. All devices within the DMZ will be limited on what other devices they can connect with and with what ports and services are utilized.

In addition, Wabtec proposes to move responsibilities to manage access to the SCADA system firewall configuration to SDMTS.

2.6 OS and MSSQL Patching

Software patches are one of the most important aspects of maintaining an integrated, software-based system. Microsoft is constantly rolling out patches for supported operating systems, while vendors and maintainers roll out new versions of libraries. For operating systems and MSSQL, Wabtec will support MTS on a monthly basis, and on occasions where a critical vulnerability is being exploited in the "wild". For dependent library updates, Wabtec will deploy dependent library during the nearest CTC software release.

Wabtec software engineers will support SDMTS Microsoft Windows OS, MSSQL Express, patches by:

- Certifying all Windows software patches in Wabtec facilities for applicability, usability, and viability prior to MTS deployment of the same patches in the operational environments.
- Wabtec proposes to certify patches in its own lab to minimize risk to SDMTS.
- Certifying the System is operational after patching. Wabtec will support SDMTS in its activities to install patches within the scope of this Proposal by verifying the System is not negatively impacted by the patching activities.
    - Updates procedures will utilize AIM failover capabilities to minimize system impact and downtime
    - Wabtec will perform AIM failover operations and provide the associated procedures to MTS IT

Most support is expected to be remote.

2.7 System Monitoring

SDMTS currently has no deployed controls for System Monitoring on the AIM CTC systems or SCADA network.

The system is not monitored for indicators of compromise or anomalous activity.

2.8 VMWare Version Updates

Mission critical servers and workstation for the AIM CTC systems in San Diego MTS are currently hosted in a VMWare virtualization environment.

Wabtec is proposing support for SDMTS during the transition period after an upgrade of the VMWare components that host AIM.

2.9 AIM Operating Systems Certification

During meetings regarding CISA VADR audit controls solutions, SDMTS personnel requested that Wabtec certify the AIM workstation on Windows 11 (images provided by SDMTS), and to certify AIM hosts and AIM FEPS on Windows 2022 (images provided by SDMTS). These images once certified will be deployed concurrently with an upcoming AIM maintenance release.

3. PERSONNEL

List of the Wabtec technical management personnel responsible for the work to be performed in connection with this Proposal are identified below.

NAME	TITLE
Jill Olivas	Project Manager
Stephen (Rod) Ruzicka	Project Engineering Lead
Jonathan Wu	Software Engineering Lead
Chris Dernoga	Hardware Engineer

* Personnel assignments are subject to change at the discretion of Wabtec management.

4. SCOPE OF WORK

SDMTS will update backup IAD facility with cyber security updates prior to updating primary OCC site. Wabtec may use SDMTS backup facilities or its lab for testing AIM capabilities of SDMTS cyber security updates.

4.1 Access Control

Wabtec will:
Update AIM System Access Control strategy by revising the AIM CTC system to support Single Sign On (SSO) integration with the existing AD facility.

- Implement a configurable integrated Single Sign On (SSO) feature for the AIM CTC
- Integrate with MTS's existing CTC and SCADA network AD.

Wabtec will provide a Design Change Form (DCF) which:

- Defines the derived requirements for this feature, such as how to configure AIM users within AD.

Perform access control integration testing.
Support MTS in troubleshooting initial integration.
Update user and administration manuals.

4.1.1 Access Control Expected Results

The AIM CTC system will be updated to incorporate SSO for all logged access to server and workstation Virtual Machines (VMs) and the AIM CTC workstation logins.
SDMTS will be trained on the upgrades to Access Control and the AD configuration.

4.2 Backup Configuration

SDMTS will procure, configure, and install all required hardware and software to support its enterprise backup solution.
Wabtec will remotely support SDMTS activities to perform verification of backup and restore of the AIM CTC VMWare ESXi server VM's (System) and list the duration to perform the procedures.
Wabtec will provide documentation on the restore procedures.

4.2.1 Backup Configuration Expected Results

Backup configuration completed and functionally verified.
AIM administration manual update to incorporate AIM System restore procedure working instructions.

4.3 Disaster Recovery

Wabtec will:
Coordinate planning sessions and meet with SDMTS for Disaster Recovery (DR).
Work with SDMTS to implement a Disaster Recovery plan for AIM CTC and SCADA data center systems.
Support annual Disaster Recovery tabletop exercises using the plan.
Support users during an actual DR event to ensure they can continue to operate the system from the recovery location until operations are restored at the primary control center location.

4.3.1 Disaster Recovery Expected Results

Planning sessions will be coordinated with SDMTS to define and scope the business continuity goals as well as assets, systems, and processes to implement Disaster Recovery.
Wabtec will work with SDMTS to identify shortcomings and issues with existing assets, systems, and processes that impact Disaster Recovery.
Wabtec will support SDMTS activities to draft a Disaster Recovery plan for the in-service architecture of the AIM CTC and SCADA Data Center Systems. If the separately submitted Backup Configuration solution is accepted, then the Disaster Recovery plan will include usage of the updated Backup Configuration.
Wabtec will support the implementation of the Disaster Recovery plan coordinating with SDMTS, including supporting a dry run “tabletop” exercise of the plan.

4.4 Document And Asset Inventory

Wabtec will provide documentation updates of the SCADA and CTC system as follows:

Update the CTC system Hardware Description Document to reflect current system status (as built).
Create a master Bill of Materials (BOM) for AIM CTC servers, workstations, switchgear.
Create switch, router and VPN configuration documentation.
Update the server room CTC equipment racks diagrams to reflect current system status (as built).

Wabtec will submit a hardware and software inventory spreadsheet to SDMTS for asset management.

4.4.1 Document And Asset Inventory Expected Results

The Hardware System Description Document reflects current system status (as built).
A master as-built inventory for the AIM CTC servers, workstations, and switchgear will be developed and submitted.
As-built documentation of the switch, router, VPN configuration will be developed and submitted.
The server room CTC equipment rack diagrams updated to reflect current system status (as built).

4.5 Network Reconfiguration

1Wabtec will support SDMTS activities to implement a DMZ by creating an enclave zone between enterprise and control system elements. This DMZ will utilize and be configured to work with the existing VPN.

SDMTS will provide two jump servers to reside within this DMZ requiring separate authentication prior to accessing the CTC network or any aspects of the SDMTS corporate network. Once provided by SDMTS, Wabtec will update the jump server at OCC server room to include existing licensed software Allen-Bradley RSlogix and Emerson PAC Machine Edition programming tools to support existing field device management by Wabtec.

SDMTS will provide two switches to segment the proposed DMZ from the CTC and SDMTS corporate network.

Wabtec will provide documentation containing information on the CTC SCADA firewall configuration and answer follow-on questions.

4.5.1 Network Reconfiguration Expected Results

The existing VPN will be configured for utilization of the proposed DMZ.
One of the SDMTS provided jump servers will be installed in the Operations Control Center (OCC) server room (VM host or physical)
One of the SDMTS provided jump servers will be installed in the Imperial Avenue Division (IAD) server room (VM host or physical).

4.6 OS Patching

Wabtec will configure a test environment at its corporate offices to install candidate patches in a segregated lab environment for internal test and verification prior to on-site deployment to SDMTS production AIM CTC servers and workstations. The initial set-up of this environment and the testing and development associated with bringing the system up to date with past patches is priced separately from the recurring monthly costs of testing and development for monthly and critical patching.

Wabtec will perform vulnerability scans in the lab environment with a focus on OS vulnerabilities, prior to and after the installation of OS patches. The final scan will be provided to SDMTS.

Wabtec will resolve issues where perspective OS patches negatively impact the operation of AIM CTC software performance or functionality.

After Wabtec has received a Notice to Proceed (NTP), Wabtec will support SDMTS activities to deploy the subsequent server and workstation OS patches on a monthly patching cycle in the AIM CTC production environment. Given the uncertain NTP date, OS patching services are to be billed monthly at the rate set in section 10.6 subject to annual price escalations.

Wabtec will support SDMTS activities to deploy emergency critical OS patches to servers and workstations in the AIM CTC production environment as jointly determined by Wabtec and SDMTS.

Patched systems will include and will be limited to Windows 2022 AIM application servers, Front End Processors (FEP), test servers, Relational Database Management System (RDBMS) servers, domain controllers, and VMWARE Horizon connection servers and composers and Windows 11 workstation VM’s, and the golden image VM.

4.6.1 OS Patching Expected Results

Following Wabtec’s receipt of the NTP, Wabtec will support SDMTS activities to provide routine and critical operating system and MSSQL Express patch services. Routine patch services will be applied monthly, while critical patches will be applied as needed based on a mutually agreed upon threat assessment level.

4.7 System Monitoring

Wabtec will be kept informed by SDMTS IT personnel as they install System Monitoring tools on the AIM CTC systems and VMWare virtual machine (VM) components including the following:

AIM Application Server Group VMs at Imperial Avenue Division (IAD) and Operations Control Center (OCC) server rooms.
AIM Front End Processor (FEP) Group VM’s at IAD and OCC server rooms.

AIM MSSQL RDBMS server VM's at IAD and OCC server rooms.
Primary and Backup Domain Controller VM's at IAD and OCC server rooms.
AIM Test Server VM's at IAD and OCC server rooms.
AIM Workstation VM's at IAD and OCC server rooms.
VMWare Horizon Workstation Golden Image VM at the OCC server room.
VMWare Horizon Connection Server VM's at IAD and OCC server rooms.
VMWare Horizon Composer Server VM's at IAD and OCC server rooms.

These will be referred to as *AIM System VM's* and *VMWare HORIZON VM's*.

The monitoring solution is expected to be agent-less without any impact to the application thus no Wabtec costs are included for this task in this proposal.

4.7.1 System Monitoring Expected Results

The System Monitoring tools suite viability is verified on an AIM CTC test configuration.
The System Monitoring tools suite is installed and configured on the AIM System VM's
The System Monitoring tools suite is installed and configured on the VMWare HORIZON VM's
Wabtec will provide documentation on the updated AIM System VM's and VMWare HORIZON VM's to the SDMTS internal IT personnel.

4.8 VMWare Version Updates

Wabtec will remotely support SDMTS activities to deploy a new Horizon View VDI desktop pool at Imperial Avenue Division (IAD) containing sixteen workstation VMs and recompose from the new Golden Image.
Wabtec will remotely support SDMTS activities to deploy a new Horizon View VDI desktop pool at Operations Control Center (OCC) containing sixteen workstation VMs and recompose from the new Golden Image.
Wabtec will remotely support SDMTS activities to configure and test Horizon View Version 8 functionality and then transition Operations and Maintenance of Way (MOW) workstation locations to use Horizon View Version 8.
Wabtec will support SDMTS activities to update the in-house maintenance installing and configuring VDI terminals and Horizon View.

4.8.1 VMWare Version Updates Expected Results

- Wabtec will certify execution of AIM on the updated components in the backup center.
- The SDMTS VMWare update at the backup center needs to be synchronized with AIM Maintenance release.
- Once the backup center is certified, the primary site can be updated.

Wabtec is proposing support for SDMTS during the transition period after an upgrade of the VMWare components that host AIM.

4.9 AIM Operating Systems Certification

Wabtec will use SDMTS provided operation system configurations. Wabtec will certify AIM Workstation on Windows 11 (images provided by SDMTS), and Wabtec will certify AIM hosts and AIM FEPS on Windows 2022 (images provided by SDMTS). Wabtec will perform certification testing at Wabtec facilities (this will only occur initially and after technology

refreshes). These images once certified will be deployed concurrently with an upcoming AIM maintenance release.

Wabtec will also update third party libraries used by the AIM system to their latest version OR last version where no known security vulnerabilities exist.

While Wabtec will address AIM source code compatibility issues between AIM source code and the new OS, to lower the cost of this proposal, the following modifications are excluded:

- No external interface updates
- No AIM feature modifications

Any of the above modifications will require dialog between Wabtec and SDMTS on how to proceed if they are triggered as part of OS technology refresh.

4.9.1 AIM Operating Systems Certification Expected Results

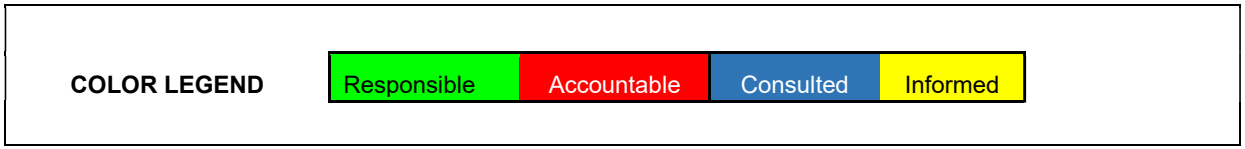
- SDMTS will provide OS images for AIM Workstations based on Windows 11.
- SDMTS will provide OS images for AIM host based on Windows 2022 server.
- Wabtec will perform certification testing of AIM software on SDMTS provided OS images.
- Major OS updates (e.g. Windows 10 to Windows 11) will be deployed along with the nearest upcoming AIM maintenance release.

5. ROLES AND RESPONSIBILITIES (RACI)

The figure below provides the Responsible, Accountable, Consulted and Informed (RACI) chart for the Access Control where Wabtec is both Responsible and Accountable. SDMTS is consulted in the design and implementation of the Access Control, Single Sign On (SSO) and the Active Directory (AD)/Lightweight Directory Access Protocol (LDAP).

SDMTS will update backup IAD facility with cyber security updates prior to updating primary OCC site. Wabtec may use SDMTS backup facilities or its lab for testing AIM capabilities of SDMTS cyber security updates as needed.

Figure 2 Responsible, Accountable, Consulted and Informed (RACI) Chart



	ACTIVITY	WABTEC	MTS IT DEPT	MTS OPERATIONS	MTS MOW
ACCESS CONTROL	Manage Active Directory for CTC				
	Update AIM CTC configure test and deploy single sign-on with AD/LDAP				
	Document firewall configuration and deployment				
	Wabtec on-site training SSO, AD/LDAP, AIM CTC login				
AIM OPERATING SYSTEMS CERTIFICATION	Provide OS images and licenses per each AIM component, including Workstations, AIM hosts and AIM FEPs				
	Certify AIM on OS images for AIM workstation and AIM host & FEP servers				

	ACTIVITY	WABTEC	MTS IT DEPT	MTS OPERATIONS	MTS MOW
DISASTER RECOVERY PLAN	Disaster Recovery planning sessions and liaison				
	Draft Disaster Recovery Plan for Wabtec provided systems, AIM CTC and SCADA				
	Implement Disaster Recovery Plan for wabtec provide systems AIM CTC and SCADA				
NETWORK RECONFIGURATION	Procure materials				
	Design Network Reconfiguration: DMZ				
	Configure, Deploy & Test DMZ & Jump Server				
DOCUMENT AND ASSET INVENTORY	AS BUILT the CTC system hardware Description Document updates				
	Create master Bill of Materials for AIM CTC servers, workstations, switchgear				
	Create Switch, Router, VPN Configuration documentation				
	AS BUILT the server room CTC equipment racks				
	Import CTC hardware & software Asset Definitions to MTS Asset MGMT System				
SYSTEM MONITORING	Create Agents to AIM CTC Test & Deployment plan.				
	Deploy Agents to AIM CTC Test Server and test				
	Deploy Agents to VDI Golden Image and test				
	Deploy Agents to Production CTC Servers				
	Deploy Agents to Production CTC Workstation VM's				

	ACTIVITY	WABTEC	MTS IT DEPT	MTS OPERATIONS	MTS MOW
OS PATCHING	Procure, design and deploy WSUS server in MTS Server Room				
	Procure, design and deploy WSUS server in WABTEC Lab				
	Patch Management coordination - Patch Candidate List				
	AIM CTC Validation & Test: Patch Candidate List at WABTEC Lab				
	Deploy Validated Patch Candidates to Prod. Workstation VM				
	Deploy Validate Patch Candidates to Prod. AIM CTC servers				
	Deploy Validated Patch Candidates to VDI Golden Image				
	Recompose VDI Desktop Pool from patched Golden Image				
	Coordinate Desktop Pool deployment with Monthly Maintenance Release				
	Refresh SDMTS knowledge on AIM Failover procedures				
BACKUP & RECOVERY	Create Backup configuration design				
	Provide enterprise backup solution				
	Setup, deploy and test backup configuration				

6. DELIVERABLES

6.1 Access Control

AIM system update with new capability to integrate with AD for AIM User Authentication.

- WABTEC will deploy an upgrade to the AIM CTC software that incorporates SSO features and capability to integrate with AD services.

User manual updates.
Administration manual updates.
Field integration test results.

6.2 Backup Configuration

Wabtec will update the AIM administration manual with restoration instructions developed by SDMTS and dry-run the procedure to affirm their effectiveness.

6.3 Disaster Recovery

Wabtec will update the Administration manual, based on the SDMTS procedures, to reflect working instructions to restore the AIM System Disaster Recovery
Wabtec will provide a Disaster Recovery plan for the AIM CTC and SCADA data center systems that utilizes the current capabilities of the System. The plan will contain durations for returning to operational for the CTC system disaster recovery.

6.4 Document and Asset Inventory

Wabtec will provide documentation to SDMTS as detailed in Section 4.4 of Appendix A

6.5 Network Reconfiguration

Wabtec will provide documentation and training on CTC SCADA firewall configuration.

6.6 MS OS and MSSQL Express Patching

Wabtec will, from receipt of NTP until the end of the Maintenance Agreement, support SDMTS activities to deploy monthly patch sets for MS OS, MSSQL Express, and select libraries to servers and workstations in the AIM CTC production environment.
Wabtec will provide internal vulnerability scans reports to SDMTS.
Wabtec will support SDMTS activities to deploy emergency critical OS patches to servers and workstations in the AIM CTC production environment.

6.7 System Monitoring

None.

6.8 VMWare Version Updates

AIM certification on updated components at the backup location.

6.9 AIM Operating Systems Certification

Wabtec will provide test results for OS certification on:

- AIM host on Windows 2022

- AIM FEP on Windows 2022
- AIM workstation on Windows 11

Wabtec will deploy newly certified operating system named upgrades (e.g. Windows 10 to Windows 11) concurrently with the nearest upcoming AIM maintenance release.

7. WABTEC RESPONSIBILITIES

7.1 Final Acceptance Criteria

Acceptance shall be deemed to have occurred upon the occurrence of the following items:

7.1.1 Access Control

The AIM CTC software is upgraded to support SSO capability integrated with AD.
System manual updates for SSO, and the AD configuration have been provided.
Integration testing results have been delivered.

7.1.2 Backup Configuration

Wabtec will update Admin manual with Restore procedure.
Wabtec will test restore procedure in factory using SDMTS provided images for Servers. Disaster Recovery

7.1.3 Disaster Recovery

A Disaster Recovery plan for the AIM CTC and SCADA data center systems is provided to SDMTS for use by SDMTS operations. Document and Asset Inventory
Documentation is provided to SDMTS as detailed in Section 4.3.1 Disaster Recovery Expected Results.

7.1.4 Network Reconfiguration

Wabtec has updated documentation to reflect new network re-configuration.
Wabtec has certified system operations and functionality post network re-configuration.

7.1.5 MS OS and MSSQL Express Patching

Wabtec will test and validate MS OS, MSSQL Express, and select library patches, and SDMTS will deploy on the AIM CTC production system, except for those SDMTS obligations defined in Section 9.3.

7.1.6 System Monitoring

None.

7.1.7 VMWare Version Updates

SDMTS has procured a total of 7 Windows 2022 server licenses for use in these VMWare version upgrades.
SDMTS has removed obsolete and replaced VMs for VCenter HA, Horizon View, Golden Image and VDI Desktop pools at IAD and OCC server rooms.
SDMTS has deployed maintenance VCenter and Horizon View systems in the Lab at Ladera Heights location.
AIM CTC servers and workstation systems transition to VCenter HA Version 8 management.
MTS Operations and MOW workstations transition to Horizon View Version 8 using updated VDI desktop pools.
Wabtec is responsible for testing any VMWare software version updates on the test environment prior to deployment to the production environment.

7.1.8 AIM Operating Systems Certification

- Once Wabtec has completed factory testing and provided documentation of results along with written certification of AIM compatibility on SDMTS provided Windows 11 and Windows 2022 images the AIM Operating Systems Certification and new operational images with AIM installed will be issued.

8. SCHEDULE

TASK or MILESTONE	DATE
VMWare Version Upgrades Notice to Proceed (NTP)	**TBD**
VMWare Version Upgrades Mobilization and Baseline schedule	NTP + 15 Working Days
VMWare Version Upgrades VCenter HA Version Upgrade	TBD
VMWare Version Upgrades Horizon View version upgrade	TBD
VMWare Version Upgrades Complete - Final Acceptance	No later than NTP + 12 months

Network Reconfiguration Proposal Notice to Proceed (NTP)	**TBD**
Network Reconfiguration Baseline Schedule	NTP + 15 Working Days
Documentation submitted	TBD
Training delivered	TBD
Network Reconfiguration Complete - Final Acceptance	No later than NTP + 12 months

Backup Configuration Proposal Notice to Proceed (NTP)	**TBD**
Backup Configuration Baseline Schedule	NTP + 15 Working Days
Updated admin manuals and restore procedures submitted	TBD
Backup Configuration Complete - Final Acceptance	No later than NTP + 12 months

Disaster Recovery Proposal Notice to Proceed (NTP)	**TBD**
Disaster Recovery Baseline Schedule	NTP + 15 Working Days
Disaster Recovery Plan submitted	TBD
Disaster Recovery Complete - Final Acceptance	No later than NTP + 12 months

TASK or MILESTONE	DATE
Document and Asset Inventory Proposal Notice to Proceed (NTP)	**TBD**
Document and Asset Inventory Baseline Schedule	NTP + 15 Working Days
Document and Asset Inventory Creation	TBD
Document and Asset Inventory Final Acceptance	No later than NTP + 12 months

AIM Operating Systems Certification Notice to Proceed (NTP)	**TBD**
AIM Operating Systems Certification Baseline Schedule	NTP + 15 Working Days
AIM Operating Systems Certification Test Results	TBD
AIM Operating Systems Certification Final Acceptance	No later than NTP + 12 months

Access Control Proposal Notice to Proceed (NTP)	**TBD**
Access Control Baseline Schedule	NTP + 15 Working Days
Access Control Implementation support	TBD
Access Control Complete - Final Acceptance	No later than NTP + 12 months

MS OS Patching Notice to Proceed (NTP)	**TBD**
MS OS Patching Mobilization & Baseline schedule	NTP + 15 Working Days
MS OS Patching - Monthly Patch deployment	NTP + 1 month
MS OS Patching Complete - Final Acceptance	NTP + Requested Period

9. ASSUMPTIONS AND EXCLUSIONS

The following assumptions and exclusions apply to this Proposal.

9.1 Access Control

- Wabtec will purchase no hardware or software to perform the access control work described in this Proposal.
- The services provided herein are provided AS IS WHERE IS AND WITH ALL FAULTS.
- Work will begin upon NTP from SDMTS.

9.2 Backup Configuration

- Wabtec will not purchase hardware, software, or licensed products for the Backup Configuration.
- The services provided herein are provided AS IS WHERE IS AND WITH ALL FAULTS.
- All work for this effort will begin upon NTP from SDMTS.
- This Proposal represents NRE work.

9.3 Disaster Recovery

- Wabtec will not purchase hardware, software, or licensed products for the Disaster Recovery work.
- The services provided herein are provided AS IS WHERE IS AND WITH ALL FAULTS.
- All work for this effort will begin upon NTP from SDMTS.
- We have included support for one Disaster Recovery dry run annually as part of an SDMTS exercise.
- Disaster Recovery plan will include the Backup Configuration solution.

9.4 Document and Asset Inventory

- Wabtec will not purchase hardware, software, or licensed products for the document and asset inventory portion of this Proposal.
- The services provided herein are provided AS IS WHERE IS AND WITH ALL FAULTS.
- All work for this Proposal will begin upon NTP from SDMTS.

9.5 Network Reconfiguration

- Wabtec will not purchase hardware, software, or licensed products for the Network Reconfiguration.
- The jump server will be procured and installed by SDMTS.
- The network switch hardware will be procured and installed by SDMTS.
- Software applications for the jump server will be purchased and installed by SDMTS for Wabtec's use. Initial list of software applications includes:
    a. RSLinx
    b. RSLogix
    c. Putty
    d. Remote Desktop (to be enabled)
    e. VPN software (if required)
- The services provided herein are provided AS IS WHERE IS AND WITH ALL FAULTS.
- All work for this effort will begin upon NTP from SDMTS.

9.6 MS OS and MSSQL Express Patching

- Evaluation, selection, and deployment of critical patches will be jointly determined by Wabtec and SDMTS.
- SDMTS will provide the licenses for the WSUS server based upon Windows Server 2022.
- SDMTS will be responsible for network connections that facilitate the WSUS server access to MS OS patch sets or critical patches for download.
- Windows OS patch management includes Microsoft Windows and MSSQL Express patching. It does not include other Commercial Off the Shelf (COTS) software. COTS software changes requested by SDMTS will be discussed and handled separate from this Proposal.
- There will be no bonding cost included for the work in this Proposal.
- SDMTS will provide operating system images.
- The services provided herein are provided AS IS WHERE IS AND WITH ALL FAULTS.
- Length of support must be determined at NTP.

9.7 System Monitoring

The System Monitoring tools suite is provided by SDMTS and includes only the following components:

- SDMTS selected OS agents to support system monitoring.
- Wabtec will not be modifying AIM source code for compatibility with Tenable, Crowdstrike, or any other solution that SDMTS chooses.
- This Proposal excludes verification and troubleshooting of future updates to selected system monitoring agents.

9.8 VMWare Version Updates

- The services provided herein are provided AS IS WHERE IS AND WITH ALL FAULTS.
- All work for this effort will begin upon NTP from SDMTS.
- The new Windows 11 Golden Image VM license will be provided by SDMTS.
- SDMTS will provide the VMWare Horizon View 8 license.
- SDMTS will provide the VMWare VCenter HA Version 8 licenses.
- SDMTS will provide the VMWare VSphere ESXi Version 8 licenses.

9.9 AIM Operating Systems Certification

- SDMTS will provide licensed images for all AIM workstations
- SDMTS will provide licensed images for all AIM servers (FEPs and hosts)
- The following modifications are excluded:
    - Interface updates: no enhancements to the behavior or protocols of the interfaces consumed by AIM Rail
    - Feature modifications: no functional enhancements, only limited to compatibility changes required from the OS upgrade
- Libraries will be updated to last version without known security vulnerabilities.
    - Wabtec will not address any known open security vulnerabilities for libraries where such vulnerabilities exist in their latest versions.
    - Deprecated libraries where open vulnerabilities have not been addressed will not be updated.

- Wabtec will deploy OS images updates with nearest adjacent AIM maintenance release for named major OS updates.

10. PAYMENT MILESTONES

	PAYMENT MILESTONES	USD
1	Mobilization	$ 162,606.83
2	Access Control Installation & Training Complete	$ 96,511.04
3	Backup Configuration Deployment Complete	$ 18,095.82
4	Disaster Recovery Plan Acceptance	$ 27,143.73
5	Document & Asset Inventory Complete	$ 27,143.73
6	Network Reconfiguration & Training Complete	$ 15,079.85
7	VMWare Version Upgrades Complete	$ 12,063.88
8	AIM Operating Systems Certification Factory Testing Complete	$ 48,255.52
9	AIM Operating Systems Certification Deployment Complete	$ 57,303.43
10	MS OS Patching - Lab Setup Complete	$ 67,279.20
Fixed Price Subtotal		**$ 531,483.03**
11	MS OS Patching (start of each month)	$ 8,992.82

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 4/9/2026

Agenda Item No. 06

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

April 16, 2026

SUBJECT:

Pest Control 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. G3106.0-26 (in substantially the same format as Attachment A), with Bashir Family Investment Inc., DBA: Pestmaster of San Diego (Bashir Family) for pest control services for five (5) years totaling $269,775.80.

Budget Impact

The total cost of this contract is estimated to be $269,775.80. This project is funded by the Operating Budgets as follows:

Group	Operating Budget	Amount
A - San Diego Trolley, Inc. (SDTI)	380016 - 571210	$127,939.80
A - Light Rail Vehicles (LRVs)	350016 - 571142	$58,320.00
B - San Diego Transit Corporation (SDTC)	331014 - 536600	$27,470.00
C - Land Management (LM)	791010 - 571250	$56,046.00
	Total	**$269,775.80**

DISCUSSION:

The SDTI, SDTC, and LM require pest control services at Trolley stations, on LRVs, buses, and buildings to ensure public health, safety and operational reliability. Bashir Family will provide all labor, transportation, chemicals, equipment, and supplies necessary to perform the services.

MTS Policy No. 52, “Procurement of Goods and Services”, requires a formal competitive process for procurements and service contracts over $150,000.00.

On November 6, 2025, MTS issued an Invitation for Bids (IFB) for pest control services. A total of seven (7) bids were received by the deadline of January 21, 2026, and are summarized as follows:

Bidder Name	Total Bid Amount	Certification
Bashir Family *	$269,775.80	N/A
Baja Wildlife Control	$283,452.00	Small Business (SB(Micro)), Small Business - Public Works (SB-PW)
Innovative Pest Solutions	$390,002.00	SB, SB-PW,
Dewey Pest and Termite Control	$399,410.00	N/A
Habitat Protection, Inc.	$407,653.20	N/A
BugMizer Termite and Pest Inc.	$419,430.00	SB (Micro)
Critter Gitters Pest Management, Inc.	$420,550.00	SB (Micro), SB-PW
MTS Independent Cost Estimate (ICE)	*$445,369.33*	

**Lowest responsive and responsible bidder*

Based on the competitive bids received, and in comparison with MTS's ICE, staff determined Bashir Family's pricing to be fair and reasonable.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. G3106.0-26 (in substantially the same format as Attachment A), with Bashir Family for pest control services for five (5) years totaling $269,775.80.

/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. G3106.0-26
B. Scope of Work
C. Bid Form

Metropolitan Transit System

STANDARD AGREEMENT FOR

MTS DOC. NO. G3106.0-26

PEST CONTROL SERVICES

THIS AGREEMENT is entered into this _____ day of _____, 2026 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: Bashir Family Investment Inc., DBA: Pestmaster of San Diego

Address: 9212 Maler Rd

San Diego (City) CA (State) 92129 (Zip)

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

Email: abashir@pestmaster.com

Telephone: (858) 344-6589

Authorized person to sign contracts: Ahmad Bashir (Name) Owner (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 five (5) years effective July 1, 2026 through June 30, 2031.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $269,775.80 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	BASHIR FAMILY INVESTMENT INC., DBA: PESTMASTER OF SAN DIEGO
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

DRAFT

SCOPE OF WORK/TECHNICAL SPECIFICATIONS

1. GENERAL (SECTION 1 APPLIES TO ALL GROUPS)

A. INTRODUCTION

MTS operates San Diego Trolley, Inc. (SDTI) for Light Rail Vehicles (LRVs) operations and San Diego Transit Corporation (SDTC) for Bus operations. The scope of work includes pest control services for the following areas, with each group's services shown separately:

i. Group A - SDTI (including all LRV fleet, yards, buildings and trolley stations)
ii. Group B - SDTC (including all Bus fleet, buildings and grounds) for these two divisions:
    a. Imperial Avenue Division (IAD)
    b. Kearny Mesa Division (KMD)
iii. Group C – Three (3) Land Management (LM) Sites
    a. Clean Transit Advancement Campus (CTAC)
    b. Kearny Mesa Transit Center (KMTC)
    c. Front St.

MTS will inform Contractor should buildings/locations/services need to be added (or removed) from the list, and an amendment to the contract will be issued under the contracted terms.

MTS will select one Contractor for all the services. Once the contract is awarded, three (3) Purchase Orders (POs) will be issued, one for each group above. Each group will have its own MTS Project Manager (PM).

Contractor shall furnish all necessities, including but not limited to labor, chemicals, supplies, transportation, equipment, licenses, permits, and insurance necessary to perform pest control services per industry standards, adhering to all requirements regarding use of pesticides, as directed by the California Department of Pesticide Regulations http://www.cdpr.ca.gov/.

Services shall be performed under the general technical guidance and direction of the respective MTS PM or designee. The MTS PMs are not authorized to commit MTS to changes in services, price or period of performance. Any changes to the contract will be made in writing via a contract amendment through the MTS Procurement Department.

Services shall be effective July 1, 2026, through June 30, 2031.

B. PEST CONTROL STAFF REQUIREMENTS

By submitting its bid, Contractor certifies that it shall:

i. Provide skilled staff (supervisors and general staff) and agrees to comply with all employment and labor standards, all applicable federal, state, local laws and regulations.

ii. Provide a single point of contact (name, phone number and email address) that MTS will use for all questions regarding performance and invoicing.

iii. Be solely and exclusively liable for all compensation due to the employee, adhere to all minimum wage requirements and overtime guidelines, and provide any and all benefits required by law.

iv. Ensure that all work is performed to the highest standard. Staff shall follow manufacturer's specifications and recommendations; meet all industry codes and standards, federal, state, and local requirements when using pest control agents. Proper supplies, tools and equipment shall be used to complete the required tasks.

v. Ensure that its staff receives the training/information required on regulations that pertain to the performance of the contract, policies including but not limited to safety, ethics and compliance with best practices and OSHA standards.

vi. Contractor is responsible for its employee's acts during performance of services. Proper conduct is expected of personnel at all times as while on MTS remises, they may be exposed to/come across sensitive or confidential materials.

vii. The person(s) assigned to provide services at shall be required to check in upon arrival, with the MTS PM or designee and sign in, every time service is performed. Upon completion of services, said assigned person shall be required to check out with the MTS PM or designee or his designee and sign out.

viii. All employees must be uniformed and must have IDs with them at all times. See Section 6.44 - Identification Of Personnel/Security. If Contractor staff is unable to perform services as a result of not having proper identification, Contractor must reschedule and perform required services within two (2) days of the original scheduled date. All rescheduling must be provided in writing to the MTS PM for approval to ensure MTS operations remain unaffected as a result of the revised schedule.

ix. All employees of the Contractor shall wear uniform style shirts bearing the Contractor's business name, and orange vests at all times. The Contractor shall provide a list of employees to the MTS PMs prior to start of the contract, and update the list as needed.

i. The Contractor shall provide sufficient labor, competent workers skilled in the services described, and ensure that supervision is provided while any work is being performed. If, in the judgment of MTS, any person is incompetent, disorderly, careless, or constitutes a security risk or safety hazard, or found to be violating CPUC or MTS safety rules and regulations, the Contractor shall promptly remove and replace such person from the work for the duration of the contract. Contractor's staff removal and replacement of said personnel shall be immediate to ensure MTS maintains a secure and safe operation.

C. ADDITIONAL CONTRACTOR REQUIREMENTS

i. Contractor shall be responsible for the applications of all material to ensure that it in no way contaminates the facilities, structures, environment, agriculture, waterways, or harms personnel, food, equipment, including but not limited to computer equipment, building surfaces, carpet, floors, finishes, landscape, or wall surfaces.

ii. The application shall be performed so as not to impact on the use of any of the facilities.

iii. All work shall be performed in a professional manner and shall at no time obstruct MTS operations.

iv. Contractor shall not be permitted to store equipment and/or chemicals at any of MTS's service locations.

v. Contractor shall at no time be permitted to utilize existing or future on-site trash receptacles to dispose of waste or waste containers resulting from performance of services.

vi. Contractor shall at no time be permitted to rinse and/or clean containers and/or equipment utilized in performance of the services described herein, at any of MTS's service locations.

vii. Contractor shall be responsible for the clean-up once services have been completed and accepted by MTS. Following clean-up, Contractor shall request final inspection and acceptance of services from the MTS PM, unless the MTS PM agrees on an alternate approval in writing.

viii. Contractor shall certify that any materials and debris removed from the site shall be disposed of in accordance with applicable federal, state, and local laws, regulations, and ordinances. If requested by MTS, Contractor shall furnish proof of disposal. If disposal of materials and debris is found to not be in accordance with applicable laws, regulations, and ordinances MTS may notify appropriate authorities of Contractors negligence.

ix. All work shall be warrantied for sixty (60) days. Additional service calls required within this time, for warrantied services, shall be provided at no additional charge to MTS.

x. Contractor shall certify that all wastes/hazardous wastes resulted from releases/spills from the site by the contractor shall be cleaned up and disposed of in accordance with applicable federal, state and local laws, regulations and ordinances. Contractor shall furnish proof of disposal.

xi. For "as needed" services, or work that is not covered under warranty, a walk through will be required before any commencement of work. Contractor will then submit a quote to the MTS PM for review. If the MTS PM determines the cost estimate and/or labor hours submitted are excessive, MTS reserves the right to get additional estimates, and to use a different contractor to perform the work. If cost estimate is deemed as fair and reasonable, MTS will issue a separate PO for these services.

xii. The Contractor shall not be permitted to subcontract any part of the work without specific prior written approval of MTS.

D. SAFETY REQUIREMENTS

i. Some pesticides are considered hazardous. The Contractor shall provide Material Safety Data Sheets (MSDS) for each item used to the respective MTS PM for each group receiving service, (and for SDTC provide for both IAD and KMD divisions), prior to commencement of services. The MTS PM or designee shall approve all chemicals and traps used in performing services prior to their use under this Agreement.

ii. All products used by the Contractor on MTS premises, and their application, shall be guaranteed for safe use around humans.

iii. All applicators, field representatives, and/or operators (Contractor staff) shall possess all applicable State of California Structural Pest Control Board Licenses throughout the term of the Agreement. http://www.pestboard.ca.gov/howdoi/lic.shtml

iv. Contractor shall be responsible for the applications of all materials, equipment and/or chemicals as to ensure said items in no way contaminate the facilities, structures, environment, agriculture, water ways, or pose real or perceived harm to personnel, food and equipment, buildings and MTS operations.

v. Contractor shall be responsible for the applications of all materials, equipment and/or chemicals as to ensure said items in no way contaminate the facilities, structures, environment, agriculture, water ways, or pose real or perceived harm to personnel, food and equipment, buildings and MTS operations.

vi. The pest control application shall be performed in a manner which does not impact the use or performance of any of the facilities, structures, and/or LRV or Bus fleet.

vii. It is the Contractor's responsibility to ensure that its employees are trained and adhere to all MTS policies and procedures. These procedures are not intended to replace or modify any existing requirements of any local, state, or federal agency.

viii. Contractor shall be responsible for adherence to MTS, Local, State, and Federal safety requirements, as applicable, while performing all services described.

ix. Contractor employees are subject to MTS safety rules and regulations and must attend a one-time safety briefing before working in MTS yards, grounds, stations, fleet, prior to commencement of services.

E. INVOICES

One (1) contract will be awarded and three (3) purchase orders will be issued, one for each group.

Each month after performance of services, Contractor shall email an invoice for each purchase order to 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 and should include:

i. Purchase Order and Contract number
ii. Date the service was performed
iii. Location of the services using the same description and fixed cost as the contract
iv. Name of MTS PM
v. Number of vehicles treated

Payment terms shall be net 30 days from invoice date. If MTS rejects an incorrectly submitted invoice and sends it back for correction, the net 30 days restart from the corrected 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.

2. GROUP A – SDTI

A. DETAILED SDTI SCOPE OF SERVICES

Contractor shall provide services for the control of common ants, all varieties of spiders, roaches, rats, mice, and all crawling and flying insects (including bed bugs) that may infest the facilities, buildings, grounds, structures, hallways, offices, restrooms, warehouse, kitchen areas, closets, locker rooms, and walkways.

i. Contractor shall provide weekly service for the control of common ants, all varieties of spiders, roaches, German cockroaches, fleas, rats, mice, and all crawling and flying insects (including bed bugs) that may infest the LRV fleet. Contractor shall determine what service is required to maintain control for a period of four (4) months between servicing any particular LRV.

ii. Contractor shall provide service for large scale infestation of common ants, all varieties of spiders, roaches, German cockroaches, fleas, and all crawling and flying insects (including bed bugs) that may infest the LRV fleet. Contractor and MTS will mutually determine what constitutes an infestation. Contractor shall determine what service is required to eradicate any infestation. Contractor must respond within twenty-four (24) hours of initial call for service.

iii. Contractor shall provide all services for the clean-up of debris caused by infestations, including the removal of all insects, webs, and disposal of all rodent at all specified locations inclusive of both the interior and exterior of all buildings and structures and LRV fleet.

iv. With the exception of the LRVs, services shall be provided to all areas on the same day of the week, or month with the actual day to be arranged by the MTS Rail PM and Contractor. Contractor shall give two (2) days advance notice to the MTS Rail PM prior to providing services. Two (2) day advance notice is required if Contractor is not able to perform services at the scheduled time.

LRVs will be treated once a week from the hours of 10:00 p.m. to 2:00 a.m. The day of the week will be determined by the LRV Director of Maintenance and Contractor. LRV service may be rescheduled during ‘Special Events’ which require vehicles to remain in service until 1:00 a.m. MTS will provide two (2) day advance notice of any special events. Two (2) day advance notice is required if Contractor is not able to perform services at the scheduled time.

For Example: Special Events normally require the service provider to move service to another day if it falls on a regularly scheduled treatment day. For example pest control usually on Tuesday nights – but there is a Padres home game that night. We may ask them to move to Thursday night.

The two day notice is there if for whatever reason they are unable to come out on their regularly scheduled service day. We need advance notice of such so we don’t hold up cars for service. For example pest control usually scheduled for Tuesday nights and their technician is getting married that day – they contact us 2 days in advance and let us know and we reschedule that service.

MTS is a reasonable partner and will work with the Contractor during special events to ensure any pest control services required do not disrupt trolley services

v. Service receipts shall be signed by the MTS Rail PM or designee at each location at the time services are performed, and those receipts shall be submitted by the Contractor with each monthly invoice. Invoices shall not be processed without Contractor delivery of all service receipts, which correspond to the monthly invoice.

vi. Contractor employees are subject to California Public Utility Commission (CPUC) rules and regulations pertaining to the use of portable electronic devices while in or on SDTI yards, grounds and stations (http://www.cpuc.ca.gov/). The Contractor shall ensure that supervision is provided at all times while any work under this contract is being performed. If, in the judgment of MTS, any person is incompetent, disorderly, or found to be violating CPUC or MTS safety rules and regulations, the Contractor shall promptly remove and replace such person from the work for the duration of the contract.

vii. Contractor employees are subject to MTS safety rules and regulations and must attend a one-time safety briefing before working in SDTI yards, grounds, stations and LRVs prior to commencement of services.

viii. For the LRV fleet, Contractor must provide 'On Call' service within twenty-four (24) hours, seven days a week, not including holidays, if called for a report of LRV infestation. Infestation will constitute of either a passenger report of cockroaches or fleas visible during vehicle passenger service or employee reports. Upon request, MTS will provide copies of passenger complaints or employee reports.

B. PEST CONTROL SERVICE MAINTENANCE

Pest control services shall be provided at the following MTS Rail locations. Contractor is notified that during the term of the contract MTS may add or remove locations from the list:

i. SDTI Buildings:
   1. Building A: 12 S. 13th St., San Diego, CA 92113
   2. Building B: 1341 Commercial St., San Diego, CA 92113
   3. Building C: 1535 Newton Ave., San Diego, CA 92113
   4. Building C Office Annex: 1535 Newton Ave., San Diego, CA 92113
   5. Yard Tower: 1535 Newton Ave., San Diego, CA 92113
   6. Bogie Overhaul Shop: 1601 Newton Ave, San Diego, CA 92113
   7. Lemon Grove Security Bldg. – 3444 Main St. Lemon Grove, CA 91945

ii. SDTI Trolley Stations:
   1. 12th & Imperial Transit Center: 1255 Imperial Ave., San Diego, CA 92101
   2. 24th Street: 506 W. 22nd St., National City, CA 91950
   3. 25th & Commercial: 10 1/2 25th St., San Diego, CA 92102
   4. 32nd & Commercial: 3200 1/2 Commercial St., San Diego, CA 92113
   5. 47th Street: 350 47th St., San Diego, CA 92102
   6. 70th Street: 7255 Alvarado Rd., La Mesa, CA 91942
   7. 8th Street: 555 W. 8th St., National City, CA 91950
   8. Amaya Drive: 9100 Amaya Dr., La Mesa, CA 91942
   9. America Plaza: 1050 India St., San Diego, CA 92101

10. Arnele Avenue: 762 1/2 N. Marshall Ave., El Cajon, CA 92020
11. Balboa Avenue: 3690 Morena Blvd., San Diego, CA 92117
12. Barrio Logan: 1910 Harbor Dr., San Diego, CA 92113
13. Bayfront/E Street: 750 E St., Chula Vista, CA 91910
14. Beyer Blvd.: 4035 Beyer Blvd., San Ysidro, CA 92173
15. Civic Center: 200 C St., San Diego, CA 92101
16. Clairemont Drive: 2680 Morena Blvd., San Diego, CA 92117
17. City College: 1155 C St., San Diego, CA 92101
18. Convention Center: 301 First Ave., San Diego, CA 92101
19. County Center/Little Italy: 1550 California St., San Diego, CA 92101
20. Courthouse: 330 West C Street, San Diego, CA 92101
21. El Cajon Transit Center: 352 S. Marshall Ave., El Cajon, CA 92020
22. Encanto/62nd Street: 6249 Akins Dr., San Diego, CA 92114
23. Euclid Ave:450 Euclid Ave San Diego Ca 92102
24. Executive Drive: 9235 Genesee Ave., San Diego, CA 92121
25. Fashion Valley Transit Center: 1205 Fashion Valley Rd., San Diego, CA 92108
26. Fenton Parkway: 2000 Fenton Parkway, San Diego, CA 92108
27. Fifth Avenue: 500 C St., San Diego, CA 92101
28. Gaslamp Quarter: 105 Sixth Ave., San Diego, CA 92101
29. Gillespie Field: 1990 1/2 N. Cuyamaca St., El Cajon, CA 92020
30. Grantville: 4510 Alvarado Canyon Rd., San Diego, CA 92120
31. Grossmont Transit Center: 8601 Fletcher Pkwy., La Mesa, CA 91942
32. Harborside: 1325 S. 28th St., San Diego, CA 92113
33. Hazard Center: 7611 Hazard Center Dr., San Diego, CA 92108
34. H Street: 745 H St., Chula Vista, CA 91910
35. Iris Avenue: 3120 Iris Ave., San Diego, CA 92154
36. La Mesa Blvd.: 8248 La Mesa Blvd., La Mesa, CA 91942
37. Lemon Grove Depot: 3443 Main St., Lemon Grove, CA 91945
38. Massachusetts Avenue: 1787 San Altos Pl., Lemon Grove, CA 91945
39. Middletown: 1396 Palm St., San Diego, CA 92101
40. Mission San Diego: 5837 Rancho Mission Rd., San Diego, CA 92108
41. Mission Valley Center: 1604 Camino de la Reina, San Diego, CA 92108
42. Morena/Linda Vista: 5210 Linda Vista Rd., San Diego, CA 92110
43. Nobel Drive: 3449 Nobel Drive, San Diego, CA 92122
44. Old Town Transit Center: 4009 Taylor St., San Diego, CA 92110
45. Palm Avenue: 2340 Palm Ave., San Diego, CA 92154
46. Palomar Street: 1265 Industrial Ave., Chula Vista, CA 91911
47. Pacific Fleet: 1800 S. 32nd St., San Diego, CA 92113
48. Park & Market: 600 Park Blvd., San Diego, CA 92101
49. Rio Vista: 2020 Qualcomm Way, San Diego, CA 92108
50. San Ysidro Transit Center: 700 E. San Ysidro Blvd., San Diego, CA 92173
51. Santa Fe Depot – 1050 Kettner Blvd.: San Diego, CA 92101
52. Santee Town Center: 152 Civic Center Dr., Santee, CA 92071
53. SDSU Transit Center: 5260 Campanile Dr., San Diego, CA 92182
54. Seaport Village: 530 W. Market St., San Diego, CA 92101
55. Spring Street: 4250 Spring St., La Mesa, CA 91941
56. Stadium (Qualcomm Stadium): 9449 Friars Rd., San Diego, CA 92108

57. Tecolote Road: 1364 W Morena Blvd., San Diego, CA 92110
58. UC San Diego Health East (Alvarado): 6658 Alvarado Rd., San Diego, CA 92120
59. UC San Diego Health La Jolla / Voigt: 3783 Voigt Drive, La Jolla, CA 92037
60. UC San Diego Central Campus (Pepper Canyon): 9482 Innovation Lane, La Jolla, CA 92093
61. UTC Transit Center: 4545 La Jolla Village Drive, San Diego, CA 92122
62. Va Medical Center: 3380 La Jolla Village Drive, San Diego, CA 92161
63. Washington Street: 2136 W. Washington St., San Diego, CA 92110

iii. SDTI Grounds/Yard:
1. "A" Yard: 12 S. 13th St, San Diego, CA 92101
2. "A" Yard Trailers: 12 S. 13th St, San Diego, CA 92101
3. "C" Yard: 1535 Newton Avenue, San Diego, CA 92113
4. "C" Yard Paint Booth: 1535 Newton Avenue, San Diego, CA 92113

iv. SDTI LRV Fleet:
1. 1535 Newton Avenue, San Diego, CA 92113
2. 12 S. 13th St, San Diego, CA 92101

C. SDTI BUILDINGS

i. **Insect Control:** Spray interior and exterior perimeter of buildings and grounds for insects, common ants, bed bugs, roaches, and remove spider webs and wasp nests.

ii. **Rodent Control:** Maintain Rodent Stations, which may include but is not limited to glue trap stations, bait stations, and spring traps stations based on the needs of MTS. Stations shall be type where rodent is not visible to the public.

iii. MTS reserves the right to request substitution of station types at no additional cost. MTS also reserves the right to increase or decrease the amount of stations based on operational needs.

iv. Monthly: Perform inspections/services at a minimum of one (1) time per month.

v. Perform pest and rodent control services at the following eight (8) SDTI Building site locations:

1. Building A, 32,150 sq ft	5. Building C Paint Booth, 6,386 sq ft
2. Building B, 28,375 sq ft	6. Yard Tower, 676 sq ft
3. Building C, 85,500 sq ft	7. Bogie Overhaul Shop, 2000 sq ft
4. Building C Annex, 2,100 sq ft	8. Lemon Grove Security Bldg, 1500 sq ft

D. SDTI TROLLEY STATIONS

i. **Insect Control:** Spray interior and exterior perimeter of trolley stations for insects, common ants, bed bugs, roaches, and remove spider webs and wasp nests.

ii. **Rodent Control:** Maintain Rodent Stations, which may include but is not limited to glue trap stations, bait stations, and spring traps stations based on the needs of MTS. Stations shall be type where rodent is not visible to the public.

iii. MTS reserves the right to request substitution of station types at no additional cost. MTS also reserves the right to increase or decrease the amount of stations based on operational needs.

iv. If and when the Contractor receives a request from the Project Manager for a servicing, Contractor shall provide service within twenty-four (24) hours from said request.

v. **Note:** Any spraying requiring the evacuation of the building shall be done after normal working hours and with proper posting at the building(s). Said services shall be coordinated with the staff at the locations requiring building evacuations to ensure operations are not impacted.

vi. Perform pest and rodent control services for at the SDTI Trolley Stations listed in Section 4.2 (Group A – SDTI), Section B, Subsection ii (SDTI Trolley Stations), for a total of 63 trolley stations.

E. SDTI TROLLEY GROUNDS/YARD

i. **Insect Control:** Spray interior and exterior perimeter of trolley paint booth, trailers, grounds and yards for insects, common ants, bed bugs, roaches, and remove spider webs and wasp nests.

ii. **Rodent Control:** Maintain Rodent Stations, which may include but is not limited to glue trap stations, bait stations, and spring traps stations based on the needs of MTS. Stations shall be type where rodent is not visible to the public.

iii. MTS reserves the right to request substitution of Station types at no additional cost. MTS also reserves the right to increase or decrease the amount of stations based on operational needs.

iv. Perform pest and rodent control services for any of the following four (4) SDTI Trolley Grounds/Yards:

1. “A” YARD TRAILER	2. “C” YARD
3. “A” YARD	4. “C” YARD PAINT BOOTH

F. SDTI LRV FLEET

i. **Insect Control:** Spray interior, rooftop (S70 vehicles only) and exterior perimeter of LRV fleet for insects, common ants, bed bugs, roaches, German cockroaches, and remove spider webs and wasp nests.

ii. **On Call Service:** Contractor to provide method of eradicating and cleaning any pest infestation within the LRV.

iii. MTS reserves the right to increase or decrease the amount of LRV vehicles based on operational needs at any time during the Agreement.

iv. If and when the Contractor receives a request from the Project Manager for a servicing, Contractor shall provide service within twenty-four (24) hours from said request.

v. Perform weekly and on-call pest control services for the following SDTI Fleet:

LRV TYPE	QUANTITY
1. PCC	2
2. S70 (3000 series)	11
3. S70US (4000 series)	65
4. S700 (5000 series)	45
5. S700 (5046-4092)	47
6. U2	1
TOTAL LRV FLEET QUANTITY	**171**

G. SERVICE HOURS (SDTI)

Contractor shall provide service within the following times at all locations, unless otherwise authorized in writing by the MTS PM:

Buildings, stations and Grounds/Yards	Monday through Friday 8:00 a.m. to 4:00 p.m.
LRV Fleet:	Monday through Sunday 10:00 p.m. to 4:00 a.m.

Note: Any spraying requiring the evacuation of a building or area shall be done after normal working hours and with proper posting at the building(s) area to be serviced. Said services shall be coordinated with the staff at the locations requiring building evacuations to ensure operations are not impacted.

H. SITE MAP - See Attachment 2.

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3. GROUP B – SDTC

A. DETAILED SDTC SCOPE OF SERVICES

i. Contractor shall provide pest control services for the control of common ants, all varieties of spiders, roaches, rats, mice, and all crawling and flying insects that may infest the facilities, buildings, grounds, structures, hallways, offices, restrooms, warehouse, kitchen areas, closets, locker rooms, walkways, and bus fleet.

ii. Contractor shall provide all services for the clean-up of debris caused by infestations, including the removal of all insects, webs, and disposal of all rodent at all specified locations inclusive of both the interior and exterior of all buildings and structures, and bus fleet.

iii. Services shall be provided to all areas on the same day of the month, with the actual day to be arranged and approved by the MTS Bus Project Manager and the Contractor. Contractor shall give two (2) days advance notice to the MTS Bus Project Manager prior to providing services. Two (2) day advance notice is required if Contractor is not able to perform services at the scheduled time. Contractor shall be required to reschedule service, in writing, and provide required service(s) within two (2) days from the date of Contractors missed performance date.

iv. Service receipts shall be signed by the MTS Bus Project Manager or designee at each location at the time services are performed, and those receipts shall be submitted by the Contractor with each monthly invoice. Invoices shall not be processed without Contractor delivery of all service receipts, which correspond to the monthly invoice.

B. PEST CONTROL SERVICE MAINTENANCE

MTS reserves the right to increase or decrease the number of bus fleet vehicles as well as the service frequency throughout the term of the agreement. Contractor shall provide services and maintain agreed to cost as identified in Contractors submitted pricing regardless of increases or decreases in bus fleet vehicles.

Pest control services shall be provided at the following two MTS locations:

C. IMPERIAL AVENUE DIVISION (IAD)

Located at 100 16th Street, San Diego, CA 92101

i. BUILDINGS AND GROUNDS

a) **Insect Control:** Spray perimeter of buildings and grounds for insects, common ants, roaches, and remove spider webs and wasp nests.

b) **Rodent Control:** Maintain Rodent Stations, which may include but is not limited to glue trap stations, bait stations, and spring traps stations based on the needs of MTS. Stations shall be type where rodent is not visible to the public. MTS reserves the right to request substitution of station types at no additional cost. MTS also reserves the right to increase or decrease the amount of stations based on operational needs.

c) **Monthly:** Perform inspections/services at a minimum of one (1) time per month, as scheduled between the Parties.

d) Perform pest control services at the following **IAD site locations**:

1. Main Administration Building	- Dispatch/drivers room/ kitchen area - Patio area / drivers locker room - 2nd floor food prep area - Overhaul shop - General grounds area
2. Ram Building	- Foreman's office - 2nd floor food prep area - 2nd floor locker rooms - Maintenance bay - General grounds area
3. Service Lanes/Tire Shop Building	- Foreman's office / break room - General grounds area

ii. BUS FLEET

a) **Insect Control:** Spray interior and exterior perimeter of bus fleet for insects, common ants, roaches, and remove spider webs and wasp nests.

b) **Weekly Service and 60 Day Requirement:** The Contractor shall perform weekly pest control services at the IAD Division, with a minimum of one (1) service visit per week. During each weekly visit, the service technician shall meet with the MTS foreman to obtain a list of buses requiring service for that week. Upon completion of service, the list of serviced buses shall be returned to the foreman.

The weekly service visits shall be structured and performed so that every bus receives a minimum of one (1) inspection and pest control service within a sixty (60) day period. The Contractor is responsible for tracking services performed and ensuring full fleet coverage within each 60-day cycle. MTS will provide the Contractor with a master bus list for tracking and verification purposes.

c) If and when the Contractor receives a request from the Project Manager for a bus fleet servicing, Contractor shall provide service within twenty-four (24) hours from said request.

d) Perform pest control services for the following IAD Bus fleet*:

Imperial Avenue Division (IAD)	- 90 standard 40-foot coaches - 44 articulated 60-foot coaches

MTS reserves the right to increase and/or decrease the quantities above

D. KEARNY MESA DIVISION (KMD)

Located at 4630 Ruffner Street, Kearny Mesa, CA 92111.

i. **BUILDINGS AND GROUNDS:**

a) **Insect Control:** Spray perimeter of buildings and grounds for insects, common ants, roaches, and remove spider webs and wasp nests.

b) **Rodent Control:** Maintain Rodent Stations, which may include but is not limited to glue trap stations, bait stations, and spring traps stations based on the needs of MTS. Stations shall be type where rodent is not visible to the public. MTS reserves the right to request substitution of station types at no additional cost. MTS also reserves the right to increase or decrease the amount of stations based on operational needs.

c) **Monthly:** Perform inspections/services at a minimum of one (1) time per month.

d) Perform pest control services at the following KMD site locations:

1. Dispatch Building	- Dispatch/drivers' locker area - Patio area - General grounds area
2. Main Bus Maintenance Building	- 2nd floor food prep area - 2nd floor locker rooms - Maintenance bay - General grounds area
3. Service Lanes	- Foreman's office - General grounds area

ii. BUS FLEET

a) **Insect Control:** Spray interior and exterior perimeter of bus fleet for insects, common ants, roaches, and remove spider webs and wasp nests.

b) **Weekly Service and 60 Day Requirement:** The Contractor shall perform weekly pest control services at the KMD Division, with a minimum of one (1) service visit per week. During each weekly visit, the service technician shall meet with the MTS foreman to obtain a list of buses requiring service for that week. Upon completion of service, the list of serviced buses shall be returned to the foreman.

The weekly service visits shall be structured and performed so that every bus receives a minimum of one (1) inspection and pest control service within a sixty (60) day period. The Contractor is responsible for tracking services performed and ensuring full fleet coverage within each 60-day cycle. MTS will provide the Contractor with a master bus list for tracking and verification purposes.

c) If and when the Contractor receives a request from the MTS PM for a servicing, Contractor shall provide service within twenty-four (24) hours from said request.

d) Perform pest control services for the following **KMD Bus fleet***:

Kearny Mesa Division (KMD)	- 83 standard 40-foot coaches - 42 articulated 60-foot coaches

MTS reserves the right to increase and/or decrease the quantities above

iii. **SERVICE HOURS (IAD/KMD**)
Contractor shall provide service within the following times at all locations, unless otherwise authorized in writing by the Project Manager.

Buildings and Grounds:	Monday through Friday 10:00 p.m. to 4:00 a.m.
Bus Fleet:	Monday through Friday 10:00 p.m. to 4:00 a.m.

Note: Any spraying requiring the evacuation of the building shall be done after normal working hours and with proper posting at the building(s). Said services shall be coordinated with the staff at the locations requiring building evacuations to ensure operations are not impacted.

iv. SITE MAP - See Attachment 3.

This section intentionally left blank

4. GROUP C – LAND MANAGEMENT

A. DETAILED LAND MANAGEMENT SCOPE OF SERVICES

i. Locations:

Department	Name	Address
Land Management	KMTC	8949 Clairemont Mesa Blvd, San Diego, CA 92123
Land Management	Front St	304-6 Front St, El Cajon, CA 92020
Land Management	CTAC	4506-4520 Federal Boulevard, San Diego, CA 92102
Land Management	CTAC	4570-4586 Federal Boulevard, San Diego, CA 92102

ii. Days/Times of service: Monday through Friday, 8:00 a.m. to 4:00 p.m.

iii. Days/Times of as-needed service: Monday through Sunday, 8:00 a.m. to 4:00 p.m.

iv. Project Management:

Services shall be performed under the general guidance and direction of the MTS PM.

Monthly services shall be provided to all properties. No notice to MTS is required for monthly service. The MTS PM shall provide keys and gates codes to access properties as necessary.

MTS PM will notify contractor of any as needed services. Contractor may suggest as needed services resulting from monthly service and inspections. No on-site trash receptacles shall be used to dispose of waste or waste containers.

v. Monthly Pest Control Maintenance:

a) Insect Control: Exterior perimeter of buildings and grounds for insects, common ants, bed bugs, and roaches.
b) Rodent Control: Maintain rodent traps. Traps shall be type where rodents are not visible to the public.
c) Maintain damaged traps
d) Dispose of any deceased mammals (including but not limited to birds, rats, mice, possum, squirrel, etc.) on the property.

vi. As Needed Pest Control Services:

The Contractor shall provide as needed interior and exterior services for the control of common ants, all varieties of spiders, roaches, rats, mice, and all crawling and flying insects (including bed bugs) that may infest the facilities, buildings, grounds, landscaping, natural areas (canyons, creeks, fields, shrubbery, etc.) structures, hallways, offices, parking lots, rooves, restrooms, warehouse, kitchen areas, closets, locker rooms, and walkways.

The Contractor shall provide for all necessary clean-up debris caused by infestations including the removal of all insects, webs, nests, burrows, and disposal of all mammals at all specified locations both on the interior and exterior of all buildings and structures.

As needed pest control services will be individually reviewed and approved by the MTS PM. Contractor will provide a not to exceed price estimate containing a description of the scope of work. The MTS PM will approve each as needed service via email. A copy of the approval email will be attached to each as needed service invoice.

vii. SITE MAP - See Attachment 4.

5. [NOT APPLICABLE] PAYMENT PROCESSING SECURITY AND PCI DSS COMPLIANCE

6. [NOT APPLICABLE] CONTRACTOR'S INFORMATION SECURITY RESPONSIBILITIES

7. [NOT APPLICABLE] BUY AMERICA

A. [NOT APPLICABLE] CONSTRUCTION MATERIALS

B. [NOT APPLICABLE] MANUFACTURED PRODUCT

C. [NOT APPLICABLE] ROLLING STOCK

D. [NOT APPLICABLE] IRON OR STEEL

8. [NOT APPLICABLE] ACQUISITION OF ROLLING STOCK

4.9. 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. Any disposal of hazardous waste must be communicated to MTS Environmental Health and Safety Specialist for approval prior to disposal.

10. [NOT APPLICABLE] NO RIGHT TO POST SIGNS

11. [NOT APPLICABLE] WARRANTY

12. [NOT APPLICABLE] REPLACEMENT PARTS

13. [NOT APPLICABLE] DELIVERY AND ACCEPTANCE

14. [NOT APPLICABLE] LIQUIDATED DAMAGES

PEST CONTROL SERVICES IFB (MTS DOC. NO. G3106.0-26)

Rev. 1

GROUP A - SDTI (BUILDINGS, STATIONS AND YARDS)

#	DESCRIPTION	UNIT (MONTHLY)	UNIT COST	COST PER YEAR
	YR 1			
1	Pest Control Services for SDTI - **Buildings A, B, C, C Annex, Paint Both, Bogie, Yard Tower and Yards**	12	870	$10,440.00
2	Pest Control Services for SDTI - **All Trolley Stations (Per List)**	12	1109	$13,308.00
	TOTAL - YEAR 1			$23,748.00

#	DESCRIPTION	UNIT (MONTHLY)	UNIT COST	COST PER YEAR
	YR 2			
1	Pest Control Services for SDTI - **Buildings A, B, C, C Annex, Paint Both, Bogie, Yard Tower and Yards**	12	870	$10,440.00
2	Pest Control Services for SDTI - **All Trolley Stations (Per List)**	12	1109	$13,308.00
	TOTAL - YEAR 2			$23,748.00

#	DESCRIPTION	UNIT (MONTHLY)	UNIT COST	COST PER YEAR
	YR 3			
1	Pest Control Services for SDTI - **Buildings A, B, C, C Annex, Paint Both, Bogie, Yard Tower and Yards**	12	870	$10,440.00
2	Pest Control Services for SDTI - **All Trolley Stations (Per List)**	12	1109	$13,308.00
	TOTAL - YEAR 3			$23,748.00

#	DESCRIPTION	UNIT (MONTHLY)	UNIT COST	COST PER YEAR
	YR 4			
1	Pest Control Services for SDTI - **Buildings A, B, C, C Annex, Paint Both, Bogie, Yard Tower and Yards**	12	870	$10,440.00
2	Pest Control Services for SDTI - **All Trolley Stations (Per List)**	12	1109	$13,308.00
	TOTAL - YEAR 4			$23,748.00

#	DESCRIPTION	UNIT (MONTHLY)	UNIT COST	COST PER YEAR
	YR 5			
1	Pest Control Services for SDTI - **Buildings A, B, C, C Annex, Paint Both, Bogie, Yard Tower and Yards**	12	870	$10,440.00
2	Pest Control Services for SDTI - **All Trolley Stations (Per List)**	12	1109	$13,308.00
	TOTAL - YEAR 5			$23,748.00

AS NEEDED SERVICES

RODENT STATION INSTALLATION

YEAR	Description	Unit of Measure	Unit Cost	Extended Cost
1	Rodent Station Installation	36	$13.61	$489.96
2	Rodent Station Installation	36	$13.61	$489.96
3	Rodent Station Installation	36	$13.61	$489.96
4	Rodent Station Installation	36	$13.61	$489.96
5	Rodent Station Installation	36	$13.61	$489.96
	Total Cost of Rodent Station Installation			$2,449.80

YEAR	Description	Estimated Hours	Rate per Hour	Extended Cost
1	Pest Applicator and Installer	36	$37.50	$1,350.00
2	Pest Applicator and Installer	36	$37.50	$1,350.00
3	Pest Applicator and Installer	36	$37.50	$1,350.00
4	Pest Applicator and Installer	36	$37.50	$1,350.00
5	Pest Applicator and Installer	36	$37.50	$1,350.00
	Total Cost of Pest Applicator and Installer			$6,750.00

TOTAL GROUP A - SDTI BUILDINGS AND YARDS **$127,939.80**

PEST CONTROL SERVICES (G3106.0-26)

Rev. 1

GROUP A - SDTI (LRV)

#	DESCRIPTION	QTY	COST PER LRV	COST PER YEAR
	YR 1			
1	Pest Control Services for SDTI - **LRV WEEKLY SERVICE**	520	$ 18.00	$9,360.00
2	Pest Control Services for SDTI - **LRV CLEANOUT SERVICES AS NEEDED**	48	$ 48.00	$2,304.00
	TOTAL - YEAR 1			$11,664.00

#	DESCRIPTION	QTY	COST PER LRV	COST PER YEAR
	YR 2			
1	Pest Control Services for SDTI - **LRV WEEKLY SERVICE**	520	$ 18.00	$9,360.00
2	Pest Control Services for SDTI - **LRV CLEANOUT SERVICES AS NEEDED**	48	$ 48.00	$2,304.00
	TOTAL - YEAR 2			$11,664.00

#	DESCRIPTION	QTY	COST PER LRV	COST PER YEAR
	YR 3			
1	Pest Control Services for SDTI - **LRV WEEKLY SERVICE**	520	$ 18.00	$9,360.00
2	Pest Control Services for SDTI - **LRV CLEANOUT SERVICES AS NEEDED**	48	$ 48.00	$2,304.00
	TOTAL - YEAR 3			$11,664.00

TOTAL:

#	DESCRIPTION	QTY	COST PER LRV	COST PER YEAR
	YR 4			
1	Pest Control Services for SDTI - **LRV WEEKLY SERVICE**	520	$ 18.00	$9,360.00
2	Pest Control Services for SDTI - **LRV CLEANOUT SERVICES AS NEEDED**	48	$ 48.00	$2,304.00
	TOTAL - YEAR 4			$11,664.00

#	DESCRIPTION	QTY	COST PER LRV	COST PER YEAR
	YR 5			
1	Pest Control Services for SDTI - **LRV WEEKLY SERVICE**	520	$ 18.00	$9,360.00
2	Pest Control Services for SDTI - **LRV CLEANOUT SERVICES AS NEEDED**	48	$ 48.00	$2,304.00
	TOTAL - YEAR 5			$11,664.00

GROUP A - TOTAL LRVs **$58,320.00**

PEST CONTROL SERVICES (G3106.0-26)

Rev. 1

GROUP B - SDTC (BUILDINGS, GROUNDS, BUS FLEET)

IAD LOCATION

Description	Service Requirements	Unit of Measure	Unit Cost	Extended Cost
Building and Grounds (Monthly Maintenance)	Insect and Rodent Control	12	$153.00	$1,836.00
Bus Fleet (Weekly Maintenance)	Insect and Rodent Control	12	$74.00	$888.00
			Total Costs for Services YR 1	**$2,724.00**

Description	Service Requirements	Unit of Measure	Unit Cost	Extended Cost
Building and Grounds (Monthly Maintenance)	Insect and Rodent Control	12	$153.00	$1,836.00
Bus Fleet (Weekly Maintenance)	Insect and Rodent Control	12	$74.00	$888.00
			467	**$2,724.00**

Description	Service Requirements	Unit of Measure	Unit Cost	Extended Cost
Building and Grounds (Monthly Maintenance)	Insect and Rodent Control	12	$153.00	$1,836.00
Bus Fleet (Weekly Maintenance)	Insect and Rodent Control	12	$74.00	$888.00
			Total Costs for Services YR 3	**$2,724.00**

Description	Service Requirements	Unit of Measure	Unit Cost	Extended Cost
Building and Grounds (Monthly Maintenance)	Insect and Rodent Control	12	$153.00	$1,836.00
Bus Fleet (Weekly Maintenance)	Insect and Rodent Control	12	$74.00	$888.00
			Total Costs for Services YR 4	**$2,724.00**

Description	Service Requirements	Unit of Measure	Unit Cost	Extended Cost
Building and Grounds (Monthly Maintenance)	Insect and Rodent Control	12	$153.00	$1,836.00
Bus Fleet (Weekly Maintenance)	Insect and Rodent Control	12	$74.00	$888.00
			Total Costs for Services YR 5	**$2,724.00**

KMD LOCATION

Description	Service Requirements	Unit of Measure	Unit Cost	Extended Cost
Building and Grounds (Monthly Maintenance)	Insect and Rodent Control	12	$116.00	$1,392.00
Bus Fleet (Weekly Maintenance)	Insect and Rodent Control	12	$67.00	$804.00
			Total Costs for Services YR 1	**$2,196.00**

Description	Service Requirements	Unit of Measure	Unit Cost	Extended Cost
Building and Grounds (Monthly Maintenance)	Insect and Rodent Control	12	$116.00	$1,392.00
Bus Fleet (Weekly Maintenance)	Insect and Rodent Control	12	$67.00	$804.00
			Total Costs for Services YR 2	**$2,196.00**

Description	Service Requirements	Unit of Measure	Unit Cost	Extended Cost
Building and Grounds (Monthly Maintenance)	Insect and Rodent Control	12	$116.00	$1,392.00
Bus Fleet (Weekly Maintenance)	Insect and Rodent Control	12	$67.00	$804.00
			Total Costs for Services YR 3	**$2,196.00**

Description	Service Requirements	Unit of Measure	Unit Cost	Extended Cost
Building and Grounds (Monthly Maintenance)	Insect and Rodent Control	12	$116.00	$1,392.00
Bus Fleet (Weekly Maintenance)	Insect and Rodent Control	12	$67.00	$804.00
			Total Costs for Services YR 4	**$2,196.00**

Description	Service Requirements	Unit of Measure	Unit Cost	Extended Cost
Building and Grounds (Monthly Maintenance)	Insect and Rodent Control	12	$116.00	$1,392.00
Bus Fleet (Weekly Maintenance)	Insect and Rodent Control	12	$67.00	$804.00
			Total Costs for Services YR 5	**$2,196.00**

AS NEEDED SERVICES (IAD & KMD)

RODENT STATION INSTALLATION (IAD & KMD)

YEAR	Description	Unit of Measure	Unit Cost	Extended Cost
1	Rodent Station Installation	10	$13.00	$130.00
2	Rodent Station Installation	10	$13.00	$130.00
3	Rodent Station Installation	10	$13.00	$130.00
4	Rodent Station Installation	10	$13.00	$130.00
5	Rodent Station Installation	10	$13.00	$130.00
			Total Cost of Rodent Station Installation	**$650.00**

YEAR	Description	Estimated Hours	Rate per Hour	Extended Cost
1	Pest Applicator and Installer	12	$37.00	$444.00
2	Pest Applicator and Installer	12	$37.00	$444.00
3	Pest Applicator and Installer	12	$37.00	$444.00
4	Pest Applicator and Installer	12	$37.00	$444.00
5	Pest Applicator and Installer	12	$37.00	$444.00
			Total Cost of As Needed Services	**$2,220.00**

OVERALL TOTAL FOR ALL SDTC: **$27,470.00**

PEST CONTROL SERVICES (G3106.0-26)

Rev. 1

GROUP C - LAND MANAGEMENT (4 LOCATIONS SHOWN BELOW)

MONTHLY MAINTENANCE SERVICE

Description	Unit of Measure	Unit Cost	Extended Cost
Pest Control Services for Land Management – **8949 Clairemont Mesa Blvd, San Diego, CA 92123**	12	$99.00	$1,188.00
Pest Control Services for Land Management – **304-306 Front St., El Cajon**	12	$50.00	$600.00
Pest Control Services for Land Management – **4570-4586 Federal Boulevard, San Diego, CA 92102**	12	$300.00	$3,600.00
Pest Control Services for Land Management – **4506-4520 Federal Boulevard, San Diego, CA 92102**	12	$279.00	$3,348.00
		Total Costs for Services YR 1	**$8,736.00**

Description	Unit of Measure	Unit Cost	Extended Cost
Pest Control Services for Land Management – **8949 Clairemont Mesa Blvd, San Diego, CA 92123**	12	$99.00	$1,188.00
Pest Control Services for Land Management – **304-306 Front St., El Cajon**	12	$50.00	$600.00
Pest Control Services for Land Management – **4570-4586 Federal Boulevard, San Diego, CA 92102**	12	$300.00	$3,600.00
Pest Control Services for Land Management – **4506-4520 Federal Boulevard, San Diego, CA 92102**	12	$279.00	$3,348.00
		Total Costs for Services YR 2	**$8,736.00**

Description	Unit of Measure	Unit Cost	Extended Cost
Pest Control Services for Land Management – **8949 Clairemont Mesa Blvd, San Diego, CA 92123**	12	$99.00	$1,188.00
Pest Control Services for Land Management – **304-306 Front St., El Cajon**	12	$50.00	$600.00
Pest Control Services for Land Management – **4570-4586 Federal Boulevard, San Diego, CA 92102**	12	$300.00	$3,600.00
Pest Control Services for Land Management – **4506-4520 Federal Boulevard, San Diego, CA 92102**	12	$279.00	$3,348.00
		Total Costs for Services YR 3	**$8,736.00**

Description	Unit of Measure	Unit Cost	Extended Cost
Pest Control Services for Land Management – **8949 Clairemont Mesa Blvd, San Diego, CA 92123**	12	$99.00	$1,188.00
Pest Control Services for Land Management – **304-306 Front St., El Cajon**	12	$50.00	$600.00
Pest Control Services for Land Management – **4570-4586 Federal Boulevard, San Diego, CA 92102**	12	$300.00	$3,600.00
Pest Control Services for Land Management – **4506-4520 Federal Boulevard, San Diego, CA 92102**	12	$279.00	$3,348.00
		Total Costs for Services YR 4	**$8,736.00**

Rev 1

Description	Unit of Measure	Unit Cost	Extended Cost
Pest Control Services for Land Management – **8949 Clairemont Mesa Blvd, San Diego, CA 92123**	12	$99.00	$1,188.00
Pest Control Services for Land Management – **304-306 Front St., El Cajon**	12	$50.00	$600.00
Pest Control Services for Land Management – **4570-4586 Federal Boulevard, San Diego, CA 92102**	12	$300.00	$3,600.00
Pest Control Services for Land Management – **4506-4520 Federal Boulevard, San Diego, CA 92102**	12	$279.00	$3,348.00
Total Costs for Services YR 5			**$8,736.00**

YEAR	Qty	Cost per Unit	Extended Cost
Rodent Station Installation YR 1	10	$13.00	$130.00
Rodent Station Installation YR 2	10		$0.00
Rodent Station Installation YR 3	10		$0.00
Rodent Station Installation YR 4	10		$0.00
Rodent Station Installation YR 5	10		$0.00
Total Cost of Rodent Station Installation			**$130.00**

YEAR	Estimated Hours	Rate per Hour	Extended Cost
Pest Applicator and Installer YR 1	8	$37.00	$296.00
Pest Applicator and Installer YR 2	8		$0.00
Pest Applicator and Installer YR 3	8		$0.00
Pest Applicator and Installer YR 4	8		$0.00
Pest Applicator and Installer YR 5	8		$0.00
Total			**$296.00**

AS NEEDED SERVICES

Description	Unit of Measure	Unit Cost	Extended Cost
As Needed Pest Control Services for Land Management – **All Properties**	12	$199.00	$2,388.00
Total Costs for Services YR 1			**$2,388.00**

Description	Unit of Measure	Unit Cost	Extended Cost
As Needed Pest Control Services for Land Management – **All Properties**	12	$199.00	$2,388.00
Total Costs for Services YR 2			**$2,388.00**

Description	Unit of Measure	Unit Cost	Extended Cost
As Needed Pest Control Services for Land Management – **All Properties**	12	$199.00	$2,388.00
Total Costs for Services YR 3			**$2,388.00**

Description	Unit of Measure	Unit Cost	Extended Cost
As Needed Pest Control Services for Land Management – **All Properties**	12	$199.00	$2,388.00
Total Costs for Services YR 4			**$2,388.00**

Description	Unit of Measure	Unit Cost	Extended Cost
As Needed Pest Control Services for Land Management – **All Properties**	12	$199.00	$2,388.00
		Total Costs for Services YR 5	**$2,388.00**

TOTAL GROUP C - ALL LOCATIONS	$56,046.00

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 4/9/2026

Agenda Item No. 07

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

April 16, 2026

SUBJECT:

PRONTO Fare Collection System – Contract Amendment

AGENDA ITEM WILL BE PROVIDED BEFORE BOARD MEETING

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 4/9/2026

Agenda Item No. 08

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

April 16, 2026

SUBJECT:

Bus Fleet Seat Upholstery Replacement and 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. B0785.0-26 (in substantially the same format as Attachment A), with Molina Manufacturing, LLC (Molina), for Bus Fleet Seat Upholstery Replacement and Repair Services for five (5) years in the amount of $426,784.39 (inclusive of 7.75% CA sales tax).

Budget Impact

The total cost of this contract is estimated to be $426,784.39 (inclusive of 7.75% CA sales tax) (Attachment C). The project will be funded by the San Diego Transit Corporation (SDTC) Bus Maintenance Operation Budget account 311014 -545100.

DISCUSSION:

MTS currently owns approximately 732 buses including in-house operations and contracted services. MTS in-house operations operate approximately 258 buses with five (5) different seating arrangements, and 31 separate seat insert styles. MTS bus passenger seat cushions require ongoing repairs due to normal wear and tear, vandalism, and/ or safety concerns. This contract provides necessary materials and services to repair and/or reupholster the seat cushions used on the fleet and on an as-needed basis.

On October 23, 2025, MTS released an Invitation for Bid (IFB) solicitation for the provision of Bus Fleet Seat Replacement and Repair Services for a five-year period. A total of two (2) bids were received on December 30, 2025, from the following:

The bid summary is shown below:

Company Name	Firm Certification	Cost
Molina Manufacturing, LLC	N/A	$426,784.39
Romeo Luxury Customs (RL)	N/A	$889,301.70
MTS Independent Cost Estimate (ICE)		$212,178.31

Molina met all the IFB requirements and was determined to be the lowest responsive and responsible bidder. The difference between the lowest bid and MTS ICE is due to the 1900 series seats, wherein the original manufacturer discontinued the seats. They are hard to make and staff believes that the pattern, stitching, and workmanship are most likely what contributed to the higher cost. Based on the comparison of the bids received, and MTS's past purchase history for the similar items and services, staff deemed Molina's pricing to be fair and reasonable.

The contract pricing is per unit based on MTS's estimated seat upholstery replacement and repair service needs each year of the five (5) year contract period. If vandalism, wear and tear, or other damages requiring repair or replacement is more than forecast, then additional funding will be requested consistent with Board Policy 41 (Signature Authority).

On January 20, 2026, MTS issued a Notice of Intent to Award to Molina.

On February 4, 2026, RL submitted a protest letter, alleging that Molina was in violation of MTS's IFB requirements by making false statements in an attempt to discredit their company. On February 27, 2026, MTS responded to the letter of protest and determined that the protest had no merit and therefore was denied. The 2025-2026 Procurement was processed as a low-bid contract award. MTS is required to award the contract to the lowest responsive and responsible bidder. No information in the protest identified why the Molina bid for the 2025-2026 Procurement was either not responsive to MTS's solicitation, or why Molina is not considered a "responsible" bidder as a matter of law. MTS goes through a detailed review to determine responsiveness and responsibility. Molina was the lowest bidder at $369,087.60 (exclusive of CA sales tax). RL was the next lowest bidder at $825,338.00. Molina's bid was determined to meet the legal definition of being both responsive to the 2025-2026 Procurement solicitation and being a "responsible" bidder. RL did not pursue their protest to the next stage after receiving MTS's response.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. B0785.0-26 (in substantially the same format as Attachment A), with Molina, for Bus Fleet Seat Upholstery Replacement and Repair Services for five (5) years in the amount of $426,784.39 (inclusive of 7.75% CA sales tax).

/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. B0785.0-26
B. Scope of Work
C. Bid Form

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. B0785.0-26

BUS FLEET SEAT UPHOLSTERY AND REPAIR SERVICES

THIS AGREEMENT is entered into this _____ day of _____, 2026 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: Molina Manufacturing, LLC Address: 23126 Mariposa Avenue

Torrance, CA 90502
City State Zip

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

Email: joe@molinamfg.com

Telephone: (310) 539-1883

Authorized person to sign contracts Joe Molina CEO
Name Title

The Contractor agrees to provide 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), Federal Requirements (Exhibit D), and Forms (Exhibit E).

The contract term is for five (5) years effective May 1, 2026 through April 30, 2031.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $426,784.39 (inclusive of 7.75% CA sales tax) without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	MOLINA MANUFACTURING, LLC
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

DRAFT

4. SCOPE OF WORK/TECHNICAL SPECIFICATIONS

4.1. BACKGROUND

The San Diego Metropolitan Transit System (MTS) is soliciting bids from a qualified Contractor to provide upholstery and repair of damaged seats for MTS Bus (SDTC) over a five (5) year period.

By submitting a bid, the Contractor certifies that it has completed all Submission Forms dated and signed. If a form is not applicable, please state N/A on the form, sign and date

4.2. OBJECTIVE

Contractor to provide upholstery repair to damaged revenue vehicle fleets seats. The Contractor shall provide all labor, any miscellaneous materials, tools & equipment, pickup and delivery needed to reupholster/repair bus seats backs and bottom cushions for the following bus models:

- New Flyer 40FT, Low floor BEB & CNG
- Gillig 40FT, Low Floor BEB & CNG
- New Flyer 60FT, articulated

All necessary materials will be provided by the Contractor and comply with FMVSS 302 compliant materials. Bidder must provide proof of material compliance with their bid submittal. All materials, vinyl, foam/padding etc. shall be provided by the vendor. Proof of material compliance may be requested by MTS at any time.

The material to be used for upholstery shall be ½'' foam/padding, Camira (Holdsworth) CAF325 Fabric (Red), Camira (Holdsworth) HTL-01 fabric (Grey) and Morbern Flair FA-308 Red Dawn Vinyl. MTS has one series of bus with thicker foam/padding insert, Vendor will not be replacing the thicker foam/padding for part Numbers, 6493376,6493379,6496030, 6493374, 6493373,6493375, 649337, 6493378. 6493380,6496031, only the cover, for reference these are New Flyer Part numbers sold with the padding The vinyl cover will be sent to the vendor, the vendor must recreate the cover including all stitching to match what they received.

4.3. SCHEDULE/SERVICE HOURS

- SDTC designated contact will arrange with the Contractor to schedule pick up of seats for repair.

- Contractor shall pick up and deliver seats at the Imperial Ave Division (IAD), 100 16th Street, San Diego CA 92101 and Kearny Mesa Division (KMD), 4630 Ruffner Street, San Diego CA 92111

- All repaired seats shall be returned to SDTC within 10 calendar days from pick up.

4.4. INSPECTION AND ACCEPTANCE

Final inspection and acceptance of all work under this Contract shall be performed at either the IAD or KMD warehouse receiving location. Contractor shall coordinate with the SDTC designated contact who will be responsible for the inspection and acceptance.

The basis of acceptance shall be in compliance with the requirements set forth in the scope of work. Deliverable items rejected under resulting inspection shall be corrected within 14 days at no additional cost to MTS. Contractor shall prepare records evidencing all inspections made related to this project and the outcome.

4.5. BID PRICING

Each bidder shall complete and submit its bid for all five (5) years using the bid forms provided by MTS as an attachment to this solicitation. The bid prices shall be firm, fixed and must be inclusive of all necessary materials and labor costs associated with the upholstery and repair of the bus fleets seats. All pages of the Bid Forms shall be fully completed, or the bid may be deemed non-responsive.

4.6. CONTRACT TERM

The contract term shall be for a period of five (5) years, with a firm-fixed pricing structure throughout the contract duration. The anticipated effective period is from March 1, 2026, to February 28, 2031.

4.7. RESPONSIBILITES

Responsibilities of Contractor:

- Maintain written and verbal communications with MTS relating to the status of the contract.
- Respond promptly and precisely to MTS staff's needs and requests for information within two (2) business days.
- Quality of material and workmanship and on time delivery shall be a priority on all orders.

Responsibilities of MTS:

- Establish operating requirements for the Contractor, including all upholstery materials for continued services.
- Administer and monitor the contract, ensuring Contractor's compliance with the specifications and the contract terms.
- Process Contractor invoice(s) upon acceptance by MTS for products and/or services delivered.

4.8. [NOT APPLICABLE] PAYMENT PROCESSING SECURITY AND PCI DSS COMPLIANCE

4.9. [NOT APPLICABLE] CONTRACTOR'S INFORMATION SECURITY RESPONSIBILITIES

4.10. BUY AMERICA

This scope of work may trigger Buy America and/or Build America Buy America requirements, which apply to construction materials, manufactured products, rolling stock, iron and steel. The

below list of definitions and examples is not exhaustive and is only to be used as illustrative and a guidance tool for Contractor compliance.

A. [NOT APPLICABLE] CONSTRUCTION MATERIALS

B. MANUFACTURED PRODUCT

Per IIJA Section 70912 (2)(B), all manufactured products used in the project must be produced in the United States. Examples for manufactured products provided per Appendix A to 49 CFR 661.3 include: Infrastructure projects not made primarily of steel or iron, including structures (terminals, depots, garages, and bus shelters), ties and ballast; contact rail not made primarily of steel or iron; fare collection systems; computers; information systems; security systems; data processing systems; and mobile lifts, hoists, and elevators.

C. [NOT APPLICABLE] ROLLING STOCK

D. IRON OR STEEL

Per IIJA Section 70912 (2)(A), all iron and steel used in the project must be produced in the United States. This means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States. Examples of iron and steel provided per Appendix A to 49 CFR 661.3 include: Items made primarily of steel or iron such as structures, bridges, and track work, including running rail, contact rail, and turnouts.

4.11. [NOT APPLICABLE] ACQUISITION OF ROLLING STOCK

4.12. [NOT APPLICABLE] SAFETY DATA SHEETS (SDS)

4.13. [NOT APPLICABLE] NO RIGHT TO POST SIGNS

4.14. WARRANTY

Bidders shall outline in detail their warranty on the equipment offered, including the method of adjustment in cases of equipment, component or parts failure. Warranty shall also be stated for installation labor, materials, and method of adjustment.

4.15. REPLACEMENT PARTS

Replacement parts and technical support for the specified equipment must be guaranteed by the manufacturer; to be available for a ten (10) year period from the date of purchase. Manufacturer shall keep parts books and maintenance manuals up-to-date for that period.

4.16. DELIVERY AND ACCEPTANCE

Equipment or any deliverable provided under this contract shall be delivered F.O.B. to MTS, 100 16th Street, San Diego, California 92101 ,and 4630 Rufner Street, San Diego, CA 92111 unless otherwise specified, in first class condition, complete and ready for operation, and the Contractor shall assume all responsibility and risk of loss incident to said delivery.

Contractor shall indicate delivery date on the Bid Form unless already specified, in which case, shall be made within the time set forth. Delivery is part of the consideration and must be adhered to as specified.

Contractor will not be held liable for failure to make delivery because of strikes, construction of property, governmental regulations, acts of God or any other causes beyond his control, provided a written extension of time is obtained from MTS.

Upon delivery, MTS will acknowledge receipt of said items or products. Delivery shall not constitute acceptance. Upon inspection and testing (if necessary) by MTS, a determination will be made whether said items or products are in conformance with contract requirements. If found in conformance, MTS shall approve the Contractor's invoice for payment; thereby constituting acceptance. Payment terms begin from this point. If the delivered items or products are found not in compliance, MTS will immediately notify the Contractor, and furnish all details of deficiencies. Contractor shall correct the deficiencies or supply new items or products (at the discretion of MTS) and resubmit for inspection and testing (if necessary).

4.17. [NOT APPLICABLE] LIQUIDATED DAMAGES

4.18. PAYMENT TERMS

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

Payment terms will be Net thirty (30) from acceptance. Payment terms less than ten (10) days from acceptance will not be considered.

Advanced Payment is Not Allowable

4.19. INVOICES

Each invoice must include the PO number from the division the seats are coming from. Invoices shall also include the following information:

- Bus Type;
- Back/Bottom;
- Quantities shall be the same as what was picked up at location
- Price for each item
- SDTC Stock Code (Attachment A)

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. If MTS rejects an incorrectly submitted invoice and sends it back for correction, the net 30 days restart from the corrected 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.

4.20. TARIFFS

All quoted pricing should be “EXCLUSIVE” of tariffs. In the event there are tariffs imposed across any items under this contract, the Contractor may request payment through the submission of CBP Form 7501 outlining the HTSUS rate (Box 33) and Duty charged (Box 34) for the description (Box 28) and quantity (Box 30 & 31) of the item which should match the MTS Purchase Order particulars.

Tariff charges may be invoiced under a separate charge to each purchase order once approved by MTS.

Bus Fleet Seat Upholstery Replacement & Repair Services IFB - MTS Bid Form

MTS Doc. No. B0785.0-26 SDTC

Bidder Name: Molina Manufacturing, Inc.

ITEM	Provide lead time (In calendar days)	MTS Material No.	PART NUMBER	ITEM DESCRIPTION	Fabric/Vinyl	QTY	UOM	UNIT PRICE	EXT. PRICE
1	10 Days	70201960	6477489	INSERT BACK, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 35.02	$ 350.20
2	10 Days	70201961	6477488	INSERT Bottom, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 32.85	$ 328.50
3	10 Days	70201962	6477487	INSERT, BACK WC, W/LOGO, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 54.97	$ 549.70
4	10 Days	70202394	83-08605-000	SEAT INSERT, BACK, WC, W/LOGO,1600	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 56.23	$ 562.30
5	10 Days	70202392	83-08603-000	SEAT INSERT, BACK, PASSENGER, 1700	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 38.40	$ 576.00
6	10 Days	70202393	83-08604-000	SEAT INSERT, BOTTOM, PASSENGER, 1700	Morbern Vinyl - Flair Red Dawn FA-308	50	EA	$ 35.70	$ 1,785.00
7	10 Days	70202395	83-08606-000	SEAT INSERT, BOTTOM, WC, 1700	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 35.85	$ 896.25
8	10 Days	70202575	83-09951-000	SEAT INSERT, BACK, WC W/LOGO,, 1700	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 58.39	$ 875.85
9	10 Days	70202178	6487661	INSERT BACK, DETAIL B, 1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 39.70	$ 992.50
10	10 Days	70202181	6487659	INSERT BACK, DETAIL A, WC,W/LOGO,1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 59.70	$ 1,492.50
11	10 Days	70202182	6487660	INSERT BOTTOM, DETAIL B, 1800	Morbern Vinyl - Flair Red Dawn FA-308	50	EA	$ 35.77	$ 1,788.50
12	10 Days	70202183	6487658	INSERT BOTTOM, DETAIL A, WC, 1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 35.92	$ 898.00
13	10 Days	70202141	6444665	Seat Bottom, Type A, WC, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	75	EA	$ 38.42	$ 2,881.50
14	10 Days	70202139	6444666	Seat Back, Type A, WC,W/LOGO, 1200/1300	Camira (Holdsworth) - CAF 325 (RED)	50	EA	$ 63.03	$ 3,151.50
15	10 Days	70202140	6444667	Seat Bottom, Type B, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	150	EA	$ 37.92	$ 5,688.00
16	10 Days	70200928	6444668	Seat Back, Type B, Flip Up, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 43.03	$ 2,151.50
17	10 Days	70198752	582390-3L	SEAT INSERT BOTTOM PASSENGER - GILLIG	Camira (Holdsworth) - CAF-325 (RED)	200	EA	$ 37.27	$ 7,454.00
18	10 Days	70198753	58N490-3L	SEAT INSERT, BACK, PASSENGER, GILLIG	Camira (Holdsworth) - CAF-325 (RED)	75	EA	$ 41.45	$ 3,108.75
19	10 Days	70198404	6361583	SEAT INSERT BOTTOM, RED, TYPE A NF 40	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 37.32	$ 1,866.00
20	10 Days	70198415	6361585	SEAT INSERT BOTTOM, RED, TYPE B, NF-40	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 37.32	$ 1,866.00
21	10 Days	70198416	6361582	SEAT INSERT BACK, RED, TYPE A, NF-40	Camira (Holdsworth) - CAF-325 (RED)	25	EA	$ 38.99	$ 974.75
22	10 Days	70203294	6493376	Seat insert B,C,F, Bottom, 18" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 264.09	$ 3,961.35
23	10 Days	70203446	6493377	Seat insert, B, back, 18" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 269.27	$ 2,692.70
24	10 Days	70203293	6493379	Seat insert, E, Bottom, 19" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 264.09	$ 3,961.35
25	10 Days	70203659	6493378	Seat insert, E, back, 19" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 269.27	$ 2,692.70
26	10 Days	70203658	6493375	C & F Back right insert	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 269.27	$ 2,692.70
27	10 Days	70203660	6493380	C & F Back left insert	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 269.27	$ 2,692.70

Bus Fleet Seat Upholstery Replacement & Repair Services IFB - MTS Bid Form

MTS Doc. No. B0785.0-26 SDTC

Bidder Name: Molina Manufacturing, Inc.

28	10 Days	70203661	6496031	Seat Insert, D, Bottom	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 284.24	$ 2,842.40
29	10 Days	70203295	6496030	Seat Insert Back, D, R,L	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 314.39	$ 3,143.90
30	10 Days	70203657	6493373	Seat Insert, A , Back WC - W/LOGO	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 476.89	$ 4,768.90
31	10 Days	70203675	6493374	Seat Insert, A Bottom	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 416.89	$ 4,168.90

Sub-Total	$ 73,854.90
Shipping/Delivery Charges	$ 4,504.80
TOTAL - YEAR 1 (All Inclusive):	$ 78,359.70

Bus Fleet Seat Upholstery Replacement & Repair Services IFB - MTS Bid Form

MTS Doc. No. B0785.0-26 SDTC

Bidder Name: Molina Manufacturing, Inc.

ITEM	Provide lead time (In calendar days)	MTS Material No.	PART NUMBER	ITEM DESCRIPTION	Fabric/Vinyl	QTY	UOM	UNIT PRICE	EXT. PRICE
1	10 Days	70201960	6477489	INSERT BACK, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 35.17	$ 351.70
2	10 Days	70201961	6477488	INSERT CUSHION, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 32.97	$ 329.70
3	10 Days	70201962	6477487	INSERT, BACK WC, W/LOGO, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 55.12	$ 551.20
4	10 Days	70202394	83-08605-000	SEAT INSERT, BACK, WC, W/LOGO,1600	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 56.37	$ 563.70
5	10 Days	70202392	83-08603-000	SEAT INSERT, BACK, PASSENGER, 1700	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 38.59	$ 578.85
6	10 Days	70202393	83-08604-000	SEAT INSERT, BOTTOM, PASSENGER, 1700	Morbern Vinyl - Flair Red Dawn FA-308	50	EA	$ 35.87	$ 1,793.50
7	10 Days	70202395	83-08606-000	SEAT INSERT, BOTTOM, WC, 1700	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 36.02	$ 900.50
8	10 Days	70202575	83-09951-000	SEAT INSERT, BACK, WC W/LOGO,, 1700	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 58.58	$ 878.70
9	10 Days	70202178	6487661	INSERT BACK, DETAIL B, 1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 39.91	$ 997.75
10	10 Days	70202181	6487659	INSERT BACK, DETAIL A, WC,W/LOGO,1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 59.91	$ 1,497.75
11	10 Days	70202182	6487660	INSERT BOTTOM, DETAIL B, 1800	Morbern Vinyl - Flair Red Dawn FA-308	50	EA	$ 35.94	$ 1,797.00
12	10 Days	70202183	6487658	INSERT BOTTOM, DETAIL A, WC, 1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 36.09	$ 902.25
13	10 Days	70202141	6444665	Seat Bottom, Type A, WC, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	75	EA	$ 38.59	$ 2,894.25
14	10 Days	70202139	6444666	Seat Back, Type A, WC,W/LOGO, 1200/1300	Camira (Holdsworth) - CAF 325 (RED)	50	EA	$ 63.24	$ 3,162.00
15	10 Days	70202140	6444667	Seat Bottom, Type B, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	150	EA	$ 38.09	$ 5,713.50
16	10 Days	70200928	6444668	Seat Back, Type B, Flip Up, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 43.25	$ 2,162.50
17	10 Days	70198752	582390-3L	SEAT INSERT BOTTOM PASSENGER - GILLIG	Camira (Holdsworth) - CAF-325 (RED)	200	EA	$ 37.89	$ 7,578.00
18	10 Days	70198753	58N490-3L	SEAT INSERT, BACK, PASSENGER, GILLIG	Camira (Holdsworth) - CAF-325 (RED)	75	EA	$ 41.64	$ 3,123.00
19	10 Days	70198404	6361583	SEAT INSERT BOTTOM, RED, TYPE A NF 40	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 37.45	$ 1,872.50
20	10 Days	70198415	6361585	SEAT INSERT BOTTOM, RED, TYPE B, NF-40	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 37.45	$ 1,872.50
21	10 Days	70198416	6361582	SEAT INSERT BACK, RED, TYPE A, NF-40	Camira (Holdsworth) - CAF-325 (RED)	25	EA	$ 39.14	$ 978.50
22	10 Days	70203294	6493376	Seat insert B,C,F, Bottom, 18" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 264.68	$ 3,970.20
23	10 Days	70203446	6493377	Seat insert, B, back, 18" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 269.86	$ 2,698.60
24	10 Days	70203293	6493379	Seat insert, E, Bottom, 19" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 264.68	$ 3,970.20
25	10 Days	70203659	6493378	Seat insert, E, back, 19" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 269.86	$ 2,698.60
26	10 Days	70203658	6493375	C & F Back right insert	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 269.86	$ 2,698.60
27	10 Days	70203660	6493380	C & F Back left insert	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 269.86	$ 2,698.60

Bus Fleet Seat Upholstery Replacement & Repair Services IFB - MTS Bid Form

MTS Doc. No. B0785.0-26 SDTC

Bidder Name: Molina Manufacturing, Inc.

28	10 Days	70203661	6496031	Seat Insert, D, Bottom	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 284.83	$ 2,848.30
29	10 Days	70203295	6496030	Seat Insert Back, D, R,L	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 314.98	$ 3,149.80

30	10 Days	70203657	6493373	Seat Insert, A , Back WC - W/LOGO	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 477.48	$ 4,774.80
31	10 Days	70203675	6493374	Seat Insert, A Bottom	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 417.48	$ 4,174.80
								Sub-Total	$ 74,181.85
								Shipping/Delivery Charges	$ 4,633.20
								TOTAL - YEAR 2 (All Inclusive):	$ 78,815.05

	Provide lead time (In calendar days)	MTS Material No.	PART NUMBER	ITEM DESCRIPTION	Fabric/Vinyl	QTY	UOM	UNIT PRICE	EXT. PRICE
1	10 Days	70201960	6477489	INSERT BACK, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 35.33	$ 353.30
2	10 Days	70201961	6477488	INSERT CUSHION, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 33.10	$ 331.00
3	10 Days	70201962	6477487	INSERT, BACK WC, W/LOGO, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 55.28	$ 552.80
4	10 Days	70202394	83-08605-000	SEAT INSERT, BACK, WC, W/LOGO,1600	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 56.54	$ 565.40
5	10 Days	70202392	83-08603-000	SEAT INSERT, BACK, PASSENGER, 1700	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 38.79	$ 581.85
6	10 Days	70202393	83-08604-000	SEAT INSERT, BOTTOM, PASSENGER, 1700	Morbern Vinyl - Flair Red Dawn FA-308	50	EA	$ 36.04	$ 1,802.00
7	10 Days	70202395	83-08606-000	SEAT INSERT, BOTTOM, WC, 1700	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 36.19	$ 904.75
8	10 Days	70202575	83-09951-000	SEAT INSERT, BACK, WC W/LOGO,, 1700	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 58.78	$ 881.70
9	10 Days	70202178	6487661	INSERT BACK, DETAIL B, 1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 40.12	$ 1,003.00
10	10 Days	70202181	6487659	INSERT BACK, DETAIL A, WC,W/LOGO,1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 60.12	$ 1,503.00
11	10 Days	70202182	6487660	INSERT BOTTOM, DETAIL B, 1800	Morbern Vinyl - Flair Red Dawn FA-308	50	EA	$ 36.11	$ 1,805.50
12	10 Days	70202183	6487658	INSERT BOTTOM, DETAIL A, WC, 1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 36.26	$ 906.50
13	10 Days	70202141	6444665	Seat Bottom, Type A, WC, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	75	EA	$ 38.76	$ 2,907.00
14	10 Days	70202139	6444666	Seat Back, Type A, WC,W/LOGO, 1200/1300	Camira (Holdsworth) - CAF 325 (RED)	50	EA	$ 63.45	$ 3,172.50
15	10 Days	70202140	6444667	Seat Bottom, Type B, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	150	EA	$ 38.26	$ 5,739.00
16	10 Days	70200928	6444668	Seat Back, Type B, Flip Up, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 43.45	$ 2,172.50
17	10 Days	70198752	582390-3L	SEAT INSERT BOTTOM PASSENGER - GILLIG	Camira (Holdsworth) - CAF-325 (RED)	200	EA	$ 38.06	$ 7,612.00
18	10 Days	70198753	58N490-3L	SEAT INSERT, BACK, PASSENGER, GILLIG	Camira (Holdsworth) - CAF-325 (RED)	75	EA	$ 41.84	$ 3,138.00
19	10 Days	70198404	6361583	SEAT INSERT BOTTOM, RED, TYPE A NF 40	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 37.52	$ 1,876.00
20	10 Days	70198415	6361585	SEAT INSERT BOTTOM, RED, TYPE B, NF-40	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 37.52	$ 1,876.00
21	10 Days	70198416	6361582	SEAT INSERT BACK, RED, TYPE A, NF-40	Camira (Holdsworth) - CAF-325 (RED)	25	EA	$ 39.30	$ 982.50
	Bus Fleet Seat Upholstery Replacement & Repair Services IFB - MTS Bid Form								
	MTS Doc. No. B0785.0-26 SDTC								
	Bidder Name: Molina Manufacturing, Inc.								
22	10 Days	70203294	6493376	Seat insert B,C,F, Bottom, 18" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 265.31	$ 3,979.65
23	10 Days	70203446	6493377	Seat insert, B, back, 18" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 270.49	$ 2,704.90
24	10 Days	70203293	6493379	Seat insert, E, Bottom, 19" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 265.31	$ 3,979.65
25	10 Days	70203659	6493378	Seat insert, E, back, 19" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 270.49	$ 2,704.90
26	10 Days	70203658	6493375	C & F Back right insert	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 270.49	$ 2,704.90
	Bus Fleet Seat Upholstery Replacement & Repair Services IFB - MTS Bid Form								
	MTS Doc. No. B0785.0-26 SDTC								
	Bidder Name: Molina Manufacturing, Inc.								
27	10 Days	70203660	6493380	C & F Back left insert	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 270.49	$ 2,704.90

28	10 Days	70203661	6496031	Seat Insert, D, Bottom	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 285.46	$ 2,854.60
30	10 Days	70203295	6496030	Seat Insert Back, D, R,L	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 315.61	$ 3,156.10
31	10 Days	70203657	6493373	Seat Insert, A , Back WC - W/LOGO	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 481.11	$ 4,811.10
32	10 Days	70203675	6493374	Seat Insert, A Bottom	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 418.11	$ 4,181.10
								Sub-Total	$ 74,448.10
								Shipping/Delivery Charges	$ 4,783.86
								TOTAL - YEAR 3 (All Inclusive):	$ 79,231.96

	Provide lead time (In calendar days)	MTS Material No.	PART NUMBER	ITEM DESCRIPTION	Fabric/Vinyl	QTY	UOM	UNIT PRICE	EXT. PRICE
1	10 Days	70201960	6477489	INSERT BACK, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 35.49	$ 354.90
2	10 Days	70201961	6477488	INSERT CUSHION, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 33.23	$ 332.30
3	10 Days	70201962	6477487	INSERT, BACK WC, W/LOGO, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 55.44	$ 554.40
4	10 Days	70202394	83-08605-000	SEAT INSERT, BACK, WC, W/LOGO,1600	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 56.71	$ 567.10
5	10 Days	70202392	83-08603-000	SEAT INSERT, BACK, PASSENGER, 1700	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 38.99	$ 584.85
6	10 Days	70202393	83-08604-000	SEAT INSERT, BOTTOM, PASSENGER, 1700	Morbern Vinyl - Flair Red Dawn FA-308	50	EA	$ 36.21	$ 1,810.50
7	10 Days	70202395	83-08606-000	SEAT INSERT, BOTTOM, WC, 1700	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 36.36	$ 909.00
8	10 Days	70202575	83-09951-000	SEAT INSERT, BACK, WC W/LOGO,, 1700	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 58.98	$ 884.70
9	10 Days	70202178	6487661	INSERT BACK, DETAIL B, 1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 40.33	$ 1,008.25
10	10 Days	70202181	6487659	INSERT BACK, DETAIL A, WC,W/LOGO,1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 60.33	$ 1,508.25
11	10 Days	70202182	6487660	INSERT BOTTOM, DETAIL B, 1800	Morbern Vinyl - Flair Red Dawn FA-308	50	EA	$ 36.28	$ 1,814.00
12	10 Days	70202183	6487658	INSERT BOTTOM, DETAIL A, WC, 1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 36.43	$ 910.75
13	10 Days	70202141	6444665	Seat Bottom, Type A, WC, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	75	EA	$ 38.93	$ 2,919.75
14	10 Days	70202139	6444666	Seat Back, Type A, WC,W/LOGO, 1200/1300	Camira (Holdsworth) - CAF 325 (RED)	50	EA	$ 63.66	$ 3,183.00
15	10 Days	70202140	6444667	Seat Bottom, Type B, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	150	EA	$ 38.43	$ 5,764.50
16	10 Days	70200928	6444668	Seat Back, Type B, Flip Up, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 43.66	$ 2,183.00
17	10 Days	70198752	582390-3L	SEAT INSERT BOTTOM PASSENGER - GILLIG	Camira (Holdsworth) - CAF-325 (RED)	200	EA	$ 38.23	$ 7,646.00
18	10 Days	70198753	58N490-3L	SEAT INSERT, BACK, PASSENGER, GILLIG	Camira (Holdsworth) - CAF-325 (RED)	75	EA	$ 42.04	$ 3,153.00
19	10 Days	70198404	6361583	SEAT INSERT BOTTOM, RED, TYPE A NF 40	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 37.71	$ 1,885.50
Bus Fleet Seat Upholstery Replacement & Repair Services IFB - MTS Bid Form									
MTS Doc. No. B0785.0-26 SDTC									
Bidder Name: Molina Manufacturing, Inc.									
20	10 Days	70198415	6361585	SEAT INSERT BOTTOM, RED, TYPE B, NF-40	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 37.71	$ 1,885.50
21	10 Days	70198416	6361582	SEAT INSERT BACK, RED, TYPE A, NF-40	Camira (Holdsworth) - CAF-325 (RED)	25	EA	$ 39.46	$ 986.50
22	10 Days	70203294	6493376	Seat insert B,C,F, Bottom, 18" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 265.94	$ 3,989.10
23	10 Days	70203446	6493377	Seat insert, B, back, 18" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 271.12	$ 2,711.20
24	10 Days	70203293	6493379	Seat insert, E, Bottom, 19" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 265.94	$ 3,989.10
25	10 Days	70203659	6493378	Seat insert, E, back, 19" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 271.12	$ 2,711.20
26	10 Days	70203658	6493375	C & F Back right insert	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 271.12	$ 2,711.20
27	10 Days	70203660	6493380	C & F Back left insert	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 271.12	$ 2,711.20

28	10 Days	70203661	6496031	Seat Insert, D, Bottom	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 286.09	$ 2,860.90
30	10 Days	70203295	6496030	Seat Insert Back, D, R,L	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 316.24	$ 3,162.40
31	10 Days	70203657	6493373	Seat Insert, A , Back WC - W/LOGO	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 481.74	$ 4,817.40
32	10 Days	70203675	6493374	Seat Insert, A Bottom	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 418.74	$ 4,187.40
								Sub-Total	$ 74,696.85
								Shipping/Delivery Charges	$ 4,934.89
								TOTAL - YEAR 4 (All Inclusive):	$ 79,631.74

	Provide lead time (In calendar days)	MTS Material No.	PART NUMBER	ITEM DESCRIPTION	Fabric/Vinyl	QTY	UOM	UNIT PRICE	EXT. PRICE
1	10 Days	70201960	6477489	INSERT BACK, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 35.66	$ 356.60
2	10 Days	70201961	6477488	INSERT CUSHION, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 33.37	$ 333.70
3	10 Days	70201962	6477487	INSERT, BACK WC, W/LOGO, 1500	Camira (Holdworth) - HTL-01 (Grey)	10	EA	$ 55.61	$ 556.10
4	10 Days	70202394	83-08605-000	SEAT INSERT, BACK, WC, W/LOGO,1600	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 56.89	$ 568.90
5	10 Days	70202392	83-08603-000	SEAT INSERT, BACK, PASSENGER, 1700	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 39.20	$ 588.00
6	10 Days	70202393	83-08604-000	SEAT INSERT, BOTTOM, PASSENGER, 1700	Morbern Vinyl - Flair Red Dawn FA-308	50	EA	$ 36.39	$ 1,819.50
7	10 Days	70202395	83-08606-000	SEAT INSERT, BOTTOM, WC, 1700	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 36.54	$ 913.50
8	10 Days	70202575	83-09951-000	SEAT INSERT, BACK, WC W/LOGO,, 1700	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 59.19	$ 887.85
9	10 Days	70202178	6487661	INSERT BACK, DETAIL B, 1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 40.55	$ 1,013.75
10	10 Days	70202181	6487659	INSERT BACK, DETAIL A, WC,W/LOGO,1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 60.55	$ 1,513.75
11	10 Days	70202182	6487660	INSERT BOTTOM, DETAIL B, 1800	Morbern Vinyl - Flair Red Dawn FA-308	50	EA	$ 36.46	$ 1,823.00
12	10 Days	70202183	6487658	INSERT BOTTOM, DETAIL A, WC, 1800	Morbern Vinyl - Flair Red Dawn FA-308	25	EA	$ 36.61	$ 915.25
13	10 Days	70202141	6444665	Seat Bottom, Type A, WC, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	75	EA	$ 39.11	$ 2,933.25
	Bus Fleet Seat Upholstery Replacement & Repair Services IFB - MTS Bid Form								
	MTS Doc. No. B0785.0-26 SDTC								
	Bidder Name: Molina Manufacturing, Inc.								
14	10 Days	70202139	6444666	Seat Back, Type A, WC,W/LOGO, 1200/1300	Camira (Holdsworth) - CAF 325 (RED)	50	EA	$ 63.89	$ 3,194.50
15	10 Days	70202140	6444667	Seat Bottom, Type B, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	150	EA	$ 38.61	$ 5,791.50
16	10 Days	70200928	6444668	Seat Back, Type B, Flip Up, 1200/1300	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 43.89	$ 2,194.50
17	10 Days	70198752	582390-3L	SEAT INSERT BOTTOM PASSENGER - GILLIG	Camira (Holdsworth) - CAF-325 (RED)	200	EA	$ 38.41	$ 7,682.00
18	10 Days	70198753	58N490-3L	SEAT INSERT, BACK, PASSENGER, GILLIG	Camira (Holdsworth) - CAF-325 (RED)	75	EA	$ 42.25	$ 3,168.75
19	10 Days	70198404	6361583	SEAT INSERT BOTTOM, RED, TYPE A NF 40	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 37.85	$ 1,892.50
	Bus Fleet Seat Upholstery Replacement & Repair Services IFB - MTS Bid Form								
	MTS Doc. No. B0785.0-26 SDTC								
	Bidder Name: Molina Manufacturing, Inc.								
20	10 Days	70198415	6361585	SEAT INSERT BOTTOM, RED, TYPE B, NF-40	Camira (Holdsworth) - CAF-325 (RED)	50	EA	$ 37.85	$ 1,892.50
21	10 Days	70198416	6361582	SEAT INSERT BACK, RED, TYPE A, NF-40	Camira (Holdsworth) - CAF-325 (RED)	25	EA	$ 39.63	$ 990.75
22	10 Days	70203294	6493376	Seat insert B,C,F, Bottom, 18" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 266.60	$ 3,999.00
23	10 Days	70203446	6493377	Seat insert, B, back, 18" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 271.78	$ 2,717.80
24	10 Days	70203293	6493379	Seat insert, E, Bottom, 19" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	15	EA	$ 266.60	$ 3,999.00
25	10 Days	70203659	6493378	Seat insert, E, back, 19" 1900 series	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 271.78	$ 2,717.80

26	10 Days	70203658	6493375	C & F Back right insert	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 271.78	$ 2,717.80
27	10 Days	70203660	6493380	C & F Back left insert	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 271.78	$ 2,717.80
28	10 Days	70203661	6496031	Seat Insert, D, Bottom	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 286.75	$ 2,867.50
30	10 Days	70203295	6496030	Seat Insert Back, D, R,L	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 316.90	$ 3,169.00
31	10 Days	70203657	6493373	Seat Insert, A , Back WC - W/LOGO	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 482.40	$ 4,824.00
32	10 Days	70203675	6493374	Seat Insert, A Bottom	Morbern Vinyl - Flair Red Dawn FA-308	10	EA	$ 419.40	$ 4,194.00
								Sub-Total	$ 74,953.85
								Shipping/Delivery Charges	$ 5,095.30
								TOTAL - YEAR 5 (All Inclusive):	$ 80,049.15

Bus Fleet Seat Upholstery Replacement & Repair Services IFB - MTS Bid Form

MTS Doc. No. B0785.0-26 SDTC

Bidder Name: Molina Manufacturing, Inc.

SDTC	
Grand Totals	
Year 1 (2/1/2026-1/31/2027)	$ 78,359.70
Year 2 (2/1/2027-1/31/2028)	$ 78,815.05
Year 3 (2/1/2028-1/31/2029)	$ 79,231.96
Year 4 (2/1/2029-1/31/2030)	$ 79,631.74
Year 5 (2/1/2030-1/31/2031)	$ 80,049.15
TOTAL - (YEARS 1-5) - BASIS OF AWARD	**$ 396,087.60**
CA 7.75 Sales Tax	**$ 30,696.79**
GRAND TOTAL	**$ 426,784.39**

BIDDER ACCEPTS RESPONSIBILITY FOR ACCURACY AND PRESENTATION OF THE ABOVE NUMBERS.

**The above quantities are for bidding pruposes only and are based on MTS' current usage. 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 pricing form, and it is dictated by MTS actual requirements and the available funding at the time each order is initiated.*

Bidders pricing should not include sales tax. MTS will add tax at PO issuance.

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 4/9/26

Agenda Item No. 09

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
EXECUTIVE COMMITTEE

April 16, 2026

SUBJECT:

Train Operator Uniforms – 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. L1708.0-26 (in substantially the same format as Attachment A), with Ace Uniforms in the amount of $470,034.34 (inclusive of CA sales tax), for five (5) years effective May 1, 2026 for the purchase of Train Operator Uniforms.

Budget Impact

The total budget for this contract shall not exceed $470,034.34. These services will be funded by the San Diego Trolley, Inc. (SDTI) Transportation Operations Budget account 250016-571280.

DISCUSSION:

San Diego Trolley, Inc. (SDTI) needs a uniform contractor to provide uniforms for the rail transportation operators, constructions safety flag persons, and transportation supervisors over the next five (5) years. It is the intent of MTS to provide a uniform that its employees will take pride in wearing that reflects MTS' professionalism. It is important that the garments fit well, are comfortable, and easy to care for.

San Diego Metropolitan Transit System (MTS) Policy No. 52, "Procurement of Goods and Services", requires a formal competitive process for procurements exceeding $150,000.00.

On November 28, 2025, MTS notified twenty-eight (28) prospective suppliers with a Request for Proposals (RFP) for Train Operator Uniforms.

On January 21, 2026, MTS received two (2) proposals from Ace Uniforms and UniFirst.

On February 5, 2026, an evaluation committee, consisting of the MTS Director of Rail Transportation, MTS Lead Training Supervisor for Rail, and an MTS Financial Analyst, convened to evaluate proposals based on the following criteria:

Evaluation Criteria	Total Possible Points
Qualifications of the Firm	25
Staffing and Management	10
Work Plan	35
Cost	30
TOTAL	**100**

The table below represents the initial scores and rankings:

Ranking	Proposer	Initial Cost	Technical Score	Cost Score	Total Score
1	Ace Uniforms	$470,034.34	61.83	15.81	77.64
2	UniFirst	$247,731.51	37.83	30.00	67.83

On February 10, 2026, following the initial evaluation, MTS requested clarification from both proposers on certain aspects of their Technical Proposals. MTS also requested each proposer to submit a Revised Cost Proposal.

On February 17, 2026, MTS received answers to the clarifications requested from both proposers regarding their Technical Proposals. The costs for Ace Uniforms remained the same while UniFirst lowered its costs by 2%.

On February 19, 2026, the evaluation committee reconvened. After reviewing both proposers' responses to the request for clarifications, the committee deemed Ace Unforms to be the highest-ranked proposer and offered the best overall value to MTS. The table below represents the final scores and rankings:

Ranking	Proposer	Initial Cost	Technical Score	Cost Score	Total Score
1	Ace Uniforms	$470,034.34	61.83	15.81	77.64
2	UniFirst	$242,669.47	36.84	30.00	66.83

In addition, the MTS evaluation panel was satisfied with the past performance and quality of work that Ace Uniforms had provided to MTS under PO 4500036741 & PO 4500065853. By comparison to MTS's Independent Cost Estimate (ICE) at $467,202.32, and based on a comparison of all proposers, MTS staff determined Ace Uniform's proposal to be fair and reasonable.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. L1708.0-26 (in substantially the same format as Attachment A), with Ace Uniforms in the amount of $470,034.34 (inclusive of CA sales tax), for five (5) years effective May 1, 2026 for the purchase of Train Operator Uniforms.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachments: A. Draft Standard Agreement MTS Doc. No. L1708.0-26
B. Scope of Work
C. Contractor's Cost Form

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. L1708.0-26

TRAIN OPERATOR UNIFORMS

THIS AGREEMENT is entered into this ___ day of _____, 2026 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: Ace Uniforms Address: 633 16th St.

San Diego (City) CA (State) 92101 (Zip)

Form of Business: LLC (C-Corp)

Email: frank@aceuniforms.com

Telephone: (619) 762-7632

Authorized person to sign contracts Frank Flores (Name) Director of 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 up to five (5) years effective May 1, 2026 through April 30, 2031.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $470,034.34 without the express written consent of MTS.

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

DRAFT

SCOPE OF WORK/TECHNICAL SPECIFICATIONS

1. OVERVIEW

The San Diego Metropolitan Transit System (MTS), on behalf of San Diego Trolley, Inc. (SDTI), is seeking proposals for the provision of uniforms for the rail transportation operators. It is the intent of MTS to provide a uniform that its employees will take pride in wearing that reflects MTS' professionalism. It is important that the garments fit well, are comfortable and easy to care for.

The Contractor shall provide uniforms that may consist of a variation of combinations noted herein and ensure that the uniforms are a fit for MTS employees. The uniforms provided must meet or exceed the requirements specified in the scope/minimum technical requirements.

It is anticipated that the contract will be for a five (5) year period effective May 1, 2026, through April 30 2031.

2. SCOPE OF WORK/MINIMUM TECHNICAL SPECIFICATIONS

A. The Contractor must be able to fulfill the following to ensure a professional image:
   i. Provide new and replacement item uniform articles
   ii. Uniform needs of approximately 67 supervisors, 195 train operators, and 75 flag persons.
   iii. Provide everything necessary including, but not limited to, long sleeve shirts, short sleeve shirts, pants, jackets and hats, as required in the attached bid forms.
   iv. Provide employee measuring and uniform pick-up during regular business hours at a convenient store location with adequate free parking.
   v. Contractor must be able to provide uniform garments in standard sizes (S – Small, M – Medium, L – Large, XL – Extra Large) up through 6XL, as well as Big/Tall sizes, Petite, Extra Small to size zero, etc.
   vi. Generate an individualized invoice for each employee that's authorized for uniform orders.

B. Rail Transportation uniform purchase requirements shall consist of the following components:
   i. **Supervisors**: The initial provision of three (3) pants, three (3) shirts and one jacket for approximately 15 new hires per year. Each shirt will require one breast and up to three sleeve patches to be sewn onto the garment or embroidery that is approved by MTS. Each jacket will require one breast and one sleeve patch to be sewn onto the garment.
   ii. **Train Operators**: The initial provision of three (3) pants, three (3) shirts, and one jacket for approximately 40 new hires per year. Each shirt and jacket will require one breast, up to two sleeve patches, to be sewn onto the garment or embroidery that is approved by MTS. Specialty patches are on a as needed basis, 20 PCC patches, 40 instructor patches per year.
   iii. **Flag Persons**: The initial provision of three (3) shirts and one jacket for approximately 45 new hires per year. Each shirt will require one breast patch to be sewn onto the garment. Each jacket will require one breast patch to be sewn onto the garment. Each jacket will require one breast patch and retro-reflective striping two (2) inch fluorescent orange with three-quarter (3/4) inch sliver reflective tape that complies with ANSI/ISEA Class II (2), day or night, to be sewn ono the garment from shoulder to waste line vertically and horizontally around waste line.

C. MTS anticipates that 30% of its train operators will require all or part of their uniform inventory replaced, and 20% of its supervisors and flag persons will require all or part of their uniform inventory replaced each year.

D. MTS procurement staff, Director of Rail Transportation, Manager of Rail Transportation and Training Supervisors are the only personnel authorized by MTS to order employee operator uniforms under this contract. The list of operator names will be provided to the Contractor.

E. A uniform acceptance period shall be no more than 30 calendar days from delivery. After the initial acceptance period, any necessary alterations, or the supply of new uniforms for MTS employees whose uniforms no longer fit properly shall be the responsibility of MTS.

F. All orders must be individually invoiced and individually packaged even if multiple orders are combined. See invoicing/payment section below.

G. Contractor should note that MTS is estimating the order quantities. These should not be considered as a minimum or maximum order level but merely estimates for proposal evaluation purposes. Actual requirements may vary dramatically from year to year based on MTS actual usage and funding availability.

Replacement authorization for all employees is provided on an as-needed basis, based on normal wear and tears.

MTS reserves the right to add and delete garments from its uniform program as it deems necessary. Any uniform change must be approved in advance by the MTS Project Manager or designee. All changes will be performed in the manner set forth elsewhere in the Contract Documents.

H. In the event a garment becomes unavailable, Contractor must immediately notify the operator and MTS Project Manager/designee. Contractor shall identify other supply sources that meet MTS' requirements and request a product change in writing for MTS' approval. Pricing for garment substitutions will be established on a case-by-case basis.

<u>IMPORTANT:</u> MTS is only accepting offers for the styles/numbers below unless a Request for an Approved Equal is requested during the Question and Answers period and approved by MTS in writing. MTS will not accept proposals for other styles/numbers that are not pre-approved.

TRAIN OPERATORS		
DESCRIPTION	**MEN'S (Style No. or "Approved Equal")**	**WOMEN'S (Style No. or "Approved Equal")**
Short sleeve shirt (grey)	Horace Small New Dimension Poly Cotton Blend 65% 35% HS1209	Horace Small New Dimension Poly Cotton Blend 65% 35% HS1267

Long sleeve shirt (grey)	Horace Small New Dimension Poly Cotton Blend 65% 35% HS1113	Horace Small New Dimension Poly Cotton Blend 65% 35% HS1166
Pants (black)	Red Kap Work Pants With cell pocket Poly Cotton Blend 65% 35% PT88BK	Red Kap Work Pants With cell pocket Poly Cotton Blend 65% 35% PT89BK
Pants (black)	N/A	N/A
Jacket (steel grey)	Port Authority Fleece Jacket J754	N/A
Hats (black/red letters)	Flex Fit Hats 6277	Flex Fit Hats 6277
SUPERVISORS		
Description	**MEN'S (Style No. or "Approved Equal")**	**WOMEN'S (Style No. or "Approved Equal")**
Short sleeve shirt (white)	Flying Cross all weather deluxe men's tropical S/S shirt 95R6600	Flying Cross all weather deluxe women's tropical S/S shirt 152W6600
Long sleeve shirt (white)	Flying Cross all weather deluxe men's tropical L/S shirt 45W6600	Flying Cross all weather deluxe women's tropical L/S shirt 102W6600
Pants (black)	Red Kap Work Pants With cell pocket Poly Cotton Blend 65% 35% PT88BK	Red Kap Work Pants With cell pocket Poly Cotton Blend 65% 35% PT89BK
Pants (black)	N/A	N/A
Jacket (red)	Port Authority Fleece Jacket J754 RED	N/A
Jacket (black)	Sport-Tek Full Wind Jacket-Black J5T70	N/A
Hats (black/white letters)	Flex Fit Hats 6277	Flex Fit Hats 6277
FLAG PERSONS		
Short sleeve shirt (Orange)	Red Kap Orange S/S work shirt SS24-EHV	N/A

Long sleeve shirt (Orange)	Red Kap Orange L/S work shirt SS14-EHV	N/A
Jacket (Navy Blue)	Red Kap Navy work jacket with Orange reflective piping JT22NV	N/A

3. MEASURING/ALTERATIONS

The Contractor shall be required to go to the MTS facility at 12 South 13th Street, San Diego, CA 92101 to measure employees for uniforms for a professional appearance by the employee. If the contractor is within 10 miles of the aforementioned MTS facility, then MTS staff may also go to the Contractor for fittings and pickups. However, MTS reserves the right to keep its above location as the main place for fittings.

Contractor shall:

A. Measure each employee individually to ensure that uniforms fit properly
B. Measurements shall be obtained by physically measuring employees
C. Make any and all alterations to the uniform at no additional charge
D. The Contractor shall have uniforms available for pick-up by the employee no later than ten (10) business days after date of measurements/order placement/alterations
E. After the initial acceptance period (30 days), any necessary alterations shall be the responsibility of MTS or the employee
F. Patch sizes are approximately 4¼" x 4¼" or smaller. Patches will be provided by MTS and shipped to the Contractor. It is the Contractor's responsibility to advise the MTS PM in a timely matter when they are running low on patches.
G. The Contractor may offer to provide MTS with replacement patches within the scope of this contract, with a final decision made solely by MTS, and such patches must be of equal quality with the existing supply and will be subject to prices provided in the bid.

4. CONTRACTOR RESPONSIBLITIES

Contractor shall:

A. Maintain written and verbal communications with MTS relating to the status of the uniforms.
B. Ensure that products and/or services provided shall meet or exceed industry standards.
C. Maintain a trackable and reportable record of all items and/or services provided under this contract.
D. Respond promptly and precisely to MTS staff's needs and requests for information within two (2) business days.
E. Quality control and on-time delivery shall be a priority for all orders.
F. Provide written confirmation of each order.
G. Provide a monthly report listing uniform items purchased and returned during the month. The items should be listed by item description, size, date of purchase or return, Operator name and number. The report should also provide an ongoing listing of all unfilled items. Unfilled orders must have a notation of when the item will be shipped.
H. Provide reports of individual accounts when requested.
I. Provide a report summarizing all accounts when requested.

5. PRICING

The bid price is firm-fixed and all-inclusive, including but not limited to all administration, material, supplies, travel and labor costs associated with the item purchased, all patches, all sewing in matching color thread to attach all necessary patches, and all sewing to attach patches. All pricing **must** be submitted in two (2) decimal places, for example $10.47, and not 3 decimal places such as $10.475.

All patches shall be provided by the Contractor.

The Contractor may offer to provide MTS with replacement patches within the scope of this contract, with a final decision made solely by MTS, and such patches must be of equal quality with the existing supply and will be subject to prices provided in the bid.

6. DELIVERY AND ACCEPTANCE

The Contractor shall have uniforms available for pick-up by the employee no later than ten (10) business days after date of measurements/order placement.
Lead time for custom or special-order items shall be within thirty (30) calendar days from the order date.

Deliverables provided under this PO shall be delivered in first class conditions, complete and ready for operation, and the Contractor shall assume all responsibility and risk of loss incident to said delivery until the MTS employee receives the uniform.

Upon receipt, MTS employees will acknowledge receipt of said items. Delivery shall not constitute acceptance. Upon inspection by MTS, a determination will be made whether said items are full functioning and in conformance with PO requirements. If found in conformance, MTS employees shall immediately approve the order receipt, thereby constituting acceptance. The contractor can then add this accepted order to next month's invoice. If the items are found not in compliance, MTS will immediately notify the Contractor and furnish all details of deficiencies. Contractor shall correct the deficiencies or supply new items (at the discretion of MTS) and resubmit for inspection.

Contractor shall immediately notify the operator and MTS Project Manager/designee if delivery requirements cannot be met and explain why. Any order exceeding 21 days from date of order will be given priority and shipped for next-day delivery without any additional cost to MTS.

If delivery of any contracted item is consistently late, Contractor shall work with MTS for a mutual remedy. If no remedy can be made, or a reasonable explanation is not given, MTS may terminate the Contract.

7. BACKORDERED PRODUCTS

A discount shall be applied in the following manner for products received after days, as shown in the schedule below, from the date of each initial order.

A. 30-45 days: 10%

B. 46-55 days: 20%
C. 56-65 days: 30%
D. 66-75 days: 50%
E. Delays of greater than 75 days will require vendors to provide an explanation of the schedule for the receipt of the product. However, MTS shall not be invoiced for more than 50% of the product. MTS reserves the right to cancel or to substitute similar products at the discounted rate.

8. INVOICES

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

Contractor should separate and summarize invoices and submit them to MTS in the following categories: Train Operators, Supervisors and Flag persons. Each summary shall include:

A. Name of the MTS employee
B. Uniform pieces purchased
C. Date of the Order
D. Invoice number
E. Contract/PO number
F. Unit price and total amount of order
G. Each summary shall also contain the same information for any credits issued during the month.

Failure of the contractor /uniform provider to separate and make legible and easily understood and trackable by MTS Project Manager and Finance/AP personnel may result in delayed payment of invoices. Contractor is encouraged to work closely with MTS to address the requirement prior to first invoice submission.

Payment terms shall be net 30 days from invoice date. If MTS rejects an incorrectly submitted invoice and sends it back for correction, the net 30 days restart from the corrected 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.

9. [NOT APPLICABLE] SAFETY DATA SHEETS (SDS)
10. [NOT APPLICABLE] NO RIGHT TO POST SIGNS
11. [NOT APPLICABLE] REPLACEMENT PARTS
12. [NOT APPLICABLE] EXPEDITING

The goods furnished under this Agreement shall be subject to expediting by MTS. MTS shall be afforded free access to Contractor's shops, factories, or places of business, and those of Contractor's suppliers, for expediting purposes. As required by MTS, Contractor shall supply schedules, unpriced copies of purchase orders and progress reports for MTS's use in expediting.

TRAIN OPERATOR UNIFORMS RFP, MTS DOC. NO. L1708.0-26

TRAIN OPERATORS

#	Description	Size	Qty.	YEAR 1 (4/1/26 to 3/31/27)		YEAR 2 (4/1/27 to 3/31/28)		YEAR 3 (4/1/28 to 3/31/29)		YEAR 4 (4/1/29 to 3/31/30)		YEAR 5 (4/1/30 to 3/31/31)	
				Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Men's Short Sleeve Shirts Grey 65/35 Poly Cotton (HS1209)	Small	6	$65.98	$ 395.88	$ 69.28	$ 415.68	$ 72.74	$ 436.44	$ 76.38	$ 458.28	$ 80.20	$ 481.20
2	Men's Short Sleeve Shirts Grey 65/35 Poly Cotton (HS1209)	Medium	46	$65.98	$ 3,035.08	$ 69.28	$ 3,186.88	$ 72.74	$ 3,346.04	$ 76.38	$ 3,513.48	$ 80.20	$ 3,689.20
3	Men's Short Sleeve Shirts Grey 65/35 Poly Cotton (HS1209)	Large	58	$65.98	$ 3,826.84	$ 69.28	$ 4,018.24	$ 72.74	$ 4,218.92	$ 76.38	$ 4,430.04	$ 80.20	$ 4,651.60
4	Men's Short Sleeve Shirts Grey 65/35 Poly Cotton (HS1209)	XL	58	$65.98	$ 3,826.84	$ 69.28	$ 4,018.24	$ 72.74	$ 4,218.92	$ 76.38	$ 4,430.04	$ 80.20	$ 4,651.60
5	Men's Short Sleeve Shirts Grey 65/35 Poly Cotton (HS1209)	2 XL	45	$65.98	$ 2,969.10	$ 69.28	$ 3,117.60	$ 72.74	$ 3,273.30	$ 76.38	$ 3,437.10	$ 80.20	$ 3,609.00
6	Men's Short Sleeve Shirts Grey 65/35 Poly Cotton (HS1209)	3 XL	25	$65.98	$ 1,649.50	$ 69.28	$ 1,732.00	$ 72.74	$ 1,818.50	$ 76.38	$ 1,909.50	$ 80.20	$ 2,005.00
7	Men's Short Sleeve Shirts Grey 65/35 Poly Cotton (HS1209)	4 XL	14	$95.97	$ 1,343.58	$ 100.77	$ 1,410.78	$ 105.81	$ 1,481.34	$ 111.10	$ 1,555.40	$ 116.66	$ 1,633.24
		Subtotal	**252**		**$ 17,046.82**		**$ 17,899.42**		**$ 18,793.46**		**$ 19,733.84**		**$ 20,720.84**

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Women's Short Sleeve Shirts Grey 65/35 Poly Cotton (HS1267)	Small	10	$65.98	$ 659.80	$ 69.28	$ 692.80	$ 72.74	$ 727.40	$ 76.38	$ 763.80	$ 80.20	$ 802.00
2	Women's Short Sleeve Shirts Grey 65/35 Poly Cotton (HS1267)	Medium	15	$65.98	$ 989.70	$ 69.28	$ 1,039.20	$ 72.74	$ 1,091.10	$ 76.38	$ 1,145.70	$ 80.20	$ 1,203.00
3	Women's Short Sleeve Shirts Grey 65/35 Poly Cotton (HS1267)	Large	50	$65.98	$ 3,299.00	$ 69.28	$ 3,464.00	$ 72.74	$ 3,637.00	$ 76.38	$ 3,819.00	$ 80.20	$ 4,010.00
4	Women's Short Sleeve Shirts Grey 65/35 Poly Cotton (HS1267)	XL	50	$65.98	$ 3,299.00	$ 69.28	$ 3,464.00	$ 72.74	$ 3,637.00	$ 76.38	$ 3,819.00	$ 80.20	$ 4,010.00
5	Women's Short Sleeve Shirts Grey 65/35 Poly Cotton (HS1267)	2 XL	3	$65.98	$ 197.94	$ 69.28	$ 207.84	$ 72.74	$ 218.22	$ 76.38	$ 229.14	$ 80.20	$ 240.60
6	Women's Short Sleeve Shirts Grey 65/35 Poly Cotton (HS1267)	3 XL	2	$95.97	$ 191.94	$ 100.77	$ 201.54	$ 105.81	$ 211.62	$ 111.10	$ 222.20	$ 116.66	$ 233.32
		Subtotal	**130**		**$ 8,637.38**		**$ 9,069.38**		**$ 9,522.34**		**$ 9,998.84**		**$ 10,498.92**

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Men's Long Sleeve Shirts Grey 65/35 Poly Cotton (HS1113)	Small	1	$73.70	$ 73.70	$ 77.39	$ 77.39	$ 81.26	$ 81.26	$ 85.32	$ 85.32	$ 89.59	$ 89.59
2	Men's Long Sleeve Shirts Grey 65/35 Poly Cotton (HS1113)	Medium	1	$73.70	$ 73.70	$ 77.39	$ 77.39	$ 81.26	$ 81.26	$ 85.32	$ 85.32	$ 89.59	$ 89.59
3	Men's Long Sleeve Shirts Grey 65/35 Poly Cotton (HS1113)	Large	1	$73.70	$ 73.70	$ 77.39	$ 77.39	$ 81.26	$ 81.26	$ 85.32	$ 85.32	$ 89.59	$ 89.59
4	Men's Long Sleeve Shirts Grey 65/35 Poly Cotton (HS1113)	XL	1	$73.70	$ 73.70	$ 77.39	$ 77.39	$ 81.26	$ 81.26	$ 85.32	$ 85.32	$ 89.59	$ 89.59
5	Men's Long Sleeve Shirts Grey 65/35 Poly Cotton (HS1113)	2 XL	1	$73.70	$ 73.70	$ 77.39	$ 77.39	$ 81.26	$ 81.26	$ 85.32	$ 85.32	$ 89.59	$ 89.59
6	Men's Long Sleeve Shirts Grey 65/35 Poly Cotton (HS1113)	3 XL	1	$104.55	$ 104.55	$ 109.78	$ 109.78	$ 115.27	$ 115.27	$ 121.03	$ 121.03	$ 127.08	$ 127.08
		Subtotal	**6**		**$ 473.05**		**$ 496.73**		**$ 521.57**		**$ 547.63**		**$ 575.03**

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Women's Long Sleeve Shirts Grey 65/35 Poly Cotton (HS1166)	Small	1	73.70	$ 73.70	$ 77.39	$ 77.39	$ 81.26	$ 81.26	$ 85.32	$ 85.32	$ 89.59	$ 89.59
2	Women's Long Sleeve Shirts Grey 65/35 Poly Cotton (HS1166)	Medium	1	73.70	$ 73.70	$ 77.39	$ 77.39	$ 81.26	$ 81.26	$ 85.32	$ 85.32	$ 89.59	$ 89.59
3	Women's Long Sleeve Shirts Grey 65/35 Poly Cotton (HS1166)	Large	1	73.70	$ 73.70	$ 77.39	$ 77.39	$ 81.26	$ 81.26	$ 85.32	$ 85.32	$ 89.59	$ 89.59
4	Women's Long Sleeve Shirts Grey 65/35 Poly Cotton (HS1166)	XL	1	73.70	$ 73.70	$ 77.39	$ 77.39	$ 81.26	$ 81.26	$ 85.32	$ 85.32	$ 89.59	$ 89.59
5	Women's Long Sleeve Shirts Grey 65/35 Poly Cotton (HS1166)	2 XL	1	73.70	$ 73.70	$ 77.39	$ 77.39	$ 81.26	$ 81.26	$ 85.32	$ 85.32	$ 89.59	$ 89.59
6	Women's Long Sleeve Shirts Grey 65/35 Poly Cotton (HS1166)	3 XL	1	104.55	$ 104.55	$ 109.78	$ 109.78	$ 115.27	$ 115.27	$ 121.03	$ 121.03	$ 127.08	$ 127.08
		Subtotal	**6**		**$ 473.05**		**$ 496.73**		**$ 521.57**		**$ 547.63**		**$ 575.03**

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Men's Pants Black w/cell phone pocket (PT88BK)	Waist 42 & Under	98	$38.57	$ 3,779.86	$ 40.50	$ 3,969.00	$ 42.53	$ 4,167.94	$ 44.66	$ 4,376.68	$ 46.89	$ 4,595.22
2	Men's Pants Black w/cell phone pocket (PT88BK)	Waist 44 & Above	99	$70.55	$ 6,984.45	$ 74.08	$ 7,333.92	$ 77.78	$ 7,700.22	$ 81.67	$ 8,085.33	$ 85.75	$ 8,489.25
		Subtotal	**197**		**$ 10,764.31**		**$ 11,302.92**		**$ 11,868.16**		**$ 12,462.01**		**$ 13,084.47**

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Women's Pants Black w/cell phone pocket (PT89BK)	Waist 18 & Under	98	$38.57	$ 3,779.86	$ 40.50	$ 3,969.00	$ 42.53	$ 4,167.94	$ 44.66	$ 4,376.68	$ 46.89	$ 4,595.22
2	Women's Pants Black w/cell phone pocket (PT89BK)	Waist 20-28	99	$70.55	$ 6,984.45	$ 74.08	$ 7,333.92	$ 77.78	$ 7,700.22	$ 81.67	$ 8,085.33	$ 85.75	$ 8,489.25
		Subtotal	**197**		**$ 10,764.31**		**$ 11,302.92**		**$ 11,868.16**		**$ 12,462.01**		**$ 13,084.47**

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Men's Port Authority Fleece Jacket Steel Grey (J754)	X-Small	1	$64.00	$ 64.00	$ 67.20	$ 67.20	$ 70.56	$ 70.56	$ 74.09	$ 74.09	$ 77.79	$ 77.79
2	Men's Port Authority Fleece Jacket Steel Grey (J754)	Small	3	$64.00	$ 192.00	$ 67.20	$ 201.60	$ 70.56	$ 211.68	$ 74.09	$ 222.27	$ 77.79	$ 233.37
3	Men's Port Authority Fleece Jacket Steel Grey (J754)	Medium	24	$64.00	$ 1,536.00	$ 67.20	$ 1,612.80	$ 70.56	$ 1,693.44	$ 74.09	$ 1,778.16	$ 77.79	$ 1,866.96
4	Men's Port Authority Fleece Jacket Steel Grey (J754)	Large	24	$64.00	$ 1,536.00	$ 67.20	$ 1,612.80	$ 70.56	$ 1,693.44	$ 74.09	$ 1,778.16	$ 77.79	$ 1,866.96
5	Men's Port Authority Fleece Jacket Steel Grey (J754)	XL	24	$64.00	$ 1,536.00	$ 67.20	$ 1,612.80	$ 70.56	$ 1,693.44	$ 74.09	$ 1,778.16	$ 77.79	$ 1,866.96
6	Men's Port Authority Fleece Jacket Steel Grey (J754)	2 XL	24	$65.67	$ 1,576.08	$ 68.95	$ 1,654.80	$ 72.40	$ 1,737.60	$ 76.02	$ 1,824.48	$ 79.82	$ 1,915.68
7	Men's Port Authority Fleece Jacket Steel Grey (J754)	3 XL	1	$69.00	$ 69.00	$ 72.45	$ 72.45	$ 76.07	$ 76.07	$ 79.87	$ 79.87	$ 83.86	$ 83.86
8	Men's Port Authority Fleece Jacket Steel Grey (J754)	4 XL	1	$70.67	$ 70.67	$ 74.20	$ 74.20	$ 77.91	$ 77.91	$ 81.81	$ 81.81	$ 85.90	$ 85.90
9	Men's Port Authority Fleece Jacket Steel Grey (J754)	5 XL	1	$74.00	$ 74.00	$ 77.70	$ 77.70	$ 81.59	$ 81.59	$ 85.67	$ 85.67	$ 89.95	$ 89.95
10	Men's Port Authority Fleece Jacket Steel Grey (J754)	6 XL	1	$75.67	$ 75.67	$ 79.45	$ 79.45	$ 83.42	$ 83.42	$ 87.59	$ 87.59	$ 91.97	$ 91.97
		Subtotal	**104**		**$ 6,729.42**		**$ 7,065.80**		**$ 7,419.15**		**$ 7,790.26**		**$ 8,179.40**

SUPERVISORS

				YEAR 1 (4/1/26 to 3/31/27)		YEAR 2 (4/1/27 to 3/31/28)		YEAR 3 (4/1/28 to 3/31/29)		YEAR 4 (4/1/29 to 3/31/30)		YEAR 5 (4/1/30 to 3/31/31)	
#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Men's Short Sleeve Shirts - White (95R6600; 8013)	Small	1	$45.43	$ 45.43	$ 47.70	$ 47.70	$ 50.09	$ 50.09	$ 52.59	$ 52.59	$ 55.22	$ 55.22
2	Men's Short Sleeve Shirts - White (95R6600; 8013)	Medium	10	$45.43	$ 454.30	$ 47.70	$ 477.00	$ 50.09	$ 500.90	$ 52.59	$ 525.90	$ 55.22	$ 552.20
3	Men's Short Sleeve Shirts - White (95R6600; 8013)	Large	13	$45.43	$ 590.59	$ 47.70	$ 620.10	$ 50.09	$ 651.17	$ 52.59	$ 683.67	$ 55.22	$ 717.86
4	Men's Short Sleeve Shirts - White (95R6600; 8013)	XL	21	$45.43	$ 954.03	$ 47.70	$ 1,001.70	$ 50.09	$ 1,051.89	$ 52.59	$ 1,104.39	$ 55.22	$ 1,159.62
5	Men's Short Sleeve Shirts - White (95R6600; 8013)	2 XL	5	$47.98	$ 239.90	$ 50.38	$ 251.90	$ 52.90	$ 264.50	$ 55.55	$ 277.75	$ 58.33	$ 291.65
6	Men's Short Sleeve Shirts - White (95R6600; 8013)	3 XL	5	$47.98	$ 239.90	$ 50.38	$ 251.90	$ 52.90	$ 264.50	$ 55.55	$ 277.75	$ 58.33	$ 291.65
7	Men's Short Sleeve Shirts - White (95R6600; 8013)	4 XL	1	$49.23	$ 49.23	$ 51.69	$ 51.69	$ 54.27	$ 54.27	$ 56.98	$ 56.98	$ 59.83	$ 59.83
		Subtotal	**56**		**$ 2,573.38**		**$ 2,701.99**		**$ 2,837.32**		**$ 2,979.03**		**$ 3,128.03**

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Women's Short Sleeve Shirts - White (152W6600; 8013W)	Small	1	$45.43	$ 45.43	$ 47.70	$ 47.70	$ 50.09	$ 50.09	$ 52.59	$ 52.59	$ 55.22	$ 55.22
2	Women's Short Sleeve Shirts - White (152W6600; 8013W)	Medium	2	$45.43	$ 90.86	$ 47.70	$ 95.40	$ 50.09	$ 100.18	$ 52.59	$ 105.18	$ 55.22	$ 110.44
3	Women's Short Sleeve Shirts - White (152W6600; 8013W)	Large	16	$45.43	$ 726.88	$ 47.70	$ 763.20	$ 50.09	$ 801.44	$ 52.59	$ 841.44	$ 55.22	$ 883.52
4	Women's Short Sleeve Shirts - White (152W6600; 8013W)	XL	14	$45.43	$ 636.02	$ 47.70	$ 667.80	$ 50.09	$ 701.26	$ 52.59	$ 736.26	$ 55.22	$ 773.08
5	Women's Short Sleeve Shirts - White (152W6600; 8013W)	2 XL	2	$47.98	$ 95.96	$ 50.38	$ 100.76	$ 52.90	$ 105.80	$ 55.55	$ 111.10	$ 58.33	$ 116.66
6	Women's Short Sleeve Shirts - White (152W6600; 8013W)	3 XL	1	$47.98	$ 47.98	$ 50.38	$ 50.38	$ 52.90	$ 52.90	$ 55.55	$ 55.55	$ 58.33	$ 58.33
		Subtotal	**36**		**$ 1,643.13**		**$ 1,725.24**		**$ 1,811.67**		**$ 1,902.12**		**$ 1,997.25**

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Men's Long Sleeve Shirts - White (45W6600; 8003)	Small	1	$46.85	$ 46.85	$ 49.19	$ 49.19	$ 51.65	$ 51.65	$ 54.23	$ 54.23	$ 56.94	$ 56.94
2	Men's Long Sleeve Shirts - White (45W6600; 8003)	Medium	1	$46.85	$ 46.85	$ 49.19	$ 49.19	$ 51.65	$ 51.65	$ 54.23	$ 54.23	$ 56.94	$ 56.94
3	Men's Long Sleeve Shirts - White (45W6600; 8003)	Large	1	$46.85	$ 46.85	$ 49.19	$ 49.19	$ 51.65	$ 51.65	$ 54.23	$ 54.23	$ 56.94	$ 56.94
4	Men's Long Sleeve Shirts - White (45W6600; 8003)	XL	1	$46.85	$ 46.85	$ 49.19	$ 49.19	$ 51.65	$ 51.65	$ 54.23	$ 54.23	$ 56.94	$ 56.94
5	Men's Long Sleeve Shirts - White (45W6600; 8003)	2 XL	1	$49.53	$ 49.53	$ 52.01	$ 52.01	$ 54.61	$ 54.61	$ 57.34	$ 57.34	$ 60.21	$ 60.21
6	Men's Long Sleeve Shirts - White (45W6600; 8003)	3 XL	1	$49.53	$ 49.53	$ 52.01	$ 52.01	$ 54.61	$ 54.61	$ 57.34	$ 57.34	$ 60.21	$ 60.21
7	Men's Long Sleeve Shirts - White (45W6600; 8003)	4 XL	1	$50.87	$ 50.87	$ 53.41	$ 53.41	$ 56.08	$ 56.08	$ 58.88	$ 58.88	$ 61.82	$ 61.82
		Subtotal	**7**		**$ 337.33**		**$ 354.19**		**$ 371.90**		**$ 390.48**		**$ 410.00**

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Women's Long Sleeve Shirts - White (102W6600; 8003W)	Small	1	$46.85	$ 46.85	$ 49.19	$ 49.19	$ 51.65	$ 51.65	$ 54.23	$ 54.23	$ 56.94	$ 56.94
2	Women's Long Sleeve Shirts - White (102W6600; 8003W)	Medium	1	$46.85	$ 46.85	$ 49.19	$ 49.19	$ 51.65	$ 51.65	$ 54.23	$ 54.23	$ 56.94	$ 56.94
3	Women's Long Sleeve Shirts - White (102W6600; 8003W)	Large	1	$46.85	$ 46.85	$ 49.19	$ 49.19	$ 51.65	$ 51.65	$ 54.23	$ 54.23	$ 56.94	$ 56.94
4	Women's Long Sleeve Shirts - White (102W6600; 8003W)	XL	1	$46.85	$ 46.85	$ 49.19	$ 49.19	$ 51.65	$ 51.65	$ 54.23	$ 54.23	$ 56.94	$ 56.94
5	Women's Long Sleeve Shirts - White (102W6600; 8003W)	2 XL	1	$49.53	$ 49.53	$ 52.01	$ 52.01	$ 54.61	$ 54.61	$ 57.34	$ 57.34	$ 60.21	$ 60.21
6	Women's Long Sleeve Shirts - White (102W6600; 8003W)	3 XL	1	$49.53	$ 49.53	$ 52.01	$ 52.01	$ 54.61	$ 54.61	$ 57.34	$ 57.34	$ 60.21	$ 60.21
		Subtotal	**6**		**$ 286.46**		**$ 300.78**		**$ 315.82**		**$ 331.60**		**$ 348.18**

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Men's Pants Black w/cell phone pocket (PT88BK)	Waist 42 & Under	25	$38.57	$ 964.25	$ 40.50	$ 1,012.50	$ 42.53	$ 1,063.25	$ 44.66	$ 1,116.50	$ 46.89	$ 1,172.25
2	Men's Pants Black w/cell phone pocket (PT88BK)	Waist 44 & Above	28	$70.55	$ 1,975.40	$ 74.08	$ 2,074.24	$ 77.78	$ 2,177.84	$ 81.67	$ 2,286.76	$ 85.75	$ 2,401.00
		Subtotal	**53**		**$ 2,939.65**		**$ 3,086.74**		**$ 3,241.09**		**$ 3,403.26**		**$ 3,573.25**

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Women's Pants Black w/cell phone pocket (PT89BK)	Waist 18 & Under	24	$38.57	$ 925.68	$ 40.50	$ 972.00	$ 42.53	$ 1,020.72	$ 44.66	$ 1,071.84	$ 46.89	$ 1,125.36
2	Women's Pants Black w/cel phone pocket (PT89BK)	Waist 20-28	28	$70.55	$ 1,975.40	$ 74.08	$ 2,074.24	$ 77.78	$ 2,177.84	$ 81.67	$ 2,286.76	$ 85.75	$ 2,401.00
		Subtotal	**52**		**$ 2,901.08**		**$ 3,046.24**		**$ 3,198.56**		**$ 3,358.60**		**$ 3,526.36**
									$ -				
#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Men's Port Authority Fleece Jacket - Red (J754 RED)	X-Small	1	$74.00	$ 74.00	$ 77.70	$ 77.70	$ 81.59	$ 81.59	$ 85.67	$ 85.67	$ 89.95	$ 89.95
2	Men's Port Authority Fleece Jacket - Red (J754 RED)	Small	1	$74.00	$ 74.00	$ 77.70	$ 77.70	$ 81.59	$ 81.59	$ 85.67	$ 85.67	$ 89.95	$ 89.95
3	Men's Port Authority Fleece Jacket - Red (J754 RED)	Medium	1	$74.00	$ 74.00	$ 77.70	$ 77.70	$ 81.59	$ 81.59	$ 85.67	$ 85.67	$ 89.95	$ 89.95
4	Men's Port Authority Fleece Jacket - Red (J754 RED)	Large	8	$74.00	$ 592.00	$ 77.70	$ 621.60	$ 81.59	$ 652.72	$ 85.67	$ 685.36	$ 89.95	$ 719.60
5	Men's Port Authority Fleece Jacket - Red (J754 RED)	XL	8	$74.00	$ 592.00	$ 77.70	$ 621.60	$ 81.59	$ 652.72	$ 85.67	$ 685.36	$ 89.95	$ 719.60
6	Men's Port Authority Fleece Jacket - Red (J754 RED)	2 XL	2	$75.67	$ 151.34	$ 79.45	$ 158.90	$ 83.42	$ 166.84	$ 87.59	$ 175.18	$ 91.97	$ 183.94
7	Men's Port Authority Fleece Jacket - Red (J754 RED)	3 XL	2	$79.00	$ 158.00	$ 82.95	$ 165.90	$ 87.10	$ 174.20	$ 91.46	$ 182.92	$ 96.03	$ 192.06
8	Men's Port Authority Fleece Jacket - Red (J754 RED)	4 XL	2	$80.67	$ 161.34	$ 84.70	$ 169.40	$ 88.94	$ 177.88	$ 93.39	$ 186.78	$ 98.06	$ 196.12
9	Men's Port Authority Fleece Jacket - Red (J754 RED)	5 XL	1	$84.00	$ 84.00	$ 88.20	$ 88.20	$ 92.61	$ 92.61	$ 97.24	$ 97.24	$ 102.10	$ 102.10
10	Men's Port Authority Fleece Jacket - Red (J754 RED)	6 XL	1	$85.67	$ 85.67	$ 89.95	$ 89.95	$ 94.45	$ 94.45	$ 99.17	$ 99.17	$ 104.13	$ 104.13
		Subtotal	**27**		**$ 2,046.35**		**$ 2,148.65**		**$ 2,256.19**		**$ 2,369.02**		**$ 2,487.40**

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
11	Men's Sport-Tek Full Wind Jacket - Black (JST70)	X-Small	1	$48.98	$ 48.98	$ 51.43	$ 51.43	$ 54.00	$ 54.00	$ 56.70	$ 56.70	$ 59.54	$ 59.54
12	Men's Sport-Tek Full Wind Jacket - Black (JST70)	Small	1	$48.98	$ 48.98	$ 51.43	$ 51.43	$ 54.00	$ 54.00	$ 56.70	$ 56.70	$ 59.54	$ 59.54
13	Men's Sport-Tek Full Wind Jacket - Black (JST70)	Medium	1	$48.98	$ 48.98	$ 51.43	$ 51.43	$ 54.00	$ 54.00	$ 56.70	$ 56.70	$ 59.54	$ 59.54
14	Men's Sport-Tek Full Wind Jacket - Black (JST70)	Large	8	$48.98	$ 391.84	$ 51.43	$ 411.44	$ 54.00	$ 432.00	$ 56.70	$ 453.60	$ 59.54	$ 476.32
15	Men's Sport-Tek Full Wind Jacket - Black (JST70)	XL	8	$48.98	$ 391.84	$ 51.43	$ 411.44	$ 54.00	$ 432.00	$ 56.70	$ 453.60	$ 59.54	$ 476.32
16	Men's Sport-Tek Full Wind Jacket - Black (JST70)	2 XL	2	$50.65	$ 101.30	$ 53.18	$ 106.36	$ 55.84	$ 111.68	$ 58.63	$ 117.26	$ 61.56	$ 123.12
17	Men's Sport-Tek Full Wind Jacket - Black (JST70)	3 XL	2	$53.98	$ 107.96	$ 56.68	$ 113.36	$ 59.51	$ 119.02	$ 62.49	$ 124.98	$ 65.61	$ 131.22
18	Men's Sport-Tek Full Wind Jacket - Black (JST70)	4 XL	2	$55.65	$ 111.30	$ 58.43	$ 116.86	$ 61.35	$ 122.70	$ 64.42	$ 128.84	$ 67.64	$ 135.28
19	Men's Sport-Tek Full Wind Jacket - Black (JST70)	5 XL	1	$58.98	$ 58.98	$ 61.93	$ 61.93	$ 65.03	$ 65.03	$ 68.28	$ 68.28	$ 71.69	$ 71.69
20	Men's Sport-Tek Full Wind Jacket - Black (JST70)	6 XL	1	$60.65	$ 60.65	$ 63.68	$ 63.68	$ 66.86	$ 66.86	$ 70.20	$ 70.20	$ 73.71	$ 73.71
		Subtotal:	**27**		**$ 1,370.81**		**$ 1,439.36**		**$ 1,511.29**		**$ 1,586.86**		**$ 1,666.28**

FLAG PERSONS

				YEAR 1 (4/1/26 to 3/31/27)		YEAR 2 (4/1/27 to 3/31/28)		YEAR 3 (4/1/28 to 3/31/29)		YEAR 4 (4/1/29 to 3/31/30)		YEAR 5 (4/1/30 to 3/31/31)	
#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Men's Short Sleeve Shirts - Orange (SS24-EHV)	Small	6	$23.91	$ 143.46	$ 25.11	$ 150.66	$ 26.37	$ 158.22	$ 27.69	$ 166.14	$ 29.07	$ 174.42
2	Men's Short Sleeve Shirts - Orange (SS24-EHV)	Medium	12	$23.91	$ 286.92	$ 25.11	$ 301.32	$ 26.37	$ 316.44	$ 27.69	$ 332.28	$ 29.07	$ 348.84
3	Men's Short Sleeve Shirts - Orange (SS24-EHV)	Large	27	$23.91	$ 645.57	$ 25.11	$ 677.97	$ 26.37	$ 711.99	$ 27.69	$ 747.63	$ 29.07	$ 784.89
4	Men's Short Sleeve Shirts - Orange (SS24-EHV)	XL	27	$23.91	$ 645.57	$ 25.11	$ 677.97	$ 26.37	$ 711.99	$ 27.69	$ 747.63	$ 29.07	$ 784.89
5	Men's Short Sleeve Shirts - Orange (SS24-EHV)	2 XL	14	$23.91	$ 334.74	$ 25.11	$ 351.54	$ 26.37	$ 369.18	$ 27.69	$ 387.66	$ 29.07	$ 406.98
6	Men's Short Sleeve Shirts - Orange (SS24-EHV)	3 XL	1	$23.91	$ 23.91	$ 25.11	$ 25.11	$ 26.37	$ 26.37	$ 27.69	$ 27.69	$ 29.07	$ 29.07
7	Men's Short Sleeve Shirts - Orange (SS24-EHV)	4 XL	1	$23.91	$ 23.91	$ 25.11	$ 25.11	$ 26.37	$ 26.37	$ 27.69	$ 27.69	$ 29.07	$ 29.07
		Subtotal	88		$ 2,104.08		$ 2,209.68		$ 2,320.56		$ 2,436.72		$ 2,558.16

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Men's Long Sleeve Shirts - Orange (SS14-EHV)	Small	1	$27.84	$ 27.84	$ 29.23	$29.23	$ 30.69	$30.69	$ 32.22	$ 32.22	$ 33.83	$ 33.83
2	Men's Long Sleeve Shirts - Orange (SS14-EHV)	Medium	1	$27.84	$ 27.84	$ 29.23	$29.23	$ 30.69	$30.69	$ 32.22	$ 32.22	$ 33.83	$ 33.83
3	Men's Long Sleeve Shirts - Orange (SS14-EHV)	Large	10	$27.84	$ 278.40	$ 29.23	$292.30	$ 30.69	$306.90	$ 32.22	$ 322.20	$ 33.83	$ 338.30
4	Men's Long Sleeve Shirts - Orange (SS14-EHV)	XL	10	$27.84	$ 278.40	$ 29.23	$292.30	$ 30.69	$306.90	$ 32.22	$ 322.20	$ 33.83	$ 338.30
5	Men's Long Sleeve Shirts - Orange (SS14-EHV)	2 XL	8	$27.84	$ 222.72	$ 29.23	$233.84	$ 30.69	$245.52	$ 32.22	$ 257.76	$ 33.83	$ 270.64
6	Men's Long Sleeve Shirts - Orange (SS14-EHV)	3 XL	1	$27.84	$ 27.84	$ 29.23	$29.23	$ 30.69	$30.69	$ 32.22	$ 32.22	$ 33.83	$ 33.83
7	Men's Long Sleeve Shirts - Orange (SS14-EHV)	4 XL	1	$27.84	$ 27.84	$ 29.23	$29.23	$ 30.69	$30.69	$ 32.22	$ 32.22	$ 33.83	$ 33.83
		Subtotal	32		$ 890.88		$ 935.36		$982.08		$ 1,031.04		$ 1,082.56

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Men's Navy Slash Pocket Jacket w/Orange Reflective Piping (JT22NV)	X-Small	1	$80.55	$ 80.55	$ 84.58	$ 84.58	$ 88.81	$ 88.81	$ 93.25	$ 93.25	$ 97.91	$ 97.91
2	Men's Navy Slash Pocket Jacket w/Orange Reflective Piping (JT22NV)	Small	2	$80.55	$ 161.10	$ 84.58	$ 169.16	$ 88.81	$ 177.62	$ 93.25	$ 186.50	$ 97.91	$ 195.82
3	Men's Navy Slash Pocket Jacket w/Orange Reflective Piping (JT22NV)	Medium	6	$80.55	$ 483.30	$ 84.58	$ 507.48	$ 88.81	$ 532.86	$ 93.25	$ 559.50	$ 97.91	$ 587.46
4	Men's Navy Slash Pocket Jacket w/Orange Reflective Piping (JT22NV)	Large	18	$80.55	$ 1,449.90	$ 84.58	$ 1,522.44	$ 88.81	$ 1,598.58	$ 93.25	$ 1,678.50	$ 97.91	$ 1,762.38
5	Men's Navy Slash Pocket Jacket w/Orange Reflective Piping (JT22NV)	XL	16	$80.55	$ 1,288.80	$ 84.58	$ 1,353.28	$ 88.81	$ 1,420.96	$ 93.25	$ 1,492.00	$ 97.91	$ 1,566.56
6	Men's Navy Slash Pocket Jacket w/Orange Reflective Piping (JT22NV)	2 XL	12	$80.55	$ 966.60	$ 84.58	$ 1,014.96	$ 88.81	$ 1,065.72	$ 93.25	$ 1,119.00	$ 97.91	$ 1,174.92
7	Men's Navy Slash Pocket Jacket w/Orange Reflective Piping (JT22NV)	3 XL	2	$80.55	$ 161.10	$ 84.58	$ 169.16	$ 88.81	$ 177.62	$ 93.25	$ 186.50	$ 97.91	$ 195.82
8	Men's Navy Slash Pocket Jacket w/Orange Reflective Piping (JT22NV)	4 XL	1	$80.55	$ 80.55	$ 84.58	$ 84.58	$ 88.81	$ 88.81	$ 93.25	$ 93.25	$ 97.91	$ 97.91
9	Men's Navy Slash Pocket Jacket w/Orange Reflective Piping (JT22NV)	5 XL	1	$80.55	$ 80.55	$ 84.58	$ 84.58	$ 88.81	$ 88.81	$ 93.25	$ 93.25	$ 97.91	$ 97.91
10	Men's Navy Slash Pocket Jacket w/Orange Reflective Piping (JT22NV)	6 XL	1	$80.55	$ 80.55	$ 84.58	$ 84.58	$ 88.81	$ 88.81	$ 93.25	$ 93.25	$ 97.91	$ 97.91
			60		$ 4,833.00		$ 5,074.80		$ 5,328.60		$ 5,595.00		$ 5,874.60

#	Description	Size	Qty.	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price	Unit Price	Ext. Price
1	Flex Fit Hats (6277)	N/A	104	$20.48	$ 2,129.92	$ 21.50	$ 2,236.00	$ 22.58	$ 2,348.32	$ 23.71	$ 2,465.84	$ 24.90	$ 2,589.60
	Subtotal:		**104**		**$ 2,129.92**		**$ 2,236.00**		**$ 2,348.32**		**$ 2,465.84**		**$ 2,589.60**

	TOTAL				**$ 78,944.41**		**$ 82,892.93**		**$ 87,037.81**		**$ 91,391.79**		**$ 95,959.83**
	7.75% CA Sales Tax				**$ 6,118.19**		**$ 6,424.20**		**$ 6,745.43**		**$ 7,082.86**		**$ 7,436.89**

Total (Years 1-5)	**$**	**436,226.77**
SUBTOTAL Sales Tax (Years 1-5)	**$**	**33,807.57**
GRAND TOTAL (Basis of Award)	**$**	**470,034.34**

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 4/9/2026

Agenda Item No. 10

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

April 16, 2026

SUBJECT:

Security and Sign Out Booth Replacement at Imperial Avenue Division (IAD) Bus Maintenance Facility – Work Order Agreement

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute Work Order No. MTSJOC441-03 under MTS Doc. PWG441.0-25 (in substantially the same format as Attachment A), with ABC General Contractor, Inc. (ABCGC), in the amount of $141,374.65 for the replacement of the security and bus driver sign-out booths at the IAD bus maintenance facility.

Budget Impact

The total cost of this contract is estimated to be $141,374.65. Under separate MTS Doc No. L1282.0-16, with the Gordian Group, MTS will pay a 1.76% JOC software license fee in the amount of $2,488.20. The project will be funded by Capital Improvement Program (CIP) 1009111217 – Miscellaneous Capital.

DISCUSSION:

At the IAD facility, there is a security shack and a sign-out shack that are past their useful life and in need of replacement. The shacks are at the IAD entrance of the facility and are used by security to monitor traffic and ensure only authorized personnel enter the facility. The sign-out booth is used for operations supervisors to track bus staging. This project includes the removal, disposal, and replacement of the existing booths with new booths of similar size and equal function, as well as new raised foundations to mitigate flood risk.

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

The JOC program includes a catalogue of pricing for a variety of potential tasks to be performed under the contract that have been pre-priced by the contractor, the Gordian Group. All potential contractors are subject to the 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. To select the lowest responsive and responsible bidder, MTS staff compares each contractor's proposed adjustment factor.

On September 24, 2025, MTS issued an Invitation for Bids (IFB) seeking a contractor to provide. JOC building and facilities construction services that primarily consist of repair, remodeling, or other repetitive work, and general building and facility contracting services. These services include, but are not limited to, demolition, maintenance, and modification of existing buildings and facilities, as well as any required incidental professional and technical services.

Five (5) bids were received, and MTS determined that ABCGC was the lowest responsive and responsible bidder. On December 18, 2025 (Agenda Item (AI) 7), the MTS Board authorized the CEO to execute MTS Doc. No. PWG441.0-25 with ABCGC for General Building Construction Services. Today's work order will be issued under this master agreement.

Today's proposed action would issue a work order to ABCGC under this JOC on-call agreement. Pricing for this repair work order was reviewed and determined to be fair and reasonable. ABCGC and its subcontractors will provide all materials, labor, and equipment needed for the replacement of the security and bus driver sign-out booths at the IAD bus maintenance facility. Work is expected to be completed within 30 days of issuance of the notice to proceed.

Although Board Policy 41 and the JOC Work Order process authorize the CEO to issue contracts, work orders, and amendments under $150,000, this work order is being brought to the Board for approval so that the CEO retains sufficient capacity under Policy 41 to avoid undue project delays and disruption of work in the event a change order exceeding $8,625 is needed.

ABCGC will utilize the following subcontractors for this project:

Subcontractor Name	Subcontractor Certification	Subcontractor Amount
C.E. Crist Inc.	None	$15,000.00
Swift Electric	None	$4,056.75

This work order is not subject to the Project Labor Agreement (PLA) approved under board Policy No. 66 because it is a work order under $1,000,000.00.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Work Order No. MTSJOC441-03 under MTS Doc. PWG441.0-25 (in substantially the same format as Attachment A), with ABCGC, in the amount of $141,374.65 for the replacement of the security and bus driver sign-out booths at the IAD bus maintenance facility.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachment: A. Draft Work Order MTSJOC441-03

Metropolitan Transit System

JOB ORDER CONTRACT
WORK ORDER

PWG441.0-25
CONTRACT NUMBER

MTSJOC441-03
WORK ORDER NUMBER

THIS AGREEMENT is entered into this _____ day of _____ 2026, 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: ABC General Construction, Inc.

Address: 1941 Friendship Drive, Ste F

Form of Business: Corporation
(Corporation, partnership, sole proprietor, etc.)

El Cajon, CA 92020

Telephone: 619-937-1010

Authorized person to sign contracts: Travis Brozowski (Name) CEO (Title)

Pursuant to the existing Job Order Contract (MTS Doc. No. PWG441.0-25), MTS issues a Work Order to Contractor to complete the detailed Scope of Work (attached as Exhibit A.), the Cost Breakdown for the Scope of Work (attached as Exhibit B.), and the subcontractor listing form applicable to this Work Order (attached as Exhibit C.)

TOTAL PAYMENTS TO CONTRACTOR SHALL NOT EXCEED $141,374.65

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	ABC GENERAL CONTRACTOR, INC.
By: _____ Sharon Cooney, Chief Executive Officer	Firm: _____
Approved as to form:	By: _____ Signature
By: _____ Karen Landers, General Counsel	Title: _____

DRAFT

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for nine cities.

EXHIBIT A
(Scope of Work)

DRAFT

San Diego Metropolitan Transit System
1255 Imperial Ave
San Diego, California 92101

Final Scope of Work

Date: 3/24/2026

Job Order Contracting

To: Travis Brozowski
ABC General Inc.
3120 National Ave
San Diego, CA 92113
(619) 239-3428
travis@abcgeneralinc.com

From: David Urbaez
San Diego Metropolitan Transit System
1255 Imperial Ave
San Diego, CA 92101
(619) 557-4576
David.Urbaez@sdmts.com

Contract Number: PWG441.0-25

Job Order Number: MTSJOC441-03

Job Order Title: IAD Security and Sign Out Booth Replacement

Location: IAD
100 16th St.
San Diego, CA 92101

Brief Scope of Work:

DRAFT

The following items detail the scope of work as discussed at the site. All requirements necessary to accomplish the items set forth below shall be considered part of this scope of work.

SECTION 1 GENERAL

The IAD Security and Sign Out Booth Replacement project generally consists of the removal and replacement of two (2) booths with all additional required work by the Imperial Avenue entrance of the Imperial Avenue Division (IAD) Bus Depot.

All work is to occur at IAD located at 100 16th Street, San Diego 92101. Work is to occur during normal working hours approximately 7:00AM-4:00PM.

SECTION 2 STAGING

Contractor is to keep and store all materials within a predesignated laydown area. 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.

SECTION 3 TEMP FACILITIES

The contractor may use adjacent MTS toilet facilities throughout the duration of the project. Contractor may use convenience outlets if available onsite for minor temp power used in relation to the construction. All other needs for construction power and water are the responsibility of the contractor.

SECTION 4 SAFETY

Diligent caution must be taken during the undertaking of this work. Due to the 24-hour nature of operations at IAD, any openings left overnight must be covered with a trench plate and/or appropriately marked off with a suitable combination of reflective delineators, cones, warning lights, caution tape, and/or A-frames.

SECTION 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.

SECTION 6 SUBMITTALS

Submittals must have a suitable transmittal cover page, be numbered and have a clear title. Prior to material procurement, the contractor shall provide the following submittals for MTS Project Manager review and approval for all components applicable to the work involved in the base and alternate contract.

- Product Data for both booths and related accessories
- Shop Drawings for booths and new foundations
- Maintenance Data
- Warranty Data
- Work Plans
- Construction Schedule

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SECTION 7 MSDS

Upon award Contractors shall provide PDFs of material safety data sheets (MSDS) with each submittal, for chemicals that MTS employees may be exposed to. The Contractor shall ensure all available MSDS' are provided to MTS and kept up to date throughout the duration of the contract.

SECTION 8 BOOTH REPLACEMENT

There are two (2) prefabricated shelters used for security and bus driver sign-out at IAD by the Imperial Avenue entrance that are beyond their useful life. Contractor shall demo and dispose the existing shelters and replace them with new shelters of similar or equal size and equal or improved function. Shelters are to be submitted to MTS for review and approval prior to procurement. New shelters are to be placed in the same locations as the existing shelters.

Following demo of the existing shelters, contractor shall demo the pavement and excavate subgrade as necessary to provide new appropriately sized and reinforced raised foundations and slab for the new shelters. Contractor must provide appropriate cure time for the new foundations and slabs before installing new shelters.

Contractor shall provide all equipment needed for this work including equipment for demo and disposal of the shelters and pavement, equipment for excavation, and equipment for delivery of the new shelters. Contractor to perform leveling and anchoring of the new shelters into the new foundation. Contractor to perform electrical disconnect of the existing shelters and reconnection of the new shelters. The new shelter and electrical hookup must meet all applicable code requirements.

Contractor shall complete all onsite work within 30 days of issuance of Notice to Proceed.

All job orders include the labor, equipment, and material costs for a complete and in-place installation, unless otherwise noted.

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EXHIBIT B
(Cost Breakdown)

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Price Proposal Detail Report

By Division
Version: 2.0
Approved
Proposal Value: $141,374.65
Approved Date: March 18, 2026

Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-03

Job Order Name: IAD Security and Sign Out Booth Replacement

Location: IAD 100 16th St. San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Division		Install Total	NPP Total	Demo Total	Division Total
01	General Requirements	$68,222.42	$0.00	$0.00	$68,222.42
02	Existing Conditions	$1,737.19	$0.00	$0.00	$1,737.19
03	Concrete	$8,252.58	$0.00	$0.00	$8,252.58
06	Wood, Plastics, and Composites	$353.06	$0.00	$0.00	$353.06
13	Special Construction	$44,548.99	$0.00	$0.00	$44,548.99
23	Heating, Ventilating, and Air-Conditioning (HVAC)	$4,103.49	$0.00	$0.00	$4,103.49
31	Earthwork	$6,891.20	$0.00	$0.00	$6,891.20
32	Exterior Improvements	$7,265.72	$0.00	$0.00	$7,265.72
	Total:	**$141,374.65**	**$0.00**	**$0.00**	**$141,374.65**

Line Count: 36 **Proposal Total: $141,374.65**

Total Reflects Filtered Statuses: Added, Clarification Requested, Clarified, Confirmed Removal, Modified, No Change, OverRuled, Rejected, Removed, Retained, System Removal Acknowledged by Contractor, System Removal Acknowledged by Owner, System Removed

The Percentage of Non Pre-Priced on this Proposal: 0.0%

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Location: IAD 100 16th St. San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

01 General Requirements — $68,222.42

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
1	012220000010	Electrician		64.00	$101.62	HR	0.8500	$5,528.13

Accepted

History: 1.1 Added,1.2 Modified,1.3 Modified,2.0 Accepted

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

Owner Comments: *V:1.2-Disconnect and hookup should take one day each for both shacks.*

Contractor Comments: *V:1.3-Yes one day to disconnect (16hrs) but install is more as we need to upgrade (32hrs) existing to code and then the one day to hook up new units (16hrs).*

There is always two men onsite.

There is also no other electrical line items.

User Note: To disconnect and hook up new booths

Item Note: For tasks not included in the Construction Task Catalog® and as directed by owner only.

Total: $5,528.13

Division 01 General Requirements Total: $5,528.13

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
2	012220000027	Laborer		32.00	$99.91	HR	0.8500	$2,717.55

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

User Note: removal of existing shacks
4 men x 1 day

Item Note: For tasks not included in the Construction Task Catalog® and as directed by owner only.

Total: $2,717.55

Division 01 General Requirements Total: $2,717.55

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
3	012220000027	Laborer		64.00	$99.91	HR	0.8500	$5,435.10

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

User Note: 1 day to off load shacks from shipping company per shack
4 men

Item Note: For tasks not included in the Construction Task Catalog® and as directed by owner only.

Total: $5,435.10

Division 01 General Requirements Total: $5,435.10

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Approved Date: March 18, 2026

Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-03

Job Order Name: IAD Security and Sign Out Booth Replacement

Location: IAD 100 16th St. San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
4	012220000027	Laborer		128.00	$99.91	HR	0.8500	$10,870.21

Accepted ***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

User Note: set new shacks
4 men 4 days

Item Note: For tasks not included in the Construction Task Catalog® and as directed by owner only.

Total:	**$10,870.21**
Division 01 General Requirements Total:	**$10,870.21**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
5	012223000288	3,200 To 3,500 Lb. Capacity, 78" Wide, Tracked Skid-Steer Loader With Full-Time Operator		3.00	$1,799.12	DAY	0.8500	$4,587.76

Accepted ***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

User Note: Demo and make ready for new slabs

Total:	**$4,587.76**
Division 01 General Requirements Total:	**$4,587.76**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
6	012223000291	Hydraulic Hammer Attachment For Skid-Steer Loaders		3.00	$321.94	DAY	0.8500	$820.95

Accepted ***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

Total:	**$820.95**
Division 01 General Requirements Total:	**$820.95**

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** Includes Price Changes due to Construction Task Catalog update*

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Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-03

Job Order Name: IAD Security and Sign Out Booth Replacement

Location: IAD 100 16th St. San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
7	012223001029	10,000 Lb. Capacity, Telescopic Boom, Hi-Reach, Rough Terrain Construction Forklift With Full-Time Operator		4.00	$1,733.17	DAY	0.8500	$5,892.78
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***						

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

User Note: 1 day to remove old shack
1 day to off load each (2 days)
1 day to set

Total: $5,892.78

Division 01 General Requirements Total: $5,892.78

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
8	012223001385	3 Ton Capacity, 12' To 16' Bed, 4 x 2 Flat Bed Truck With Full-Time Truck Driver		2.00	$1,104.34	WK	0.8500	$1,877.38
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***						

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: daily tool truck with generator etc.
no labor

Total: $1,877.38

Division 01 General Requirements Total: $1,877.38

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
9	012223001420	18 CY Rear Dump Truck With Full-Time Truck Driver		4.00	$2,245.96	DAY	0.8500	$7,636.26
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***						

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

User Note: demo of old shacks = 2
demo of Asphalt and base = 2

Total: $7,636.26

Division 01 General Requirements Total: $7,636.26

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Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-03

Job Order Name: IAD Security and Sign Out Booth Replacement

Location: IAD 100 16th St. San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
10	012223001464	500 To 600 Gallon Water Trailer With Pump		3.00	$164.74	DAY	0.8500	$420.09

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

Total: $420.09

Division 01 General Requirements Total: $420.09

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
11	013529000003	Trucking Delivery Of 40' Shipping Container		1,782.00	$5.40	MI	0.8500	$8,179.38

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: Delivery of shack on one trailer from
4133 Shoreline Drive
Earth City, MO 63045
= 1,782miles

Total: $8,179.38

Division 01 General Requirements Total: $8,179.38

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
12	015626000175	48" High With Posts At 8' On Center, Plastic Mesh Temporary Safety Fence		5,000.00	$2.01	LF	0.8500	$8,542.50

Accepted

History: 1.1 Added,1.2 Modified,1.3 Modified,2.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Owner Comments: *V:1.2-Delineators can remain in place until work is complete.*

Contractor Comments: *V:1.3-There is no way the site is going to allow us to leave our barriers out/up after we leave. We will have to take them down and put back up daiy.*

User Note: 500LF set up each day we are on site and taken down at end of day for bus access
500x10 days (2 weeks) No material included as it is same stuff set up daily

Total: $8,542.50

Division 01 General Requirements Total: $8,542.50

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Job Order: MTSJOC441-03

Job Order Name: IAD Security and Sign Out Booth Replacement

Location: IAD 100 16th St. San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
13	017113000002	First 25 Miles, Equipment Delivery, Pickup, Mobilization And Demobilization Using A Rollback Flatbed Truck		5.00	$452.85	EA	0.8500	$1,924.61

Accepted ***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: 1 day bobcat
1 day forklift removal
1 day forklift unload from shipper x 2
1 day forklift install

Item Note: Includes loading, tie-down of equipment, delivery of equipment, off loading on site, rigging, dismantling, loading for return and transporting away. For equipment such as trenchers, skid-steer loaders (bobcats), industrial warehouse forklifts, sweepers, scissor platform lifts, telescoping and articulating boom man lifts with up to 40' boom lengths, etc.

Total: $1,924.61

Division 01 General Requirements Total: $1,924.61

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
14	017123160019	Survey Clear Area For Underground Utilities		0.10	$7,071.47	ACR	0.8500	$601.07

Accepted ***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Total: $601.07

Division 01 General Requirements Total: $601.07

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
15	017136000004	>1 To 4 Hours On Site, Electromagnetic (SIR/GPR) Survey, Earth, Concrete, Masonry Or Asphalt		1.00	$1,742.85	EA	0.8500	$1,481.42

Accepted ***History: 1.1 Added,1.2 Removed,1.3 Retained,2.0 Accepted***

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

Owner Comments: *V:1.2-Redundant with 017123 16-0019, please choose one*

Contractor Comments: *V:1.3-Not redundant. We also do CPL as none of the private MTS utilities come up during our mark outs.*

User Note: CPL for unknown utilities

Total: $1,481.42

Division 01 General Requirements Total: $1,481.42

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Job Order: MTSJOC441-03

Job Order Name: IAD Security and Sign Out Booth Replacement

Location: IAD 100 16th St. San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
16	017419000021	Rampless Concrete Washout Bin		1.00	$558.82	MO	0.8500	$475.00

Accepted *History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted*

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

Item Note: Includes delivery.

Total: $475.00

Division 01 General Requirements Total: $475.00

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
17	017419000029	General Refuse		8.00	$181.21	TON	0.8500	$1,232.23

Accepted *History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted*

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: Dump Fess for Shacks, Asphalt and dirt demo'd

Total: $1,232.23

Division 01 General Requirements Total: $1,232.23

02 Existing Conditions **$1,737.19**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
18	024119130058	Saw Cut Minimum Set-up Charge, One Per Project		1.00	$1,173.35	EA	0.8500	$997.35

Accepted *History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted*

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Item Note: For projects where the total saw cutting charge is less than the minimum charge, use this task exclusively. This task should not be used in conjunction with any other tasks in this section.

Total: $997.35

Division 02 Existing Conditions Total: $997.35

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Job Order: MTSJOC441-03

Job Order Name: IAD Security and Sign Out Booth Replacement

Location: IAD 100 16th St. San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
19	024119130283	3/4" Diameter Drilling In Concrete Per Inch Of Depth		256.00	$3.40	IN	0.8500	$739.84

Accepted ***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Drilling new concrete for new anchors, 16 each shack at 8" each

Total: $739.84

Division 02 Existing Conditions Total: $739.84

03 Concrete **$8,252.58**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
20	033113000092	Delivery Fee For Small Concrete Purchases (Short Load) Per CY For Each CY Less Than 9 CY		5.00	$27.00	CY	0.8500	$114.75

Accepted ***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

Item Note: The task quantity is 9 minus the number of CY's delivered. For example, the delivery fee for 2CY's is: (9-2) = 7.

Total: $114.75

Division 03 Concrete Total: $114.75

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
21	033113000097	6" Equipment Pad With Rebar Assembly		240.00	$33.63	SF	0.8500	$6,860.52

Accepted ***History: 1.1 Added,1.2 Modified,1.3 Modified,2.0 Accepted***

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Owner Comments: *V:1.2-New slabs are 8x10 each*

Contractor Comments: *V:1.3-We are not pouring 2 independent slabs, if we do MTS will have portion in-between to maintain. Als, we increase the slab each way to ensure drainage around the slab/shack.*

User Note: New Slab
Estimated 12x20

Total: $6,860.52

Division 03 Concrete Total: $6,860.52

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Job Order Name: IAD Security and Sign Out Booth Replacement

Location: IAD 100 16th St. San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
22	033716000010	35 CY/HR, 66 HP Trailer Mounted Concrete Pump		8.00	$187.84	HR	0.8500	$1,277.31
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: New Slab

Item Note: Includes hoses

Total:	**$1,277.31**
Division 03 Concrete Total:	**$1,277.31**

06 Wood, Plastics, and Composites **$353.06**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
23	060523000263	Sill Anchor Embedded In Concrete		32.00	$12.98	EA	0.8500	$353.06
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: 16 anchors each

Total:	**$353.06**
Division 06 Wood, Plastics, and Composites Total:	**$353.06**

13 Special Construction **$44,548.99**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
24	133423130004	50 SF To 79 SF Prefabricated Signal, Communication Or Electrical Building		156.00	$317.32	SF	0.8500	$42,076.63
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: 2 - "Porta King" DURALUMINUM BUILDING Model 9676 per submittal (78SF each)

Total:	**$42,076.63**
Division 13 Special Construction Total:	**$42,076.63**

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Job Order: MTSJOC441-03

Job Order Name: IAD Security and Sign Out Booth Replacement

Location: IAD 100 16th St. San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
25	133423130010	Add Per Additional Exterior Door With Frame And Hardware		2.00	$1,047.29	EA	0.8500	$1,780.39

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: 1 additional door each

Total: $1,780.39

Division 13 Special Construction Total: $1,780.39

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
26	133423130062	Connection Straps To Anchor		32.00	$25.44	EA	0.8500	$691.97

Accepted

History: 1.1 Added,1.2 Clarification Requested,1.3 Clarified,2.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Owner Comments: *V:1.2-Can you please provide product data on this and/or clarify how it'll be used in conjunction with the sill anchors?*

Contractor Comments: *V:1.3-the anchor is embedded in the concrete, theses are on the building to attached to the anchor.*

User Note: 16 each

Item Note: Includes straps per each anchor See CSI section 13 34 23 13 0030 for anchors.

Total: $691.97

Division 13 Special Construction Total: $691.97

23 Heating, Ventilating, and Air-Conditioning (HVAC) $4,103.49

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
27	238116000021	12,000 BTU, 12.2 EER, 230/208 Volt, Cooling Only, Window Unit, Room Air-Conditioner (Friedrich SS12N30C)		2.00	$2,413.82	EA	0.8500	$4,103.49

Accepted

History: 1.3 Added,2.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Contractor Comments: *V:1.3-Change to a window unit. We don't have a submittal on the exact unit to be installed yet though.*

User Note: Units come with: 230V, 12,000C / 10,600H BTU Thru Wall HVAC w/ White

Total: $4,103.49

Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total: $4,103.49

31 Earthwork $6,891.20

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** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 2.0
Approved
Proposal Value: $141,374.65
Approved Date: March 18, 2026

Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-03

Job Order Name: IAD Security and Sign Out Booth Replacement

Location: IAD 100 16th St. San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
28	312316360009	Excavation For Building Foundations And Other Structures By Hand in Soil		28.00	$151.01	CY	0.8500	$3,594.04

Accepted

History: 1.1 Added,1.2 Clarification Requested,1.3 Clarified,2.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Owner Comments: *V:1.2-Please show how you calculated 28 CY.*

Contractor Comments: *V:1.3-28CY = We figured 2 (14CY) loads for the existing buildings, asphalt and soil. Area removed is 39SY*

Total:	**$3,594.04**
Division 31 Earthwork Total:	**$3,594.04**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
29	312316360009	For Excavation In Heavy/Wet Material (Class C), Add **MOD: 0013**		28.00	$60.40	CY	0.8500	$1,437.52

Accepted

History: 1.1 Added,1.2 Clarification Requested,1.3 Clarified,2.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Total:	**$1,437.52**
Division 31 Earthwork Total:	**$1,437.52**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
30	312316360022	Compaction Of Fill Or Subbase For Building Foundations and Other Structures by Hand		28.00	$47.31	CY	0.8500	$1,125.98

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Total:	**$1,125.98**
Division 31 Earthwork Total:	**$1,125.98**

DRAFT

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 2.0
Approved
Proposal Value: $141,374.65
Approved Date: March 18, 2026

Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-03

Job Order Name: IAD Security and Sign Out Booth Replacement

Location: IAD 100 16th St. San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
31	312316360026	Finish Grading For Building Foundations And Other Structures by Hand		39.00	$13.99	SY	0.8500	$463.77

Accepted

History: 1.1 Added,1.2 Clarification Requested,1.3 Clarified,2.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Owner Comments: *V:1.2-Please show how you calculated 28 CY.*

Contractor Comments: *V:1.3-This is SY not CY.*
We are removing more asphalt than just the Concrete area.

Total: $463.77

Division 31 Earthwork Total: $463.77

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
32	312316360028	Load Excess Material For Removal From Excavation For Building Foundations and Other Structures by Machine		28.00	$6.48	CY	0.8500	$154.22

Accepted

History: 1.1 Added,1.2 Clarification Requested,1.3 Clarified,2.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Owner Comments: *V:1.2-Please show how you calculated 28 CY.*

Contractor Comments: *V:1.3-28CY = We figured 2 (14CY) loads for the existing buildings, asphalt and soil*

Total: $154.22

Division 31 Earthwork Total: $154.22

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
33	312316360028	For >20 To 50, Add MOD: 0027		28.00	$4.86	CY	0.8500	$115.67

Accepted

History: 1.1 Added,1.2 Clarification Requested,1.3 Clarified,2.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Total: $115.67

Division 31 Earthwork Total: $115.67

32 Exterior Improvements **$7,265.72**

DRAFT

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 2.0
Approved
Proposal Value: $141,374.65
Approved Date: March 18, 2026

Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-03

Job Order Name: IAD Security and Sign Out Booth Replacement

Location: IAD 100 16th St. San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
34	320116710009	>6" To 12" Depth, Limited Cold Milling Of Asphalt		39.00	$52.71	SY	0.8500	$1,747.34

Accepted ***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: AC removal, estimated 15x23

Total: $1,747.34

Division 32 Exterior Improvements Total: $1,747.34

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
35	320117630022	Asphalt Placement For Small Repair Areas, Hot Mix Modified, Up To 3 Tons		2.00	$2,488.99	EA	0.8500	$4,231.28

Accepted ***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted***

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Repairs around the concrete slab for the 2 shacks

Item Note: For small areas of existing asphalt is removed to allow work such as trenching across or in a road, excavating a drainage structure, uncovering a utility line, etc.

Total: $4,231.28

Division 32 Exterior Improvements Total: $4,231.28

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
36	321116160003	Class II Graded Crushed Aggregate Roadway Base Course		14.00	$108.16	CY	0.8500	$1,287.10

Accepted ***History: 1.1 Added,1.2 Clarification Requested,1.3 Clarified,2.0 Accepted***

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Owner Comments: *V:1.2-Please show how 14CY was calculated.*

Contractor Comments: *V:1.3-39SY @12" = 14CY*

User Note: Under new Concrete

Total: $1,287.10

Division 32 Exterior Improvements Total: $1,287.10

Proposal Total: $141,374.65

Div **The Percentage of Non Pre-Priced on this Proposal: 0.0%**

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** Includes Price Changes due to Construction Task Catalog update*

EXHIBIT C
(Subcontractor Listing)

DRAFT

San Diego Metropolitan Transit System
1255 Imperial Ave
San Diego, CA 92101

Subcontractor Report

Date: 3/24/2026

Job Order Contracting

Contract #: PWG441.0-25

Job Order #: MTSJOC441-03

Job Order Title: IAD Security and Sign Out Booth Replacement

Job Order Value: $141,374.65

Location: IAD

Contractor: ABC General Inc.

Subcontractors: C.E. CRIST INC

Swift Electric

Subcontractor Name	License Number	Describe Nature of Work (Trade)	Certifications	Subcontractor Total	Participation %
C.E. CRIST INC 11213 El Nopal, Lakeside, CA 92040	532947	New Concrete	No Certification	$15,000.00	10.61%
Swift Electric 12515 Woodside Ave #906, Lakeside, CA 92040	915171	Electrician	No Certification	$4,056.75	2.87%

Summary

Certification Name	Value	% Subcontracted
No Certification	$19,056.75	13.48%
Total	**$19,056.75**	**13.48%**

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Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 4/9/2026

Agenda Item No. 11

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

April 16, 2026

SUBJECT:

A and C Building Heating, Ventilation, and Air Conditioning (HVAC) Replacement – Work Order Agreement

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute Work Order No. MTSJOC441-04 under MTS Doc. PWG441.0-25 (in substantially the same format as Attachment A), with ABC General Contractor, Inc. (ABCGC), in the amount of $208,130.66 for the replacement and needed addition of HVAC for the MTS Trolley Facilities Buildings A and C.

Budget Impact

The total cost of this contract is estimated to be $208,130.66. Under separate MTS Doc No. L1282.0-16, with The Gordian Group, MTS will pay a 1.76% JOC software license fee in the amount of $3,663.10. The project will be funded by the Capital Improvement Program (CIP) 2008121901 – San Diego Trolley, Inc. (SDTI) HVAC Replacement.

DISCUSSION:

Trolley Building A has three (3) packaged HVAC units providing climate control over different areas of the building. These three (3) units were installed from 2013 through 2014 and are no longer in a state of good repair. Building C currently has insufficient climate control for rooms used for radio storage and communications by Transit Security. As part of ongoing maintenance of MTS Facilities, this project consists of the removal, disposal, replacement, and startup of the three (3) packaged HVAC units with new electrical disconnects and connections to existing ductwork. In Building C, the project will be installed and start up a new mini-split system with the needed power supply for the rooms currently needing climate control.

Today's proposed action would issue a work order to ABCGC under their JOC Building and Facilities Construction Services master agreement. ABCGC and its subcontractor Comfort Mechanical, a Small Business (SB), will provide all materials, labor, and equipment for the Central Control HVAC Replacements. Pricing for this repair work order was reviewed and determined to be fair and reasonable. Work is expected to be completed within forty-five (45) days of issuance of the notice to proceed.

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.

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

The JOC program includes a catalogue of pricing for a variety of potential tasks to be performed under the contract that has been pre-priced by the contractor, the Gordian Group. All potential contractors are subject to 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.

On September 24, 2025, MTS issued an Invitation for Bids (IFB) seeking a contractor to provide JOC building and facilities construction services that primarily consist of repair, remodeling, or other repetitive work, and general building and facility contracting services. These services include, but are not limited to, demolition, maintenance, and modification of existing buildings and facilities, as well as any required incidental professional and technical services.

Five (5) bids were received, and MTS determined that ABCGC was the lowest responsive and responsible bidder. On December 18, 2025 (Agenda Item (AI) 7), the MTS Board authorized the CEO to execute MTS Doc. No. PWG441.0-25 with ABCGC for General Building Construction Services. Today's work order will be issued under this master agreement.

ABCGC will utilize the following subcontractors for this project:

Subcontractor Name	Subcontractor Certification	Subcontractor Amount
Comfort Mechanical	None	$133,057.00
Swift Electric	None	$10,908.00

This work order is not subject to the Project Labor Agreement (PLA) approved under board Policy No. 66 because it is a work order under $1,000,000.00.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Work Order MTSJOC441-04 under MTS Doc. No. PWG441.0-25 (in substantially the same format as Attachment A), with ABCGC, in the amount of $208,130.66 for the replacement and needed addition of HVAC for the MTS Trolley Facilities Buildings A and C.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachment: A. Draft Work Order MTSJOC441-04

Metropolitan Transit System

JOB ORDER CONTRACT
WORK ORDER

PWG441.0-25
CONTRACT NUMBER

MTSJOC441-04
WORK ORDER NUMBER

THIS AGREEMENT is entered into this _____ day of _____ 2026, 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: ABC General Construction, Inc.

Address: 1941 Friendship Drive, Ste F

El Cajon, CA 92020

Form of Business: Corporation
(Corporation, partnership, sole proprietor, etc.)

Telephone: 619-937-1010

Authorized person to sign contracts: Travis Brozowski (Name) CEO (Title)

Pursuant to the existing Job Order Contract (MTS Doc. No. PWG441.0-25), MTS issues a Work Order to Contractor to complete the detailed Scope of Work (attached as Exhibit A.), the Cost Breakdown for the Scope of Work (attached as Exhibit B.), and the subcontractor listing form applicable to this Work Order (attached as Exhibit C.)

TOTAL PAYMENTS TO CONTRACTOR SHALL NOT EXCEED $208,130.66

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	ABC GENERAL CONTRACTOR, INC.
By: _____ Sharon Cooney, Chief Executive Officer	Firm: _____
Approved as to form:	By: _____ Signature
By: _____ Karen Landers, General Counsel	Title: _____

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San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for nine cities.

EXHIBIT A
(Scope of Work)

DRAFT

San Diego Metropolitan Transit System
1255 Imperial Ave
San Diego, California 92101

Final Scope of Work

Date: 3/24/2026

Job Order Contracting

To:	Travis Brozowski ABC General Inc. 3120 National Ave San Diego, CA 92113 (619) 239-3428 travis@abcgeneralinc.com
From:	David Urbaez San Diego Metropolitan Transit System 1255 Imperial Ave San Diego, CA 92101 (619) 557-4576 David.Urbaez@sdmts.com

Contract Number: PWG441.0-25

Job Order Number: MTSJOC441-04

Job Order Title: A & C Building HVAC Replacement

Location: Building A
12 S. 13th Street
San Diego, CA 92101

Brief Scope of Work:

The following items detail the scope of work as discussed at the site. All requirements necessary to accomplish the items set forth below shall be considered part of this scope of work.

SECTION 1 GENERAL

The A and C Building HVAC Replacement project generally consists of the removal and replacement of three packaged heat pumps in Trolley Building A and the addition of a mini-split system to service two rooms in the Security offices of Trolley Building C.

All work is to occur at the Trolley Building A located at 12 S. 13th Street, San Diego 92101 and Trolley Building C located at 1535 Newton Ave, San Diego, CA 92113. Work is to occur during normal working hours approximately 7:00AM-4:00PM.

SECTION 2 STAGING

Contractor is to keep and store all materials within a predesignated laydown area. 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.

SECTION 3 TEMP FACILITIES

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The contractor may use adjacent MTS toilet facilities throughout the duration of the project. Contractor may use convenience outlets if available onsite for minor temp power used in relation to the construction. All other needs for construction water are the responsibility of the contractor.

SECTION 4 SAFETY

Due to the 24-hour nature of Trolley operations inside and around Buildings A and C, diligent caution must be taken during the undertaking of this work. MTS Roadway Worker Protection Training is required for all workers and supervision. Flagging is required when work and equipment fouls the MTS Right of Way.

SECTION 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.

SECTION 6 SUBMITTALS

Submittals must have a suitable transmittal cover page, be numbered and have a clear title. Prior to material procurement, the contractor shall provide the following submittals for MTS Project Manager review and approval for all components applicable to the work involved in the base and alternate contract.

- Product Data for all units and related accessories
- Maintenance Data
- Warranty Data
- Work Plans
- Construction Schedule
- Pick Plans for each lift

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SECTION 7 MSDS

Upon award Contractors shall provide PDFs of material safety data sheets (MSDS) with each submittal, for chemicals that MTS employees may be exposed to. The Contractor shall ensure all available MSDS' are provided to MTS and kept up to date throughout the duration of the contract.

SECTION 8 BUILDING A HVAC

There are two (2) 7.5-ton and one (1) 15-ton packaged heat pumps manufactured by Trane and installed in 2013 that are beyond their useful life. Contractor shall:

1. Remove and replace each of the existing package units in kind at existing locations ensuring compatibility with existing platforms.
    i. Disconnect ductwork and save for re-use.
    ii. Fabricate and install new flex connectors for each of the units and adjust existing ductwork as needed.

   iii. Seal new ductwork as needed.
   iv. Provide connections to existing condensate drain lines.
   v. Perform startup and commissioning per manufacturer requirements.
2. Before any removal, perform an electrical disconnect and lock-out-tag-out for each unit. New units can utilize existing power supply.
   i. Provide new wiring and conduit to the disconnect and unit from existing connection point to be confirmed with MTS Project Manager.
   ii. Provide new ½" thermostat wiring and conduit.
   iii. All exterior conduit and disconnects must by 3R rated.
3. Provide necessary equipment to perform the removal and installation of the three (3) units.

Contractor shall complete all onsite work for Building A within 30 days of issuance of Notice to Proceed.

SECTION 9 BUILDING C HVAC

Two rooms in the Transit Security offices in Building C for storing radios and communication equipment currently have insufficient climate control. Contractor shall:

1. Provide a new mini split system with one (1) head for each of the two (2) rooms.
   i. Rooftop condenser to sit on appropriately sized Dura-Block supports.
   ii. Provide and install line-set and control wire from fan coils to condenser.
   iii. Provide wall mounted thermostats.
   iv. Tie in condensate pumps and copper drain lines to existing roof drainage.
   v. Perform nitrogen and pressure tests of line-sets and startup and commissioning per manufacturer requirements.
2. Provide a power supply and new disconnects to the new rooftop condenser from an existing Building C electrical panel to be confirmed with MTS Project Manager. Electrical conduit to be surface mounted from the wall to the roof penetration.
3. Provide cranes and any other equipment necessary for rooftop installation.
4. Perform roof penetrations and subsequent patching as needed for installation

Contractor shall complete all onsite work for Building C within 15 days following completion of Building A HVAC.

All job orders include the labor, equipment, and material costs for a complete and in-place installation, unless otherwise noted.

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EXHIBIT B
(Cost Breakdown)

DRAFT

Price Proposal Detail Report

By Division
Version: 3.0
Approved
Proposal Value: $208,130.66
Approved Date: March 18, 2026

Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Division		Install Total	NPP Total	Demo Total	Division Total
01	General Requirements	$51,092.72	$0.00	$0.00	$51,092.72
02	Existing Conditions	$198.74	$0.00	$0.00	$198.74
07	Thermal And Moisture Protection	$1,069.95	$0.00	$0.00	$1,069.95
13	Special Construction	$2,535.52	$0.00	$0.00	$2,535.52
22	Plumbing	$2,568.77	$0.00	$901.48	$3,470.25
23	Heating, Ventilating, and Air-Conditioning (HVAC)	$137,781.12	$0.00	$139.84	$137,920.96
26	Electrical	$9,957.30	$0.00	$1,126.65	$11,083.95
34	Transportation	$758.57	$0.00	$0.00	$758.57
	Total:	**$205,962.69**	**$0.00**	**$2,167.97**	**$208,130.66**

Line Count: 44 **Proposal Total: $208,130.66**

Total Reflects Filtered Statuses: Added, Clarification Requested, Clarified, Confirmed Removal, Modified, No Change, OverRuled, Rejected, Removed, Retained, System Removal Acknowledged by Contractor, System Removal Acknowledged by Owner, System Removed

The Percentage of Non Pre-Priced on this Proposal: 0.0%

DRAFT

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 3.0
Approved
Proposal Value: $208,130.66
Approved Date: March 18, 2026

Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

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01 General Requirements **$51,092.72**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
1	012220000043	Sheet Metal Worker		48.00	$117.40	HR	0.8500	$4,789.92

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

User Note: Building A
Labor time to adjust existing ductwork as needed to take new duct work from units, 2 men 1 day per unit

Item Note: For tasks not included in the Construction Task Catalog® and as directed by owner only.

Total: **$4,789.92**

Division 01 General Requirements Total: **$4,789.92**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
2	012220000043	Sheet Metal Worker		96.00	$117.40	HR	0.8500	$9,579.84

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

User Note: Building A
Provide labor to connect to existing ductwork
(2 men per unit x 2 days each unit x 3 units)

Item Note: For tasks not included in the Construction Task Catalog® and as directed by owner only.

Total: **$9,579.84**

Division 01 General Requirements Total: **$9,579.84**

DRAFT

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 3.0
Approved
Proposal Value: $208,130.66
Approved Date: March 18, 2026

Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
3	012220000071	HVAC/Electrical Techanician		48.00	$165.38	HR	0.8500	$6,747.50

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

User Note: Building A
Safe off and disconnect all 3 units
2 men, 1 day each unit, not consecutive = 48

Item Note: For tasks not included in the Construction Task Catalog® and as directed by owner only.

Total: $6,747.50

Division 01 General Requirements Total: $6,747.50

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
4	012220000071	HVAC/Electrical Techanician		48.00	$165.38	HR	0.8500	$6,747.50

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

User Note: Building A
Electrician to connect each of the 3 units after HVAC Installation
2 men, 1 day each unit, not consecutive = 48

Item Note: For tasks not included in the Construction Task Catalog® and as directed by owner only.

Total: $6,747.50

Division 01 General Requirements Total: $6,747.50

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
5	012220000088	Flagperson For Traffic Control		24.00	$99.91	HR	0.8500	$2,038.16

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

User Note: Building A
ground guide for forking lift units offsite to trailer then news one through site, 3 days, not consecutive

Total: $2,038.16

Division 01 General Requirements Total: $2,038.16

DRAFT

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 3.0
Approved
Proposal Value: $208,130.66
Approved Date: March 18, 2026

Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
6	012223000061	30' Electric, Scissor Platform Lift		4.00	$338.54	DAY	0.8500	$1,151.04

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: Building B
Under roof access for line set

Total: $1,151.04

Division 01 General Requirements Total: $1,151.04

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
7	012223001029	10,000 Lb. Capacity, Telescopic Boom, Hi-Reach, Rough Terrain Construction Forklift With Full-Time Operator		3.00	$1,733.17	DAY	0.8500	$4,419.58

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

User Note: Building A
Fork lift to remove existing and set New
3 units 3 days, not consecutive.

Total: $4,419.58

Division 01 General Requirements Total: $4,419.58

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
8	012223001385	3 Ton Capacity, 12' To 16' Bed, 4 x 2 Flat Bed Truck With Full-Time Truck Driver		3.00	$4,729.63	WK	0.8500	$12,060.56

Accepted

History: 1.1 Added,1.2 Removed,1.3 Retained,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

Owner Comments: *V:1.2-Tool truck is included in factor*

Contractor Comments: *V:1.3-This is used as we have to move on and off each day. There is no laydown space for us to put up a controlled laydown area*

User Note: Building A
Onsite Tool truck (daily), 1 week per unit

Total: $12,060.56

Division 01 General Requirements Total: $12,060.56

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** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 3.0
Approved
Proposal Value: $208,130.66
Approved Date: March 18, 2026

Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
9	012223001385	For Equipment Without Operator, Deduct MOD: 0032		3.00	-$3,625.29	WK	0.8500	-$9,244.49
Accepted		*History: 1.1 Added,1.2 Removed,1.3 Retained,2.0 Accepted,2.1 Accepted,3.0 Accepted*						
		Includes Labor Yes	**Includes Equipment No**	**Includes Materials No**				
							Total:	**-$9,244.49**
							Division 01 General Requirements Total:	**-$9,244.49**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
10	012223001385	3 Ton Capacity, 12' To 16' Bed, 4 x 2 Flat Bed Truck With Full-Time Truck Driver		1.00	$4,729.63	WK	0.8500	$4,020.19
Accepted		*History: 1.1 Added,1.2 Removed,1.3 Retained,2.0 Accepted,2.1 Accepted,3.0 Accepted*						
		Includes Labor Yes	**Includes Equipment No**	**Includes Materials Yes**				
		Owner Comments: *V:1.2-Tool truck is included in factor*						
		Contractor Comments: *V:1.3-This is used as we have to move on and off each day. There is no laydown space for us to put up a controlled laydown area*						
		User Note: Building C Onsite tool truck						
							Total:	**$4,020.19**
							Division 01 General Requirements Total:	**$4,020.19**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
11	012223001385	For Equipment Without Operator, Deduct MOD: 0032		1.00	-$3,625.29	WK	0.8500	-$3,081.50
Accepted		*History: 1.1 Added,1.2 Removed,1.3 Retained,2.0 Accepted,2.1 Accepted,3.0 Accepted*						
		Includes Labor Yes	**Includes Equipment No**	**Includes Materials No**				
							Total:	**-$3,081.50**
							Division 01 General Requirements Total:	**-$3,081.50**

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Price Proposal Detail Report

By Division
Version: 3.0
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Proposal Value: $208,130.66
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Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
12	012223001417	12 To 14 CY Rear Dump Truck With Full-Time Truck Driver		3.00	$2,107.69	DAY	0.8500	$5,374.61

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

User Note: Building A
Site containment and haul off of demo units and ancillary items, 1 day per unit, not Consecutive.

Total:	**$5,374.61**
Division 01 General Requirements Total:	**$5,374.61**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
13	012223001417	For Equipment Without Operator, Deduct MOD: 0032		3.00	-$725.06	DAY	0.8500	-$1,848.90

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

Total:	**-$1,848.90**
Division 01 General Requirements Total:	**-$1,848.90**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
14	017113000004	First 25 Miles, Equipment Delivery, Pickup, Mobilization And Demobilization Using A Tractor Trailer With Up To 53' Bed		3.00	$1,473.23	EA	0.8500	$3,756.74

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Building A
Fork lift deliveries, 1 time for each unit

Item Note: Includes loading, tie-down of equipment, delivery of equipment, off loading on site, rigging, dismantling, loading for return and transporting away. For equipment such as bulldozers, motor scrapers, hydraulic excavators, gradalls, road graders, loader-backhoes, heavy-duty construction loaders, tractors, pavers, rollers, bridge finishers, straight mast construction forklifts, telescoping boom rough terrain construction forklifts, telescoping and articulating boom man lifts with >40' boom lengths, etc.

Total:	**$3,756.74**
Division 01 General Requirements Total:	**$3,756.74**

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Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
15	017136000004	>1 To 4 Hours On Site, Electromagnetic (SIR/GPR) Survey, Earth, Concrete, Masonry Or Asphalt		1.00	$1,742.85	EA	0.8500	$1,481.42
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted***						

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: Building C
For roof penetration

Total: **$1,481.42**

Division 01 General Requirements Total: **$1,481.42**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
16	017413000003	Collect Existing Debris And Load Into Truck Or Dumpster		15.00	$29.56	CY	0.8500	$376.89
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Building A
3 Units (Estimated)

Item Note: Per CY of debris removed.

Total: **$376.89**

Division 01 General Requirements Total: **$376.89**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
17	017419000029	General Refuse		15.00	$181.21	TON	0.8500	$2,310.43
Accepted		***History: 1.1 Added,1.2 Removed,1.3 Retained,2.0 Accepted,2.1 Accepted,3.0 Accepted***						

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

Owner Comments: *V:1.2-Redundant with 01 74 19 00-0039, please choose one only*

Contractor Comments: *V:1.3-Not redundant, 1 is hauling and the other is the disposal costs.*

User Note: Building A
Disposal of removed units and debris

Total: **$2,310.43**

Division 01 General Requirements Total: **$2,310.43**

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Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
18	017419000039	Hauling With 10 To 12 CY Dump Truck, Up To 15 Miles		3.00	$162.05	EA	0.8500	$413.23

Accepted

History: 1.1 Added,1.2 Modified,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Owner Comments: *V:1.2-If each unit requires a 13CY haul then it should be 3 hauls*

Contractor Comments: *V:1.3-Agree with determination*

User Note: Building A
3 -13CY loads estimated (3x13)

Item Note: Each first 15 miles per trip

Total:	**$413.23**
Division 01 General Requirements Total:	**$413.23**

02 Existing Conditions **$198.74**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
19	024116130023	Sorting Of Material Debris For Recycling Prior To Hauling Off		11.00	$11.06	CCF	0.8500	$103.41

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Building A
39CY = 11CCF

Total:	**$103.41**
Division 02 Existing Conditions Total:	**$103.41**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
20	024119130180	Drill 4" Diameter Core In >6" To 8" Brick/Concrete Block		1.00	$112.15	EA	0.8500	$95.33

Accepted

History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Building C
Roof penetration

Total:	**$95.33**
Division 02 Existing Conditions Total:	**$95.33**

07 Thermal And Moisture Protection **$1,069.95**

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Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
21	070513000002	Up To 1 SQ, Mobilization Of Crew For Small Quantity Of Roof Work		1.00	$1,258.77	EA	0.8500	$1,069.95
Accepted		*History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted*						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Building C
Roof penetration

Total: $1,069.95

Division 07 Thermal And Moisture Protection Total: $1,069.95

13 Special Construction **$2,535.52**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
22	134853000002	4-Bolt Deck Anchor Connection For Seismic Brace		18.00	$165.72	EA	0.8500	$2,535.52
Accepted		*History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted*						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Building A
New units anchors, 6 per unit x 3 units

Item Note: Includes drilling into concrete, bolts, anchor plate, seismic bracket attached with bolt, nut and washer.

Total: $2,535.52

Division 13 Special Construction Total: $2,535.52

22 Plumbing **$3,470.25**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
23	221116000444	3/4" Diameter, Soft Drawn Type K Copper Tube		120.00	$16.30	LF	0.8500	$1,662.60
Accepted		*History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted*	Demo:	120.00	$3.11	LF	0.8500	$317.22

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Building A
New condensate Lines for each units, estimated at 40LF each

Total: $1,979.82

Division 22 Plumbing Total: $1,979.82

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Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
24	221116000456	3/4" Diameter, 90 Degree Copper Elbow		6.00	$51.38	EA	0.8500	$262.04
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted***	Demo:	6.00	$32.87	EA	0.8500	$167.64

Includes Labor Yes Includes Equipment Yes Includes Materials Yes

User Note: Building A
New condensate Lines for each units, estimated at 40LF each

Total: $429.68

Division 22 Plumbing Total: $429.68

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
25	221116000528	3/4" Diameter, Copper Coupling		18.00	$42.10	EA	0.8500	$644.13
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted***	Demo:	18.00	$27.23	EA	0.8500	$416.62

Includes Labor Yes Includes Equipment Yes Includes Materials Yes

User Note: Building A
New condensate Lines for each units, estimated at 40LF each

Total: $1,060.75

Division 22 Plumbing Total: $1,060.75

23 Heating, Ventilating, and Air-Conditioning (HVAC) $137,920.96

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
26	230160710003	Recovery And Recharging Of Refrigerant		120.00	$23.80	LB	0.8500	$2,427.60
Accepted		***History: 1.1 Added,1.2 Modified,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted***						

Includes Labor Yes Includes Equipment Yes Includes Materials No

Owner Comments: *V:1.2-2-4 lbs of refrigerant per ton of cooling capacity (4 lbs * (15 ton + 7.5 ton + 7.5 ton) = 120lbs*

Contractor Comments: *V:1.3-Estimated*

User Note: Building A
Recover and recycle all existing refrigerant.
Estimated 300lbs per unit

Item Note: Includes cleaning refrigerant gas prior to recharging.

Total: $2,427.60

Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total: $2,427.60

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Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
27	230593000011	Balancing Package A/C Unit		3.00	$331.70	EA	0.8500	$845.84
Accepted		*History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted*						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Building A
3 Units

Total:	**$845.84**
Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total:	**$845.84**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
28	230593000102	Up To 100', >1-1/2" To 4" Piping, Pneumatic Testing		3.00	$1,170.86	EA	0.8500	$2,985.69
Accepted		*History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted*						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Building A
3 Units
Item Note: Includes soaping joints.

Total:	**$2,985.69**
Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total:	**$2,985.69**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
29	230593000102	Up To 100', >1-1/2" To 4" Piping, Pneumatic Testing		1.00	$1,170.86	EA	0.8500	$995.23
Accepted		*History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted*						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Building C
1 Unit
Item Note: Includes soaping joints.

Total:	**$995.23**
Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total:	**$995.23**

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Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
30	230923530087	With Display, Interior Wall Mounted, Standalone Controller For Heat Pumps, Fan Coil Units And Other Packaged HVAC Equipment (Automated Logic RC642D)		1.00	$1,933.79	EA	0.8500	$1,643.72
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted***	**Demo:**	1.00	$164.52	EA	0.8500	$139.84

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Building A
New Thermostat (Only one Unit needs this)

Total: $1,783.56

Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total: $1,783.56

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
31	233113230003	Galvanized Steel Welded Duct		300.00	$25.03	LB	0.8500	$6,382.65
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Modified,2.0 Accepted,2.1 Accepted,3.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Contractor Comments: *V:1.3-This was left at 0 on first submittal to stay under ROM number*

User Note: Building A
3 Units attaching to existing building (Estimated 100lbs each)

Total: $6,382.65

Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total: $6,382.65

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
32	237416130066	8 Ton, Air-Cooled Packaged Rooftop Units (AAON RNA-008)		2.00	$28,623.94	EA	0.8500	$48,660.70
Accepted		***History: 1.3 Added,2.0 Accepted,2.1 Accepted,3.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Contractor Comments: *V:1.3-Building A Trane Units 7.5 Tons*
Please review Submittal

User Note: Building A Trane Units 7.5 Tons, 2 Units
Please review Submittal

Total: $48,660.70

Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total: $48,660.70

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Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
33	237416130066	For Factory Installed And Wired Dry Bulb Economizer, Add **MOD: 0514**		2.00	$1,707.38	EA	0.8500	$2,902.55

Accepted

History: 1.3 Added,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

Total: $2,902.55

Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total: $2,902.55

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
34	237416130072	15 Ton, Air-Cooled Packaged Rooftop Units (AAON RNB-015)		1.00	$38,681.49	EA	0.8500	$32,879.27

Accepted

History: 1.3 Added,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Contractor Comments: *V:1.3-Building A Trane Unit 15 Tons Please review Submittal*

User Note: Building A Trane Unit 15 Tons
Please review Submittal

Total: $32,879.27

Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total: $32,879.27

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
35	238123130004	2 Ton Packaged Computer Room Air Conditioner, Ceiling Mounted, Split System		2.00	$21,158.68	EA	0.8500	$35,969.76

Accepted

History: 1.1 Added,1.2 Modified,1.3 Modified,2.0 Accepted,2.1 Accepted,3.0 Accepted

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Owner Comments: *V:1.2-Only 1 mini split*

Contractor Comments: *V:1.3-There will be two heads installed per SOW, this is the best fit line item in the CTC.*

User Note: Building C
2 heads spilt units

Total: $35,969.76

Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total: $35,969.76

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Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
36	238126130032	4" Line Set Cover, Rigid Polyvinyl Chloride (PVC) Line Set Covers		50.00	$18.26	LF	0.8500	$776.05
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted***						
		Includes Labor Yes	**Includes Equipment Yes**	**Includes Materials Yes**				
	User Note:	Building C Estimated conduit run						
							Total:	**$776.05**
							Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total:	**$776.05**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
37	238126130038	4" 90 Degree Elbow, Rigid Polyvinyl Chloride (PVC) Line Set Covers		8.00	$99.45	EA	0.8500	$676.26
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted***						
		Includes Labor Yes	**Includes Equipment Yes**	**Includes Materials Yes**				
	User Note:	Building C Estimated conduit run						
							Total:	**$676.26**
							Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total:	**$676.26**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
38	238126130041	4" 90 Degree Long Radius Elbow, Rigid Polyvinyl Chloride (PVC) Line Set Covers		8.00	$93.50	EA	0.8500	$635.80
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted***						
		Includes Labor Yes	**Includes Equipment Yes**	**Includes Materials Yes**				
	User Note:	Building C Estimated lineset run						
							Total:	**$635.80**
							Division 23 Heating, Ventilating, and Air-Conditioning (HVAC) Total:	**$635.80**

26 Electrical **$11,083.95**

DRAFT

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 3.0
Approved
Proposal Value: $208,130.66
Approved Date: March 18, 2026

Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
39	260519160003	Pull String Installed To Remain In Place, In Existing Conduit		60.00	$0.33	LF	0.8500	$16.83
Accepted		*History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted*						

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

User Note: Building A
pull string for thermostat wire in ½" conduit.

Total: $16.83

Division 26 Electrical Total: $16.83

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
40	260519160264	#12 AWG, Type SFF-2, 600 Volt, Copper, Single Stranded Cable, Installed In Conduit		0.30	$2,360.44	MLF	0.8500	$601.91
Accepted		*History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted*	Demo:	0.30	$450.02	MLF	0.8500	$114.76

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Building A
New wire to disconnect and unit from nearest existing connection point., estimated 50LF each unit x 2 runs = .3

Total: $716.67

Division 26 Electrical Total: $716.67

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
41	260533130596	1/2" Electrical Metallic Tubing (EMT) Conduit		60.00	$4.97	LF	0.8500	$253.47
Accepted		*History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted*	Demo:	60.00	$1.69	LF	0.8500	$86.19

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Building A
New Conduit for new thermostat

Total: $339.66

Division 26 Electrical Total: $339.66

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** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 3.0
Approved
Proposal Value: $208,130.66
Approved Date: March 18, 2026

Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
42	260533130598	1" Electrical Metallic Tubing (EMT) Conduit		90.00	$7.12	LF	0.8500	$544.68
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted***	Demo:	90.00	$2.06	LF	0.8500	$157.59

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Building A
New conduit to disconnect and unit from nearest existing connection point for each of the 3 units, estimated 30LF each

Total: $702.27

Division 26 Electrical Total: $702.27

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
43	262816160558	60 Amperes, 240 Volt Class, 4 Pole, Non-Fusible, NEMA 3R Enclosure, Neutral Kit, Double Throw Safety Switch		3.00	$3,349.18	EA	0.8500	$8,540.41
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted***	Demo:	3.00	$301.22	EA	0.8500	$768.11

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Building A
New disconnects,1 for each new unit

Total: $9,308.52

Division 26 Electrical Total: $9,308.52

34 Transportation **$758.57**

Record #	CSI Number	Description	Type	Quantity	Unit Price	UOM	Factor	Line Total
44	340543000302	Drill Out 1" Diameter Fastener/Anchor In Concrete		18.00	$49.58	EA	0.8500	$758.57
Accepted		***History: 1.1 Added,1.2 Accepted,1.3 Accepted,2.0 Accepted,2.1 Accepted,3.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Building A
Drill out existing units anchors, 6 per unit x 3 units

Total: $758.57

Division 34 Transportation Total: $758.57

Proposal Total: $208,130.66

Div **The Percentage of Non Pre-Priced on this Proposal: 0.0%**

DRAFT

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 3.0
Approved
Proposal Value: $208,130.66
Approved Date: March 18, 2026

Catalog: August 2025 - SDMTS, General Building and Facilities Construction Services

Job Order: MTSJOC441-04

Job Order Name: A & C Building HVAC Replacement

Location: Building A 12 S. 13th Street San Diego, CA 92101

Contractor: ABC General Inc.
Contract Number: PWG441.0-25
Contract Name: JOC General Building and Facilities Construction Services

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** Includes Price Changes due to Construction Task Catalog update*

EXHIBIT C
(Subcontractor Listing)

DRAFT

San Diego Metropolitan Transit System
1255 Imperial Ave
San Diego, CA 92101

Subcontractor Report

Date: 3/24/2026

Job Order Contracting

Contract #: PWG441.0-25

Job Order #: MTSJOC441-04

Job Order Title: A & C Building HVAC Replacement

Job Order Value: $208,130.66

Location: Building A

Contractor: ABC General Inc.

Subcontractors: Comfort Mechanical

Swift Electric

Subcontractor Name	License Number	Describe Nature of Work (Trade)	Certifications	Subcontractor Total	Participation %
Comfort Mechanical 10740 Kenney St, #404 Santee, CA 92071	695913	HVAC	No Certification	$133,057.00	63.93%
Swift Electric 12515 Woodside Ave #906, Lakeside, CA 92040	915171	Electrician	No Certification	$10,908.00	5.24%

Summary

Certification Name	Value	% Subcontracted
No Certification	$143,965.00	69.17%
Total	**$143,965.00**	**69.17%**

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Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 4/9/2026

Agenda Item No. 12

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

April 16, 2026

SUBJECT:

Maintenance of Wayside (MOW) Signal and Track Inspection Cloud Software Solution – 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. L1690.0-25 (in substantially the same format as Attachment A), with TekTracking LLC (TekTracking), to provide Signal and Track Inspection Cloud Software Solution in the amount of $2,480,001.07 for a three (3) year base period with (2) two 1-year options, for a total of five (5) years; and

2) Exercise the option years at the CEO's discretion.

Budget Impact

This contract will be funded by the Capital Improvement Program (CIP) 1007120101 - MOW Signal and Track Inspection Solution, and the Information Technology (IT) Operating Budget as shown below:

Budget	Totals
CIP – 1007120101	$570,757.75
IT Cost Center – 661010	$1,909,243.32
Totals	**$2,480,001.07**

The total cost of this contract is shown below:

Description	Estimated Services
Year 1	$937,743.55
Year 2	$366,985.80
Year 3	$385,335.00
Subtotal (Base Years)	**$1,690,064.35**
Year 4 (Option Year 1)	$385,335.00
Year 5 (Option Year 2)	$404,601.72
Subtotal (Option Years)	**$789,936.72**
Grand Total	**$2,480,001.07**

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.

DISCUSSION:

The MOW department is seeking wayside maintenance software to help manage and comply with Federal Railroad Administration (FRA) regulations, specifically FRA CFR Part 213, Part 234, and Part 236. MOW conducts essential maintenance along rail lines to ensure safety and reliability for MTS riders. Currently, this maintenance relies heavily on paper forms, which are later manually entered into the MTS Enterprise Resource Planning/Enterprise Asset Management (ERP/EAM) system, a process that consumes substantial time and resources.

This paper-based workflow slows down and complicates MOW operations, lacks effective work order prioritization, creates repetitive waste, and increases the risk of manual errors in reporting. A software solution will address these issues by eliminating the paper process and improving maintenance efficiency by providing (thirty-one) 31 rugged tablets installed in MOW field maintenance trucks. These devices automatically update the MTS ERP/EAM system upon completion of maintenance tasks. Additional features include management tools such as work order prioritization, analytics on high-failure items, and identification of trouble spots along the tracks.

This solution will enable MTS to scale its operations, future-proof its processes, lower operational costs, and provide enhanced analytics to help MOW monitor real-time rail conditions and respond effectively.

On January 30, 2025, MTS issued a Request for Proposal (RFP) for a Signal and Track Inspection Cloud Software Solution. A total of four (4) proposals were received on the due date of May 16, 2025, from the following firms:

#	Proposer Name	Firm Certification
1	TekTracking	N/A
2	Railroad Software	N/A
3	Praedico Technologies USA Inc. (Praedico)	N/A
4	Vossloh Rail Services North America (Vossloh Rail)	N/A

All proposals were deemed responsive and responsible and were evaluated by a committee consisting of representatives from the Finance, IT, and MOW departments. The RFP evaluation process for this procurement consisted of 2 phases. During phase 1, evaluators examined the written proposals and conducted interviews with proposers. During phase 2, proposers meeting the competitive range were invited to participate in a 28-day on-site testing and objective evaluation period within MTS provided testing environments.

For phase 1 of 2, the proposals were scored based on the following evaluation criteria:

Evaluation Criteria	Total Possible Points
Qualifications of the Firm or Individual	20
Staffing, Organization, and Management Plan	20
Work Plan	35
Cost and Price	25
Total	**100**

The following table illustrates the initial scores and ranking of each firm:

Proposer Name	Technical Score	Cost Score	Total Score (Maximum 100)	Ranking
TekTracking LLC	64.80	9.75	74.55	2
Railroad Software	38.20	21.20	59.40	3
Praedico	61.40	25.00	86.40	1
Vossloh Rail	9.60	22.04	31.64	4

On July 23 and 24, 2025, Request for Revised Proposals No. 1 & Invitation for Presentations and Demonstration were sent to the two highest-ranked proposers after the evaluation panel's review. Both proposers were asked technical questions about the software solution and were asked to demonstrate, in a realistic and production-like environment, how their software meets the objectives outlined in this RFP.

On August 11, 2025, the selection panel met again to evaluate the proposals based on the findings from the Request for Revised Proposals, Presentations, and Demonstrations. Below are the scores:

Proposer Name	Technical Score	Cost Score	Total Score (Maximum 100)	Ranking
TekTracking LLC	66.60	9.75	76.35	1
Praedico	49.00	25.00	74.00	2

On August 27, 2025, for Phase 2 of 2, TekTracking, the highest-ranked firm, was invited for product on-site testing commencing from September 22, 2025, through October 19, 2025. The intent of the on-site testing was to conduct real-world field testing at MTS, showcasing the capabilities through a comprehensive software demonstration and mock-up. IT and MOW staff came together to test the product and ensure it had the ability to work for staff and the existing technology infrastructure.

As a result, on October 27, 2025, the evaluation panel discussed the testing. On November 24, 2025, Request for Revised Proposals No. 2, and on February 18, 2026, No. 3, were sent to TekTracking regarding technical specifications and requesting clarification on the work plan. Due to this effect, the price increased from $2,260,143.83 to $2,480,001.07. The Independent Cost Estimate (ICE) for the services was $2,120,947.90.

On March 26, 2026, a Best and Final Offer (BAFO) was sent to TekTracking. On the same day, a response was provided stating that the cost will remain the same due to the uncertainty of the ongoing global memory chip supply constraint. Based on the objectives of this procurement and consideration of the evaluation criteria, TekTracking presented the best overall value to MTS.

That the MTS) Board of Directors authorize the CEO to:

1) Execute MTS Doc No. L1690.0-25 (in substantially the same format as Attachment A), with TekTracking, to provide Signal and Track Inspection Cloud Software Solution in the amount of $2,480,001.07 for a three (3) year base period with (2) two 1-year options, for a total of five (5) years; and

2) 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 Agreement, MTS Doc. No. L1690.0-25
B. Scope of Work
C. Cost Form

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. L1690.0-25

MAINTENANCE OF WAYSIDE SIGNAL AND TRACK INSPECTION CLOUD SOFTWARE SOLUTION

THIS AGREEMENT is entered into this _____ day of _____, 2026 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: TekTracking LLC

Address: 144 Fairport Village Landing #239

Fairport (City) New York (State) 14450 (Zip)

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

Email: gfogarty@tektracking.com

Telephone: 585-455-8276

Authorized person to sign contracts: Gregory P Fogarty (Name) Founder & CEO (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).

The contract term is for up to three (3) base years and two (2) 1-year options, exercisable at MTS's sole discretion, for a total of 5 years. Base period shall be effective May 1, 2026 through April 30, 2029 and option years shall be effective May 1, 2029 through April 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 $1,690,064.35 for the base years and $789,936.72 for the option years, for a contract total not to exceed $2,480,001.07 without the express written consent of MTS.

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

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SCOPE OF WORK/TECHNICAL SPECIFICATIONS

1. INTRODUCTION

MTS is looking for qualified and experienced firms to propose a cloud-based Federal Railroad Administration (FRA) approved Track Inspection & Signal Testing Application.

The contract term shall be for a three (3) year base period with two (2) 1-year options, exercisable at MTS' sole discretion.

2. BACKGROUND

Maintenance of Way (MOW) department is seeking proposals for tools designed to digitize the current track inspection process and signal testing process. MOW staff is looking to digitize an existing paper-based process, along with streamlining report management. The tools should be mobile in nature and simple for both track inspectors and signal maintainers. The system will be architected with mobile applications available for field employees (track inspectors & signal maintainers) and a web-based back-office system for managers, executives & oversight groups.

The system shall ensure manual inspections of all track assets will occur per the frequency set by the railroad and FRA CFR Part 213 requirements.

The system shall ensure testing of all signal assets will occur per the frequency set by the railroad and FRA CFR Part 234 and CFR Part 236 requirements.

3. UNDERSTANDING THE STATEMENT OF OBJECTIVES

MTS seeks an application that is future-proof, scalable and cost efficient. It is critical to MTS that the selected solution is scalable and flexible to adapt efficiently to changes in MOW requirements and technology. This includes ever changing cloud environments and government compliance.

This application is a critical need to replace the outdated, MOW paper-based 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.

4. USER ROLES AND LICENSING FORECAST

The following table is designed to help proposers construct accurate proposals based on current process roles, total resources for the role and functional descriptions of the role:

Role	Amount	Function
Maintainers	55	Logs into software, enters maintenance actions, performs preventative maintenance, performs emergency corrective actions, views schematics, views asset locations, logs hours of service, receives work orders, completes work orders

System Administrator	2	Performs advanced configurations and assists in troubleshooting and escalations
Supervisors	14	Creates reports, adds and manages employees, adds/modifies/deletes assets, dispatch assignments, prioritize work orders, views analytics, views schematics, approve hours of service, approve inspections, approve corrective actions
Auxiliary Supervisors	10	Creates reports, dispatch assignments, prioritize work orders, views analytics, views schematics, approve hours of service, approve inspections, approve corrective actions
Analytics Viewers	4	Views analytics reports
Analytics Reports Developer	2	Creates and shares internal and external reports with various stakeholders

5. HARDWARE, INSTALLATION AND SETUP

MTS recognizes that the successful deployment of the new MOW application requires additional hardware upgrades for field assets to achieve full functionality and optimize software performance. To address this need, MTS seeks proposals from qualified vendors capable of delivering a comprehensive, end-to-end hardware implementation. This includes all phases from initial proposal to go-live, encompassing hardware procurement, installation in fleet vehicles, and ongoing field support. Proposals should demonstrate the ability to provide seamless integration and ensure minimal disruption to operations during deployment.

During the implementation phase, MTS MOW will provide one vehicle at a time from the designated fleet for hardware installation. Upon completion of each installation, the vehicle will be returned to operational service, allowing the vendor to proceed with the next vehicle. While MTS MOW will collaborate with the vendor to address and resolve any impediments that arise, MTS will maintain overall control of the hardware implementation schedule to ensure alignment with operational priorities.

The following list is dynamic and changes throughout our operations lifecycle. A finalized list will be verified by the vendor and confirmed before contract execution:

LIST OF FLEET VEHICLES			
Veh #	**Description**	**Department**	**Model Year**
401	Ford Explorer	MOW	2016
410	Ford F150	MOW	2020
402	Ford Explorer	MOW	2022
421	Ford F350 Extra Cab Line Truck	MOW	2024
422	Ford F350 Extra Cab Line Truck	MOW	2021
423	Ford F350 Extra Cab Line Truck	MOW	2019
425	Ford F350 Extra Cab Line Truck	MOW	2021
426	Ford F350 Extra Cab Line Truck	MOW	2022
427	Ford F350 Extra Cab Line Truck	MOW	2021
429	Ford F350 Extra Cab Line Truck	MOW	2021
431	Ford F350 Extra Cab Line Truck	MOW	2021
434	Ford F350 Extra Cab Line Truck	MOW	2019
437	Ford F550 dual wheel drive w/ Hyrail	MOW	2022
435	Ford F250 Hyrail	MOW	2022
439	Ford F600 Bucket Truck	MOW	2021
460	Ford Explorer	Track	2017
413	Ford F350 Crew Cab	Track	2021
462	Ford F350 Crew Cab	Track	2017
463	Ford F350 Crew Cab	Track	2017
464	Ford F350 Crew Cab	Track	2017
465	Ford F550	Track	2017
467	Ford F550 Welding Truck	Track	2020
468	FORD F350 HYRAIL	Track	2021
470	Ford F-150 XL 4x2 SuperCab Styleside 8 ft. box 163 in. WB	Track	2018
472	Ford F350 Hyrail Insp Truck	Track	2022

436	Ford F550	MOW	2014
438	Ford F550	MOW	2014
461	International 7400 Chassis	MOW	2011
440	International 4300 Chassis	MOW	2011
441	International 4300 Chassis	MOW	2011
448	International 4300 Chassis	MOW	2011

Provide within your proposal the complete implementation from procurement to go-live of the following hardware to support the list of fleet vehicles.

A. All Track vehicles (10 + 1 Spare Tablet Only) should have:

Dell Latitude 7230 Rugged Extreme Tablets configured with 12th Gen Intel® Core™ i5-1240U, vPro® (12 MB cache, 10 cores, 12 threads, up to 4.4 GHz Turbo), Windows 11 Pro English, Integrated Intel®Iris® Xe Graphics for i5-1240U vPro Processor, 16GB Memory, u-blox NEO-M9N GPS card, 16 GB: 2 x 8 GB, LPDDR5, 5200 MT/s (onboard), 256 GB, M.2 2230, PCIe NVMe, SSD, Class 35, 12" Touch 1200 nits WVA FHD (1920x1200) 100% sRGB AntiGlare,Outdoor Viewable,front/rear cam,dual mic, Intel® Wi-Fi 6E AX211, 2x2, 802.11ax, MU-MIMO, Bluetooth® 5.3 wireless card, 2 Cell, 35.6 Wh, ExpressCharge™ Capable, 65W AC adapter, USB Type-C, EcoDesign, Backcover, no Fingerprint, no Smartcard reader, no removable SSD, with passive pen, 5yrs ProSupport Plus, Dell Rigid Handle, Dell 7230 Tablet Keyboard, Havis Mounting Solution, Havis Docking Station, Havis Charger, Havis ChargeGuard, Necessary Havis Adapter Lugs, Necessary Havis Docking Stations, mount kits and full installation.

B. 1.4.2.2 All Wayside (MOW) vehicles (21 + 1 Spare Laptop Only) should have:

Latitude 5430 Rugged Laptops with 11th Gen Intel® Core™ i7-1185G7, vPro® (12 MB cache, 4 cores, 8 threads, 3.00 GHz to 4.80 GHz Turbo), Windows 11 Pro English, Intel® Core™ vPro i7-1185G7 with Iris Xe Graphics, ME Lockout MOD – Manageability, 32 GB: 2 x 16 GB, DDR4, 3200 MT/s, 256 GB, M.2, PCIe NVMe, SSD, Class 35, 14" Touch 1100 nits WVA FHD (1920 x 1080) 100% sRGB Anti-Glare,Outdoor Viewable,Passive Pen, English US RGB backlit sealed keyboard, Intel AX210 WLAN Driver, Intel® Wi-Fi 6E AX210, 2x2, 802.11ax, Bluetooth® 5.2 wireless card, No Mobile Broadband Card, 3 Cell, 53.5 Whr, Long-lifecycle 3 Year Battery, 65W AC adapter, USB Type-C, EcoDesign, No Fingerprint, no Smartcard reader, E4 Power Cord 1M for US, Dummy Airbay Cover, Microphone +RGB HD camera; Touch; WLAN/WWAN antennae; Pogo vehicle docking and RF passthrough, Dedicated u-blox NEO GPS Card, No AutoPilot, Additional USB-A rear port, Additional TBT/Type-C port, Rigid handle, 5yrs ProSupport Plus, Havis Mounting Solution, Havis Docking Station, Havis Charger, Havis ChargeGuard, Necessary Havis Adapter Lugs, Necessary Havis Docking Stations, mount kits and full installation.

C. 1.4.2.2 Vehicles (31) require full installation:

Complete installation of mounting solutions and charging adapters of equipment defined in section 1.4.2.1 and 1.4.2.2 including: Havis Mounting Solution, Havis Docking Station, Havis Charger, Havis ChargeGuard, Necessary Havis Adapter Lugs, Necessary Havis Docking Stations, mount kits and full installation.

Most software offerings will have the store and forward capability enabled. MOW staff are in and out of range of current Wi-Fi locations throughout the Rail system during the workday and will have intermittent connectivity. Strong store and forward capabilities will be of high value to MTS MOW throughout the procurement and testing process.

Included in Section 2.17 of the General Provisions is the Request for Approved equal (RFA) information. Complete documentation should be provided in support of any RFAs submitted by Proposers for MTS' review and response and must be submitted by the deadline provided in the calendar of events. Any RFAs submitted with the proposal will not be accepted.

6. TRAINING

The proposer shall provide virtual and on-site training options during the project implementation, tailored to the specific training phase and the roles outlined in section 5.4. 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 proposer shall 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 shall 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.

7. SERVICE LEVEL - WARRANTY, MAINTENANCE AND SUPPORT

Support Services: Explain how the Offeror intends to provide support 24 hours a day, 7 days a week, 365 days a year and their 24-hour call center capabilities.

A. Error Reporting – Describe and demonstrate the process and methods used to report errors of the services proposed and the measures taken to resolve standard errors.
B. Response Priority Determination – Describe and demonstrate the process that the proposer utilizes for categorizing and prioritizing different classes of error's, issues or problems with the service proposed.
C. First Response, Resolution and Updates – Describe and demonstrate the process for establishing timelines for first response, actions taken during initial response, expected response times and communication commitments for updates, next steps and resolutions.
D. Subscribers Obligations – Describe and demonstrate the expectations of the subscriber of the proposed solution during error, outage or problems.
E. Issue Escalation and Resolution Methods – Describe and demonstrate the internal and external process of issue escalation and resolution methods.

Service Level: Describe System, subsystem, and equipment warranty and include a copy of all applicable standard support Agreements (i.e., warranty, maintenance, software licensing, etc.).

A. Monthly Uptime Commitment – Describe and demonstrate the monthly uptime percentage, the measuring techniques of uptime, reports available for measure of uptime and any additional uptime commitment of the proposed service.
B. Detailed Uptime Components – Describe and demonstrate any detailed components that might have uptimes that differ from the entire service presented.
C. Service Credits – Describe and demonstrate any service credits offered for dips in service below acceptable thresholds.
D. Requesting Service Credits – Describe and demonstrate the requirements and process to request and receive service credits including expected timelines and typical outcomes of requests made.
E. Scheduled Maintenance – Describe and demonstrate the procedure for performing scheduled maintenance, the frequencies of maintenance, any expected communications prior to maintenance and how these maintenance periods are measured in relation to Service Level measured uptime.

Warranty: Describe how the offeror intends to meet warranty requirements.

A. Service and repair to be performed 24 hours a day, 7 days a week, 365 days a year.
B. If applicable, Identify the Offeror's qualified service organization(s) that shall provide warranty service and repair
C. Hardware repair and replacement. Software and firmware upgrades and back up. Describe procedures to handle System level failures and defects during the warranty period
D. Software and firmware upgrade support to be provided during the warranty period.
E. Describe all subcontracted work intended to support the obligations of this contract.

8. TENTATIVE PAYMENT SCHEDULE

Project Phase	Activity	Tentative Timeline	Tentative Calendar Days	Payment Percentage
IMPLEMENTATION PHASE	Project Kickoff & Onboarding	NLT 30 days after NTP	30	0% of One Time Service Fees
	Onsite Project Meeting	1 days following project KO and onboarding	1	0% of One Time Service Fees
	Hardware Implementation	80 days following onsite project meeting	80	10% of One Time Service Fees
	Software Implementation	80 days following Hardware Implementation	80	10% of One Time Service Fees
	Application & Data Conversion Setup Complete	80 days following Software Implementation	80	10% of One Time Service Fees

	Training Complete	60 days following application setup	60	10% of One Time Service Fees
	UAT 1 Complete	60 Days following training	60	10% of One Time Service Fees
	UAT Revisions Complete	30 Days following UAT 1	30	10% of One Time Service Fees
	UAT 2 Complete	60 Days following UAT 1 Revisions	60	10% of One Time Service Fees
	UAT 2 Revisions Complete	30 Days following UAT 2	30	10% of One Time Service Fees
	Go-Live Complete (Move from Test to Production)	30 Days following UAT 2 Revisions	30	10% of One Time Service Fees
	Final Acceptance & QA Complete	15 Days following Go-Live	15	10% of One Time Service Fees
License YR 1	Year 1 Subscription Dues (15 Days after Go-Live)	15 Days following Go-Live	365	100% of Recurring Software Fees
License YR 2	Year 2 Subscription Dues	365 Days	365	100% of Recurring Software Fees
License YR 3	Year 3 Subscription Dues	365 Days	365	100% of Recurring Software Fees
Optional 1 License YR 4	Year 4 Subscription Dues	365 Days	365	100% of Recurring Software Fees
Optional 2 License YR 5	Optional Year 5 Subscription Dues	365 Days	365	100% of Recurring Software Fees

9. FUNCTIONALITY TESTING

Provide a detailed Project Action Plan to address the goals and requirements contained in ATT 2, Product Testing Plan. No changes to your plan shall be made after submittal without the approval of MTS.

10. INSTALLATION AND CONFIGURATION

Proposer shall perform all installation and configuration of proposed system in accordance with the project implementation plan. Proposer shall partner with MTS resources to finalize designs and receive approval for configuration and setup prior to data conversion.

11. DESIGN

Proposer shall develop and provide configuration designs and documentation for the system prior to implementation. All designs must receive approval from the MTS Project Manager (PM) before implementation and the finalized design, incorporating Quality Assurance and Go-Live milestones, will be submitted to the MTS PM for inclusion in the operational closeout package. Initial designs will also be incorporated into the training detailed.

12. DATA CONVERSION

Proposer shall perform data conversion from existing operational systems to ensure seamless continuity during cutover and live operations, with zero data loss or historical retrieval errors. All data will be securely stored, converted, and managed in compliance with applicable laws and regulations.

13. SYSTEM INTEGRATION

Contractor system shall integrate with all IT systems.

14. TESTING

Proposer shall develop and deliver unique system testing plans for MTS Project Manager approval prior to training. System testing plan should incorporate key elements of system functionality and 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.

15. ADDITIONAL REQUIRED MATERIALS

Any additional materials required for proposed systems shall be outlined clearly within proposer’s proposals and be labeled as “Bill of Required Materials”.

16. MODIFICATIONS

Proposer shall provide a comprehensive process for requesting, evaluating, and implementing modifications necessary to support San Diego MTS objectives throughout the contract lifecycle. This process will include clear guidelines for submitting modification requests, specifying required documentation and designated points of contact. Once a request is submitted, the proposer 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 proposer 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 San Diego MTS objectives and are executed efficiently, cost-effectively, and transparently.

17. ACCEPTANCE

Proposer shall establish a clear and structured process for the acceptance of goods and services to ensure alignment with San Diego MTS standards and objectives. This process will include defined criteria for evaluating the performance and compliance of delivered goods and services against contractual requirements. Upon delivery, the proposer shall facilitate a thorough review process, during which the MTS PM shall assess performance using predefined metrics, benchmarks, and quality standards agreed upon during the contract initiation phase.

To confirm acceptance, the proposer shall 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.

18. PAYMENT TIMELINE

The payment amount and timeline will directly correspond to the milestones outlined in Section 5.8. Payments will only be released upon the successful completion of all obligations related to contractor testing and quality assurance, as specified in Section 5.17, "Acceptance." All deliverables must meet the performance standards and objectives outlined in the SOW. This ensures that payments are tied to the verified fulfillment of contractual requirements, maintaining accountability and alignment with MTS objectives.

19. 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.

20. [NOT APPLICABLE] HEWLETT PACKARD ENTERPRISE (HPE) MINIMUM REQUIREMENTS

21. [NOT APPLICABLE] CISCO MINIMUM REQUIREMENTS

22. 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.

23. [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

24. [NOT APPLICABLE] SAFETY DATA SHEETS (SDS)

25. [NOT APPLICABLE] NO RIGHT TO POST SIGNS

26. REPLACEMENT PARTS

Replacement parts and technical support for the specified equipment must be guaranteed by the manufacturer; to be available for a ten (10) year period from the date of purchase. Manufacturer shall keep parts books and maintenance manuals up-to-date for that period.

27. DELIVERY AND ACCEPTANCE

Equipment or any deliverable provided under this contract shall be delivered F.O.B. to SDTI, 1341 Commercial Street, San Diego, California 92113 unless otherwise specified, in first class condition, complete and ready for operation, and the Contractor shall assume all responsibility and risk of loss incident to said delivery. Contractor shall indicate delivery date on the Bid Form unless already specified, in which case, shall be made within the time set forth. Delivery is part of the consideration and must be adhered to as specified. Contractor will not be held liable for failure to make delivery because of strikes, construction of property, governmental regulations, acts of God or any other causes beyond his control, provided a written extension of time is obtained from MTS. Upon delivery, MTS will acknowledge receipt of said items or products. Delivery shall not constitute acceptance. Upon inspection and testing (if necessary) by MTS, a determination will be made whether said items or products are in conformance with contract requirements. If found in conformance, MTS shall approve the Contractor’s invoice for payment; thereby constituting acceptance. Payment terms begin from this point. If the delivered items or products are found not in compliance, MTS will immediately notify the Contractor and furnish all details of deficiencies. Contractor shall correct the deficiencies or supply new items or products (at the discretion of MTS) and resubmit for inspection and testing (if necessary).

28. EXPEDITING

The goods furnished under this Agreement shall be subject to expediting by MTS. MTS shall be afforded free access to Contractor's shops, factories, or places of business, and those of Contractor's suppliers, for expediting purposes. As required by MTS, Contractor shall supply schedules, unpriced copies of purchase orders and progress reports for MTS's use in expediting.

29. [NOT APPLICABLE] ACQUISITION OF ROLLING STOCK

ATT 1 - Cost Form

L1690.0-25 Maintenance of Wayside (MOW) Signal and Track Inspection Cloud Software Solution RFP

		Year 1 - Implementation Plan			Yearly Licensing and Service After Implementation		
Description	**Estimated QTY**	**Unit Cost**	**Extended Total**		**Year**	**Monthly Cost**	**Extended Total**
Implementation (Training, Professional Services)	1	$ 208,918.75	$ 208,918.75		**YR 2**	$ 30,582.15	$ 366,985.80
Licensing and Service	12	$ 30,582.15	$ 366,985.80		**YR 3**	$ 32,111.25	$ 385,335.00
Customization of Forms	31	$ 5,500.00	$ 170,500.00		**Option - YR 4**	$ 32,111.25	$ 385,335.00
Tablets	33	$ 2,569.00	$ 84,777.00		**Option - YR 5**	$ 33,716.81	$ 404,601.72
Laptops	0	$ -	$ -				
Device Mounts	31	$ 555.00	$ 17,205.00				
Device Docks With Inverters	31	$ 1,600.00	$ 49,600.00				
Charge Guard System	31	$ 119.00	$ 3,689.00				
Mounting Kit	31	$ 578.00	$ 17,918.00				
Rugged Tablet Keyboards	33	$ 550.00	$ 18,150.00				
Annual Total			**$ 937,743.55**				

Annual Total Summary		
Total Year 1	$	937,743.55
Total Year 2	$	366,985.80
Total Year 3	$	385,335.00
Total Year 4 - OPTION	$	385,335.00
Total Year 5 - OPTION	$	404,601.72
CONTRACT TOTAL	**$**	**2,480,001.07**

Costs must be all-inclusive of requirements to perform all the work described in the scope of services. MTS will not pay additional costs.

Quantities displayed on the cost form are estimates for proposal purposes only. They represent what MTS anticipates, but are not guaranteed. The actual quantities may be more or less than anticipated, and are dictated by MTS's actual needs and available funding.

Proposer accepts responsibility for accuracy and presentation of the above numbers.

Proposers must complete the forms as provided. Failure to do so may deem the proposal non-responsive.

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 4/9/2026

Agenda Item No. 13

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

April 16, 2026

SUBJECT:

Old Town Transit Center Wayfinding (OTTC) Signage Design Services – Work Order Agreement

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute Work Order No. WOA355-AE-75, under MTS Doc No. PWL355.0-22 (in substantially the same format as Attachment A), with Psomas, in the amount of $422,506.60 to prepare Plans, Specifications, and Estimate (PS&E) for the OTTC Wayfinding Signage Design Services.

Budget Impact

The total cost of this contract is estimated to be $422,506.60. This project will be funded by the Capital Improvement Program (CIP) account 2009122001- System Sign Replacement - Old Town.

DISCUSSION:

The Old Town Transit Center (OTTC) is a major intermodal gateway to San Diego, linking customers to the region's transportation network and nearby popular amenities. While MTS operates 90% of the service at OTTC, it is also used by North County Transit – San Diego Railroad, Amtrak, and the Airport Flyer shuttle.

Clear, effective, and well-maintained wayfinding signage is essential to the customer experience at OTTC. The station design can be difficult to navigate for riders. Bus stops are located on the east and west sides of OTTC, while heavy and light rail services run through the middle. With so much activity and bus service bifurcated by rail service, new or infrequent transit riders are easily confused about where to go. Additionally, much of the existing wayfinding infrastructure is aging and termite ridden and susceptible to constant repair and vandalism.

To improve the current wayfinding system, MTS staff have developed preliminary designs for new and/or replacement wayfinding signage design that uses a color-coded system, consistent message hierarchy, larger lettering, and new locations to improve the transit riding experience. Proposed new and replacement sign types at OTTC include information pillars, monument

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.

signs, wall and post-mounted signs, and directional ground vinyl on the rail platforms. The proposed signage has been designed by MTS staff in collaboration with California State Parks and other transit agencies operating in OTTC. Overall, the proposed signage will improve wayfinding clarity, be larger for enhanced readability, have modernized aesthetic features, and reduce vandalism.

Today's proposed action would issue a Work Order to Psomas to review the MTS-proposed signage designs, perform on-site reviews of the existing conditions, and provide PS&E for the layout, material selection, fabrication, and installation of new and replacement signage, including new structural footings and power supply as needed.

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

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

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

On December 23, 2025, MTS issued a Request for Proposals (RFP) to all firms in Categories A and B.

On January 28, 2026, MTS received a total of one (1) proposal from Psomas.

On January 29, 2026, MTS issued a post-bid survey to determine why the other on-call firms did not provide proposals for the project. The survey revealed that the solicitation, as issued, did not contain language that would have restricted participation, and MTS proceeded with the evaluation of the single proposal from Psomas

An evaluation panel comprised of CIP, Finance, and Marketing staff conducted its initial evaluation of Psomas' proposal based on the following criteria:

Criteria	**Points**
Project Team	15
Project Team's Capabilities	20
Project Understanding and Approach	40
Schedule	25
Total Possible Score	**100**

On February 6, 2026, the selection committee evaluated the Psomas' initial proposal and scored it as follows:

Ranking	Proposer Name	Total Score
1	Psomas	78

On February 10, 2026, to further evaluate Psomas' technical proposal, MTS requested clarifications from the firm.

On February 19, 2026, following the receipt of the clarifications from Psomas, the selection committee rescored Psomas' revised proposal as follows:

Ranking	Proposer Name	Total Score
1	Psomas	83.33

As part of this evaluation, the evaluation panel concluded that Psomas met the standards of being the "most qualified" A&E firm to provide the specified services.

For this project, Psomas will utilize the following subconsultant:

Subconsultant Name	**Subconsultant Certification**	**Subconsultant Amount**
Anil Verma Associates	SB (Micro)	$245,514.94

Fair & Reasonable Price Determination

Psomas' initial proposed amount for the services was $801,937.04. Through negotiations, staff was able to reduce the cost by $379,430.44, a 47.13% savings to MTS. MTS' Independent Cost Estimate (ICE) for the services was $252,019.64. Based on the level of effort and proposed classifications for the services, Psomas' proposed amount of $422,506.60 was determined to be fair and reasonable.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Work Order No. WOA355-AE-75, under MTS Doc No. PWL355.0-22 (in substantially the same format as Attachment A), with Psomas, in the amount of $422,506.60 to prepare PS&E for the OTTC Wayfinding Signage Design Services.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

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

Attachment: A. Draft Work Order WOA355-AE-75

Metropolitan Transit System

April 16, 2026

MTS Doc. No. PWL355.0-22
Work Order No. WOA355-AE-75

Mrs. Sarah Curran, PE
Vice President
Psomas
401 B Street, Suite 1600
San Diego, CA 92101

Dear Mrs. Curran:

Subject: WORK ORDER WOA355-AE-75 TO MTS DOC. NO. PWL355.0-22, FOR THE OLD TOWN TRANSIT CENTER WAYFINDING SIGNAGE DESIGN SERVICES PROJECT

This letter shall serve as our agreement for Work Order WOA355-AE-75 to MTS Doc. No. PWL355.0-22, for professional services under the General Engineering Consultant Agreement, as further described below.

SCOPE OF SERVICES

This Work Order shall provide design services for Old Town Transit Center Wayfinding Signage Project. Services shall be performed in accordance with the attached Scope of Services (Attachment A)

SCHEDULE

The Schedule shall be for a period of twenty (20) weeks from the date of the Notice to Proceed.

PAYMENT

Payment shall be based on actual costs in the amount of $422,506.60 (Attachment B). The Work Order amount shall not be exceeded, without prior authorization of MTS.

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For Hire Vehicle administrator for nine cities.

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

Sincerely,

Sharon Cooney
Chief Executive Officer

Accepted:

_____
Sarah Curran, Vice President
Psomas

Date:_____

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

ATTACHMENT A
SCOPE OF SERVICES

TITLE: OLD TOWN TRANSIT CENTER WAYFINDING SIGNAGE DESIGN SERVICES **WOA #:** WOA355-AE-75

I. PROJECT DESCRIPTION

The San Diego Metropolitan Transit System, (referred to hereafter as "MTS") seeks a proposal for consultant services for the schematic design, design development, and final engineering for wayfinding signage installation at the Old Town Transit Center (referred to hereafter as "OTTC").

The Old Town Transit Center (OTTC) serves as a major intermodal gateway to San Diego, connecting visitors, residents, and commuters to the region's transportation network. Located adjacent to Old Town San Diego State Historic Park and near the junction of Interstates 5 and 8, OTTC provides access to MTS' Green and Blue Trolley Lines, MTS fixed bus routes, Amtrak's Pacific Surfliner, North County Transit District's (NCTD) COASTER commuter rail, San Diego Flyer airport shuttle, UC San Diego shuttle, taxis and various transportation network companies (TNCs). The OTTC was built in 1995, with much of the existing wayfinding signage dating from that time and past their useful life and/or no longer in a state of good repair. There is also inconsistency between older and newer signage and a lack of conformance with current MTS standards.

The goal of this project is to provide complete construction documents for a modern wayfinding program that will not only help connect passengers with transit services but also help guide passengers toward other civic amenities. This project must ensure safety, accessibility, and equity during all phases of construction and following project closeout regardless of the routes and services riders utilize at OTTC.

MTS will provide the general wayfinding content (artwork/graphics with high resolution files) and sign type by location, but Consultant shall be responsible for identifying the signage location on the site plans and performing any required structural assessment and design for sign posts and/or foundations suitably designed for geotechnical, seismic, and wind conditions. Signage shall be designed to be resistant to acts of vandalism. Consultant shall provide technical specifications for the signs, including material finish, dimensions, construction type, anti-graffiti coatings, and all other items needed for fabrication and construction.

In addition to providing the bid ready plans, specifications and estimate (PS&E), the Consultant shall provide all necessary outside agency coordination, and perform all necessary survey and pre-construction geotechnical engineering in accordance with this Scope of Work.

II. SCOPE OF WORK

The scope of work shall consist of the following tasks and deliverables:

Task 1 - Project Management and Coordination

1.1 Provide project management services including the requirements for invoicing, scheduling, monthly project progress reports, and administration of the Consultant's team.

1.2 Arrange and facilitate Project Development Team (PDT) meetings, interagency meetings, field reviews, and other project-related meetings. Consultant shall prepare meeting agendas, meeting minutes, necessary supplemental materials, and meeting sign-in sheets for all meetings.

1.3 Develop and implement a project schedule to complete the Scope of Work and manage the project to eliminate or minimize supplemental agreements.

1.4 Prepare monthly status reports and project schedules which are to be submitted with invoices. The status report must outline all activities for which charges have been made by the Consultant or sub-Consultants. The Consultant shall prepare a draft status report and submit it for approval prior to submitting the first invoice.

1.5 Provide QA/QC on all deliverables. To ensure quality of work and compliance with the scope of work, the Consultant shall perform a systematic in-house review of all documents produced prior to submittal. All reviewed documents shall have a check box or signature indicating a review has been performed.

Task 2 – Outside Agency Coordination and Approvals

2.1 Provide all necessary coordination with outside agencies and key stakeholders as required for the design. This might include but isn't limited to California State Parks. Consultant shall coordinate with MTS staff regarding ownership, easements, and joint-use agreements.

2.2 It is anticipated that there will be one coordination meeting between the designer, MTS, and California State Parks to review the finalized design as well as one over the shoulder meeting prior to 60% design completion.

2.3 Collect all necessary as-builts from outside agencies required for the design.

2.4 Conduct initial site visits with MTS for review of project, confirmation of existing conditions, and examine existing environment, structures, and facilities.

Task 3 – Survey and Geotechnical Engineering During Design

3.1 Provide all necessary surveying for use in the design and permitting of site improvements. Consultant shall review and evaluate information for the proposed work area, including all available information and MTS design guidelines, local jurisdiction requirements, ADA standards and other pertinent information that may apply. Any survey after design or during the construction phase will be performed by the Construction Manager (CM) or Contractor.

Task 4 – Design, Specifications, and Estimate

4.1 Consultant shall prepare a complete set of scaled drawings and specifications based on MTS-provided conceptual design documents, any as-built plans, survey and field information gathered following initial site visit. These plans and specifications consist of, but are not limited to the following:

1. Demolition plans and details showing the limits and depth of all existing signage removals, pavement removals, concrete removals, and any other necessary demolition work with preferred material staging areas. Items to be protected, relocated, or salvaged shall also be clearly identified.

2. Improvement plans that depict concrete pavement thickness, asphalt pavement thickness and details, subgrade preparation, pavement jointing details, temporary fencing details for excavations (for safety and minimizing ADA accessibility impacts), phasing details (minimizing impacts to pedestrian flow), any necessary landscaping rearrangement or irrigation modification, and all other required work. It is anticipated that all adjacent areas shall be protected in place and new work shall meet or match all adjacent elevations.
3. Wayfinding signage plans depicting locations, dimensions and limits of all signage and foundations; sign fabrication, sign mounting, signage framing/foundation structural details; individual sign layouts; and sign type and finish schedule.
4. Erosion and Sedimentation control plans and details showing locations of proposed temporary construction BMPs and proposed installation details.
5. Electrical plans depicting the electrical point of connection, underground conduit pathway, wiring sizes, single line diagram, panel designation, typical trench detail, spare conduit design, and components necessary for the lighting attached to the proposed monument signage. Consultant to provide MTS with solar-powered monument lighting solution as an alternative to hard-wired signage.

4.2 Based on initial site visit, coordination with MTS and in response and adherence to MTS provided signage package, prepare design plan submittal packages at 60%, 90%, and 100% phases. Design plans shall include site layout, demolition, signage layout, signage installation details, utilities, and detail sheets.

4.3 Consultant shall prepare technical specifications for the proposed work. The specifications will be submitted to MTS for review at each milestone. Specifications will be prepared in CSI format. For any standard reference the Caltrans Standard Specifications (current version), San Diego Standard Specifications for Public Works Construction (current version), or San Diego Regional Standard Drawings can be referenced in order to adhere to the City of San Diego requirements.

4.4 Prepare construction cost estimate and bid form (in the same format as the construction estimate) at each plan submission. The Consultant shall develop a construction cost estimate and bid form for the 60%, 90% and 100% plan level and submit it to MTS. Current available cost data will be used to develop the Engineer's Estimate, and a bottom's up estimate is not included.

Task 5 – Construction Procurement Bid Support

5.1 Consultant shall assist MTS with the construction procurement by responding to bidder comments and pre-bid Request for Information (RFIs) during the bidding phase. Consultant shall attend the pre-bid meeting and MTS to coordinate all bidder questions and correspondence during the bid phase.

5.2 Consultant shall prepare any specifications or front-end division 1 information to adhere to the MTS standard IFB language.

Task 6 – Design Support During Construction (DSDC)

6.1 Consultant shall attend construction team meetings as needed.

6.2 Consultant shall review and approve, or take other appropriate action, as necessary in response to Contractor-prepared submittals required by the specifications. These submittals include shop drawings, product catalog cut sheets, certificates of compliance, samples, and other data which the Contractor is required to submit, but only for conformance with the information given in the Contract Documents. Such review and approvals or other action shall not extend to means, methods, techniques, equipment choice and usage, sequences, schedules or procedures of construction and related safety precautions and programs by the Contractor.

6.3 Consultant shall review and respond to Contractor RFIs forwarded from the CMor MTS Project Manager and issue necessary clarifications and interpretations of the Contract Documents as appropriate for the orderly completion of the Contractor's work. Any orders authorizing variations from the Contract Documents will be made by the CM or MTS Project Manager.

6.4 At the request of MTS, the Consultant shall conduct site visits to respond to RFI's, develop Change Orders, provide review of work, and/or perform other specific tasks.

III. PERIOD OF PERFORMANCE

The Period of Performance for the design and pre-construction bid support project effort shall be for twenty (20) weeks from the issuance of a Notice to Proceed. Pre-construction bid support and DSDC shall be from the commencement of the bidding phase through the completion of construction project closeout.

IV. DELIVERABLES

MTS expects to receive the following deliverables produced over the course of this project:

Task 1
1. Project Schedule
2. Monthly Invoices and Status Reports
3. Meeting Agendas, Minutes, and Sign-in Sheets

Task 3
1. Survey

Task 4

1. 60% plans, specifications, and engineer's construction cost estimate/bid form; one PDF copy.
2. 90% plans, specifications, and engineer's construction cost estimate/bid form; one PDF copy.
3. 100% plans, specifications, and engineer's construction cost estimate/bid form; one PDF copy.
4. Issuance for Construction (IFC) plans and specifications; one PDF copy

Task 5
1. Pre-bid RFI responses
2. Bid phase specifications

V. ASSUMPTIONS

The following items are assumed to complete the Scope of Work:

1. Design shall comply with latest design manuals/criteria and/or guidance from the Authorities Having Jurisdiction (AHJs)
2. New monument signage-attached lighting will not require coordination with SDG&E. All new lighting will be connected to existing circuits or independently solar powered.
3. Interagency over the shoulder review with MTS and other stakeholders

VI. EXCLUSIONS

The following items are excluded from this Scope of Work:
1. Wayfinding artwork, graphics, and inserts
2. Pre- and Post-Construction Surveys
3. Construction Permits

VII. SCHEDULE OF SERVICES/MILESTONES/DELIVERABLES

A. Tasks Schedule

Task	Begin/End Dates
Project Management and Coordination	NTP/project completion
Document Review and Site Visits	NTP/project completion
60% Design Submittal	NTP/NTP + 10 weeks
90% Design Submittal	NTP/NTP + 14 weeks
100% Design Submittal and IFC	NTP/NTP + 18 weeks
Bid Support	During IFB period, as needed
Design Support During Construction	During course of construction, as needed

B. Milestones/Deliverables Schedule

Milestone/Deliverable	Due Date
Over the Shoulder Review	NTP + 12 weeks
60% Design Submittal	NTP + 10 weeks
90% Design Submittal	NTP + 14 weeks
100% Design Submittal and IFC	NTP + 18 weeks

VIII. MATERIALS TO BE PROVIDED BY MTS AND/OR THE OTHER AGENCY

1. MTS will provide As-Builts for existing facilities within the project site if obtainable and conceptual signage design documents.

2. MTS will provide the general wayfinding content (artwork/graphics with high resolution files) and sign type by location

IX. SPECIAL CONDITIONS

Any condition listed below applies solely to this Work Order and does not otherwise alter the Agreement or other Work Orders.

Not Applicable.

X. MTS ACCEPTANCE OF SERVICES:

Contractor shall not be compensated at any time for unauthorized work outside of this Work Order. Contractor shall provide notice to MTS' Project Manager upon 100% completion of this Work Order. Within five (5) business days from receipt of notice of Work Order completion, MTS' Project Manager shall review, for acceptance, the 100% completion notice. If Contractor provides final service(s) or final work product(s) which are found to be unacceptable due to Contractors and/or Contractors subcontractors negligence and thus not 100% complete by MTS' Project Manager, Contractor shall be required to make revisions to said service(s) and/or work product(s) within the Not to Exceed (NTE) Budget. MTS reserves the right to withhold payment associated with this Work Order until the Project Manager provides written acceptance for the 100% final completion notice. Moreover, 100% acceptance and final completion will be based on resolution of comments received to the draft documents and delivery of final documentation which shall incorporate all MTS revisions and comments.

Monthly progress payments shall be based on hours performed for each person/classification identified in the attached Fee Schedule and shall at no time exceed the NTE. Contractor shall only be compensated for actual performance of services and at no time shall be compensated for services for which MTS does not have an accepted deliverable or written proof and MTS acceptance of services performed.

XI. DEFICIENT WORK PRODUCT0

Throughout the construction management and/or implementation phases associated with the services rendered by the Contractor, if MTS finds any work product provided by Contractor to be deficient and the deficiently delays any portion of the project, Contractor shall bear the full burden of their deficient work and shall be responsible for taking all corrective actions to remedy their deficient work product including but not limited to the following:

- Revising provided documents,

At no time will MTS be required to correct any portion of the Contractors deficient work product and shall bear no costs or burden associated with Contractors deficient performance and/or work product.

XII. DELIVERABLE REQUIREMENTS

Contractor will be required to submit any and all documentation required by the Scope of Work. The deliverables furnished shall be of a quality acceptable to MTS. The criteria for acceptance shall be a product of neat appearance, well-organized, and procedurally, technically and grammatically correct. MTS reserves the right to request a change in the format if it doesn't satisfy MTS's needs. All work products will become the property of MTS. MTS reserves the right to disclose any reports or material provided by the Contractor to any third party.

Contractor shall provide with each task, a work plan showing the deliverables schedule as well as other relevant date needed for Contractor's work control, when and as requested by MTS.

Contractor's computer data processing and work processing capabilities and data storage should be compatible with Windows compatible PC's, text files readable in Microsoft Word, and standard and customary electronic storage. Contractor shall maintain backup copies of all data conveyed to MTS.

Contractor shall provide MTS with hard copy or electronic versions of reports and/or other material as requested by MTS.

XIII. PRICING

Except where otherwise noted herein, pricing shall be firm and fixed for the duration of the Work Order and any subsequent Change Orders/Amendments to the Work Order. There shall be no escalation of rates or fees allowed.

XIV. ADDITIONAL INFORMATION

List additional information as applicable to the specific Work Order scope of services.

XV. PREVAILING WAGE

Prevailing wage rates apply to certain personnel for these services? X Yes ☐ No

Exhibits:
A. OTTC Wayfinding Signage Conceptual Design
B. OTTC Existing Sign Types
C. OTTC As-Built Plans (Attached Separately on PlanetBids)

EXHIBIT A
OTTC WAYFINDING SIGNAGE CONCEPTUAL DESIGN

Dec. 2024 / Version 12

Old Town Transit Center
Wayfinding Sign Upgrade

MTS

NORTH COUNTY TRANSIT DISTRICT

AMTRAK PACIFIC SURFLINER

OLD TOWN SAN DIEGO STATE HISTORIC PARK

SAN DIEGO FLYER

MTS

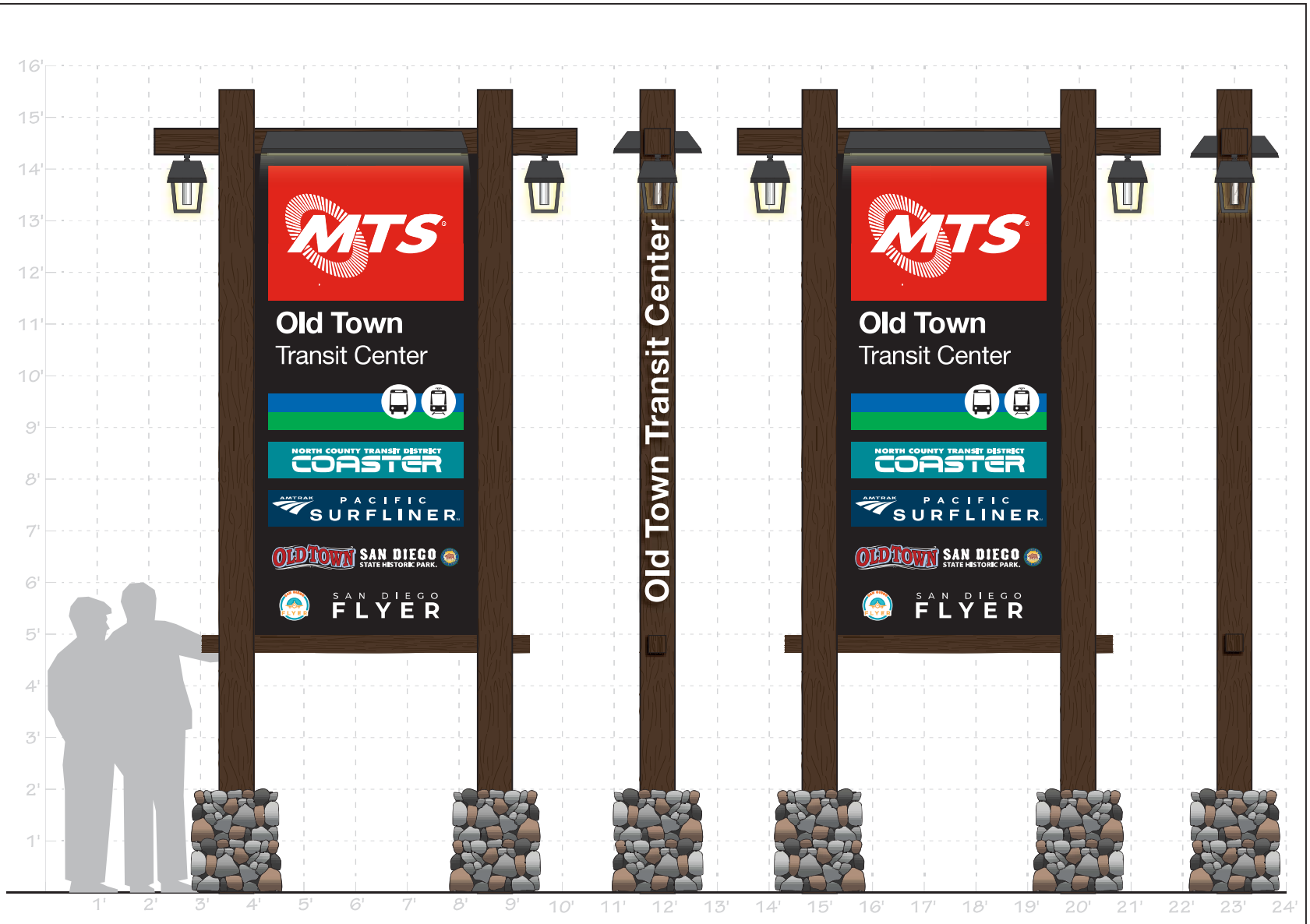
Old Town Transit Center

Item 1: MONUMENT SIGN #1

LOCATION:
Pacific Highway x Parking Lot Entrance (Telegraph Place)

SIZE: 66”w x 15’h

Notes:



Design Drawing
December 2024 / Version 12

Old Town Transit Center

Item 1: MONUMENT SIGN #1

LOCATION:
Pacific Highway x Parking Lot Entrance (Telegraph Place)

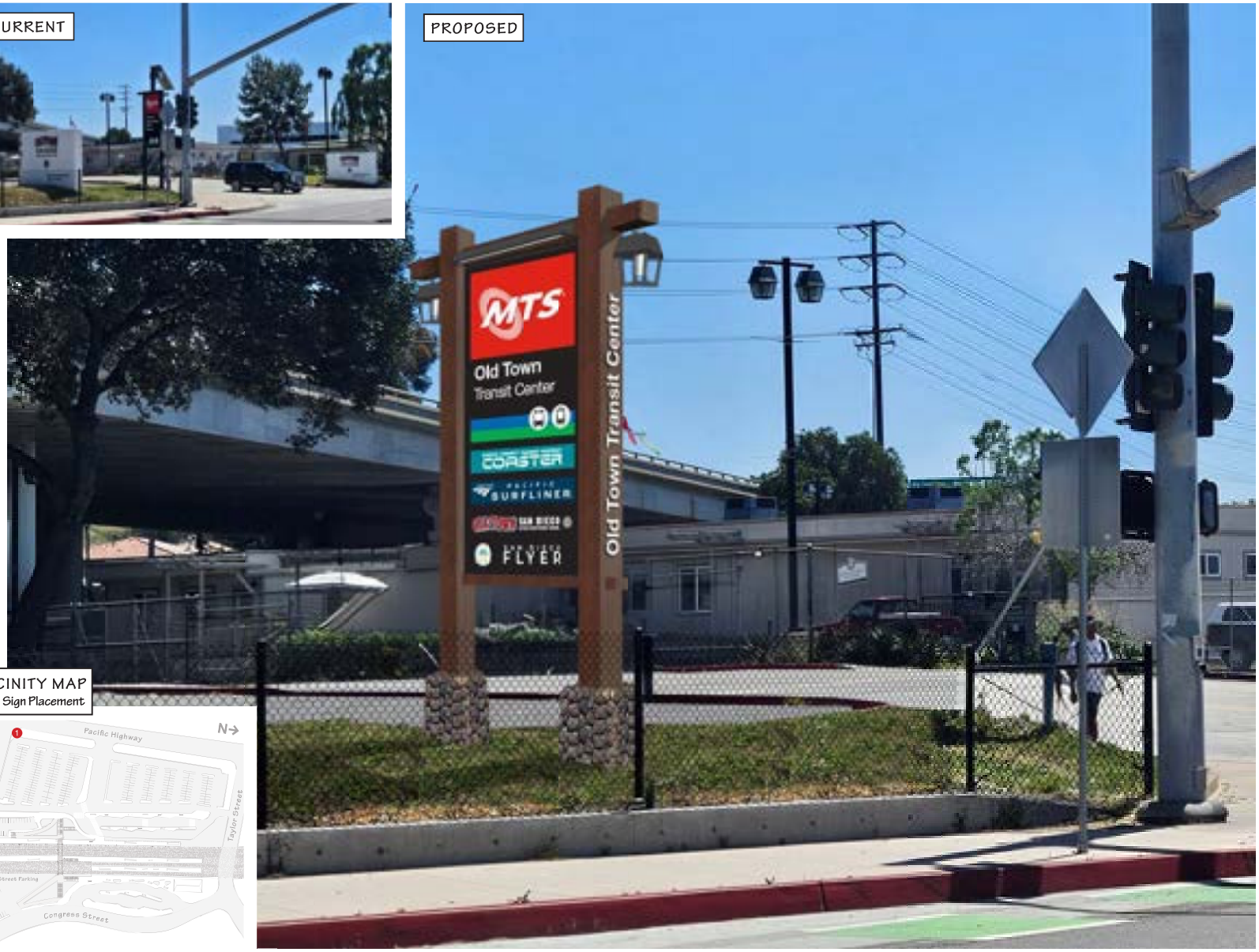
SIZE: 66”w x 15’h

Notes:

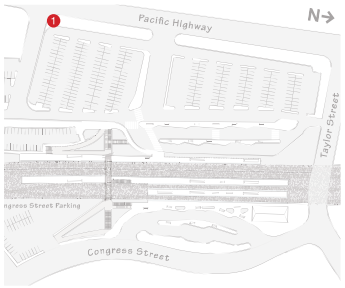
Design Drawing
December 2024 / Version 12

CURRENT

PROPOSED



VICINITY MAP
Sign Placement



Old Town Transit Center

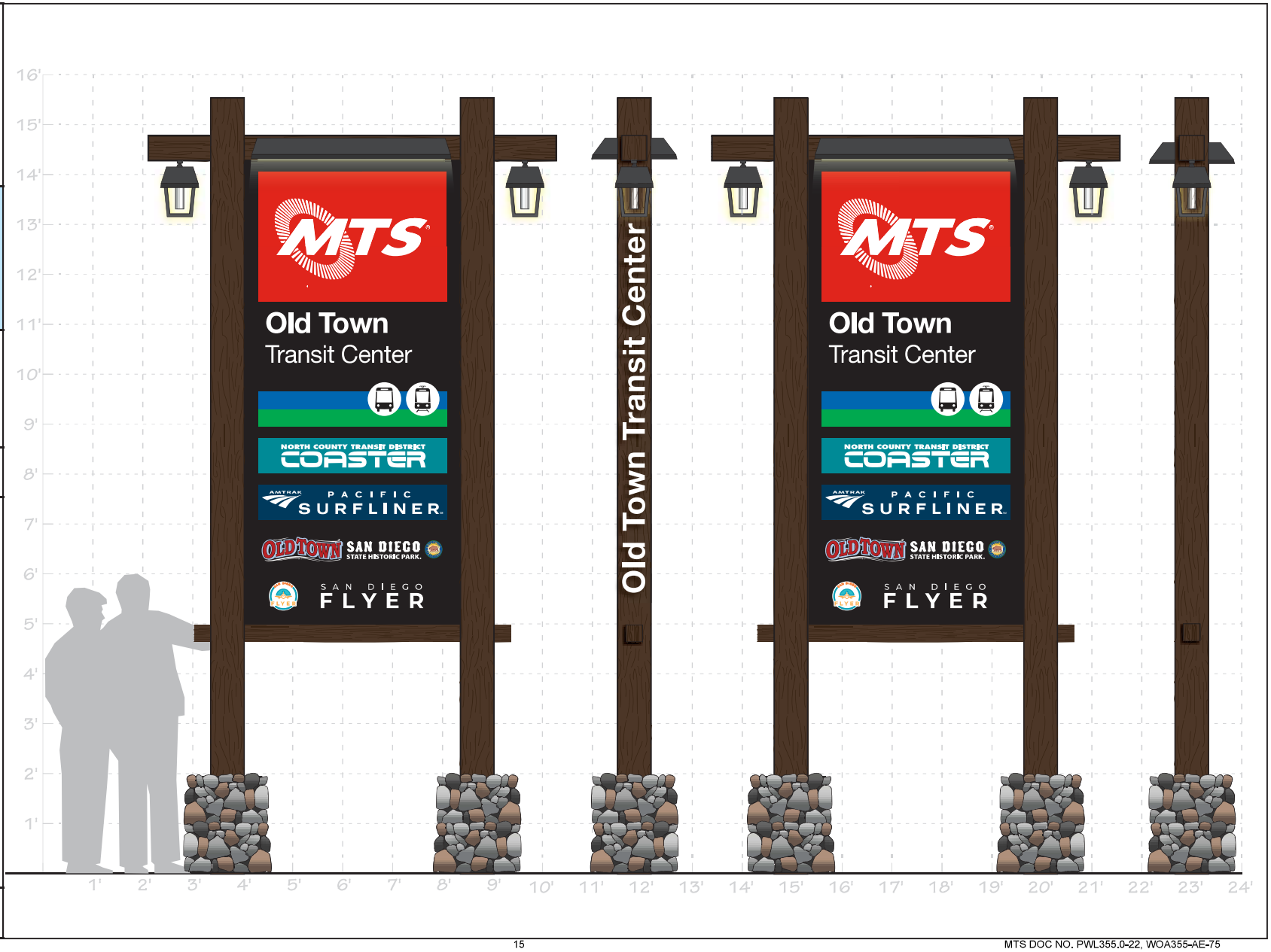
Item 2: MONUMENT SIGN #2

LOCATION:
Congress x East Bus Loop

SIZE: 66”w x 15’h

Notes:
Same size as Pacific Highway x Parking Lot Entrance

Design Drawing
December 2024 / Version 12



Old Town Transit Center

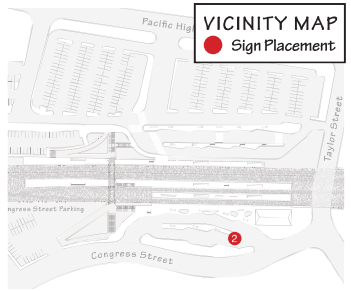
Item 2: MONUMENT SIGN #2

LOCATION:
Congress x East Bus Loop

SIZE: 66”w x 15’h

Notes:
Same size as Pacific Highway x Parking Lot Entrance

Design Drawing
December 2024 / Version 12



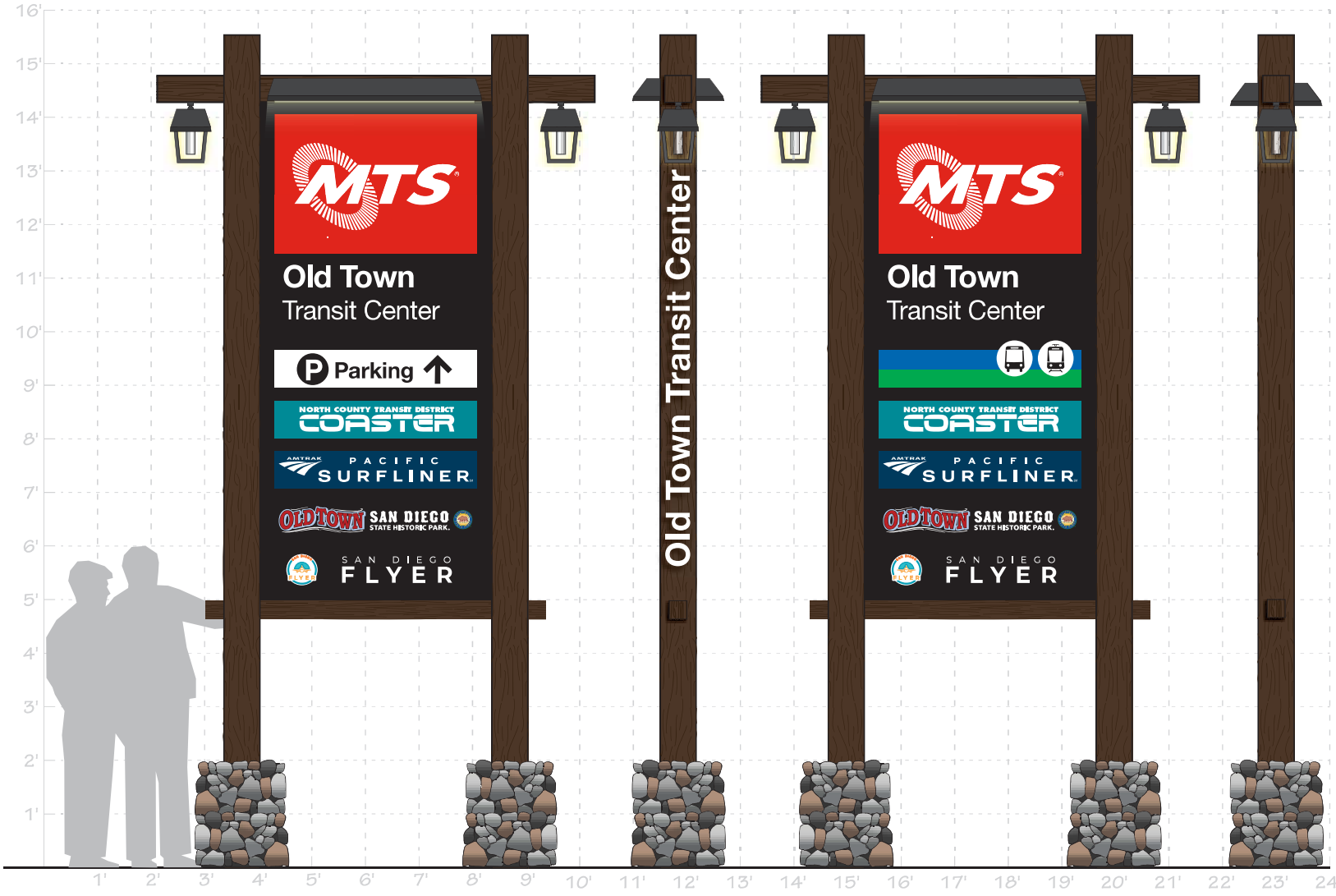
Old Town Transit Center

Item 3: MONUMENT SIGN #3

LOCATION:
Taylor and Congress Corner

SIZE: 66”w x 15’h

Notes:



Design Drawing
December 2024 / Version 12

Old Town Transit Center

Item 3: MONUMENT SIGN #3

LOCATION:
Taylor and Congress Corner

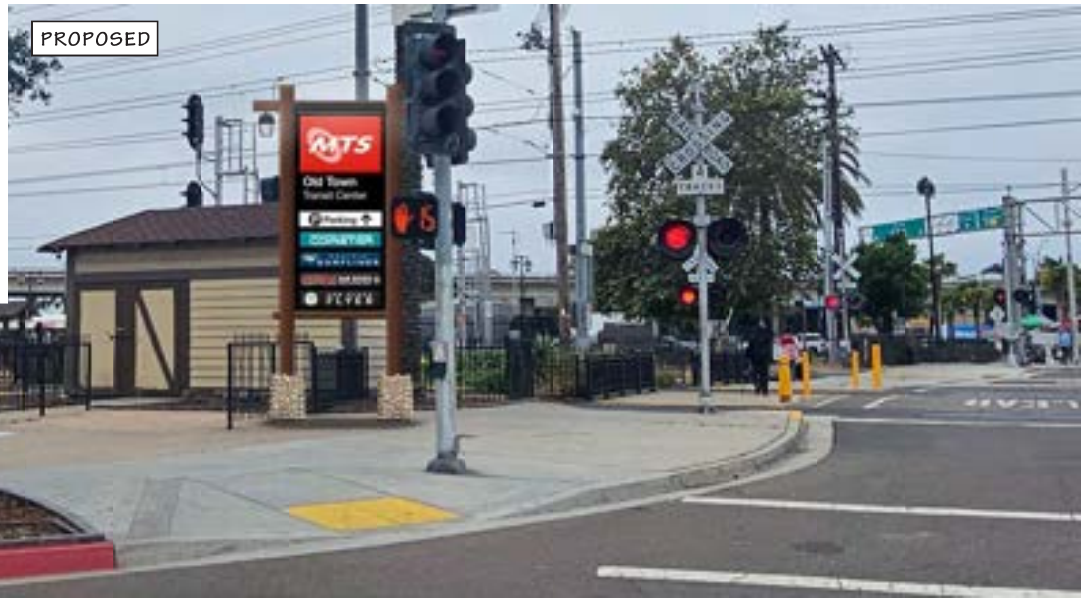
SIZE: 66”w x 15’h

Notes:

Design Drawing
December 2024 / Version 12

CURRENT

PROPOSED



CURRENT

PROPOSED

VICINITY MAP
Sign Placement

MTS DOC NO. PWL355.0-22, WOA355-AE-75

Old Town Transit Center

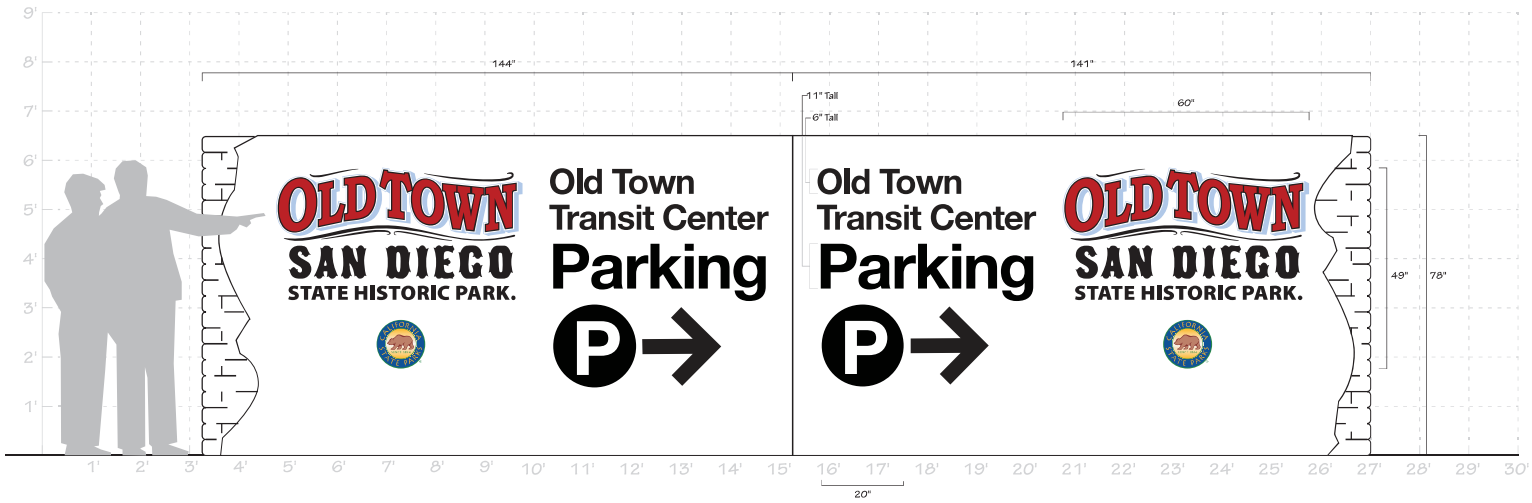
Item 4: MONUMENT SIGN #4

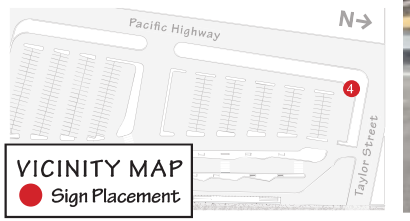
LOCATION:
Taylor and Pacific Highway Corner

SIZE: leave existing sign

Notes:
Update art on face of existing sign. Purpose of sign is to direct vehicles to parking entrance off Pacific Highway.

Design Drawing
December 2024 / Version 12





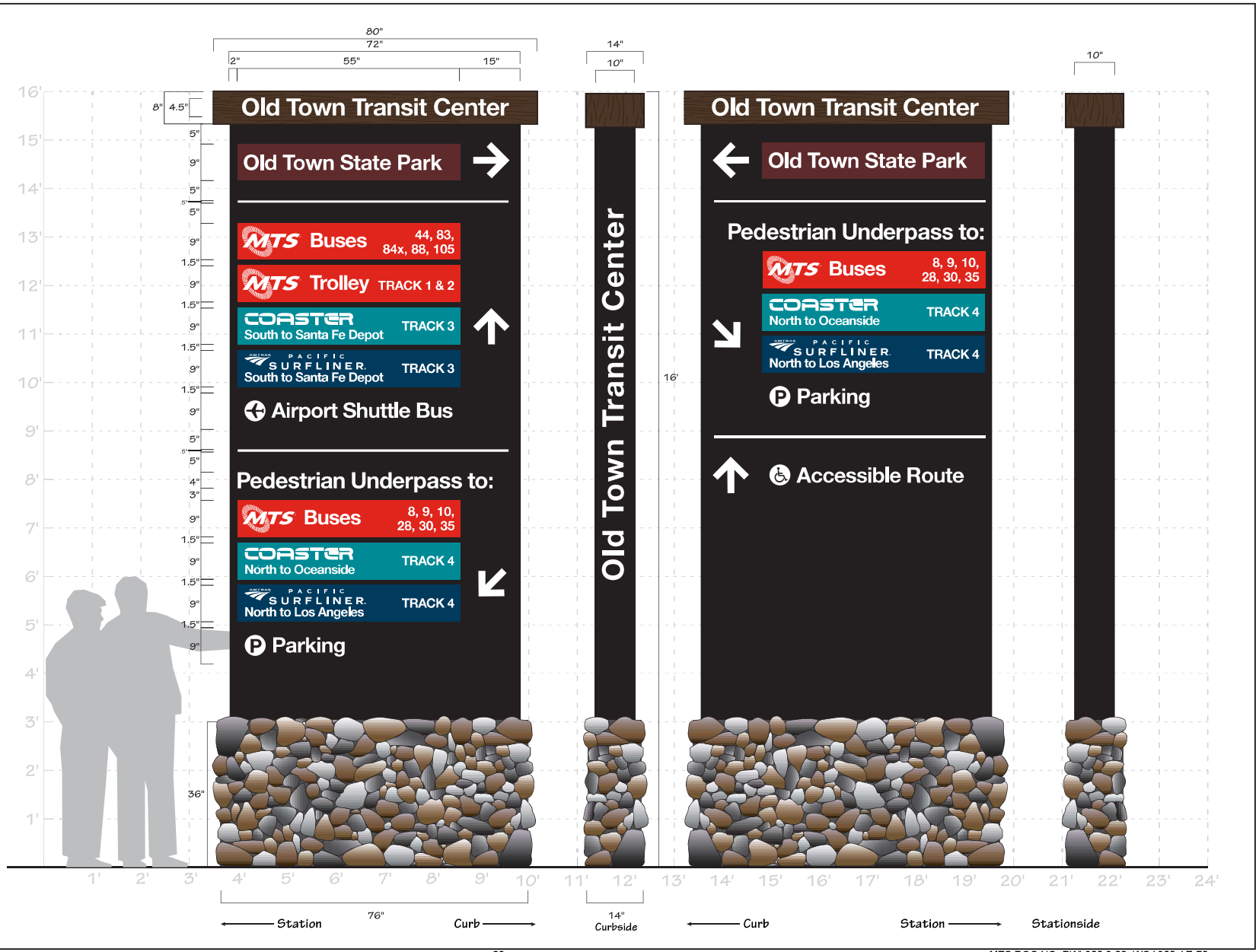
Old Town Transit Center

Item 5: LARGE WAYFINDING SIGN

LOCATION:
Congress and Station Entrance

SIZE: 6'w x 15'h

Notes:



Design Drawing
December 2024 / Version 12

MTS DOC NO. PWL355.0-22, WOA355-AE-75

Old Town Transit Center

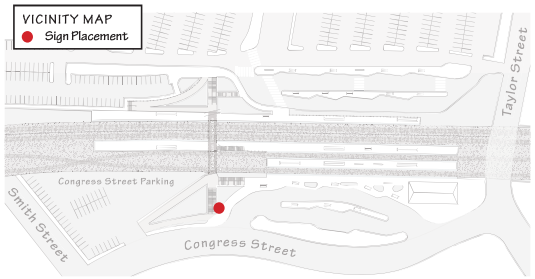
Item 5: LARGE WAYFINDING SIGN

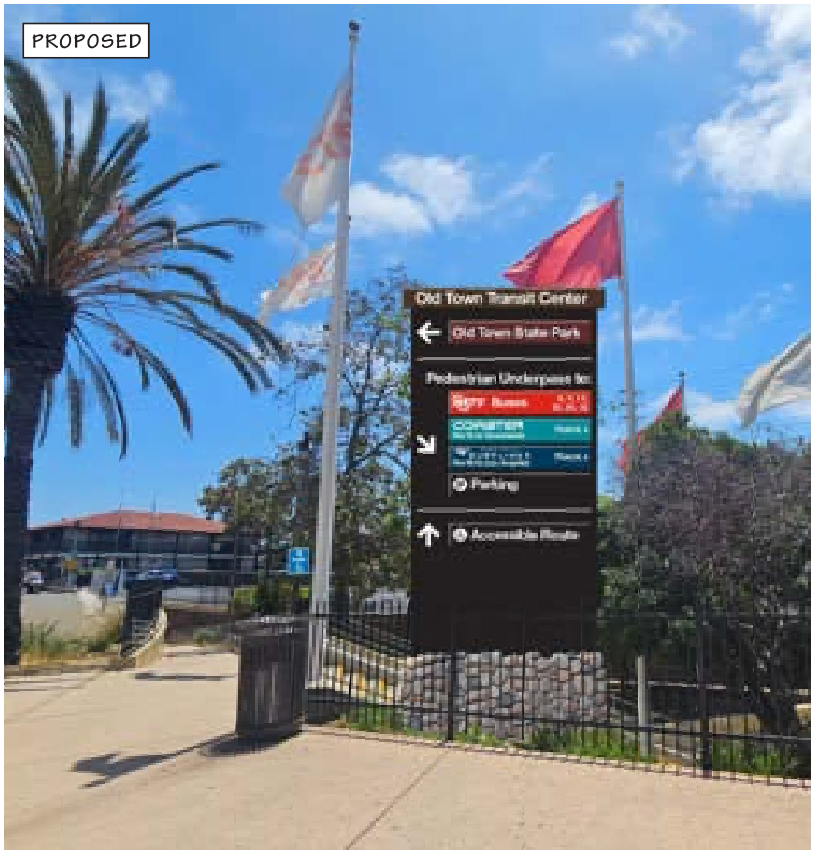
LOCATION:
Congress and Station Entrance; East Entrance to pedestrian underpass

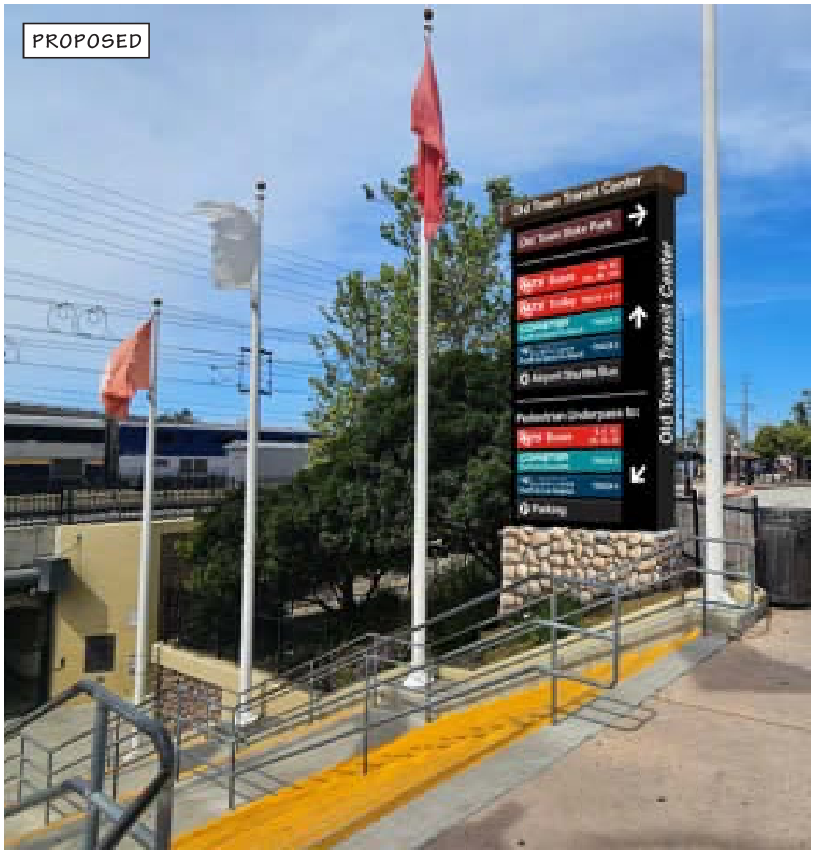
SIZE: 6'w x 15'h

Notes:

Design Drawing
December 2024 / Version 12







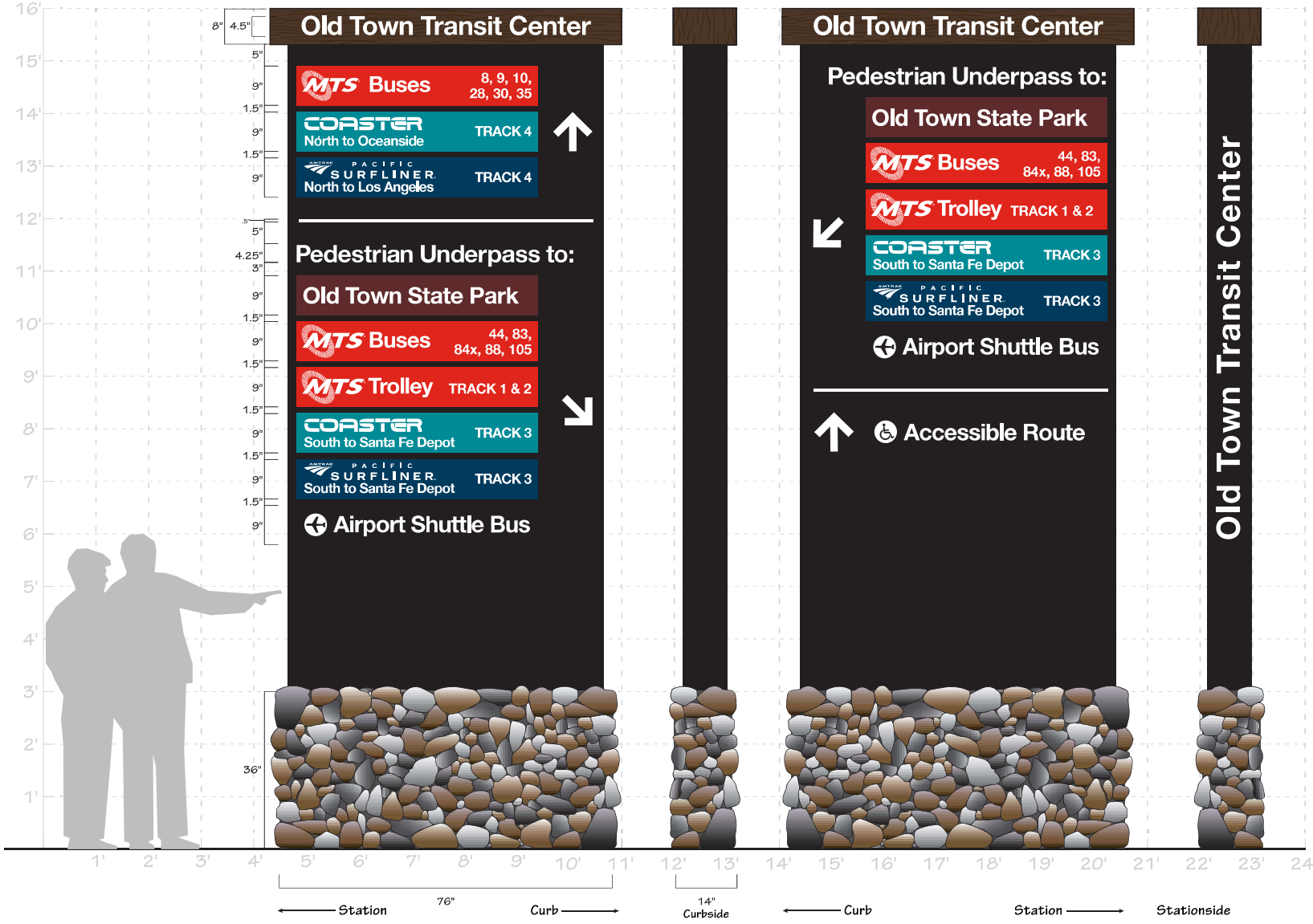
Old Town Transit Center

Item 6: LARGE WAYFINDING SIGN

LOCATION:
West Entrance of Pedestrian Underpass

SIZE: 6'w x 15'h

Notes:



Design Drawing
December 2024 / Version 12

MTS

Old Town Transit Center

Item 6: LARGE WAYFINDING SIGN

LOCATION:
West Entrance of Pedestrian Underpass

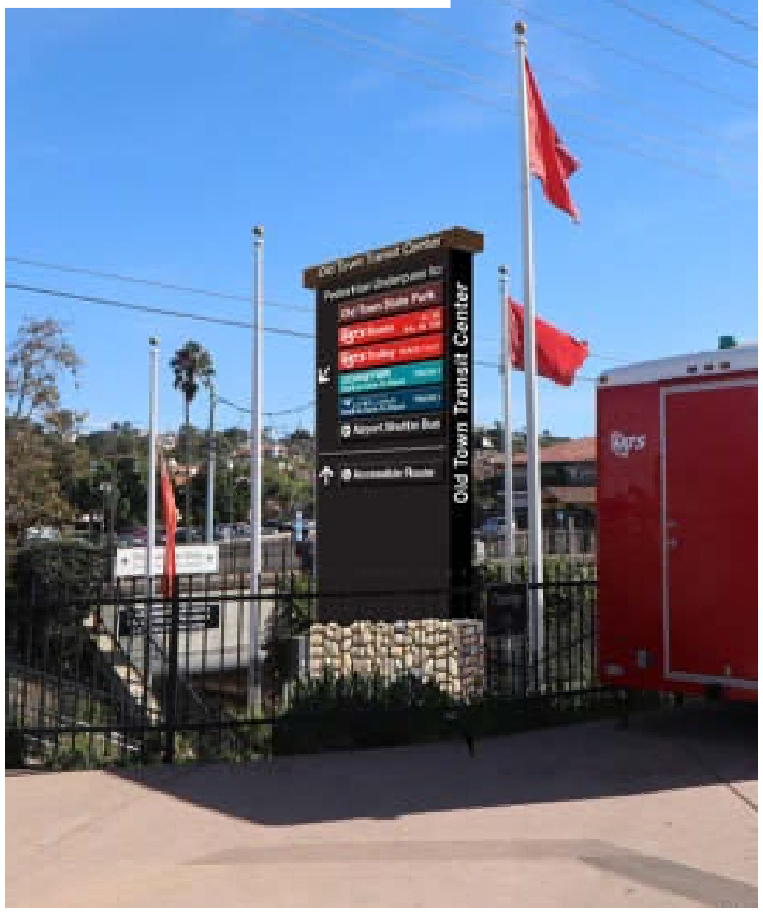
SIZE: 6'w x 15'h

Notes:

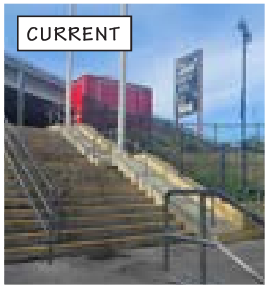
Design Drawing
December 2024 / Version 12

CURRENT

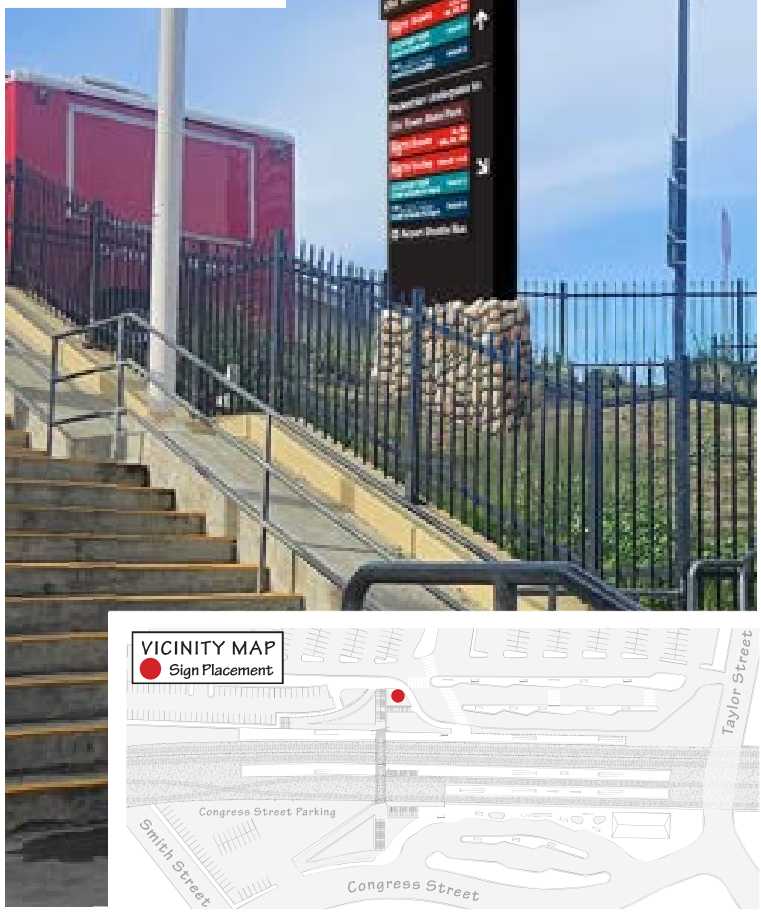
PROPOSED



CURRENT



PROPOSED



VICINITY MAP
Sign Placement

MTS

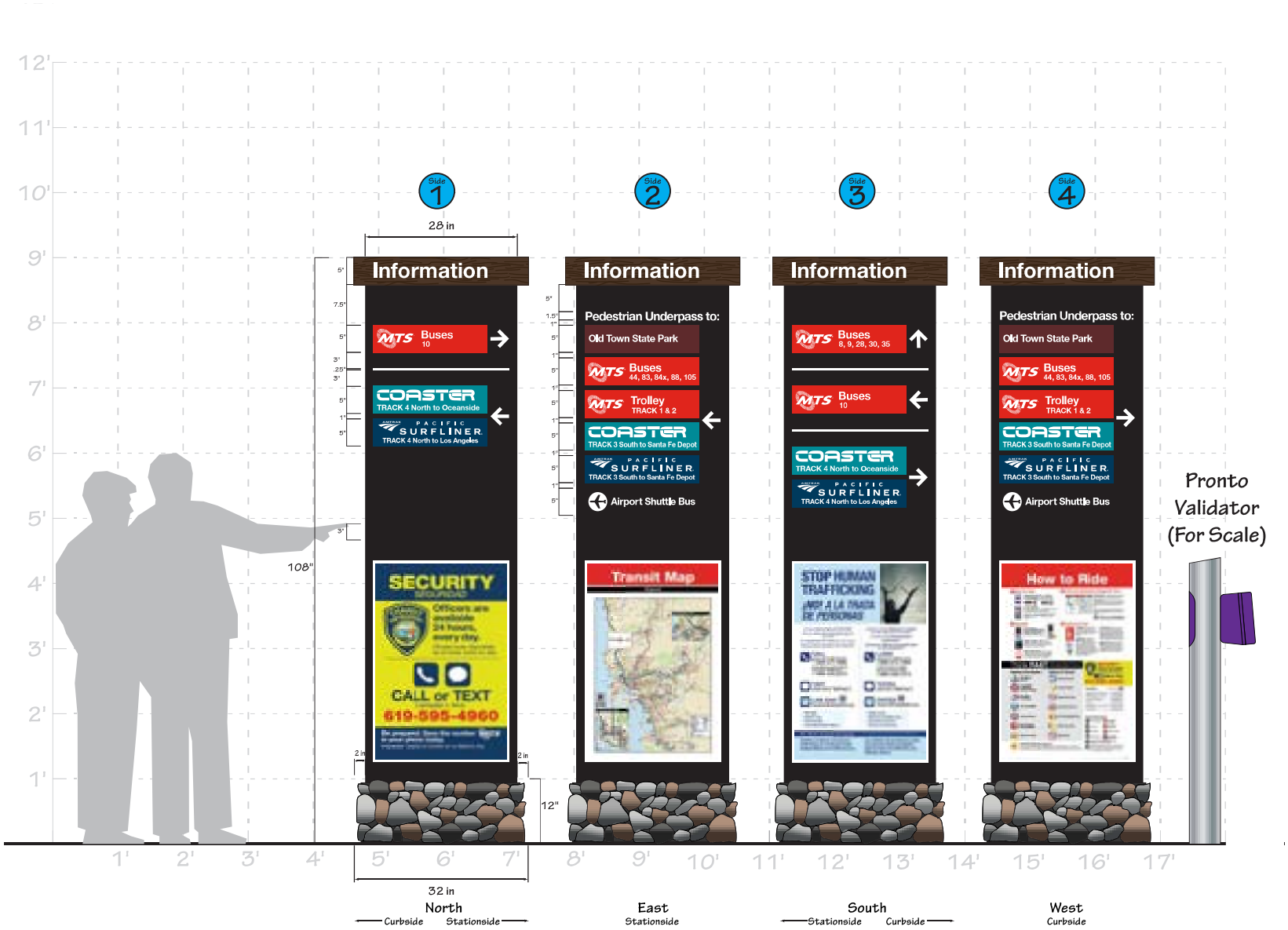
Old Town Transit Center

Item 7: INFORMATION PILLAR #1

LOCATION:
West Middle Bus Platform

SIZE: 28”w x 9’h

Notes:



Design Drawing
December 2024 / Version 12

MTS

Old Town Transit Center

Item 7: INFORMATION PILLAR #1

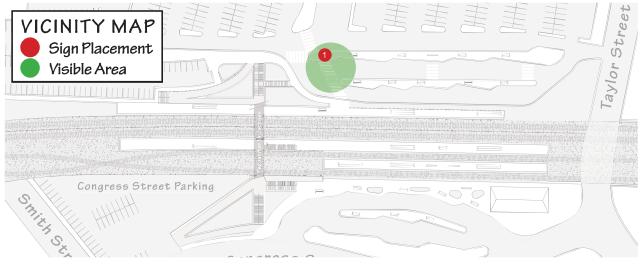
LOCATION:
West Middle Bus Platform

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12

PROPOSED



Old Town Transit Center

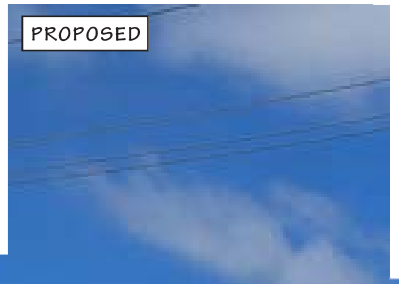
Item 7: INFORMATION PILLAR #1

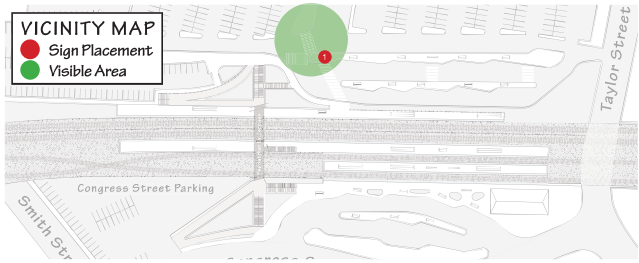
LOCATION:
West Middle Bus Platform

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12





MTS

Old Town Transit Center

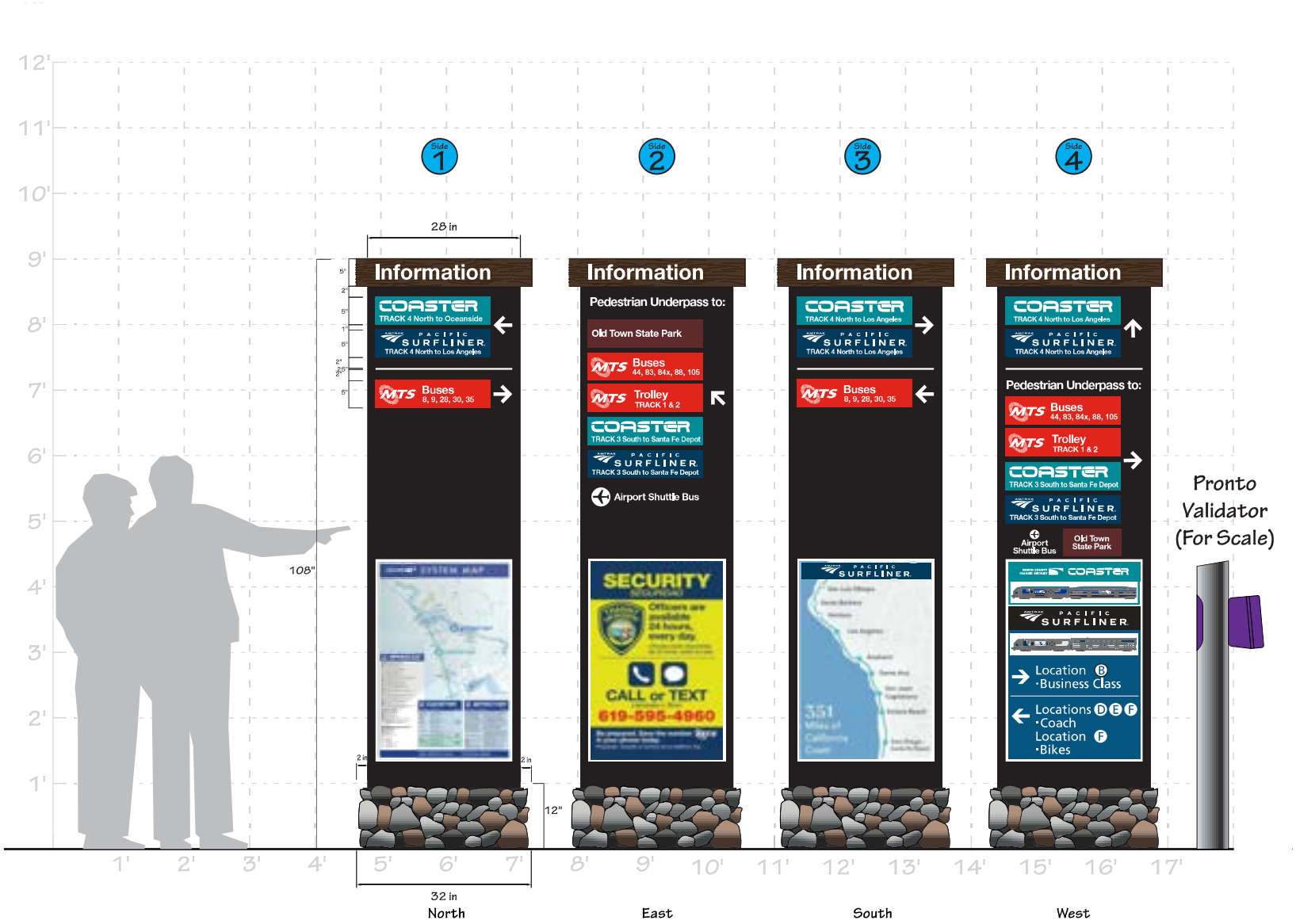
Item 8: INFORMATION PILLAR #2

LOCATION:
West Side - Entrance to Track 4 - Amtrak/Coaster Platform

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12



Old Town Transit Center

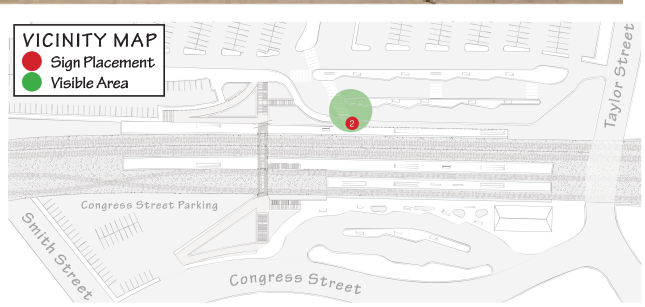
Item 8: INFORMATION PILLAR #2

LOCATION:
West Side - Entrance to Track 4 - Amtrak/Coaster Platform

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12



Old Town Transit Center

Item 8: INFORMATION PILLAR #2

LOCATION:
West Side - Entrance to Track 4 - Amtrak/Coaster Platform

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12

Old Town Transit Center

Item 9: INFORMATION PILLAR #3

LOCATION:
East Side - Trolley/Coaster Platform - SouthWest

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12

Old Town Transit Center

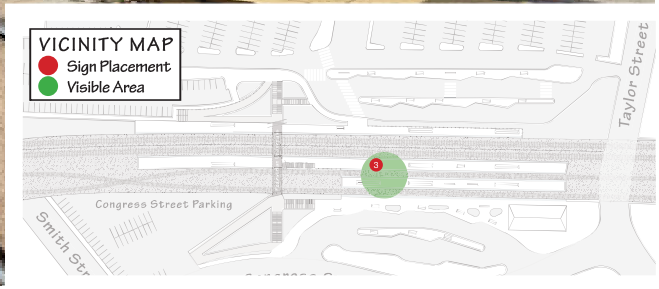
Item 9: INFORMATION PILLAR #3

LOCATION:
East Side - Trolley/Coaster Platform - SouthWest

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12



Old Town Transit Center

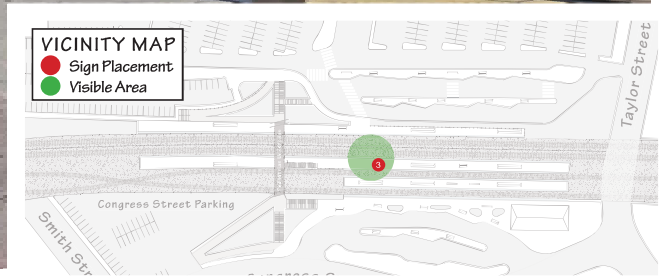
Item 9: INFORMATION PILLAR #3

LOCATION:
East Side - Trolley/Coaster Platform - SouthWest

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12



MTS

Old Town Transit Center

Item 10: INFORMATION PILLAR #4

LOCATION:
East Side - Middle Trolley Platform

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12

Old Town Transit Center

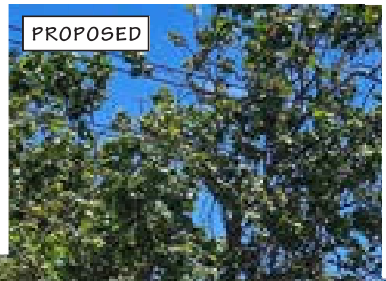
Item 10: INFORMATION PILLAR #4

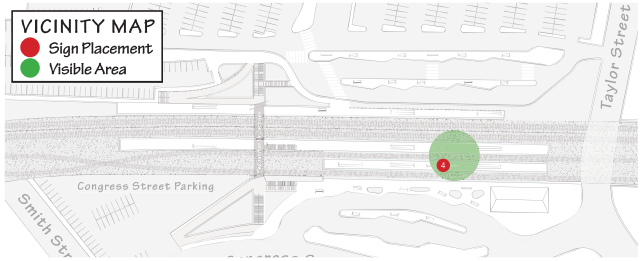
LOCATION:
East Side - Middle Trolley Platform

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12





Old Town Transit Center

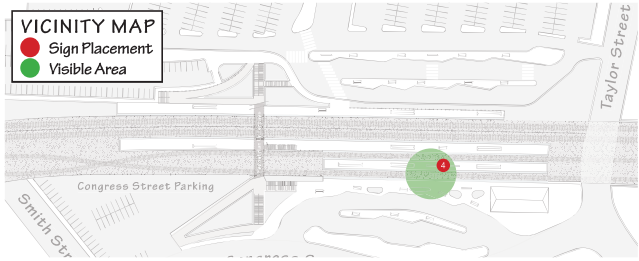
Item 10: INFORMATION PILLAR #4

LOCATION:
East Side - Middle Trolley Platform

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12



Old Town Transit Center

Item 11: INFORMATION PILLAR #5

LOCATION:
East Side - East Trolley Platform close to Store

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12

MTS DOC NO. PWL355.0-22, WOA355-AE-75

Old Town Transit Center

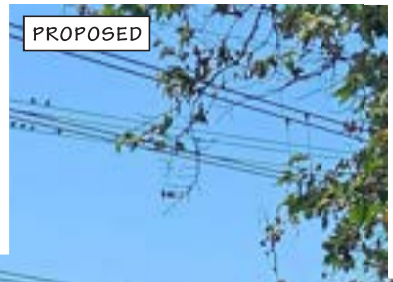
Item 11: INFORMATION PILLAR #5

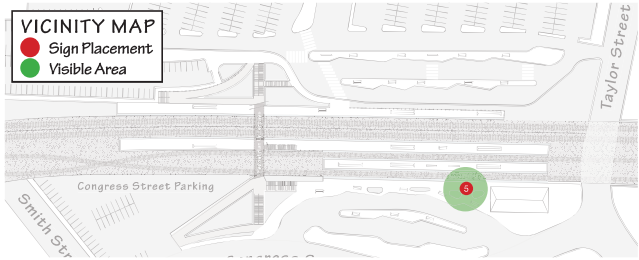
LOCATION:
East Side - East Trolley Platform close to Store

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12





MTS

Old Town Transit Center

Item 11: INFORMATION PILLAR #5

LOCATION:
East Side - East Trolley Platform close to Store

SIZE: 28”w x 9’h

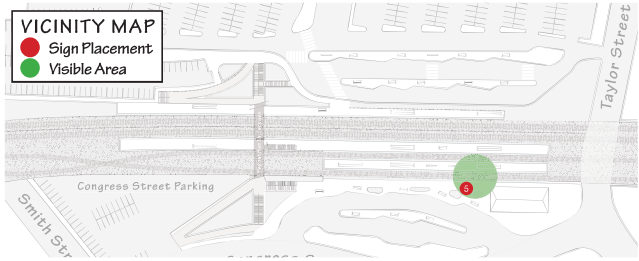
Notes:

Design Drawing
December 2024 / Version 12

CURRENT

PROPOSED

VICINITY MAP
Sign Placement
Visible Area



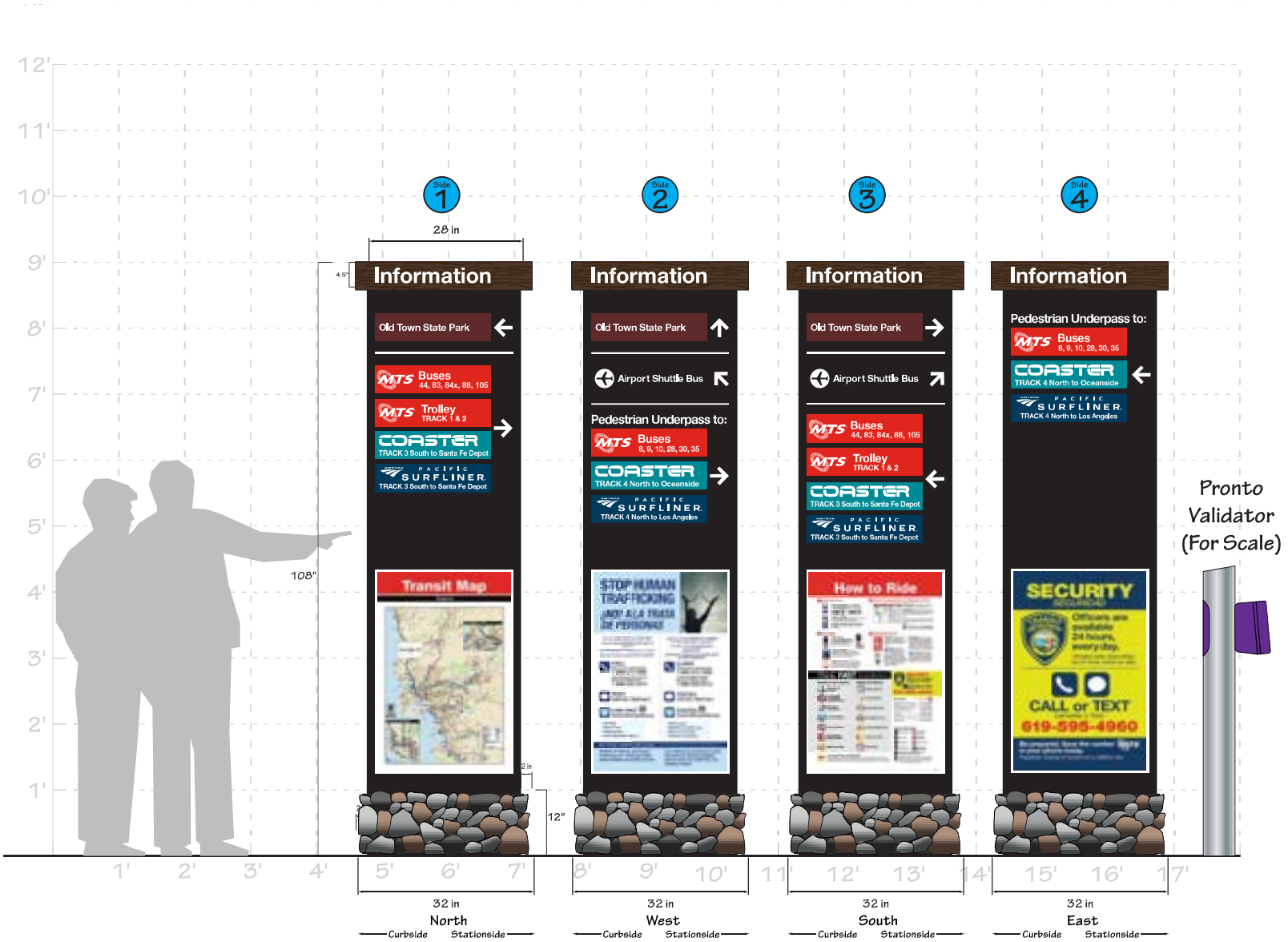
Old Town Transit Center

Item 12: INFORMATION PILLAR #6

LOCATION:
East Side - East Trolley Platform at south end

SIZE: 28”w x 9’h

Notes:



Design Drawing
December 2024 / Version 12

Old Town Transit Center

Item 12: INFORMATION PILLAR #6

LOCATION:
East Side - East Trolley Platform at south end

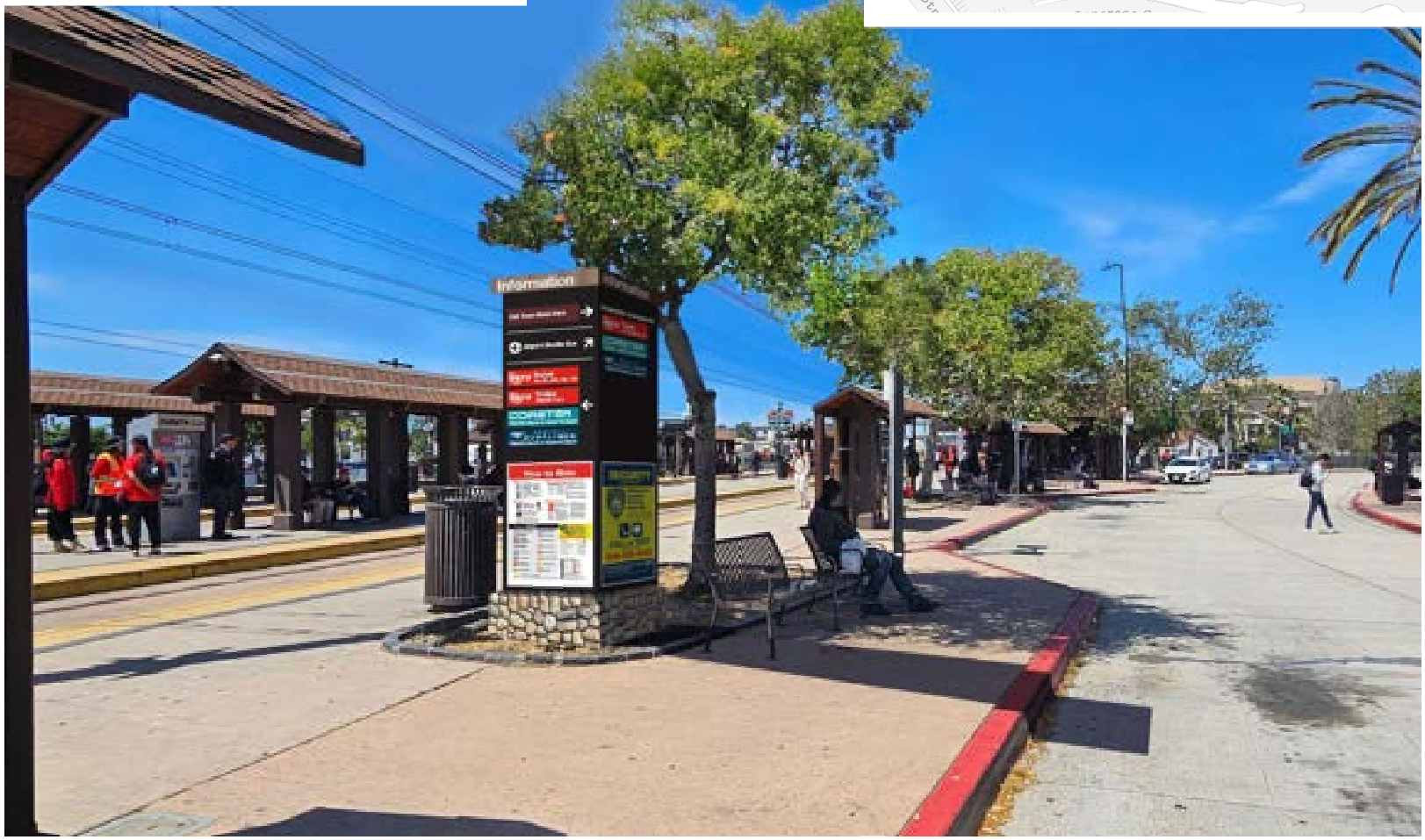
SIZE: 28”w x 9’h

Notes:

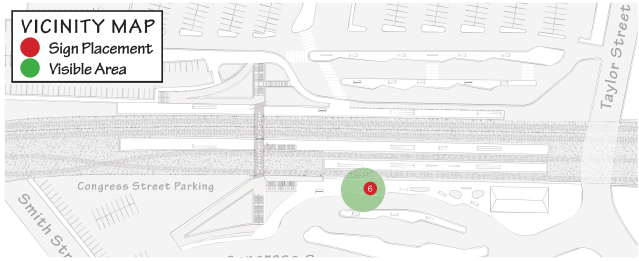
Design Drawing
December 2024 / Version 12

CURRENT

PROPOSED



VICINITY MAP
Sign Placement
Visible Area



Old Town Transit Center

Item 12: INFORMATION PILLAR #6

LOCATION:
East Side - East Trolley Platform at south end

SIZE: 28”w x 9’h

Notes:

Design Drawing
December 2024 / Version 12

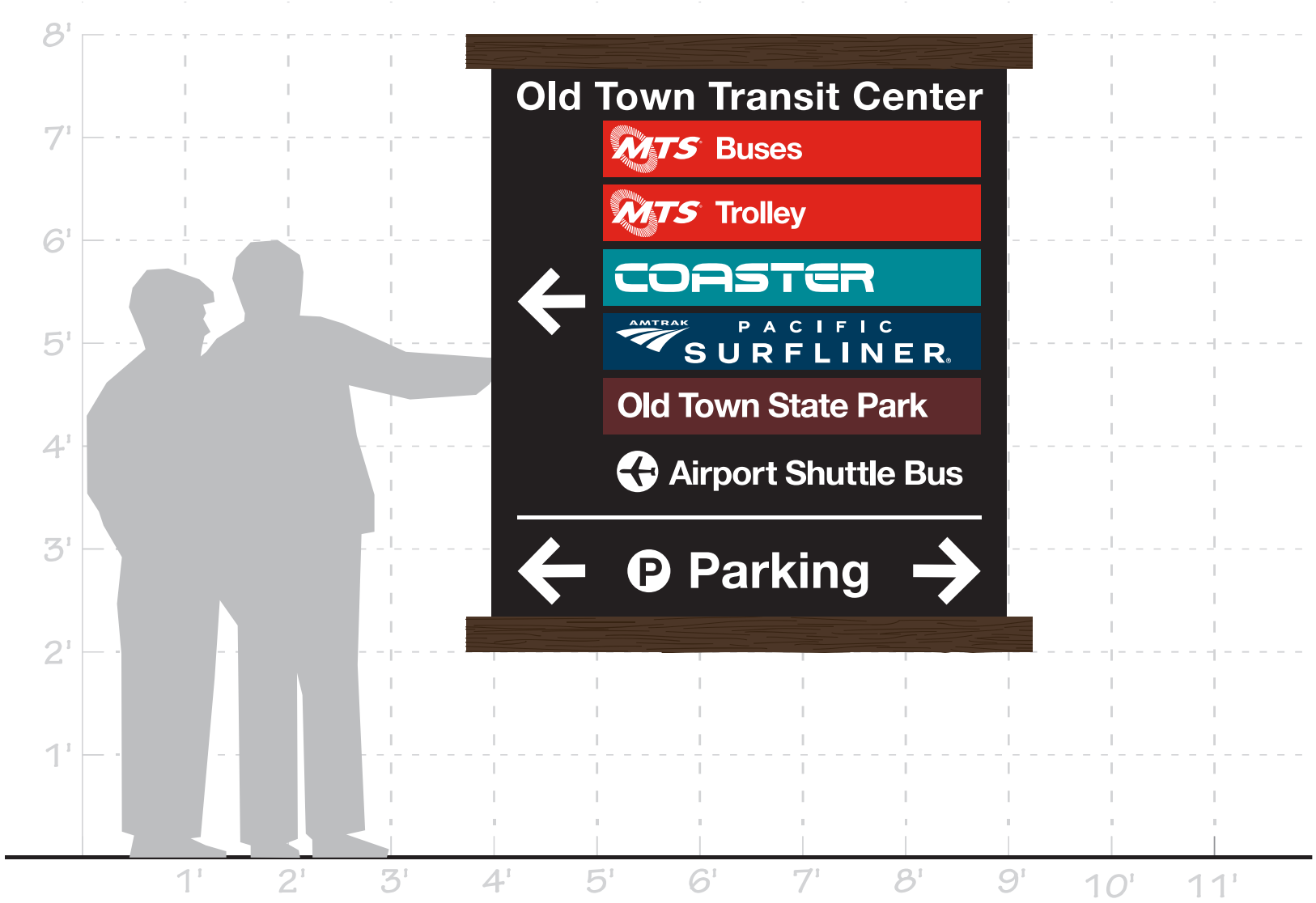
Old Town
Transit Center

Item 13: PARKING LOT ENTRANCE

LOCATION:
In parking lot

SIZE: 60”w x 66”h

Notes:



Design Drawing
December 2024 / Version 12

MTS

Old Town Transit Center

Item 13: PARKING LOT ENTRANCE

LOCATION:
In parking lot

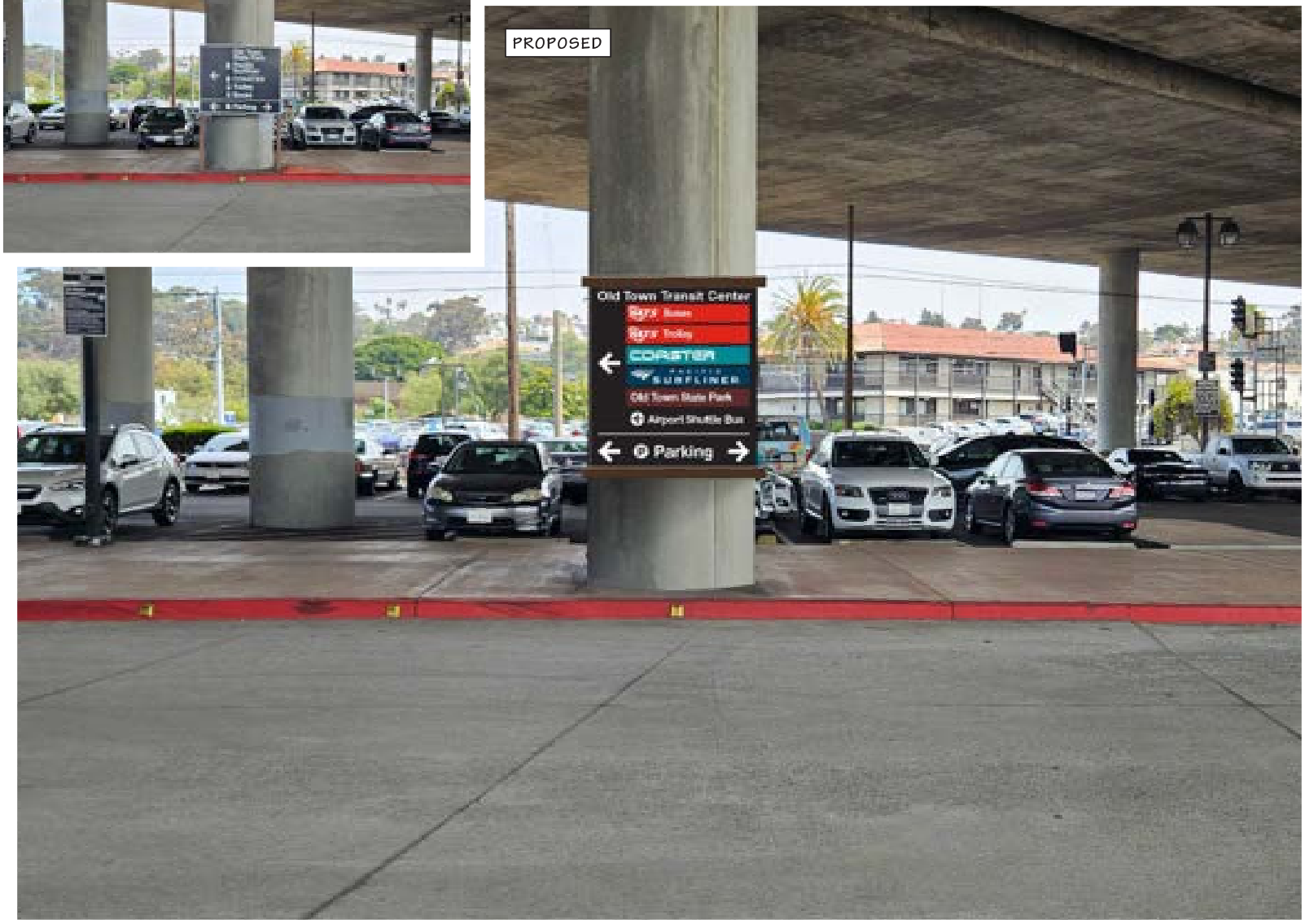
SIZE: 60”w x 66”h

Notes:

Design Drawing
December 2024 / Version 12

CURRENT

PROPOSED



Old Town
Transit Center

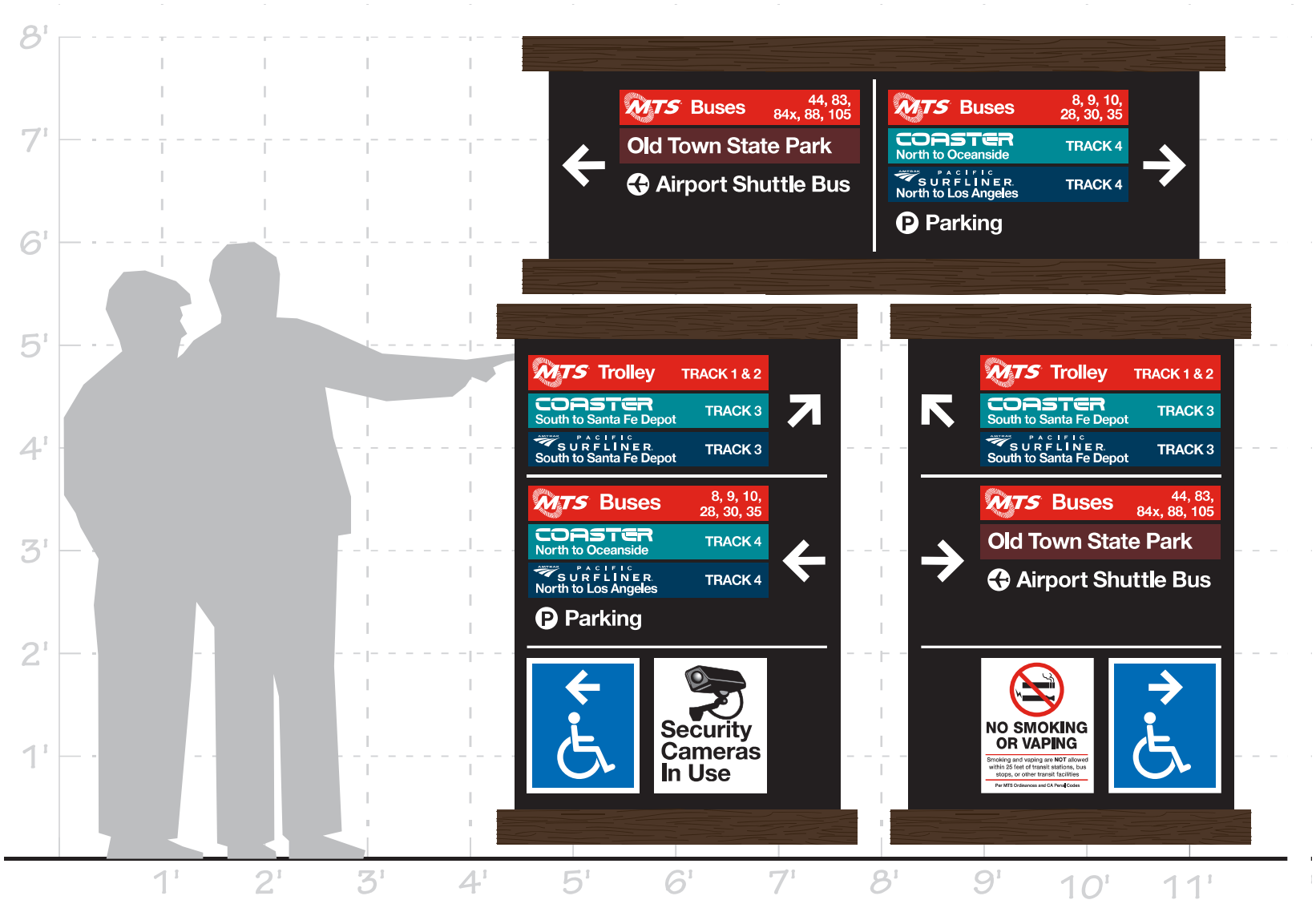
Item 14: INTERIOR UNDERPASS

LOCATION:
Signs are inside of pedestrian underpass

SIZE: 76”x26” & 38”x55”

Notes:

Design Drawing
December 2024 / Version 12



Old Town Transit Center

Item 14: INTERIOR UNDERPASS

LOCATION:
Signs are inside of pedestrian underpass

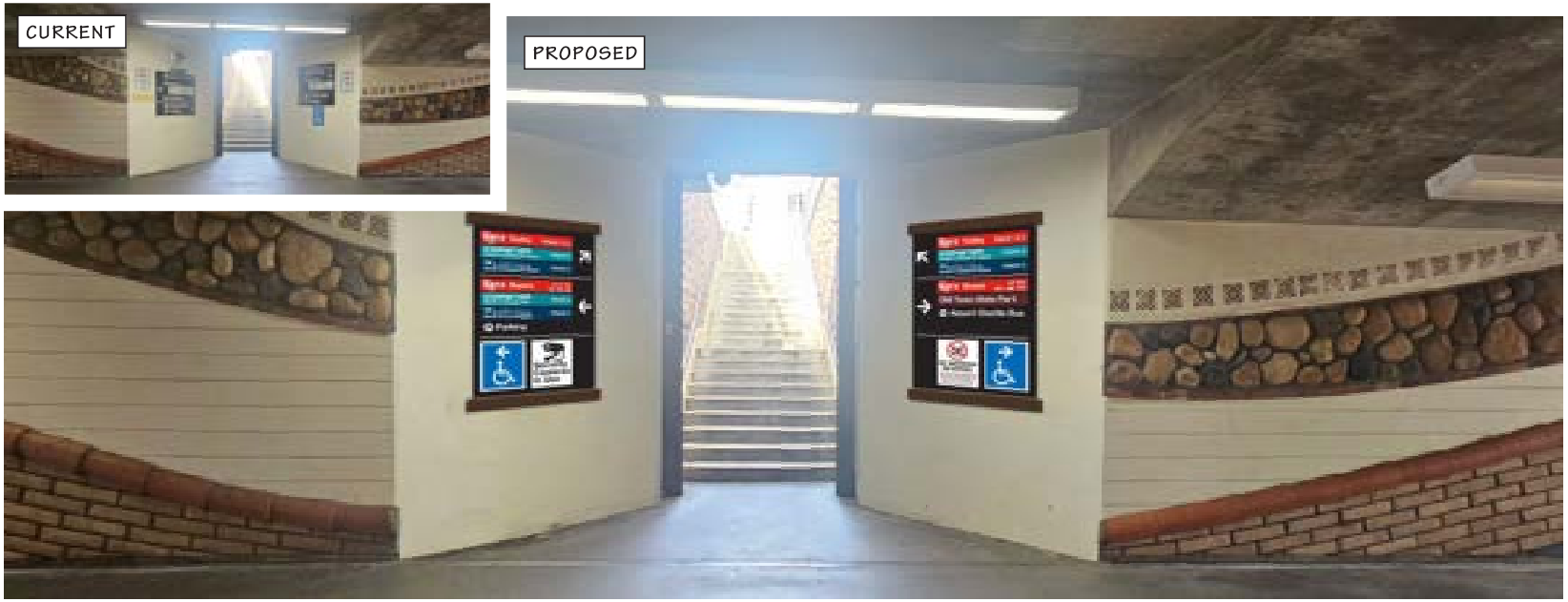
SIZE: 76”x26” & 38”x55”

Notes:

Design Drawing
December 2024 / Version 12

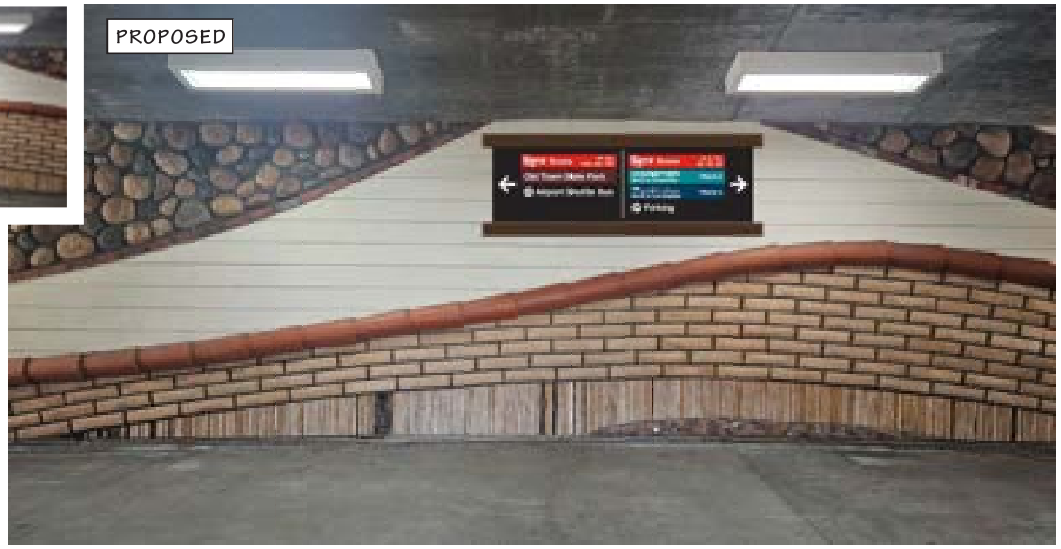
CURRENT

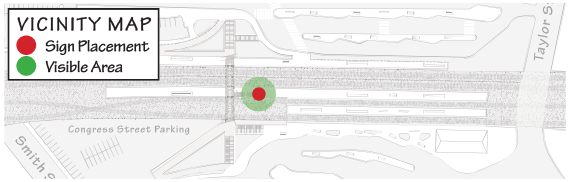
PROPOSED



CURRENT

PROPOSED





MTS

Old Town Transit Center

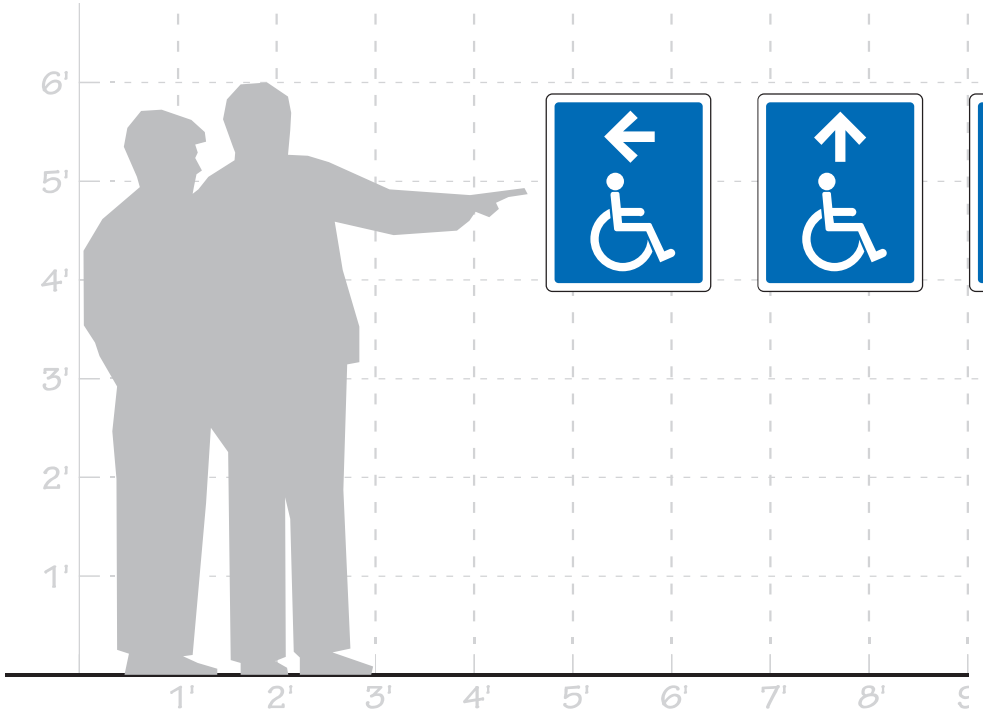
Item 15: ADA DIRECTIONAL

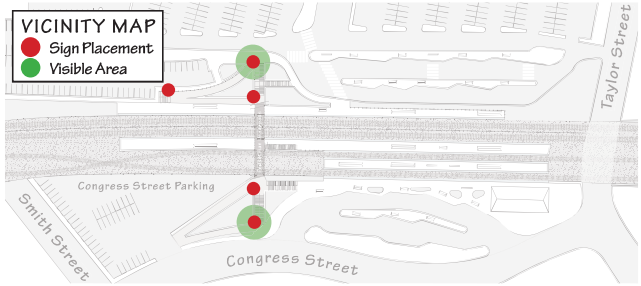
LOCATION:
Around ramp area

SIZE: 18”w x 24”h

Notes:

Design Drawing
December 2024 / Version 12





MTS

Old Town Transit Center

Item 16: SHELTER BACK & FENCE DIRECTIONAL

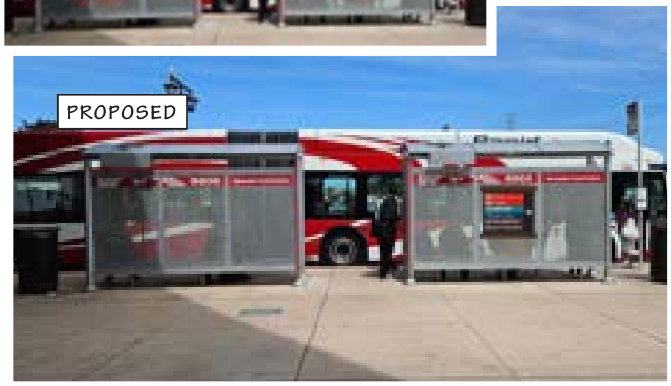
LOCATION:
West side shelters and fence

SIZE: 38”w x 30”h & 70”x64”

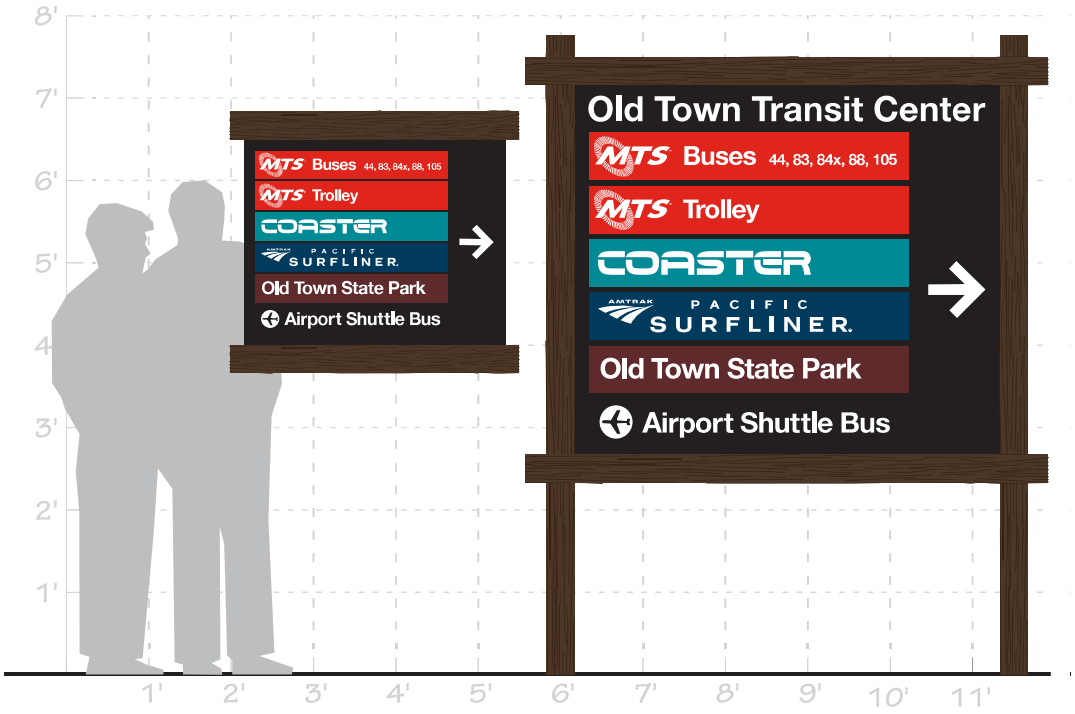
Notes:

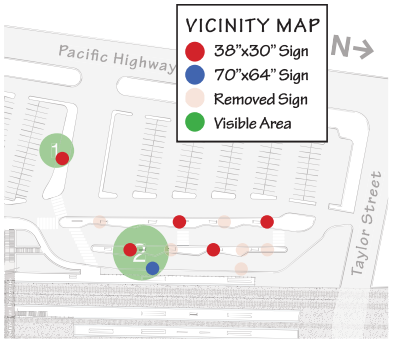
Design Drawing
December 2024 / Version 12

1



2





MTS

Old Town Transit Center

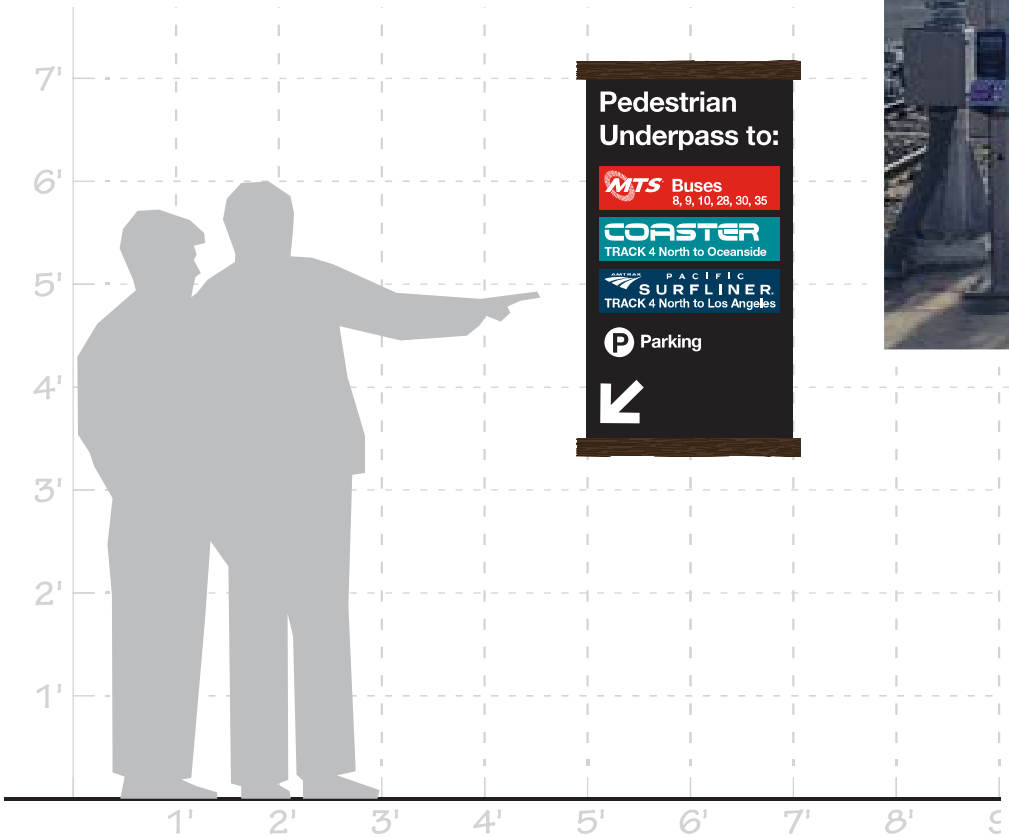
Item 17: UNDERPASS DIRECTIONAL

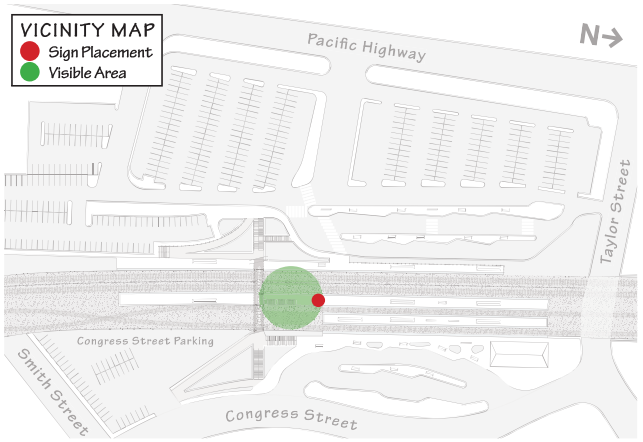
LOCATION:
East Side - by middle platform stairs to underpass

SIZE: 24”w x 42”h

Notes:

Design Drawing
December 2024 / Version 12





MTS

Old Town Transit Center

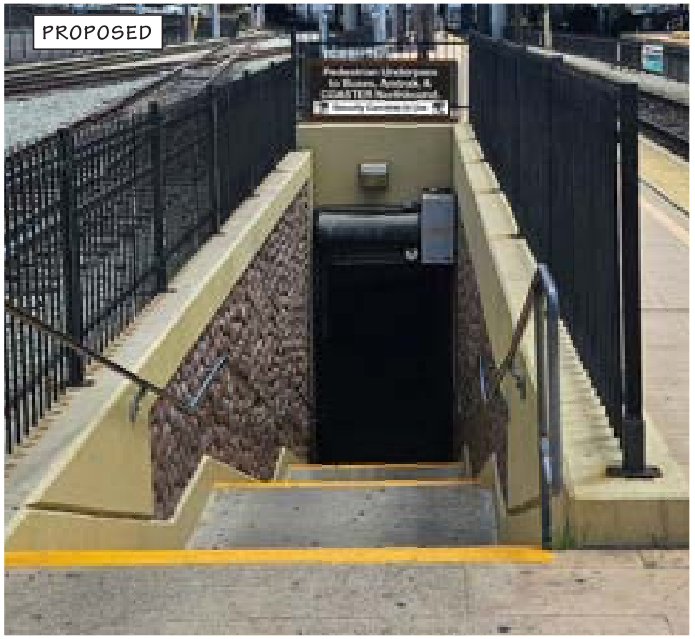
Item 18: UNDERPASS HEADER SMALL

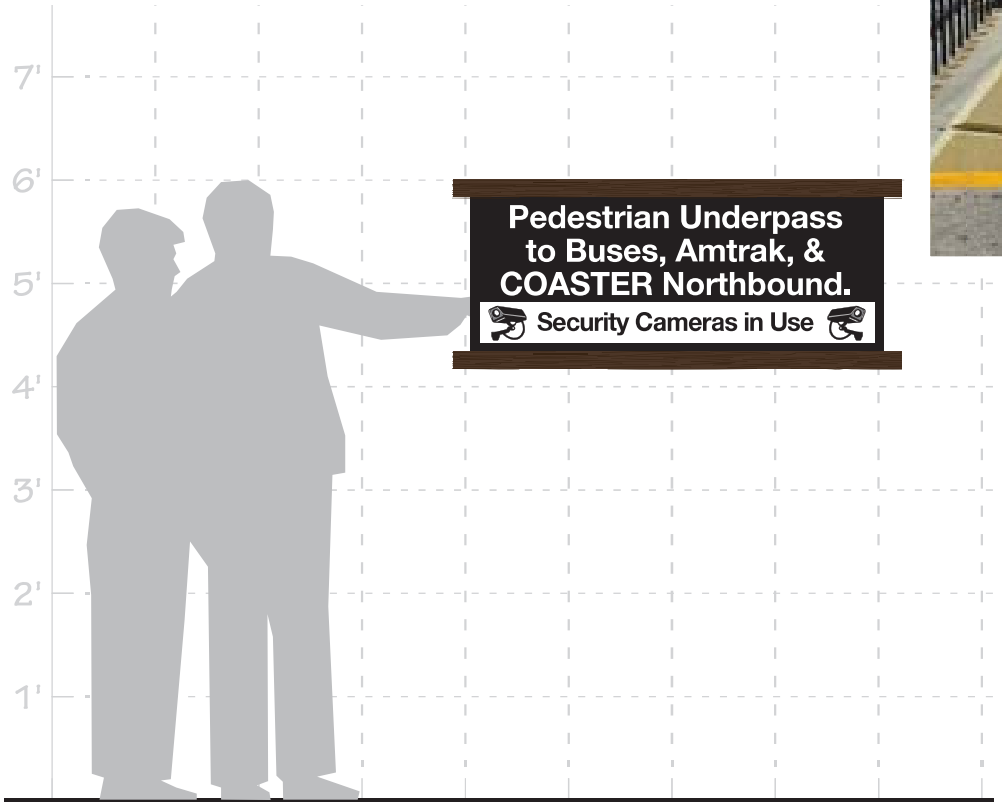
LOCATION:
Above middle platform stairs to pedestrian underpass

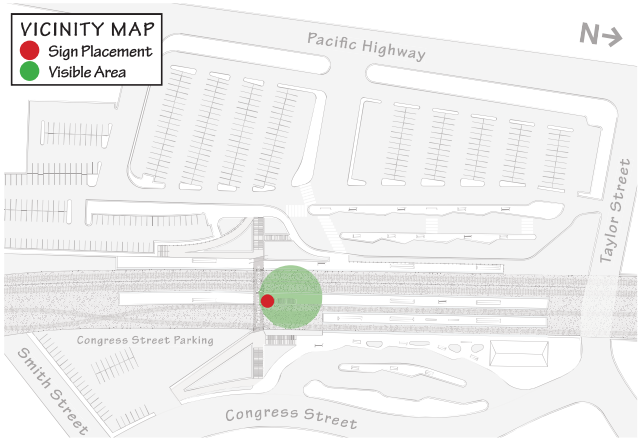
SIZE: 48”w x 18”h

Notes:

Design Drawing
December 2024 / Version 12







Old Town
Transit Center

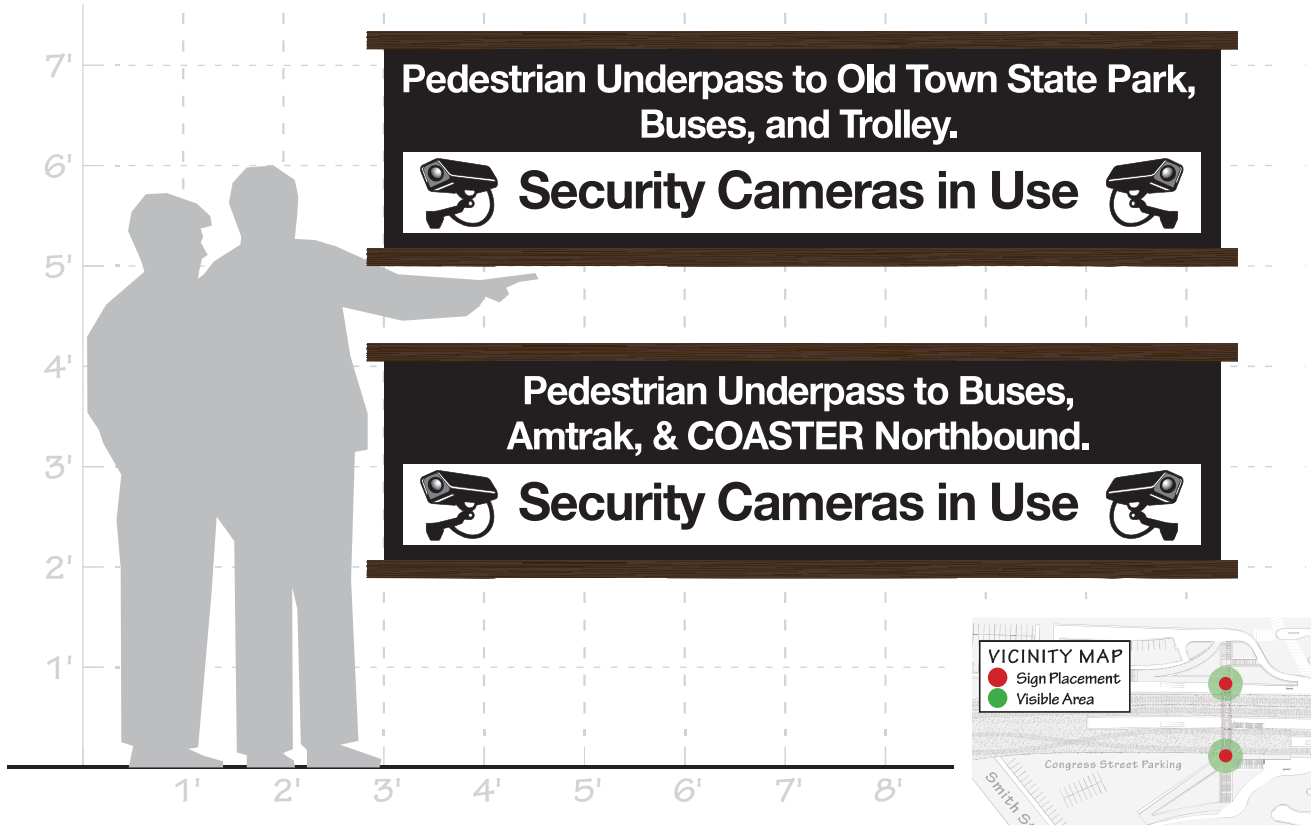
Item 19: UNDERPASS HEADER LARGE

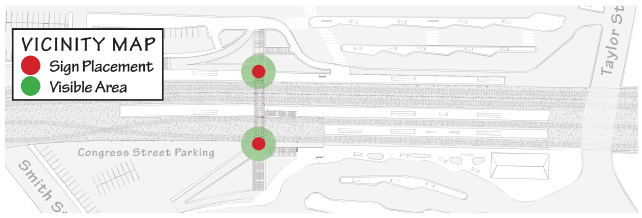
LOCATION:
Above entrances to underpass

SIZE: 100”w x 24”h

Notes:

Design Drawing
December 2024 / Version 12





MTS

Old Town Transit Center

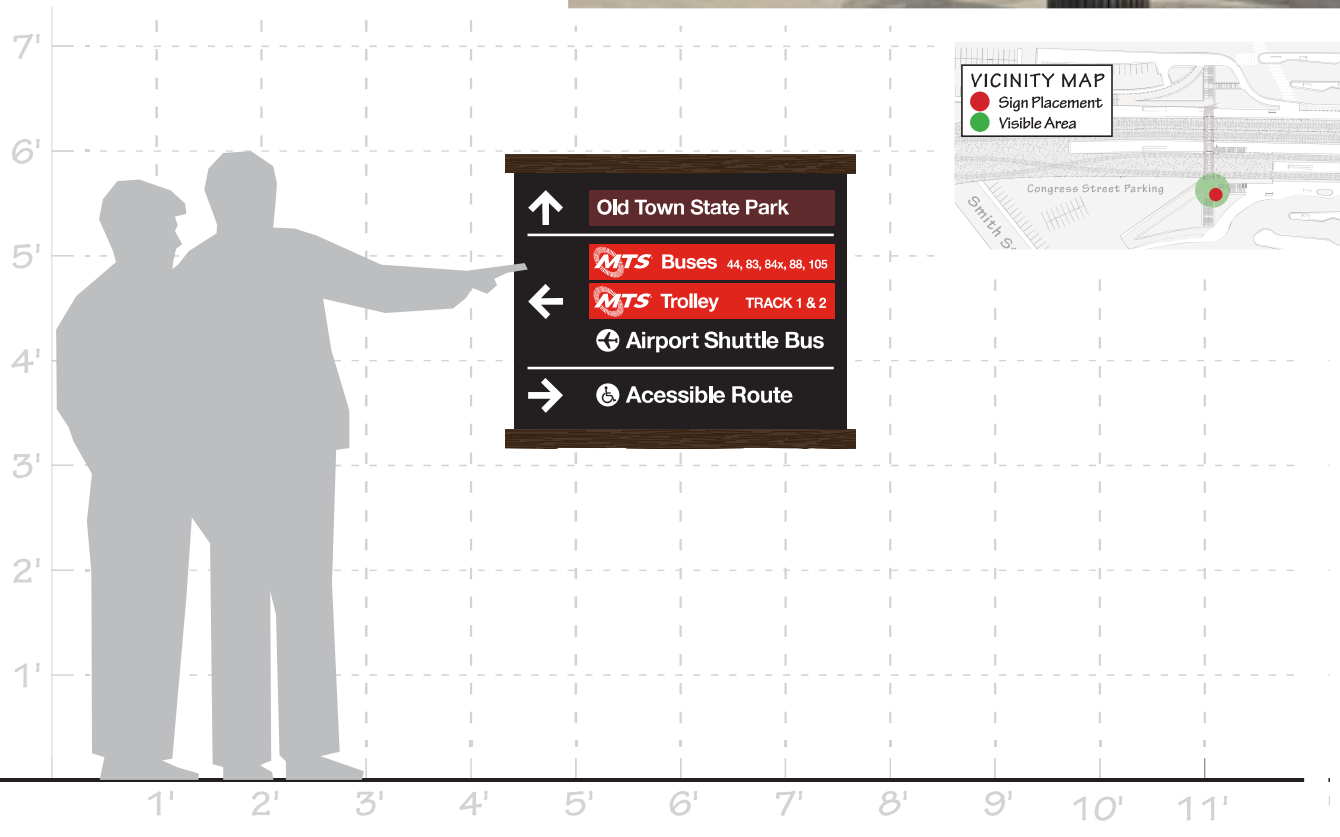
Item 20: EAST UNDERPASS EXIT

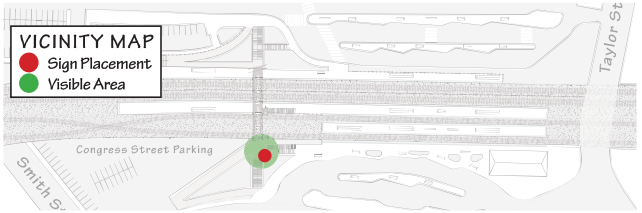
LOCATION:
East side exit of underpass before stairs

SIZE: 38”w x 24”h

Notes:

Design Drawing
December 2024 / Version 12





MTS

Old Town Transit Center

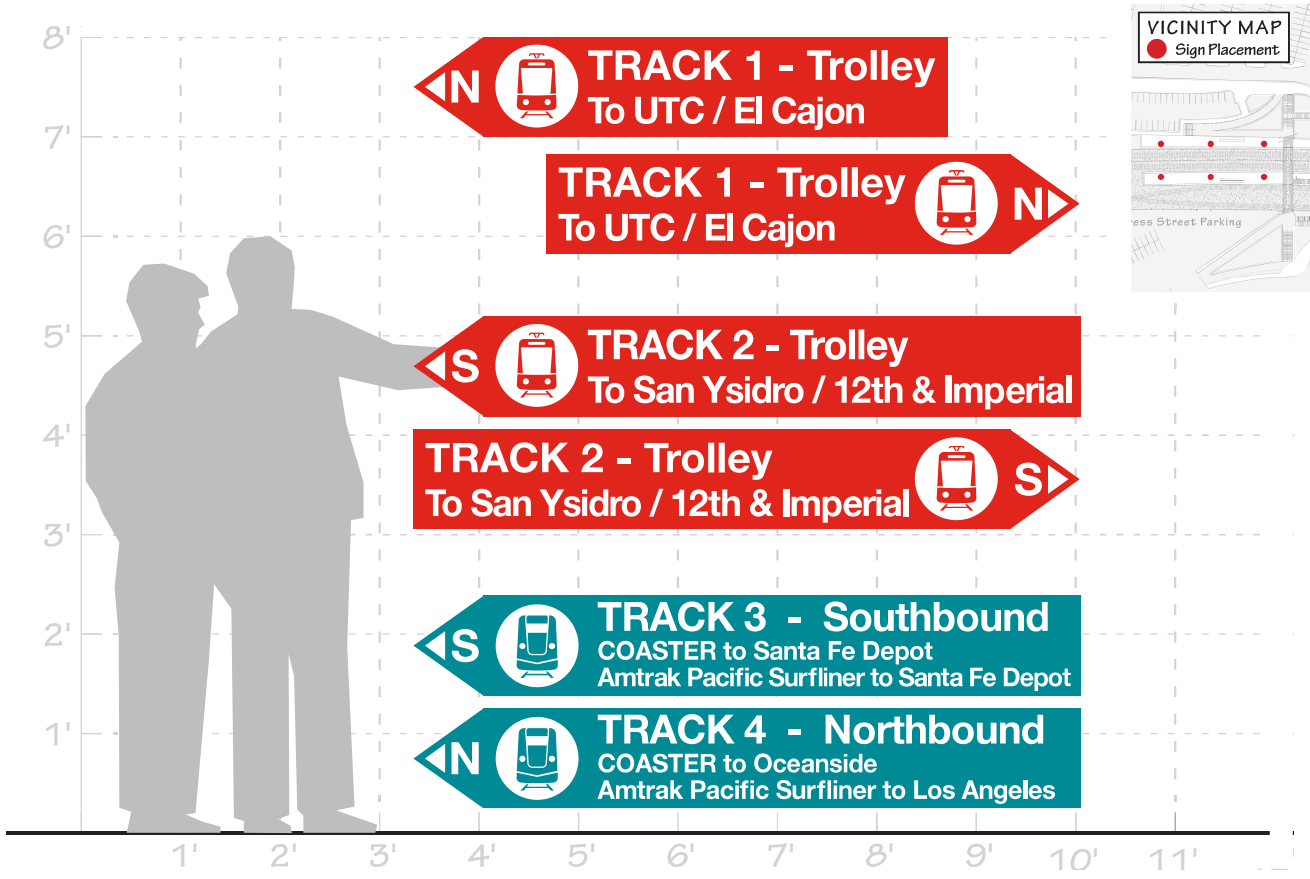
Item 21: DIRECTIONAL GROUND VINYL

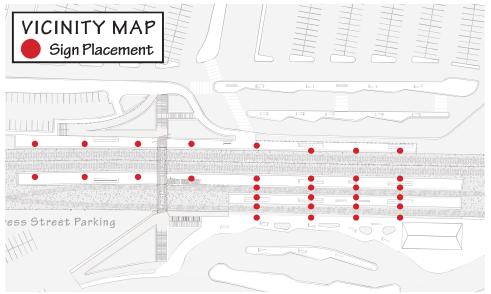
LOCATION:
All track platforms

SIZE: 80”w x 12”h

Notes:

Design Drawing
December 2024 / Version 12





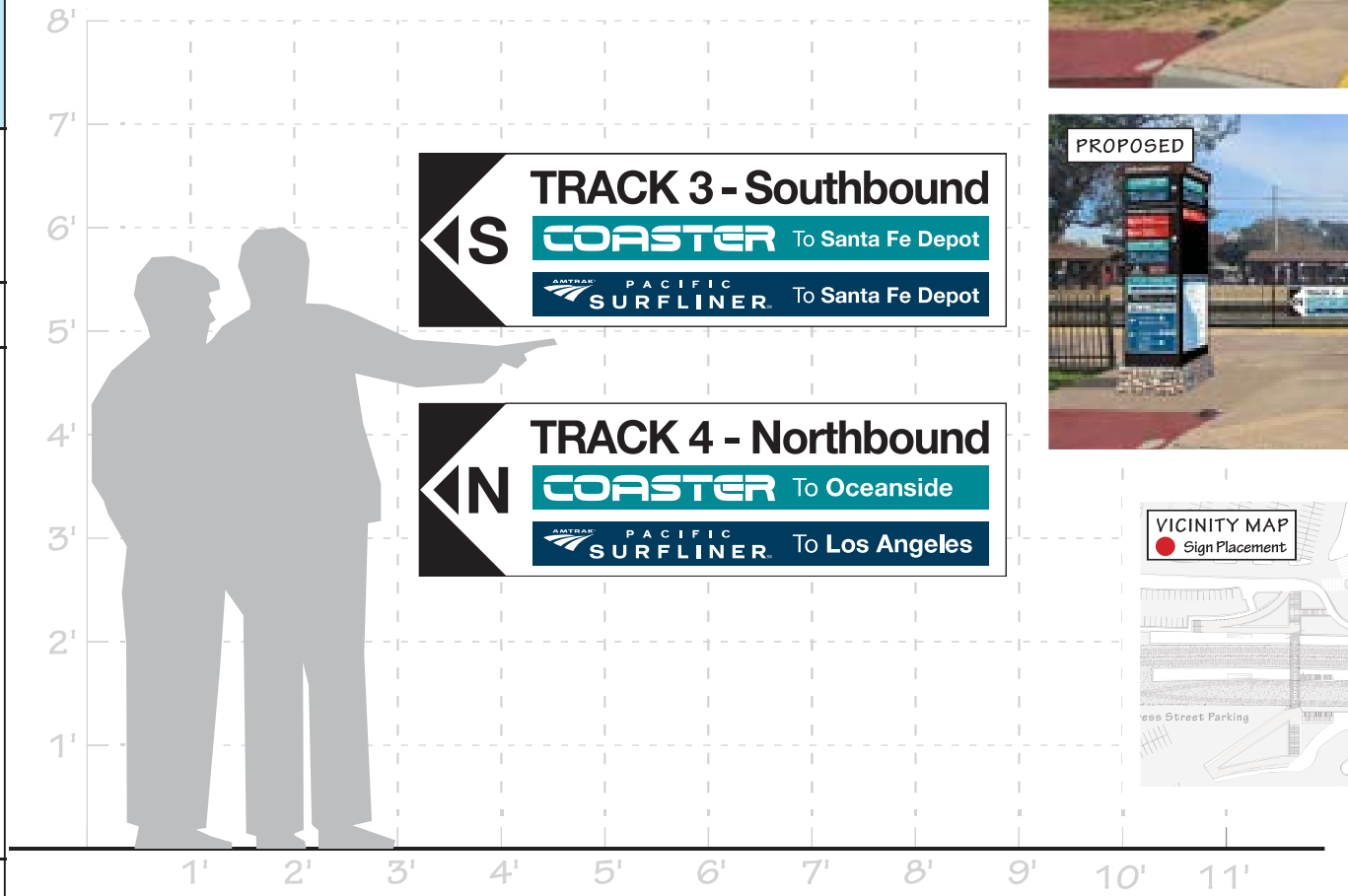
Old Town Transit Center

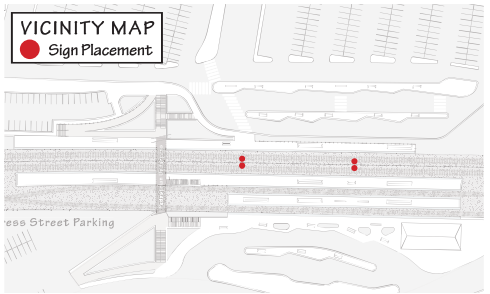
Item 22: TRACK 3 & 4 FENCE SIGNS

LOCATION:
Track 3 & 4 fences

SIZE: 72”w x 20”h

Notes:





Design Drawing
December 2024 / Version 12

Old Town Transit Center

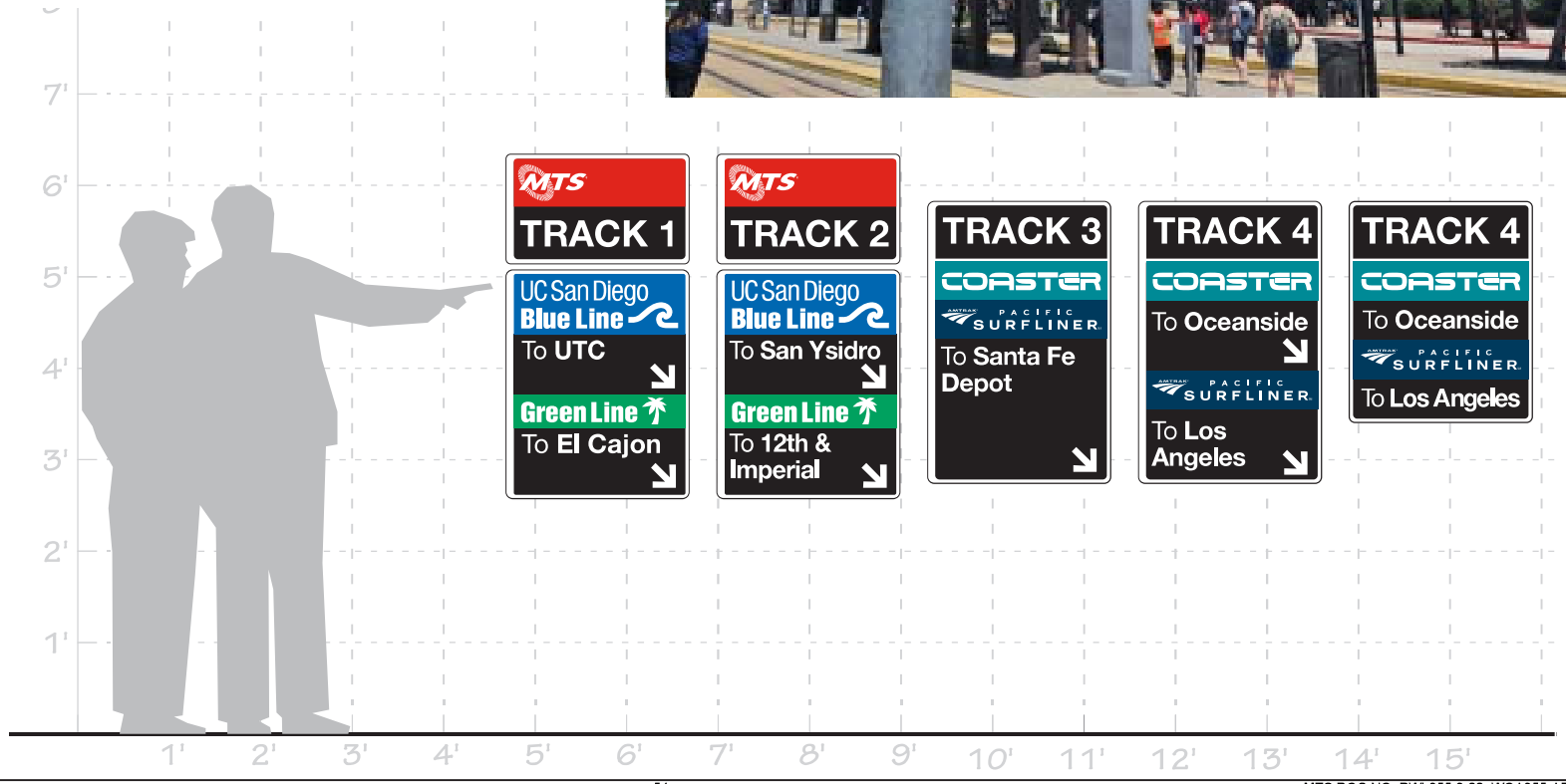
Item 23: TRACK LABEL SIGNS

LOCATION:
All track platforms

SIZE: 20”x12” & 20”x25”

Notes:

Design Drawing
December 2024 / Version 12



Old Town Transit Center

Item 23: TRACK LABEL SIGNS

LOCATION:
All track platforms

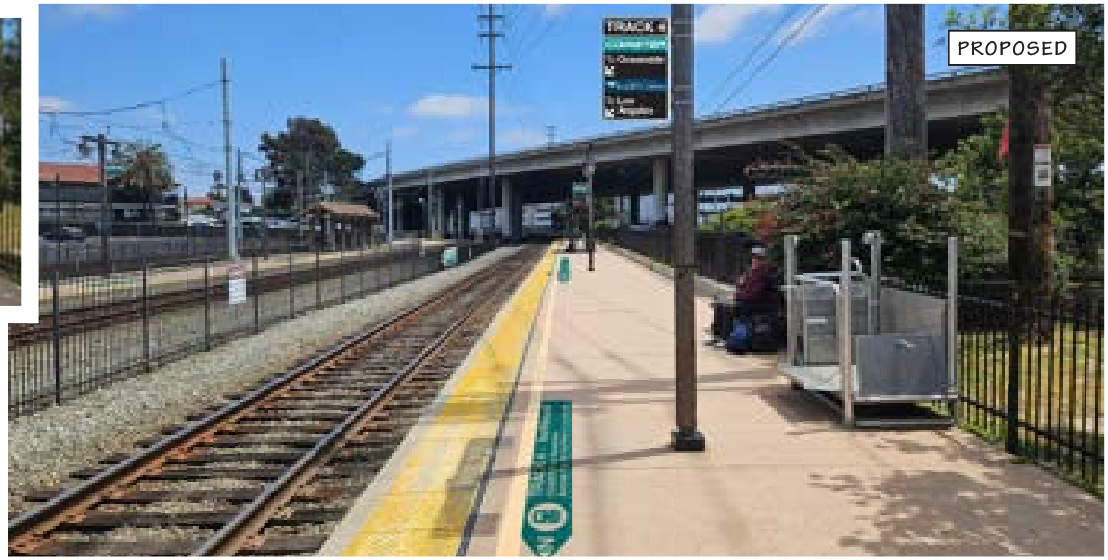
SIZE: 20”x12” & 20”x25”

Notes:

Design Drawing
December 2024 / Version 12

CURRENT

CURRENT



MTS

Old Town Transit Center

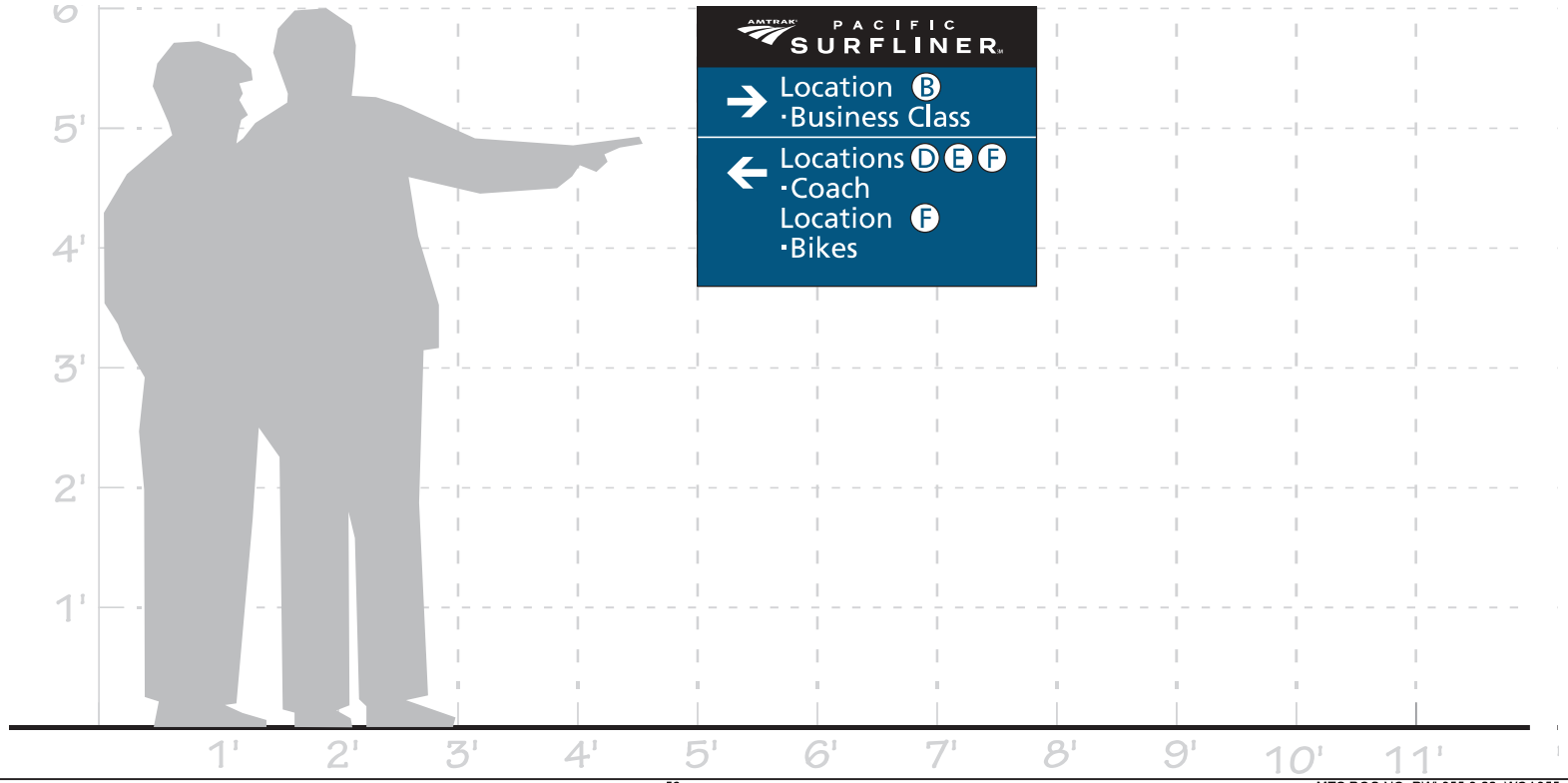
Item 24: TRACK 4 BOARDING INFO

LOCATION:
Track 4 platform

SIZE: 34”x28”

Notes:

Design Drawing
December 2024 / Version 12



Old Town Transit Center

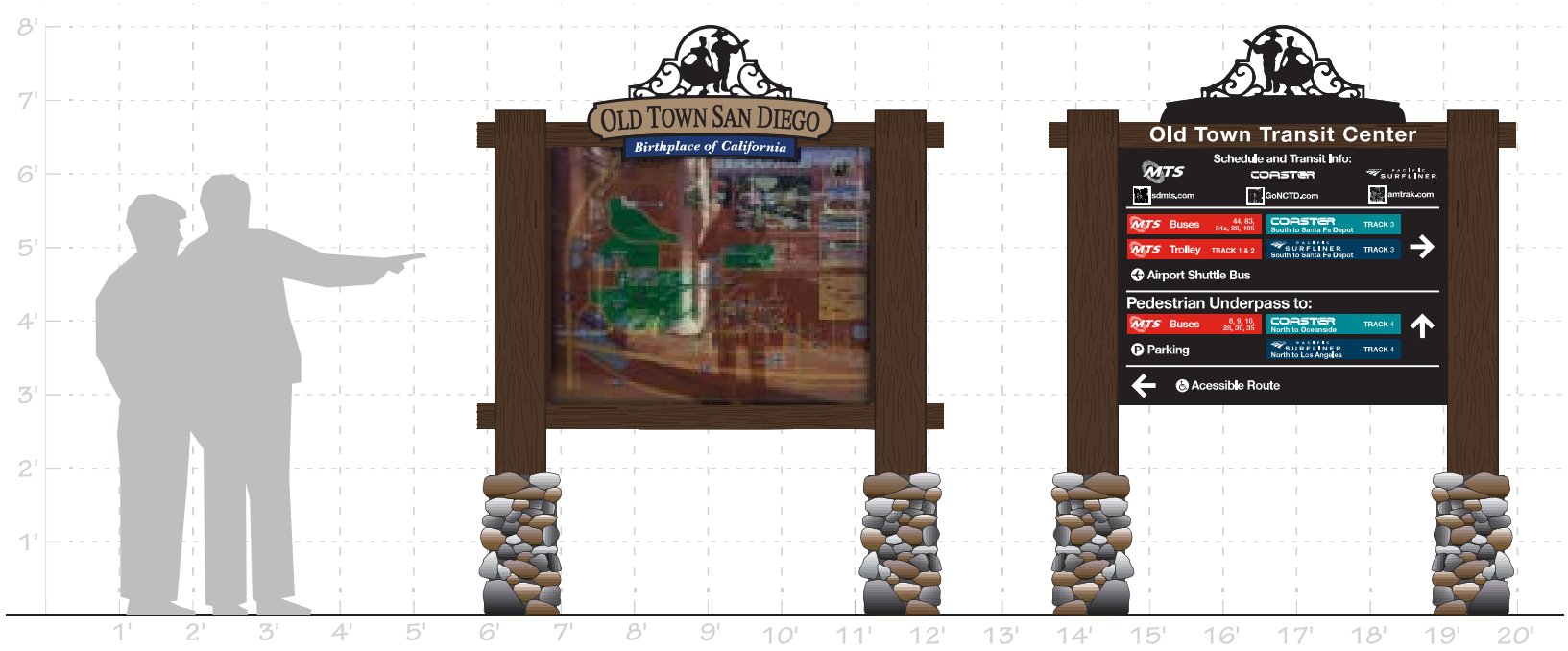
Item 25: OLD TOWN CHAMBER KIOSK

LOCATION:
Congress St. and Station Entrance

SIZE: 53”x46”

Notes:
Add Transit Center Panel to back side of existing Old Town State Park Map Sign

Design Drawing
December 2024 / Version 12



Old Town
Transit Center

Item 25: OLD TOWN CHAMBER KIOSK (NEW)

LOCATION:
Congress St. and Station Entrance

SIZE: 53”x46”

Notes:
Add Transit Center Panel to back side of existing Old Town State Park Map Sign

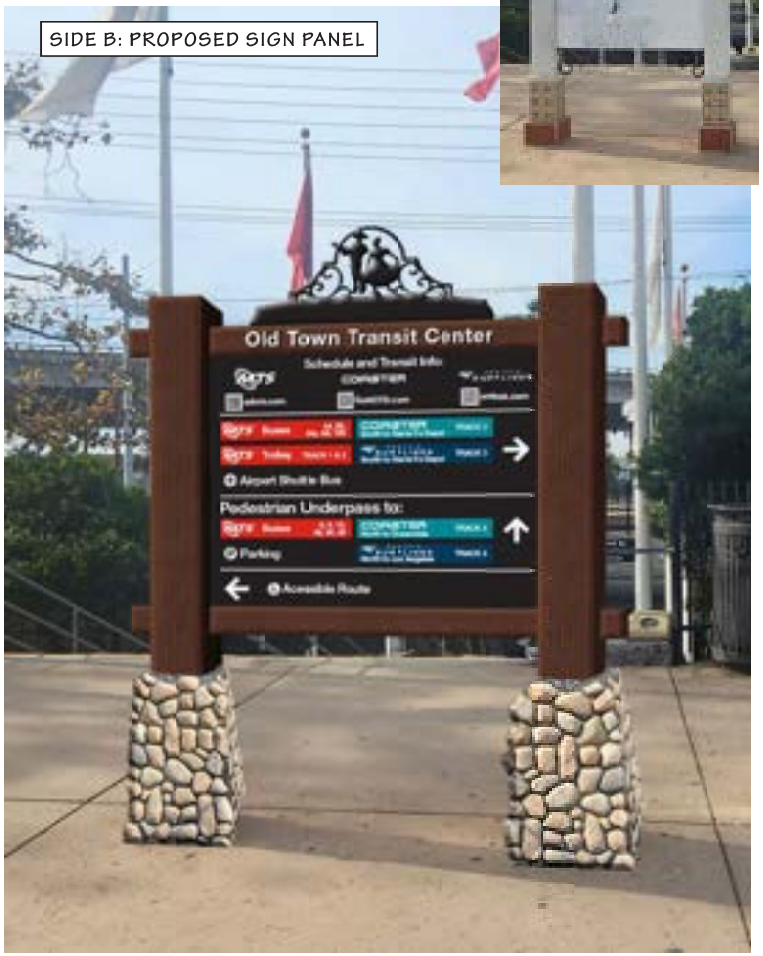
Design Drawing
December 2024 / Version 12

SIDE A: EXISTING

SIDE A: PROPOSED SIGN PANEL

SIDE B: EXISTING

SIDE B: PROPOSED SIGN PANEL



Old Town Transit Center

Item 25: OLD TOWN CHAMBER KIOSK (BACK ONLY)

LOCATION:
Congress St. and Station Entrance

SIZE: 53”x46”

Notes:
Add Transit Center Panel to back side of existing Old Town State Park Map Sign

Design Drawing
December 2024 / Version 12

SIDE A: OLD TOWN MAP

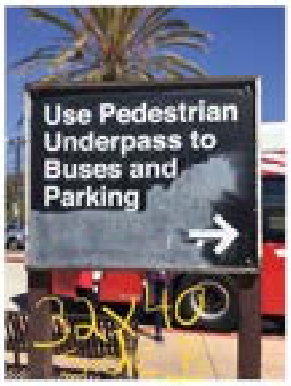
SIDE B: BLANK

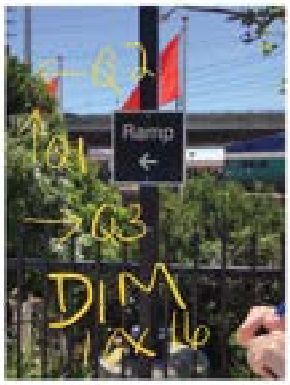
SIDE B: PROPOSED SIGN PANEL

EXHIBIT B
OTTC EXISTING SIGN TYPES

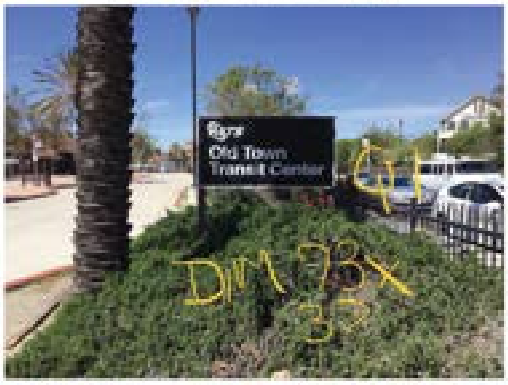
OLD TOWN
UC
SAN DIEGO
HEALTH
HILLCREST

Use Pedestrian
Underpass to
Buses and
Parking

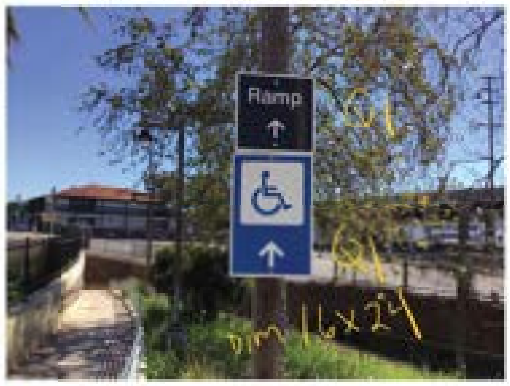

Use Pedestrian
Underpass to
Buses and
Parking


Ramp

Old Town
State Park
Use Pedestrian
Underpass to:
Pacific Surfliner
COASTER
Buses
Parking

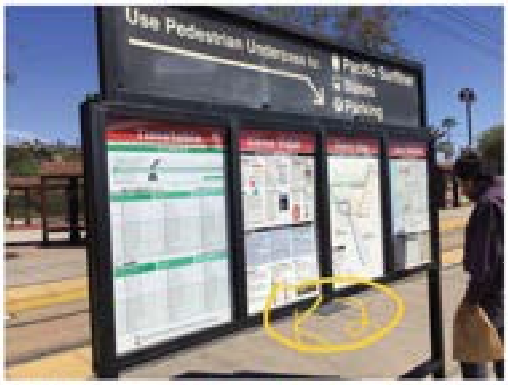

Old Town
Transit Center

Old Town
Transit Center


Ramp

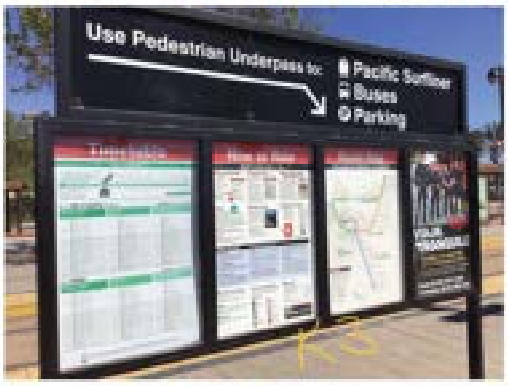
Underpass Monitored by
Closed-Circuit Television

NO
PEDESTRIAN
ACCESS
ALLOWED
AT ANY TIME


Use Pedestrian Underpass to:
Pacific Surfliner
Buses
Parking

Use Pedestrian Underpass to:
Pacific Surfliner
Buses
Parking

Buses
Parking


Use Pedestrian Underpass to:
Pacific Surfliner
Buses
Parking

Use Pedestrian Underpass to:
Pacific Surfliner
Buses
Parking

Coaster to Oceanside
Pacific Surfliner
Buses
Parking

Use Pedestrian Underpass to:
Pacific Surfliner
Buses
Parking

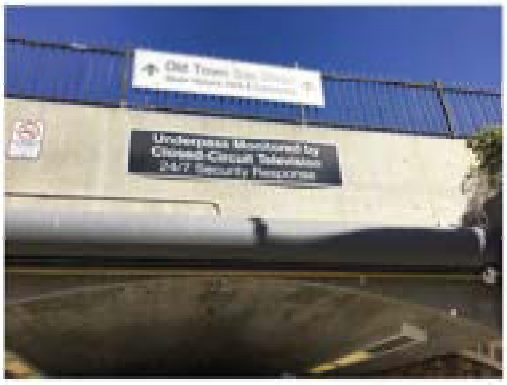
COASTER
Trolley
Buses
Old Town State Park

Old Town State Park
Buses
44 84X 88 105
Pacific Surfliner
Buses
8 9 9A 10
28 30 35 150
Parking

Old Town State Park
Buses
COASTER
Trolley

Pacific Surfliner
Buses
Parking
COASTER
Trolley

Trolley


Underpass Monitored by Closed-Circuit Television
24/7 Security Response

Old Town State Park
Pacific Surfliner
COASTER
Trolley
Buses

16x
14
Q2

Side
A
Use Pedestrian Underpass to:
Old Town State Park
COASTER
Trolley
Buses
70x104.5

Use Pedestrian Underpass to:
Old Town State Park
COASTER
Trolley
Buses

Pacific Surfliner
Use Pedestrian Underpass to:
Old Town State Park
COASTER
Trolley
Buses
Q3

Use Pedestrian Underpass to:
Old Town State Park
COASTER
Trolley
Buses

Use Pedestrian Underpass to:
Old Town State Park
COASTER
Trolley
Buses
Q4

Use Pedestrian Underpass to Trolley Platform and State Park
Q6

Use Pedestrian Underpass for State Park and Trolley Platform
70x30
Q5

Old Town State Park
Pacific Surfliner
COASTER
Trolley
Buses
Q1
70x30

Use Pedestrian Underpass to Trolley Platform and State Park

Use Pedestrian Underpass to Trolley Platform and State Park

Passenger Load and Unload Only
Q2

EXIT
Q11
18x18

EXIT

NOTICE

Shuttle
Only

STOP
EXIT

Ramp

NOT a
THROUGH
ROAD

OLD TOWN
SAN DIEGO
STATE HISTORIC PARK
MTS

OLD TOWN
UC
SAN DIEGO
HEALTH-
HILLCREST

Old Town
State Park
Pacific
Surfliner
COASTER
Trolley
Buses
G Parking

Old Town
State Park
Pacific
Surfliner
COASTER
Trolley
Buses

Use Pedestrian
Underpass to:
Old Town
State Park
COASTER
Trolley
Buses
44 84X 88 105

EXHIBIT C
OTTC AS-BUILT PLANS
(Attached Separately on PlanetBids)

SAN DIEGO

METROPOLITAN TRANSIT DEVELOPMENT BOARD

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	
	6/28/93	
	5-12-95	AS-BUILT ARMED SHEET 57 & 58

CONFORMED DRAWINGS

AS-BUILTS VOLUME I (SHEETS 1-79)

AS BUILT
Contract No. LRT-552
Date 5-7-97

CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT M.K. APP.
1854-4267
NAD 83
214-1701
DWG. NO. 24411-1-0

OLD TOWN TRANSIT CENTER
CONTRACT LRT- NO. 552

DE LEUW, CATHER & COMPANY

APRIL 1995

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

CITY DRG No.	MTDB SHEET No.	DRAWING TITLE	DRAWING No.
		VOLUME I (SHEETS 1-79)	
		GENERAL DRAWINGS	
1	1	TITLE SHEET	X1
2	2	DRAWING INDEX SHEET 1 OF 2	X2
3	3	DRAWING INDEX SHEET 2 OF 2	X3
4	4	PROJECT AREA & LOCATION MAP	X4
5	5	ABBREVIATIONS	X5
6	6	SYMBOLS	X6
		SURVEY CONTROL POINTS AND DATA	
	7	SHEET 1 OF 2	CSS1
	8	SHEET 2 OF 2	CSS2
		TYPICAL SECTIONS AND DETAILS	
	9	PLATFORMS AND EASTERLY BUS BAYS	X1
7	10	STREETS	X2
8	11	TAYLOR STREET & MISC. DETAILS	X3
9	12	MISCELLANEOUS CONSTRUCTION	X4
10	13	PARKING LOT AND WEST BUS BAYS	X5
		GRADING AND MISC. CONSTRUCTION PLANS	
	14	TRANSIT CENTER & PARKING LOT	G100
11	15	SHEET 1 OF 4	G101
12	16	SHEET 2 OF 4	G102
13	17	SHEET 3 OF 4	G103
14	18	SHEET 4 OF 4	G104
	19	ALIGNMENT DATA - SHEET 1 OF 4	G105
	20	ALIGNMENT DATA - SHEET 2 OF 4	G106
	21	ALIGNMENT DATA - SHEET 3 OF 4	G107
	22	ALIGNMENT DATA - SHEET 4 OF 4	G108
		UTILITY PLANS	
15	23	LEGEND AND NOTES	U1
16	24	QUANTITIES SHEET - SHEET 1 OF 2	U2
17	25	QUANTITIES SHEET - SHEET 2 OF 2	U3
18	26	DRAINAGE ALIGNMENT DATA	U4
19	27	LAYOUT 1 OF 2	U5
20	28	LAYOUT 2 OF 2	U6
21	29	DRAINAGE IMPROVEMENTS	U7
22	30	WATER LINE PROFILES - SHEET 1 OF 2	W1
23	31	WATER LINE PROFILES - SHEET 2 OF 2	W2
24	32	SANITARY SEWER PROFILES - SHEET 1 OF 2	SS1
25	33	SANITARY SEWER PROFILES - SHEET 2 OF 2	SS2
26	34	STORM DRAIN PROFILES SHEET 1 OF 6	D1
27	35	STORM DRAIN PROFILES SHEET 2 OF 6	D2
28	36	STORM DRAIN PROFILES SHEET 3 OF 6	D3
29	37	STORM DRAIN PROFILES SHEET 4 OF 6	D4
30	38	STORM DRAIN PROFILES SHEET 5 OF 6	D5
31	39	STORM DRAIN PROFILES SHEET 6 OF 6	D6
	40	DRAIN INLET PROFILES	D7
	41	STORM WATER PUMPING STATION SHEET 1 OF 2	PS1
	42	STORM WATER PUMPING STATION SHEET 2 OF 2	PS2

CITY DRG No.	MTDB SHEET No.	DRAWING TITLE	DRAWING No.
		LANDSCAPE PLANS	
	43	URBAN DESIGN PLAN 1 OF 4	HP1
	44	URBAN DESIGN PLAN 2 OF 4	HP2
	45	URBAN DESIGN PLAN 3 OF 4	HP3
	46	URBAN DESIGN PLAN 4 OF 4	HP4
	47	CONSTRUCTION DETAILS 1 OF 4	HP5
	48	CONSTRUCTION DETAILS 2 OF 4	HP6
	49	CONSTRUCTION DETAILS 3 OF 4	HP7
	50	CONSTRUCTION DETAILS 4 OF 4	HP8
	51	IRRIGATION PLAN 1 OF 4	HP9
	52	IRRIGATION PLAN 2 OF 4	HP10
	53	IRRIGATION PLAN 3 OF 4	HP11
	54	IRRIGATION PLAN 4 OF 4	HP12
	55	IRRIGATION LEGEND AND DETAILS	HP13
	56	PLANTING PLAN 1 OF 4	HP14
	57	PLANTING PLAN 2 OF 4	HP15
	58	PLANTING PLAN 3 OF 4	HP16
	59	PLANTING PLAN 4 OF 4	HP17
	60	PLANTING LEGEND AND DETAILS	HP18
	61	TAYLOR ST. WIDENING-IRRIGATION	HP19
	62	TAYLOR ST. WIDENING-PLANTING	HP20
		PEDESTRIAN PASSAGEWAY	
	63	GENERAL PLAN	ST1
	64	PLAN AND PROFILE	ST2
	65	PASSAGEWAY DETAILS - 1	ST3
	66	RAMP No. 1	ST4
	67	RAMP NO. 2	ST5
	68	RAMP DETAILS	ST6
	69	STAIRS-1	ST7
	70	STAIRS - 2	ST8
	71	STAIR DETAILS	ST9
	72	WATERPROOFING DETAILS	ST10
	73	MISCELLANEOUS DETAILS	ST11
	74	STRAY CURRENT DETAILS	ST12
	75	LAYOUT SHEET 1 OF 2	ST20
	76	LAYOUT SHEET 2 OF 2	ST21
	77	ELEVATION SHEET 1 OF 2	ST22
	78	ELEVATION SHEET 2 OF 2	ST23
	79	HANDRAILS AND STAIR DETAILS	ST24
		VOLUME II (SHEETS 80-160)	
		STREET IMPROVEMENT PLAN AND PROFILE	
32	80	CONGRESS ST SHEET 1 OF 2	C1
33	81	CONGRESS ST SHEET 2 OF 2	C2
34	82	TAYLOR ST SHEET 1 OF 2	C3
35	83	TAYLOR ST SHEET 2 OF 2	C4
36	84	CURB PROFILES 1 OF 2	C5
37	85	CURB PROFILES 2 OF 2	C6
38	86	WALLACE ST. AND PACIFIC HWY	C7

CITY DRG No.	MTDB SHEET No.	DRAWING TITLE	DRAWING No.
		SIGNING, STRIPING AND MARKING PLANS	
39	87	TAYLOR STREET	SM1
40	88	CONGRESS	SM2
	89	PARKING LOT AND BUS BAYS	SM3
		QUANTITY SUMMARY	
41	90	DETOUR & CONSTRUCTION STAGING SHEET 1 OF 3	01
42	91	PERMANENT TRAFFIC CONTROL FACILITIES - SHEET 2 OF 3	02
43	92	CIVIL - SHEET 3 OF 3	03
		ELECTRICAL PLANS	
44	93	TRAFFIC SIGNALS AT PACIFIC HWY/TAYLOR ST.	E1
45	94	TRAFFIC SIGNALS AT CONGRESS/TAYLOR ST.	E2
46	95	STREET LIGHTING CONGRESS STREET	E3
47	96	TRAFFIC SIGNALS AT PACIFIC HWY/PKG LOT	E4
48	97	TRAFFIC SIGNALS AT JUAN/TAYLOR ST.	E5
49	98	TRAFFIC SIGNALS AT CONGRESS STREET	E6
	99	SCHEDULES AND DIAGRAMS	E100
	100	LIGHTING	E101
	101	POWER	E102
	102	DETAILS & SCHEMATICS	E103
	103	RAMPS AND STAIR PLAN	E104
		EMERGENCY REPORTING SYSTEM	
	104	EMERGENCY SYSTEM BLOCK DIAGRAM	S110
	105	EMERGENCY SYSTEM STATION PANEL	S111
	106	PANEL LOCATION AND MOUNTING BRACKET	S112
	107	CC PERS CONTROL PANEL LAYOUT	S113
		DETOUR AND CONSTRUCTION STAGING PLANS	
50	108	CONGRESS ST 1 OF 4	SC1
51	108A	CONGRESS ST 2 OF 4	SC1A
52	109	CONGRESS ST 3 OF 4	SC2
53	110	CONGRESS ST 4 OF 4	SC2A
54	111	TAYLOR ST 1 OF 4	SC3
55	112	TAYLOR ST 2 OF 4	SC4
56	113	TAYLOR ST 3 OF 4	SC5

DRAWINGS CONT'D ON SHEET NO. 5

AS BUILT
Contract No. LRT-552
Date 6-2-97

CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT MJA ABC
1854-6267
NAD 83
216-1707
2618-2-1

NO.	DATE	REVISIONS	BY	CHK	APPR
2	8-95	CCO #			
1	4-95	CONFORMED			

DE LEUW CATHER

DESIGNED BY MRS	DATE 6/20/94
DRAWN BY MRS	9/16/94
CHECKED BY RWL	1/6/95
MTDB PROJECT D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
GENERAL DRAWINGS
DRAWING INDEX
SHEET 1 OF 2

SCALE NTS
MTDB CONTRACT NO. LRT 552
DRAWING NO. X2 SHEET NO. 2

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

67

MTS DOC NO. PWL355-A22; WOA355-AE-75

CITY DWG No.	MTDB SHEET No.	DRAWING TITLE	DRAWING NO.
		VOLUME I (SHEETS 1-79)	
		GENERAL DRAWINGS	
1	1	TITLE SHEET	G1
2	2	DRAWING INDEX SHEET 1 OF 2	G2
3	3	DRAWING INDEX SHEET 2 OF 2	G3
4	4	PROJECT AREA & LOCATION MAP	G4
5	5	ABBREVIATIONS	G5
6	6	SYMBOLS	G6
		SURVEY CONTROL POINTS AND DATA	
	7	SHEET 1 OF 2	C551
	8	SHEET 2 OF 2	C552
		TYPICAL SECTIONS AND DETAILS	
	9	PLATFORMS AND EASTERLY BUS BAYS	X1
7	10	STREETS	X2
8	11	TAYLOR STREET & MISC. DETAILS	X3
9	12	MISCELLANEOUS CONSTRUCTION	X4
10	13	PARKING LOT AND WEST BUS BAYS	X5
		GRADING AND MISC. CONSTRUCTION PLANS	
	14	TRANSIT CENTER & PARKING LOT	G100
11	15	SHEET 1 OF 4	G101
12	16	SHEET 2 OF 4	G102
13	17	SHEET 3 OF 4	G103
14	18	SHEET 4 OF 4	G104
	19	ALIGNMENT DATA - SHEET 1 OF 4	G105
	20	ALIGNMENT DATA - SHEET 2 OF 4	G106
	21	ALIGNMENT DATA - SHEET 3 OF 4	G107
	22	ALIGNMENT DATA - SHEET 4 OF 4	G108
		UTILITY PLANS	
15	23	LEGEND AND NOTES	U1
16	24	QUANTITIES SHEET - SHEET 1 OF 2	U2
17	25	QUANTITIES SHEET - SHEET 2 OF 2	U3
18	26	DRAINAGE ALIGNMENT DATA	U4
19	27	LAYOUT 1 OF 2	U5
20	28	LAYOUT 2 OF 2	U6
21	29	DRAINAGE IMPROVEMENTS	U7
22	30	WATER LINE PROFILES - SHEET 1 OF 2	W1
23	31	WATER LINE PROFILES - SHEET 2 OF 2	W2
24	32	SANITARY SEWER PROFILES - SHEET 1 OF 2	SS1
25	33	SANITARY SEWER PROFILES - SHEET 2 OF 2	SS2
26	34	STORM DRAIN PROFILES SHEET 1 OF 6	D1
27	35	STORM DRAIN PROFILES SHEET 2 OF 6	D2
28	36	STORM DRAIN PROFILES SHEET 3 OF 6	D3
29	37	STORM DRAIN PROFILES SHEET 4 OF 6	D4
30	38	STORM DRAIN PROFILES SHEET 5 OF 6	D5
31	39	STORM DRAIN PROFILES SHEET 6 OF 6	D6
	40	DRAIN INLET PROFILES	D7
	41	STORM WATER PUMPING STATION SHEET 1 OF 2	PS1
	42	STORM WATER PUMPING STATION SHEET 2 OF 2	PS2

CITY DWG No.	MTDB SHEET No.	DRAWING TITLE	DRAWING NO.
		LANDSCAPE PLANS	
	43	URBAN DESIGN PLAN 1 OF 4	HP1
	44	URBAN DESIGN PLAN 2 OF 4	HP2
	45	URBAN DESIGN PLAN 3 OF 4	HP3
	46	URBAN DESIGN PLAN 4 OF 4	HP4
	47	CONSTRUCTION DETAILS 1 OF 4	HP5
	48	CONSTRUCTION DETAILS 2 OF 4	HP6
	49	CONSTRUCTION DETAILS 3 OF 4	HP7
	50	CONSTRUCTION DETAILS 4 OF 4	HP8
	51	IRRIGATION PLAN 1 OF 4	HP9
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	53	IRRIGATION PLAN 3 OF 4	HP11
	54	IRRIGATION PLAN 4 OF 4	HP12
	55	IRRIGATION LEGEND AND DETAILS	HP13
	56	PLANTING PLAN 1 OF 4	HP14
	57	PLANTING PLAN 2 OF 4	HP15
	58	PLANTING PLAN 3 OF 4	HP16
	59	PLANTING PLAN 4 OF 4	HP17
	60	PLANTING LEGEND AND DETAILS	HP18
	61	TAYLOR ST. WIDENING-IRRIGATION	HP19
	62	TAYLOR ST. WIDENING-PLANTING	HP20
		PEDESTRIAN PASSAGEWAY	
	63	GENERAL PLAN	ST1
	64	PLAN AND PROFILE	ST2
	65	PASSAGEWAY DETAILS - 1	ST3
	66	RAMP No. 1	ST4
	67	RAMP NO. 2	ST5
	68	RAMP DETAILS	ST6
	69	STAIRS-1	ST7
	70	STAIRS - 2	ST8
	71	STAIR DETAILS	ST9
	72	WATERPROOFING DETAILS	ST10
	73	MISCELLANEOUS DETAILS	ST11
	74	STRAY CURRENT DETAILS	ST12
	75	LAYOUT SHEET 1 OF 2	ST20
	76	LAYOUT SHEET 2 OF 2	ST21
	77	ELEVATION SHEET 1 OF 2	ST22
	78	ELEVATION SHEET 2 OF 2	ST23
	79	HANDRAILS AND STAIR DETAILS	ST24
		VOLUME II (SHEETS 80-160)	
		STREET IMPROVEMENT PLAN AND PROFILE	
32	80	CONGRESS ST SHEET 1 OF 2	C1
33	81	CONGRESS ST SHEET 2 OF 2	C2
34	82	TAYLOR ST SHEET 1 OF 2	C3
35	83	TAYLOR ST SHEET 2 OF 2	C4
36	84	CURB PROFILES 1 OF 2	C5
37	85	CURB PROFILES 2 OF 2	C6
38	86	WALLACE ST. AND PACIFIC HWY	C7

CITY DWG NO.	MTDB SHEET No.	DRAWING TITLE	DRAWING No.
		SIGNING, STRIPING AND MARKING PLANS	
39	87	TAYLOR STREET	SN1
40	88	CONGRESS	SN2
	89	PARKING LOT AND BUS BAYS	SN3
		QUANTITY SUMMARY	
41	90	DETOUR & CONSTRUCTION STAGING SHEET 1 OF 3	Q1
42	91	PERMANENT TRAFFIC CONTROL FACILITIES - SHEET 2 OF 3	Q2
43	92	CIVIL - SHEET 3 OF 3	Q3
		ELECTRICAL PLANS	
44	93	TRAFFIC SIGNALS AT PACIFIC HWY/TAYLOR ST.	E1
45	94	TRAFFIC SIGNALS AT CONGRESS/TAYLOR ST.	E2
46	95	STREET LIGHTING CONGRESS STREET	E3
47	96	TRAFFIC SIGNALS AT PACIFIC HWY/PKG LOT	E4
48	97	TRAFFIC SIGNALS AT JUAN/TAYLOR ST.	E5
49	98	TRAFFIC SIGNALS AT CONGRESS STREET	E6
	99	SCHEDULES AND DIAGRAMS	E100
	100	LIGHTING	E101
	101	POWER	E102
	102	DETAILS & SCHEMATICS	E103
	103	RAMPS AND STAIR PLAN	E104
		EMERGENCY REPORTING SYSTEM	
	104	EMERGENCY SYSTEM BLOCK DIAGRAM	S110
	105	EMERGENCY SYSTEM STATION PANEL	S111
	106	PANEL LOCATION AND MOUNTING BRACKET	S112
	107	CC PERS CONTROL PANEL LAYOUT	S113
		DETOUR AND CONSTRUCTION STAGING PLANS	
50	108	CONGRESS ST 1 OF 4	SC1
51	108A	CONGRESS ST 2 OF 4	SC1A
52	109	CONGRESS ST 3 OF 4	SC2
53	110	CONGRESS ST 4 OF 4	SC2A
54	111	TAYLOR ST 1 OF 4	SC3
55	112	TAYLOR ST 2 OF 4	SC4
56	113	TAYLOR ST 3 OF 4	SC5

DRAWINGS CONT'D. ON SHEET NO. 5

AS BUILT
Contract No. LBT-552
Date 6-3-97

CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT N/A ENG
1854-1067
NAD 83
214-1707
26877-2-D

NO.	DATE	REVISIONS	BY	CHK	APVD
3	8-95	CCO #			
2	4-95	CONFORMED			

DE LEUW CATHER

DES'D-CHKD BY HRS 6/20/94
DRAWN BY HRS 9/16/94
CHECKED BY RHB 1/15/95
MTDB PROJ.ENG. D. RAGLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
GENERAL DRAWINGS
DRAWING INDEX
SHEET 1 OF 2

SCALE NTS
MTDB CONTRACT NO. LBT 552
DRAWING NO. K2 SHEET NO. 2

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

MTS DOC NO. PWL355J-22, WOA355-AE-75

MTDB SHEET No.	DRAWING TITLE	DRAWING No.
	DEPOT PLANS	
	ARCHITECTURAL DRAWINGS	
114	GENERAL NOTES	A0.1
115	FLOOR PLAN	A1.2
116	ROOF PLAN	A1.3
117	ELEVATIONS WEST/NORTH	A1.4
118	ELEVATIONS EAST/SOUTH	A1.5
119	BUILDING SECTIONS	A1.6
120	CEILING PLAN	A1.7
121	ROOM FINISH SCHEDULE/DOORSCHEDULE/DOOR DETAILS	A2.1
122	DOOR/WINDOW DETAILS	A2.2
123	WALL TYPES/EXTERIOR TRIM DETAILS	A2.3
124	EXTERIOR TRIM/ROOF DETAILS	A2.4
125	INTERIOR ELEVATIONS	A2.5
126	INTERIOR DETAILS/TILE PATTERNS	A2.6
127	TROLLEY SHELTER	A3.1
128	BUS SHELTER	A3.2
	STRUCTURAL	
129	GENERAL NOTES - SHEET 1 OF 2	S1.1
130	GENERAL NOTES - SHEET 2 OF 2	S1.1A
131	TYPICAL DETAILS	S1.2
132	FOUNDATION PLAN	S2.1
133	ROOF FRAMING PLAN	S2.2
134	UPPER ROOF FRAMING PLAN	S2.3
135	CEILING FRAMING PLAN	S2.4
136	WALL ELEVATIONS	S3.1
137	FOUNDATION DETAILS	S4.1
138	FRAMING DETAILS - SHEET 1 OF 3	S5.1
139	FRAMING DETAILS - SHEET 2 OF 3	S5.2
140	FRAMING DETAILS - SHEET 3 OF 3	S5.3
141	PLANS @ SHELTER	S6.1
	MECHANICAL	
142	NOTES, SYMBOLS, SCHEDULES, DETAILS & TITLE 24	M1.1
145	MECHANICAL FLOOR PLANS	M2.1
144	NOTES, SYMBOLS, SCHEDULES, DETAILS & CALCULATIONS	P1.1
145	PLUMBING FLOOR PLAN	P2.1
146	PIPING DIAGRAMS	P3.1
	ELECTRICAL	
147	LEGENDS & FIXTURE SCHEDULES	E1.1
148	FLOOR PLAN	E2.1
149	PANEL SCHEDULES, DETAILS, & SHELTER PLANS	E3.1
	MISCELLANEOUS DETAILS	
150	FLOOR PLAN	FS.01
151	EQUIPMENT SCHEDULE	FS.02
152	PLUMBING LOCATION	FS.03
153	ELECTRIC LOCATION	FS.04
154	EXHAUST HOOD DETAILS	FS.05

CITY DWG. NO.	MTDB SHEET NO.	DRAWING TITLE	DRAWING NO.
57	155	OLD TOWN TRANSIT CENTER - DRIVEWAY CONSTRUCTION PLAN	G-1.1B
	156	FLETCHER GRADING PLAN	G-1.2
58	157	UTILITY PLAN - STORM DRAIN PROFILES - AS-BUILT	D-1A
	158	DIAGRAMS AND TROLLEY OPERATOR'S BOOTH	E-1.1B
	163	EQUIPMENT SHELTER 1 OF 2	A2.2
	160	EQUIPMENT SHELTER 2 OF 2	A2.4

CITY OF SAN DIEGO, CALIFORNIA — R.E. 920103

AS-BUILT — M.E. — dtr — 1854-5267 — NAD 83 — 214-1757

25677-3-D

NO.	DATE	REVISIONS	BY	CHK	APPR
1	8-95	DDS #	BVB		
	4-95	CONFORMED			

DE LEUW CATHER

DESIGNED BY MPC — DATE 8/16/93
DRAWN BY BVB — 8/16/93
CHECKED BY BVB — 12/8/94
MTDB PROJECT MGR. D. RAGLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490

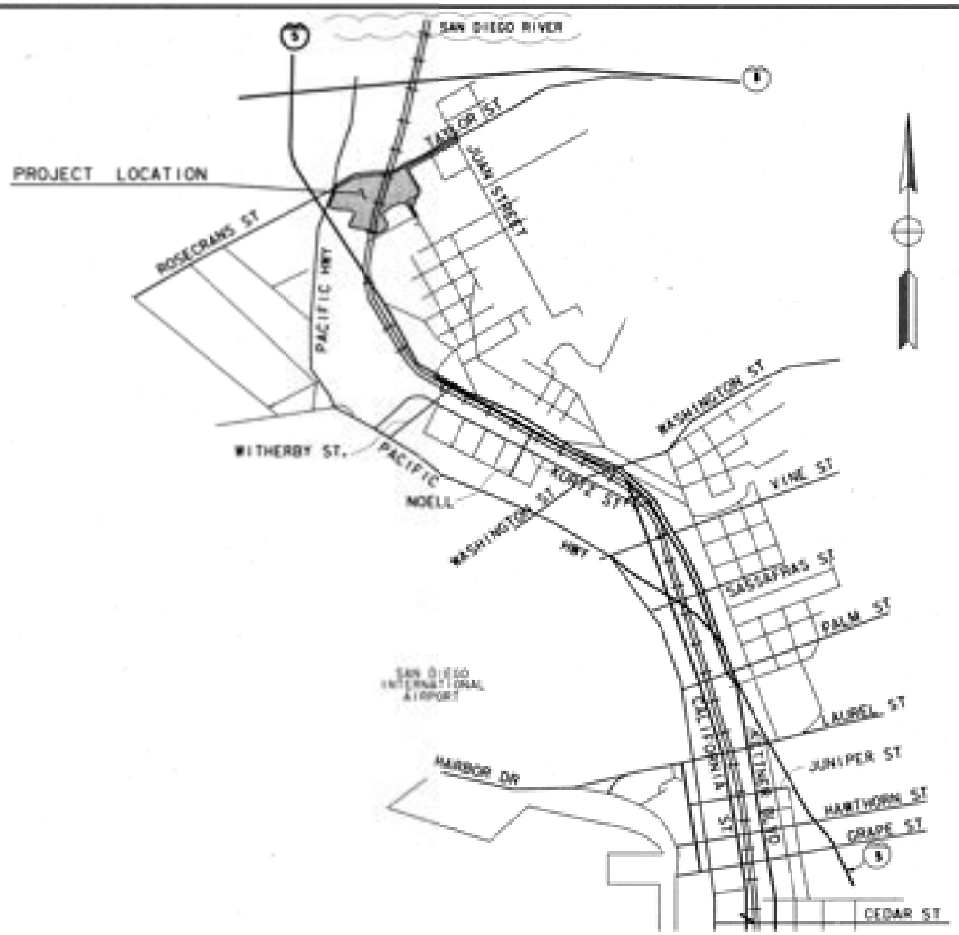
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
DRAWING INDEX
SHEET 2 OF 2

SCALE NTS
MTDB CONTRACT NO. LRT 552
DRAWING NO. 43
SHEET NO. 3

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

MTS DOC NO. PWL355-A22, WOA355-AE-76

AREA MAP



LOCATION MAP

AS BUILT

Contract No. LRT-552

Date 5-19-97

CITY OF SAN DIEGO, CALIFORNIA

920TOT

AS-BUILT M.R.

1854-6267

HAD 83

2141707

24877-4

DE LEUW CATHER

NO.	DATE	REVISIONS	BY	CHK	APPD

DESIGNED BY R.M.M.
DRAWN BY R.M.M.
CHECKED BY
MTDB PROJ. ENG. D. RAGLAND
DATE

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
GENERAL DRAWINGS
PROJECT AREA & LOCATION MAP

SCALE N.T.S.
MTDB CONTRACT NO. LRT 552
DRAWING NO. X4
SHEET NO. 4

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

ABBREVIATIONS	TERMS
AB	AGGREGATE BASE
ABD or ABAND.	ABANDONED OR ABANDON
ABUT	ABUTMENT
A.C.	ASPHALT CONCRETE
ACP	ASBESTOS CEMENT PIPE
ADJ	ADJACENT
AH or AHD	AHEAD
ALIGN	ALIGNMENT
AP	ANGLE POINT
APPROX	APPROXIMATE
ARCH	ARCHITECT
ARV	AIR RELEASE VALVE
ASPH	ASPHALT
AT&SF or AT&SF	ATCHISON TOPEKA & SANTA FE RAILWAY
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BEGIN HORIZONTAL CURVE
BCR	BEGIN CURB RETURN
B.E.	BEND ELEVATION
BK	BACK
BL	BASE LINE
BM	BENCH MARK
BOTT	BOTTOM
BRG or BRGS	BEARING
BVC	BEGIN VERTICAL CURVE
BW	BOTTOM OF WALL
CALTRANS or CT	CALIFORNIA DEPT. OF TRANSPORTATION
CAT	CATENARY
CB	CATCH BASIN
CC	CENTER OF CURVE
COD	CONSTRUCTION CHANGE ORDER
C & G	CURB & GUTTER
CF	CUBIC FEET
CI	CURB INLET
CIP	CAST IRON PIPE
CJ	CONSTRUCTION JOINT
CL OR C/L	CENTER LINE or CLEAR
CLCIP	CONCRETE LINED CAST IRON PIPE
CLF	CHAIN LINK FENCE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
COMM	COMMERCIAL
CONC	CONCRETE
COND	CONDUIT
CONST or CONSTR	CONSTRUCT or CONSTRUCTION
CONT	CONTINUOUS
COR	CORNER
CORR	VERTICAL CURVE CORRECTION
CP	CONCRETE PIPE
CS	CURVE TO SPIRAL (ALIGNMENT POINT)
CSP	CORRUGATED STEEL PIPE
CT	CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) OR CURVE TO TANGENT
CTB	CEMENT TREATED BASE
CTR	CENTER
CWR	CONTINUOUS WELDED RAIL
DC	DEGREE OF CURVE (ARC DEFINITION)
DF	DOUGLAS FIR
DIM	DIMENSION
DIAPH or DIAPHS	DIAPHRAGM
DRG	DRAWING
DWY OR D/W	DRIVEWAY
E	EAST or ELECTRICAL
EG	ACTUAL SUPERELEVATION

ABBREVIATIONS	TERMS
EA	EACH
EC	END HORIZONTAL CURVE
EJ	EXPANSION JOINT
ELEC	ELECTRIC or ELECTRICAL
ELEV or EL	ELEVATION
EMB	EMBANKMENT
ENC	ENCASEMENT
E/P or EP	EDGE OF PAVEMENT
EQ	EQUAL
EVC	END VERTICAL CURVE
EXC	EXCAVATION
EXP	EXPANSION
EXIST. or EX.	EXISTING
E.B.	EAST BOUND
FAA	FEDERAL AVIATION ADMINISTRATION
FBM	FOOT-BOARD MEASURE
F.F.	FINISHED FLOOR (BUILDING ELEVATION)
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FT	FEET/FOOT
FTA	FIXED TERMINATION ANCHOR
FTG	FOOTING
FWBO	FUTURE WORK BY OTHERS
FWR	FIELD WELDED RAIL
FWY	FREEWAY
G	GAS
GALV	GALVANIZED
GB	GRADE BREAK
GP	GUY POLE
GRX	GRADE CROSSING
G.V.	GATE VALVE
H.D.CU	HARD DRAWN COPPER
HORIZ	HORIZONTAL
HP	HIGH PRESSURE GAS LINE
HPT	HIGH POINT
H.T.	HAND THROW
HV	HORIZONTAL & VERTICAL CONTROL MONUMENT
HW OR HDWL	HEADWALL
HWY	HIGHWAY
INT	INTERIOR
INV. or I.E.	INVERT ELEVATION
I.D.	INSIDE DIAMETER
JT	JOINT
K	TANGENT DISTANCE OF SHIFTED PC
KV	KILOVOLT
LBS	POUNDS
LC	LENGTH OF CIRCULAR CURVE
LF	LINEAR FEET
LOL	LINE OF LAYOUT
LP	LIGHT POLE
LPT	LOW POINT
LRT	LIGHT RAIL TRANSIT
LS	LENGTH OF SPIRAL
LT	LEFT
LH	LEFT HAND
LVC	VERTICAL CURVE LENGTH
MAR	MANUAL AIR RELEASE
MAX	MAXIMUM
MBGR	METAL BEAM GUARD RAIL
MCM	CIRCULAR MILS (THOUSANDTHS)
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MODIFIED

ABBREVIATIONS	TERMS
MP	MILE POST
MSL	MEAN SEA LEVEL
MTL	METAL
N	NORTH
NIC	NOT IN CONTRACT
NO.	NUMBER
NOM	NOMINAL
N.A.	NOT AVAILABLE or NOT APPLICABLE
N.B. or N/B	NORTHBOUND
NMC	NON METALLIC CONDUIT
N.T.S.	NOT TO SCALE
OC or O.C.	ON CENTER
OE	OVERHEAD ELECTRIC
O.G.	ORIGINAL GROUND
OS	OVERHEAD SIGNAL
P	TANGENT OFFSET OF SHIFTED PC OR POLE
PC	POINT OF CURVATURE
P/C	PRECAST
PCC	PORTLAND CEMENT CONCRETE or POINT OF COMPOUND CURVE
PCR	POINT OF CURB RETURN
PCVC	POINT OF COMPOUND VERTICAL CURVE
PEHP	POLYETHYLENE HIGH PRESSURE
PF	POINT OF FROG
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PN	P.K. NAIL
P/L	PROPERTY LINE
PL	PLATE
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF END
POS	POINT ON SPIRAL
POT	POINT ON TANGENT
POVC	POINT ON VERTICAL CURVE
PROF	PROFILE
PROP.	PROPOSED
PRVC	POINT OF REVERSE VERTICAL CURVE
PS	POINT OF SWITCH
P/S	PRESTRESSED
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY OR POINT
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
PWBO	PREVIOUS WORK BY OTHERS
QTY	QUANTITY
R	RADIUS OF CIRCULAR CURVE
RBM	RAILBOUND MANGANESE FROG
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REBAR	REINFORCING BAR
REINF	REINFORCED
RES	RESIDENTIAL
RET	RETAINING
RH	RIGHT HAND
RR	RAILROAD
RSD or SDRS	SAN DIEGO REGIONAL STANDARD DRAWINGS
RT	RIGHT
RY	RAILWAY
R/W	RIGHT OF WAY
S	SLOPE

ABBREVIATIONS	TERMS
SC	SPIRAL TO CURVE ALIGNMENT POINT
SCRCP	STEEL COATED REINFORCED CONCRETE PIPE
SD	STORM DRAIN
SDWK or S/W	SIDEWALK
SDRS or RSD	SAN DIEGO REGIONAL STANDARD DRAWING
SEC	SECTION
SHLD	SHOULDER
SHT	SHEET
SP	SIGNAL POLE
SPA or SPCS	SPACING or SPACES (RESPECTIVE)
SPI	SPIRAL POINT OF INTERSECTION
SQ	SQUARE
SR	STATE ROUTE
SS	SANITARY SEWER
ST	SPIRAL TO TANGENT ALIGNMENT POINT OR STREET
STA	ENGINEER'S STATIONING OR LRV STATION PLATFORM
STD	STANDARD
STL	STEEL
S.B. or S/B	SOUTHBOUND
SYMM	SYMMETRICAL
TC OR T/C	TANGENT TO CURVE or TOP OF CURB
TEL.	TELEPHONE
TEMP	TEMPORARY
TERM	TERMINATION
TF	TRACK FEET
T/F	TOP OF FOOTING
T/G	TOP OF GRATE
THK	THICK
TOT	TOTAL
TPS	TRACTION POWER SUBSTATION
T/P	TOP OF PLATFORM ELEVATION
T/R	TOP OF RAIL
T/S	TOP OF SLOPE
TS	TANGENT TO SPIRAL ALIGNMENT POINT
TYP	TYPICAL
T/W	TOP OF WALL
TBA	TIE WIRE ANCHOR
UD	UNDERDRAIN
U/G	UNDERGROUND
U.N.O. or UNO	UNLESS NOTED OTHERWISE
UP	UTILITY POLE
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VLT	VAULT
W	WATER
W/	WITH
W.B.	WESTBOUND
WBS	WOODEN BUS SHELTER
W/L	WATER LINE
W/O	WITHOUT
WP	WORK POINT
WV	WATER VALVE
WWM	WELDED WIRE MESH
#	POUND OR NUMBER
ø	PHASE or DIAMETER

AS BUILT

Contract No. LRT-692

Date 5-19-97

CITY OF SAN DIEGO, CALIFORNIA — R.E. 920707

AS-BUILT — MTDB — 1854-6267 — NAD 83 — 214-1707

26477-9-D

NO.	DATE	REVISIONS	BY	CHK	APPR
1	4-96	Conformed			

DE LEUW CATHER

DESIGNED BY R. P. S.	DATE 1/31/94
DRAWN BY R. H. LUNA	1/31/94
CHECKED BY R. H. LUNA	11/17/94
MTDB PROJECT D. RAILAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER

GENERAL DRAWING
ABBREVIATIONS

SCALE N.T.S.

MTDB CONTRACT NO. LRT 592

DRAWING NO. G-5 — SHEET NO. 5

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

SYMBOLS

- B1 OR TYPE B-3 CURB PER RSD G-6 or 6" CURB PER RSD G-1
- CURB & GUTTER PER RSD G2
- PCC SIDEWALK PER RSD G7
- CENTER LINE STREET
- RIGHT-OF-WAY LINE
- RR TRACK CENTER LINE WITH 100' TICK MARKS
- RETAINING WALL
- FENCE
- EARTH 'V' DITCH
- NO. 9A GATES
- NO. 9A CANTILEVER
- NO. 8 FLASHING LIGHT
- STREET LIGHTS
- TYPE E-1 DELINEATOR PER CT A-T46
- TRAFFIC SIGN
- TYPE I BARRICADE
- TYPE III BARRICADE PER CT A-T3
- CONTINUOUS BARRICADE PER M 9
- LIMITS OF GRADING/CUT OR FILL LINE
- GRADE BREAK
- HAND RAILING
- TRENCH DRAIN
- LUG CONNECTIONS PER RSD D-63
- MANHOLE OR CLEANOUT
- BOLLARDS
- PEDESTRIAN RAMP

CONT'D

- CERAMIC PAVEMENT MARKERS
- A.C. PAVEMENT
- A.C. OVERLAY
- PCC PAVEMENT
- PLATFORMS
- G-1 / RSD — DRAWING NUMBER PER STANDARD; DESIGNATED ENTITY (RSD, CT, MTDB etc.)
- X6 / A — DWG. ON WHICH SECTION IS DRAWN; SECTION IDENTIFICATION
- POINT OF VERTICAL INTERSECTION, PVI, CREST CURVE
- POINT OF VERTICAL INTERSECTION, PVI, SAG CURVE
- POINT OF INTERSECTION
- CP — CATENARY POLE

CONT'D

- EXIST. RAILROAD TRACKS
- EXIST. RAILROAD TRACKS
- EXIST. WATER LINE
- EXIST. RUBBERIZED ROADWAY CROSSING
- EXIST. OVERHEAD ELECTRIC
- EXIST. TELEPHONE LINE
- EXIST. UNDERGROUND ELECTRIC
- EXIST. GAS LINE
- EXIST. SEWER LINE WITH MANHOLE
- EXIST. CABLE TELEVISION
- EXIST. STORM DRAIN WITH MANHOLE AND CATCH BASIN
- EXIST. SIGNAL POLE AND OVERHEAD SIGNAL LINE
- EXIST. UTILITY POLE & OVERHEAD UTILITY
- EXIST. STEEL OR CONCRETE ENCASEMENT
- EXIST. CHAIN LINK FENCE
- EXIST. RETAINING WALL
- GRADED DITCH
- EXIST. WATER VALVE
- EXIST. FIRE HYDRANT
- EXIST. GUY POLE
- EXIST. GATES
- EXIST. CANTILEVER

STANDARD SPECIFICATIONS:

1. STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (1991 EDITION), INCLUDING THE REGIONAL AND CITY OF SAN DIEGO SUPPLEMENTAL AMENDMENTS, DOCUMENT NO 769796, FILED APRIL 23 1992. (WATER AND SEWER ONLY)
2. SAN DIEGO COUNTY REGIONAL STANDARDS COMMITTEE 1990 EDITION OF THE "WATCH" HANDBOOK, DOCUMENT NO. 769802, FILED JUNE 29, 1992.
3. 1990 STANDARD SPECIAL PROVISIONS STREET LIGHTING & TRAFFIC SIGNAL SYSTEMS OF THE CITY OF SAN DIEGO DOCUMENT NO. 769759, FILED FEBRUARY 5 1991.
4. CALIFORNIA DEPARTMENT OF TRANSPORTATION, "MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES," (1990 EDITION), DOCUMENT NO. 769744 FILED NOVEMBER 7, 1990
5. STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS (JULY 1992), DOCUMENT NO. 769806, FILED JULY 9, 1992.

STANDARD DRAWINGS:

1. CITY OF SAN DIEGO STANDARD DRAWINGS, DOCUMENT NO. 769796, FILED APRIL 23, 1992.
2. STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION STANDARD PLANS (JULY 1992), DOCUMENT NO. 769805, FILED JULY 9, 1992.

AS BUILT
Construct No. 21CT-552
Date 5-20-97

CITY OF SAN DIEGO, CALIFORNIA — I.O. 320707

AS-BUILT — M.M. — JMC

1851-6257
NAD 83
2140.1707

DE LEUW CATHER

DESIGNED BY	DATE
H.R.S.	1/31/94
DRAWN BY	
R.H.L.	1/31/94
CHECKED BY	
R.W.M.	11/17/94
MTDB PROJ. ENG.	
D. HIGHLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490

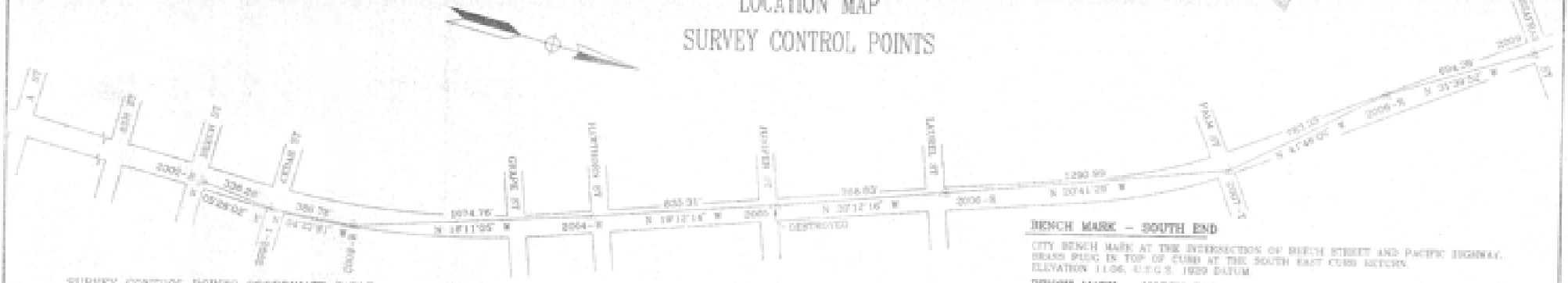
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
GENERAL DRAWING
SYMBOLS

SCALE: NONE
MTDB CONTRACT NO. LRT 552
DRAWING NO. | SHEET NO.
6.0 | 6

NO.	DATE	REVISIONS	BY	CHK	APPD
1	10/94	Conformed			

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

LOCATION MAP
SURVEY CONTROL POINTS



BENCH MARK – SOUTH END

CITY BENCH MARK AT THE INTERSECTION OF BEECH STREET AND PACIFIC HIGHWAY. BRASS PLUG IN TOP OF CURB AT THE SOUTH EAST CURB RETURN. ELEVATION 11.06, U.S.C.S. 1929 DATUM

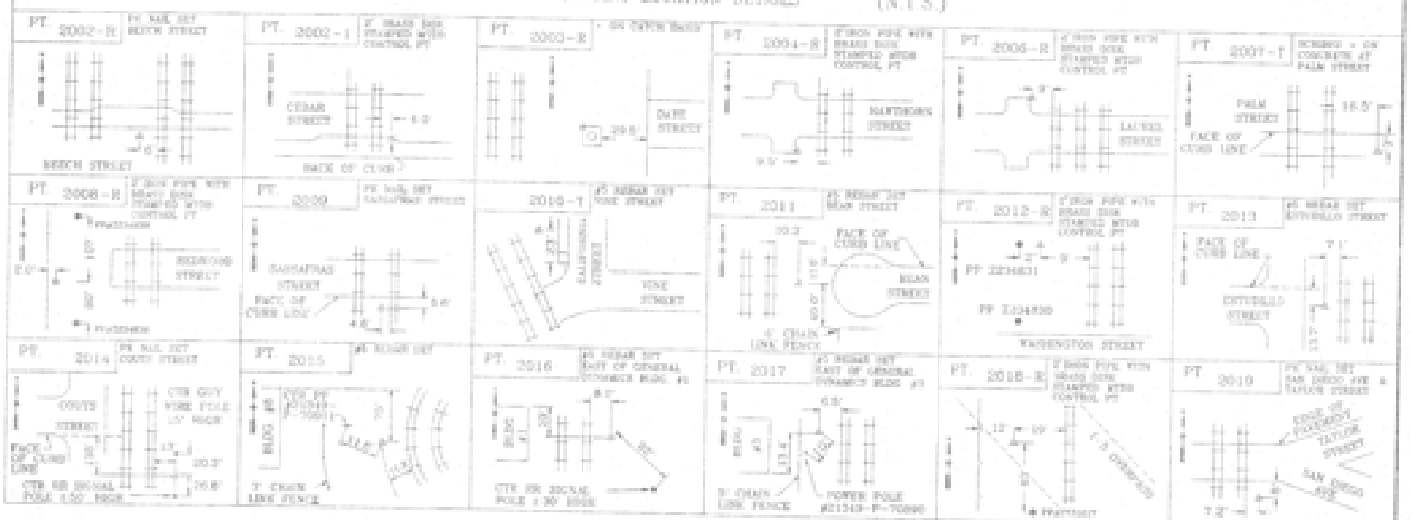
BENCH MARK – NORTH END

CITY BENCH MARK AT THE INTERSECTION OF ROSECRANS STREET AND PACIFIC HIGHWAY. BRASS PLUG IN TOP OF CURB AT THE NORTH EAST CURB RETURN. ELEVATION 10.97, U.S.C.S. 1929 DATUM.

SURVEY CONTROL POINTS COORDINATE TABLE
CALIFORNIA COORDINATE SYSTEM 1983, ZONE 6
CITY OF SAN DIEGO MEAN SEA LEVEL DATUM

POINT #	NORTHING	EASTING	ELEVATION	NOTE
2001	1843586.10	6278708.79	10.57	DESTROYED
2002-R	1842251.50	6278714.51	10.24	NEW POINT
2002-1	1843686.16	6278746.85	10.52	NEW POINT
2003-R	1844060.19	6278717.41	10.52	NEW POINT
2004	1845108.15	6278684.65	10.52	DESTROYED
2004-R	1845387.27	6278682.00	24.34	NEW POINT
2005	1845478.18	6278697.24	21.54	DESTROYED
2006	1846732.62	6277785.03	22.87	DESTROYED
2006-R	1846987.62	6277641.71	10.19	NEW POINT
2007	1847035.20	6277385.51	10.70	DESTROYED
2007-T	1847865.34	6277385.58	10.56	NEW POINT
2008	1848231.73	6277027.09	10.29	DESTROYED
2008-R	1848390.27	6276863.42	10.59	NEW POINT
2009	1849380.20	6276439.86	10.50	ORIGINAL POINT
2010-0	1849084.18	6276257.68	------	DESTROYED
2010	1849833.03	6276605.87	29.24	DESTROYED
2010-T	1849840.00	6276739.93	29.83	NEW POINT
2011	1850382.74	6276160.24	25.01	DISTURBED, NEW NAV
2012	1850870.67	6274124.62	22.53	DESTROYED
2012-R	1850883.79	6274215.35	24.65	NEW POINT
2013	1851351.70	6273211.67	19.88	DISTURBED, NEW NAV
2014	1852119.72	6272418.15	18.83	ORIGINAL POINT
2015-0	1852154.34	6272260.98	------	DESTROYED
2015	1852697.27	6271583.11	15.62	DISTURBED, NEW NAV
2016	1853451.47	6271002.31	6.51	DISTURBED, NEW NAV
2017	1854354.86	6270402.49	10.00	DISTURBED, NEW NAV
2018	1855214.43	6269887.97	11.45	DESTROYED
2018-R	1854838.93	6269942.10	9.08	NEW POINT
2019	1856078.43	6269854.90	11.73	DISTURBED, NEW NAV
2019-0	1856388.29	6269836.24	------	DESTROYED
2020	1856692.00	6269836.51	10.61	DESTROYED
2020-R	1856821.66	6269832.06	14.79	NEW POINT
2021	1857322.59	6269696.58	23.73	DESTROYED
E 132	1857362.89	6269687.25	24.25	USGS E 132

CONTROL POINT LOCATION DETAILS (N.T.S.)



NOTE

ORIGINAL CONTROL POINTS THAT HAVE BEEN DESTROYED DURING CONSTRUCTION HAVE BEEN REMOVED FROM THE DETAILS ABOVE, AND ARE SHOWN AS DESTROYED IN THE COORDINATE LIST TO THE LEFT.

AS BUILT
Contract No. LRT-992
Date 3-15-97

NO	DATE	REVISIONS	BY	CHK'D
4-M	Continued			

FRASER ENGINEERING, INC.

DRAWN BY: D. HOOPER	DATE: 5-27-93
CHECKED BY: J. BERGREEN	5-27-93
MTDB PROJ ENG: D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

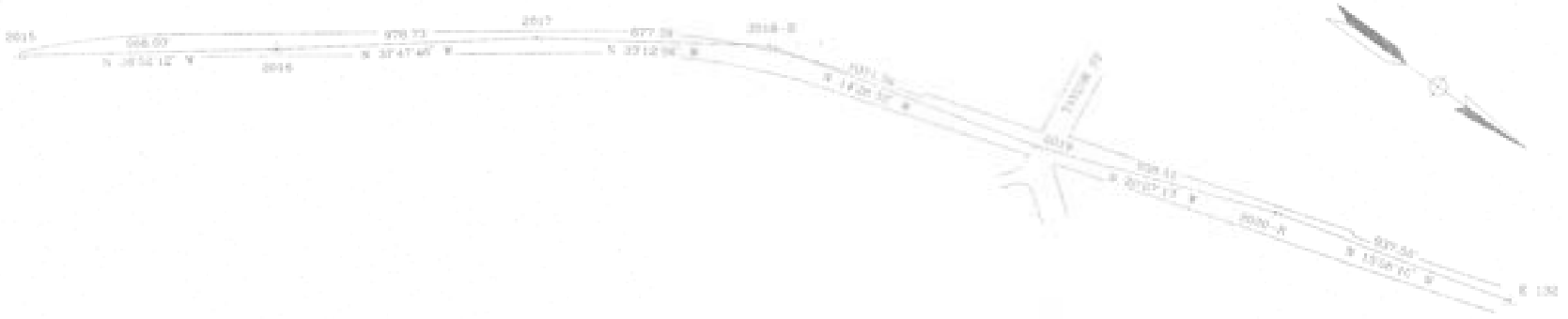
LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN LRT CONSTRUCTION
SURVEY CONTROL POINTS AND DATA
SHEET 1 OF 2

SCALE: N.T.S.
MTDB CONTRACT NO. LRT 95.2
DRAWING NUMBER C201
MTS DOC NO. PWL355422, WOA355-AE-75

SURVEY CONTROL POINTS

LOCATION MAP



AS BUILT
Contract No. LRT-552
Date 5-15-97

NO.	DATE	REVISIONS	BY	CHECKED
4-98		Coordinates		

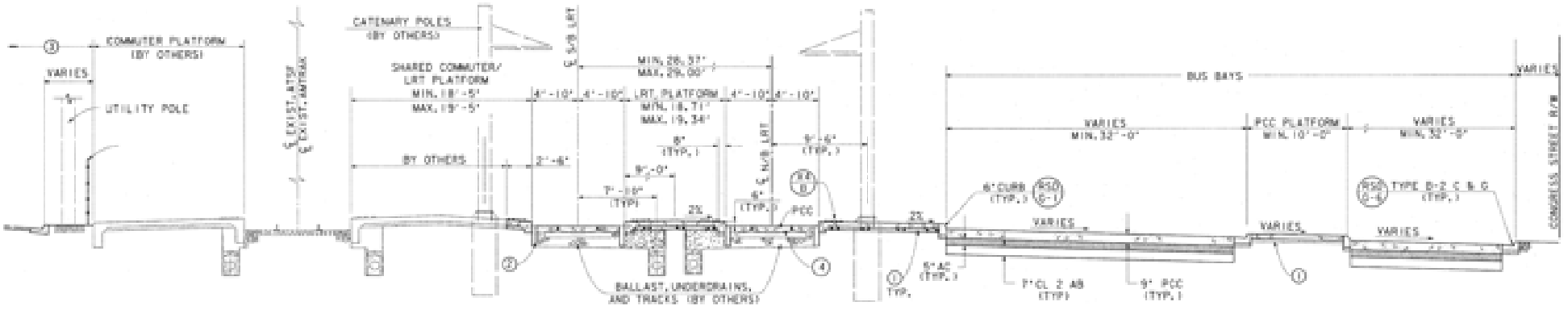
FRASER ENGINEERING, INC.

DESIGNED BY D. HOOPER 5-27-93
CHECKED BY J. HENDRICK 5-27-93
MTDB PRJ ENG. D. MACLAND

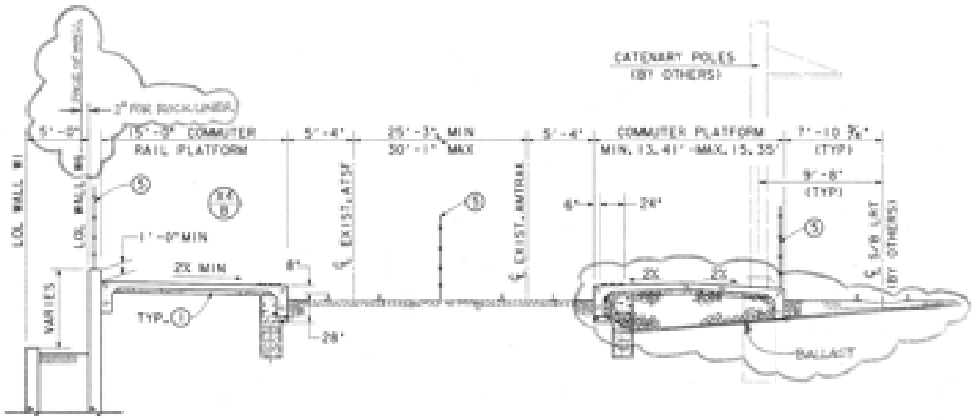
MTDB
Metropolitan Transit Development Board

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN LRT CONSTRUCTION
SURVEY CONTROL POINTS AND DATA
SHEET 2 OF 2

SCALE N.T.S.
MTDB CONTRACT NO. LRT - 5 2
DRAWING NO. / SHEET NO.
MTS DOC NO. PWL355422, WOA355-SD-75



TYPICAL LRT STATION PLATFORMS AND EASTERLY BUS BAYS
S/B STA. 177+36.93 TO S/B STA. 180+96.81
(LOOKING NORTH)



TYPICAL COMMUTER PLATFORMS
S/B STA. 174+10 TO S/B STA. 177+36.93
(LOOKING NORTH)

NOTES:

1. 4" OF AGGREGATE BASE CLASS 2 (TYP.)
2. FOR LOCATION OF TRENCH DRAINS SEE DWG. U7.
3. FOR PARKING LOT TYPICAL CROSS SECTIONS (WEST OF ATSF PLATFORM) SEE DWG. X-5.
4. FOR CONSTRUCTION DETAILS ON PLATFORM AREAS AND TRACK PAVING SEE DWG NO. HP-5 THRU HP-8.
5. FOR FENCING SEE DWGS. HP-1 THRU HP-4.
6. FOR RET. WALL PLAN SEE DWG. ST20
   FOR RET. WALL ELEVATIONS SEE DWG. ST22.

AS BUILT
Contract No.
Date

NO.	DATE	REVISIONS	BY	CHK	APPV
4	9/94	Coordinated			

DE LEUW CATHER

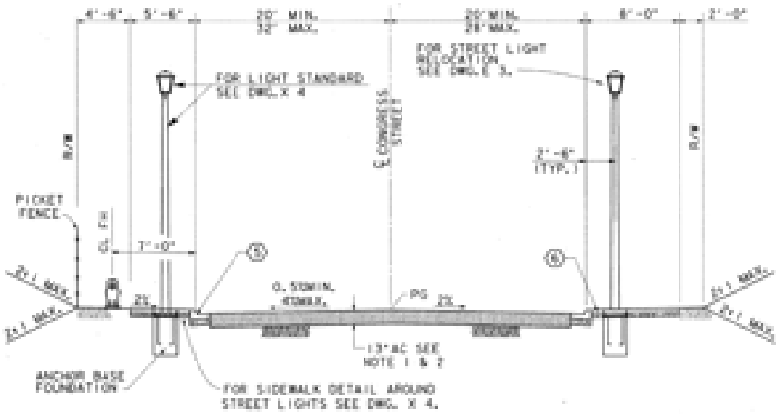
DESIGNED BY R. H. L.	DATE 5/08/94
DRAWN BY R. H. L.	5/08/94
CHECKED BY H. R. S.	11/18/94
PROJECT ENGINEER D. RAGLAND	

MTDB
Metropolitan Transit Development Board
(255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-7490)

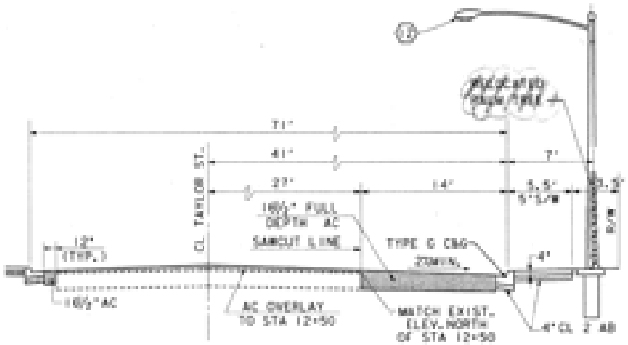
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
TYPICAL CROSS SECTIONS & DETAILS
PLATFORMS AND EASTERLY BUS BAYS

SCALE 1" = 5'
MTDB CONTRACT NO. LRT 552
DRAWING NO. X-1
SHEET NO. 9

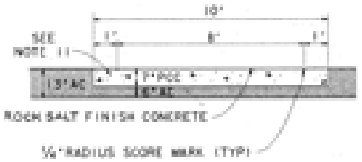
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES



CONGRESS STREET



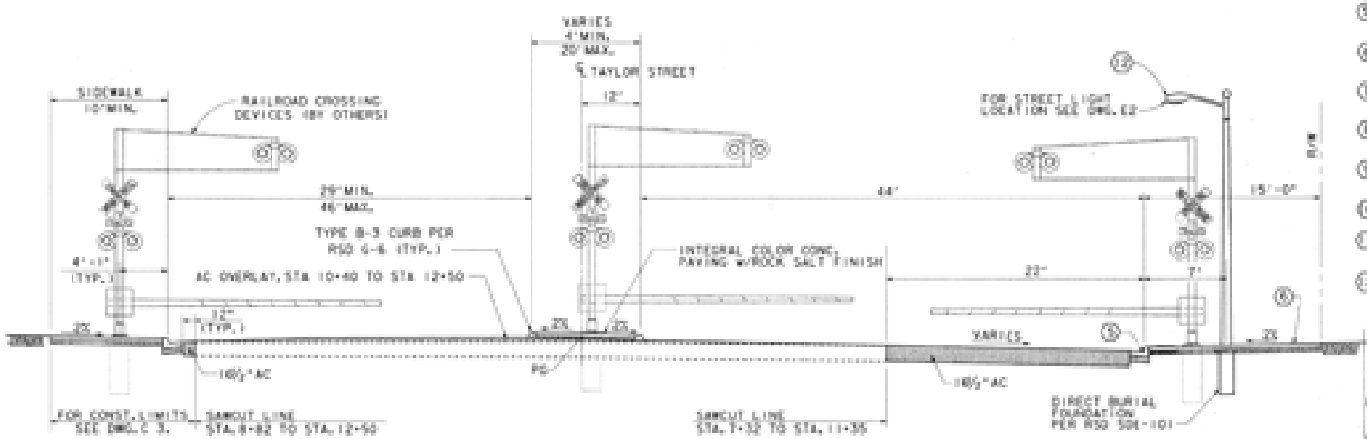
TAYLOR STREET
(CONGRESS TO JUAN ST.)



STRUCTURAL SECTION OF CROSSWALK

GENERAL NOTES:

1. PAVEMENT STRUCTURAL SECTION PER SCHEDULE J RSD SDG 113 , "R" VALUE OF 10.0 TO 19.9.
2. SEE DWG. C1, C2 AND C3 FOR LIMITS OF OVERLAY.
3. PROVIDE OVERLAY AS REQUIRED FOR SMOOTH TRANSITION WHERE PAVEMENT WIDENS.
4. FOR PEDESTRIAN RAMP MODIFIED RSD D-27 DETAIL SEE DWG. X 4
5. ALL CURB AND GUTTER SHALL BE TYPE G PER RSD D-2 w/ 4"CL 2 AB (TYP.)
6. ALL SIDEWALKS SHALL BE PER RSD D-7 w/ 4"CL 2 AB EXCEPT AT RR CROSSING - SEE DETAIL C ON DWG. X 5.
7. ALL CURB, GUTTER AND SIDEWALK REMOVAL SHALL BE PER RSD D-11.
8. FOR BOLLARD DETAILS & SCHEDULE SEE DWG X 3.
9. FOR LOCATION OF ST LIGHTS, SEE ELECTRICAL DWGS.
10. FOR UTILITY LOCATIONS, SEE UTILTIY PLANS
11. INTEGRAL COLOR CONCRETE WITH ROCK SALT FINISH , SEE SPECIFICATIONS.
12. STREET LIGHTS PER RSD = SDE-101.



TAYLOR STREET
(PACIFIC HWY. TO CONGRESS ST.)

AS BUILT
Contract No.
Date

STREET NAME	STREET CLASSIFICATION	ADT
CONGRESS STREET	TWO LANE - COLLECTOR	6800
TAYLOR STREET	FIVE LANE - ARTERIAL	24100

CITY OF SAN DIEGO, CALIFORNIA
Approved
Date
Drawing No. 920707
1854-6267
NAD 83
216-1767
Scale: 1" = 5'

NO.	DATE	REVISIONS	BY	CHK	APPR
	4-96	CONFORMED			

DE LEUW CATHER

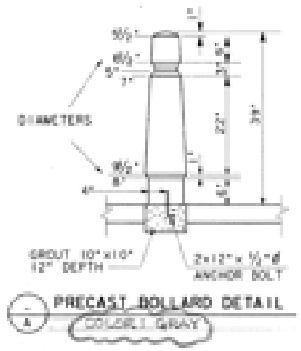
DESIGNED BY R.H.L. 3/4/94
DRAWN BY R.H.L. 3/4/94
CHECKED BY H.K.S. 11/7/94
MTDB PROJ. ENG. D. RAGLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-3490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
TYPICAL CROSS SECTIONS & DETAILS STREETS

MTDB CONTRACT NO. LRT 552
DRAWING NO. X 2
SHEET NO. 10

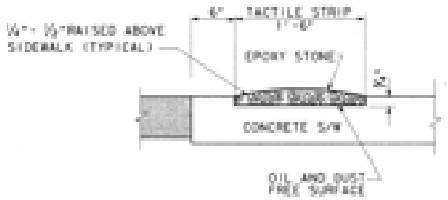
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES



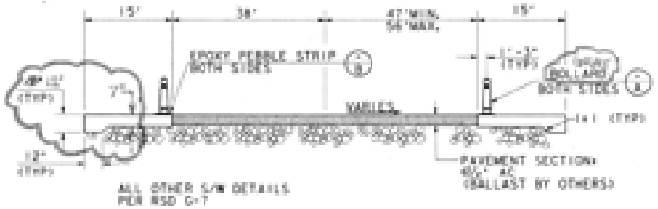
PRECAST BOLLARD DETAIL
COLOR: GRAY

PRECAST BOLLARD SCHEDULE	
STATION	LOCATION
10+59	RT. SIDE
10+67	RT. SIDE
10+86	RT. SIDE
10+95	RT. SIDE
10+41	LT. SIDE
10+50	LT. SIDE
10+70	LT. SIDE
10+78	LT. SIDE

NOTE: STATIONS SHOWN ARE FOR TAYLOR STREET

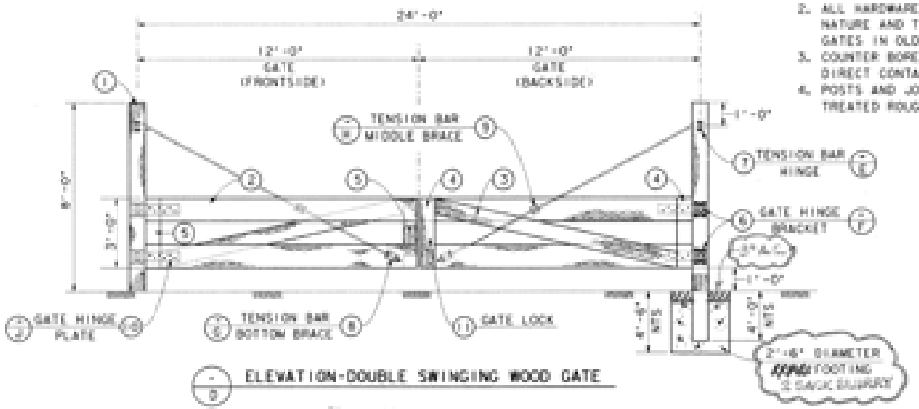


EPOXY PEBBLE STRIP

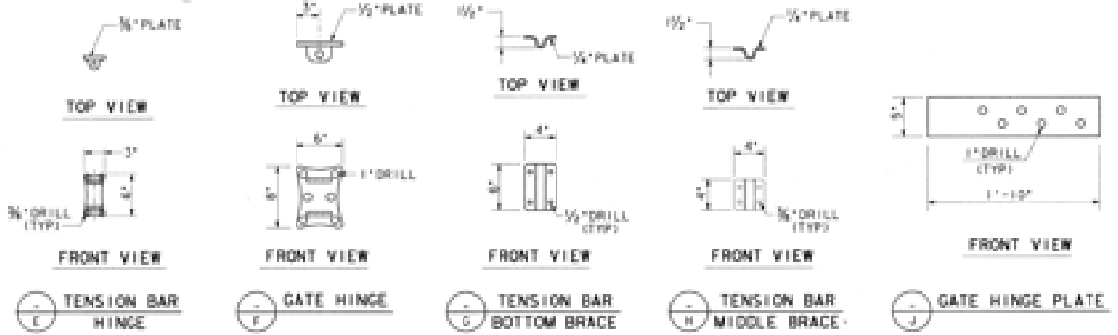


TAYLOR STREET AT TRACKS

NOTE:
1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ENGINEER'S APPROVAL.
2. ALL HARDWARE TO BE OF DECORATIVE NATURE AND TO MATCH SIMILAR WOOD GATES IN OLD TOWN AREA.
3. COUNTER BORE ALL NUTS AND BOLTS IN DIRECT CONTACT WITH JOISTS.
4. POSTS AND JOISTS SHALL BE PRESSURE TREATED ROUGH SAWN DOUGLAS FIR LARCH NO. 1



ELEVATION-DOUBLE SWINGING WOOD GATE



TENSION BAR HINGE | GATE HINGE | TENSION BAR BOTTOM BRACE | TENSION BAR MIDDLE BRACE | GATE HINGE PLATE

GATE-MATERIALS LIST		
NO.	DESCRIPTION	REQ'D.
1	8" x 8" x 12'-0" POST	2
2	2" x 12" x 11'-7½" JOIST	4
3	2" x 8" x 10'-9" JOISTS	2
4	2" x 8" x 3'-0" JOIST	4
5	2" x 8" x 1'-3" JOIST	4
6	POST MOUNTED GATE HINGE BRACKET w/ BOLTS & NUTS	4
7	POST MOUNTED TENSION BAR BRACKET w/ BOLTS & NUTS	2
8	TENSION BAR BOTTOM BRACE w/ BOLTS & NUTS	2
9	TENSION BAR MIDDLE BRACE w/ BOLTS & NUTS	2
10	GATE HINGE PLATE w/ BOLTS & NUTS	4
11	GATE LOCK w/ BOLTS & NUTS	1

AS BUILT
Contract No. LRT-552
Date 5-20-97

CITY OF SAN DIEGO, CALIFORNIA — I.O. 920707
1854-6261
NAD 83
214-1707
2487-8 -D

NO.	DATE	REVISIONS	BY	CHK	APPD
		Contract			

DE LEUW CATHER

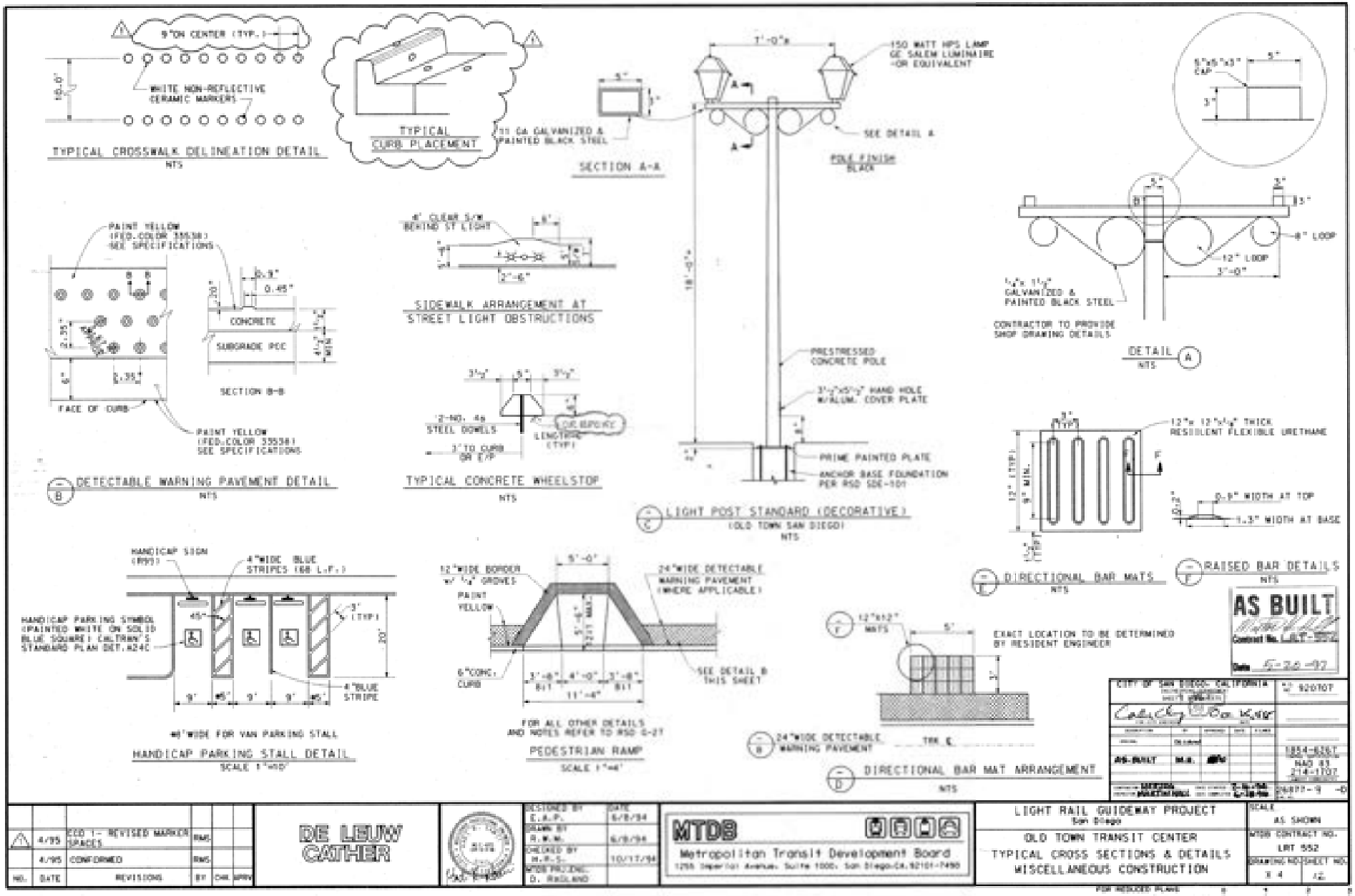
DESIGNED BY R.M.L. — DATE 6/30/94
DRAWN BY R.M.L. — 6/30/94
CHECKED BY H.R.S. — 11/30/94
MTDB PROJ. ENG. D. ENGLAND

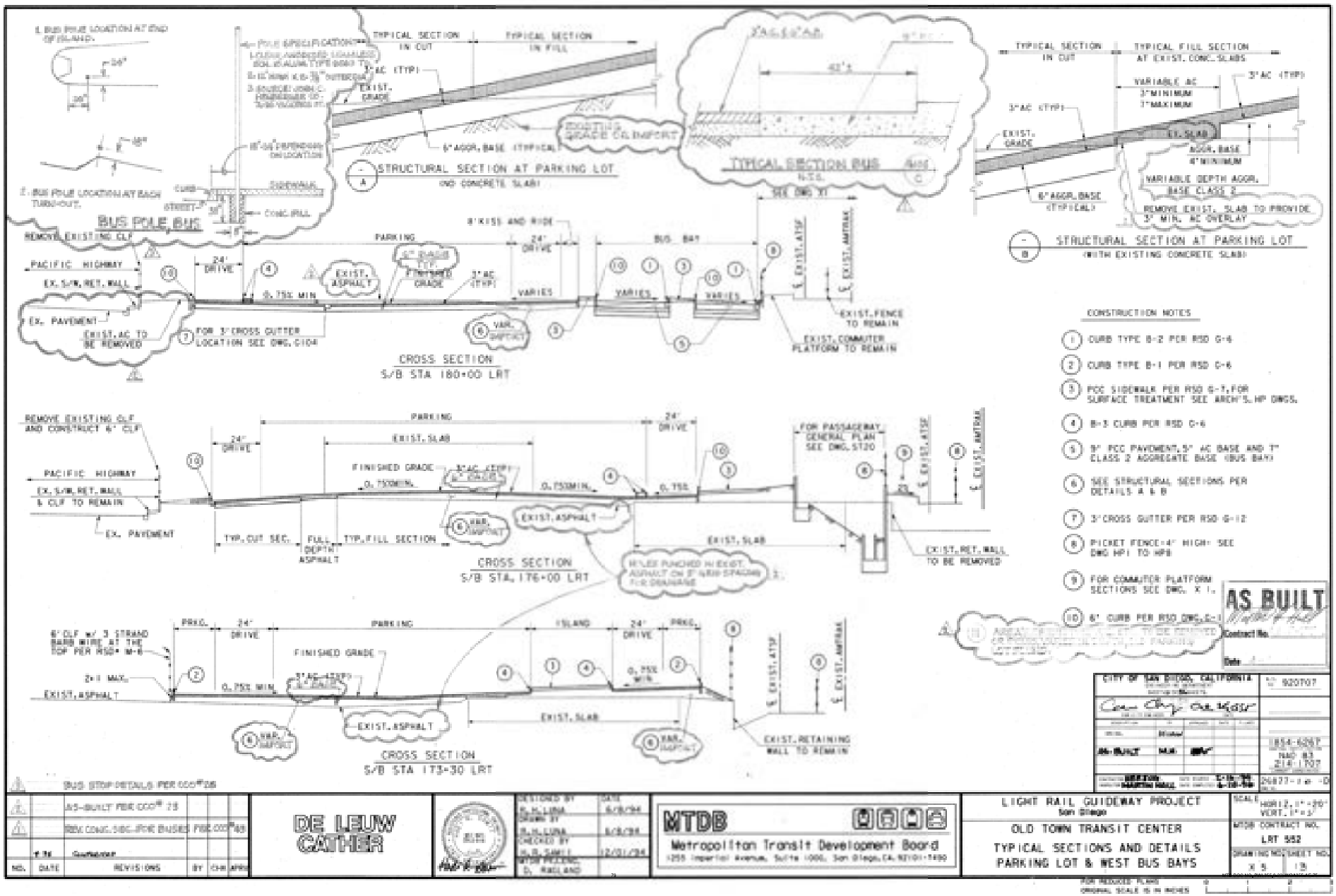
MTDB
Metropolitan Transit Development Board
(255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490)

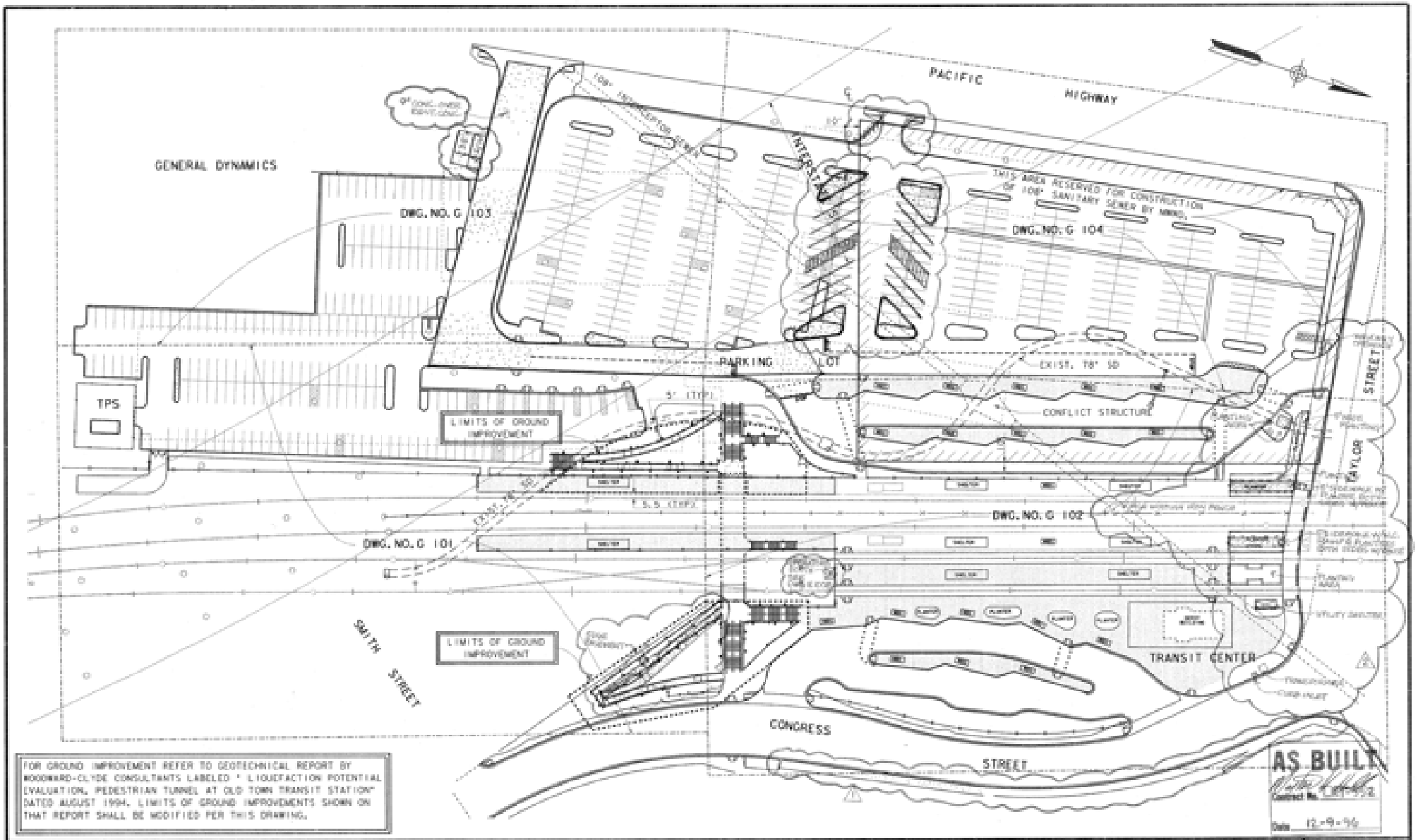
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
TYPICAL CROSS SECTIONS & DETAILS
TAYLOR STREET & MISC. DETAILS

SCALE 1"=5' U.N.O.
MTDB CONTRACT NO. LRT 552
DRAWING NO. X 3
SHEET NO. 11

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES


9"ON CENTER (TYP.)
10'-0"
WHITE NON-REFLECTIVE CERAMIC MARKERS
TYPICAL CROSSWALK DELINEATION DETAIL
NTS
TYPICAL CURB PLACEMENT
PAINT YELLOW (FED.COLOR 33538) SEE SPECIFICATIONS
0.45"
CONCRETE
SUBGRADE PCC
SECTION B-B
FACE OF CURB
PAINT YELLOW (FED.COLOR 33538) SEE SPECIFICATIONS
DETECTABLE WARNING PAVEMENT DETAIL
NTS
4" CLEAR S/W BEHIND ST LIGHT
2'-6"
SIDEWALK ARRANGEMENT AT STREET LIGHT OBSTRUCTIONS
2-NO. 4s STEEL DOWELS
3' TO CURB OR E/P
CAR BUMPER
LENGTHS (TYP.)
TYPICAL CONCRETE WHEELSTOP
NTS
5"
11 GA. GALVANIZED & PAINTED BLACK STEEL
SECTION A-A
7'-0"±
150 WATT HPS LAMP GE SALEM LUMINAIRE -OR EQUIVALENT
SEE DETAIL A
POLE FINISH BLACK
18'-0"
PRESTRESSED CONCRETE POLE
3½"x5½" HAND HOLE W/ALUM. COVER PLATE
PRIME PAINTED PLATE
ANCHOR BASE FOUNDATION PER RSD SDE-101
LIGHT POST STANDARD (DECORATIVE)
(OLD TOWN SAN DIEGO)
NTS
5"x5"x3" CAP
3"
8" LOOP
12" LOOP
3'-0"
1½"x 1½" GALVANIZED & PAINTED BLACK STEEL
CONTRACTOR TO PROVIDE SHOP DRAWING DETAILS
DETAIL A
NTS
12"± 12"±½" THICK RESILIENT FLEXIBLE URETHANE
12" (TYP.)
9" MIN.
0'-9" WIDTH AT TOP
1'-3" WIDTH AT BASE
DIRECTIONAL BAR MATS
NTS
RAISED BAR DETAILS
NTS
HANDICAP SIGN (R99)
4"WIDE BLUE STRIPES (66 L.F.)
HANDICAP PARKING SYMBOL (PAINTED WHITE ON SOLID BLUE SQUARE) CALTRANS STANDARD PLAN DET. A24C
45°
3' (TYP.)
20'
9'
8'
4"BLUE STRIPE
8'WIDE FOR VAN PARKING STALL
HANDICAP PARKING STALL DETAIL
SCALE 1"=10'
12"WIDE BORDER w/ ½" GROVES
PAINT YELLOW
5'-0"
24"WIDE DETECTABLE WARNING PAVEMENT (WHERE APPLICABLE)
5'-6" MIN.
2'-1"
6"CONC. CURB
3'-8" R=1'
4'-0"
3'-8" R=1'
11'-4"
SEE DETAIL B THIS SHEET
FOR ALL OTHER DETAILS AND NOTES REFER TO RSD G-27
PEDESTRIAN RAMP
SCALE 1"=4'
12"x12" MATS
5'
EXACT LOCATION TO BE DETERMINED BY RESIDENT ENGINEER
24"WIDE DETECTABLE WARNING PAVEMENT
TRK. C
DIRECTIONAL BAR MAT ARRANGEMENT
NTS
AS BUILT
Contract No. LRT-552
Date 5-26-97
CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT
M.R.
1854-6267
NAD 83
214-1707
24877-9
-0
4/95 ECO 1 - REVISED MARKER SPACES RMS
4/95 CONFORMED RMS
NO. DATE REVISIONS BY CHK APPV
DE LEUW CATHER
DESIGNED BY E.A.P. 6/8/94
DRAWN BY R.M.M. 6/8/94
CHECKED BY M.R.S. 10/17/94
MTDB PROJECT MGR. D. RADLAND
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
TYPICAL CROSS SECTIONS & DETAILS
MISCELLANEOUS CONSTRUCTION
SCALE AS SHOWN
MTDB CONTRACT NO. LRT 552
DRAWING NO. SHEET NO. 84 42
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES
0 1 2 3
MTS DOC NO. PWL355.A42, WOA355-AE-79


BUS POLE BASE
REMOVE EXISTING CLF
PACIFIC HIGHWAY
EX. S/W, RET. WALL
EX. PAVEMENT
EXIST. AC TO BE REMOVED
24' DRIVE
PARKING
8' KISS AND RIDE
BUS BAY
EXIST. ASPHALT
3" AC (TYP)
VARIES
EXIST. FENCE TO REMAIN
EXIST. COMMUTER PLATFORM TO REMAIN
CROSS SECTION S/B STA 180+00 LRT
STRUCTURAL SECTION AT PARKING LOT (NO CONCRETE SLAB)
STRUCTURAL SECTION AT PARKING LOT (WITH EXISTING CONCRETE SLABS)
TYPICAL SECTION IN CUT
TYPICAL SECTION IN FILL
TYPICAL FILL SECTION AT EXIST. CONC. SLABS
VARIABLE AC 3" MINIMUM 7" MAXIMUM
EX. SLAB
AGGR. BASE 6" MINIMUM
VARIABLE DEPTH AGGR. BASE CLASS 2
REMOVE EXIST. SLAB TO PROVIDE 3" MIN. AC OVERLAY
6" AGGR. BASE (TYPICAL)
REMOVE EXISTING CLF AND CONSTRUCT 6' CLF
FINISHED GRADE
EXIST. SLAB
FOR PASSAGEWAY GENERAL PLAN SEE DWG. ST20
TYP. CUT SEC.
FULL DEPTH ASPHALT
TYP. FILL SECTION
EXIST. RET. WALL TO BE REMOVED
CROSS SECTION S/B STA. 176+00 LRT
6' CLF w/ 3 STRAND BARB WIRE AT THE TOP PER RSD M-6
PRKG.
ISLAND
2:1 MAX.
EXIST. RETAINING WALL TO REMAIN
CROSS SECTION S/B STA 173+30 LRT
CONSTRUCTION NOTES
1 CURB TYPE B-2 PER RSD G-6
2 CURB TYPE B-1 PER RSD G-6
3 PCC SIDEWALK PER RSD G-7, FOR SURFACE TREATMENT SEE ARCH'L. HP DWGS.
4 B-3 CURB PER RSD G-6
5 9" PCC PAVEMENT, 5" AC BASE AND 7" CLASS 2 AGGREGATE BASE (BUS BAY)
6 SEE STRUCTURAL SECTIONS PER DETAILS A & B
7 3' CROSS GUTTER PER RSD G-12
8 PICKET FENCE-4' HIGH SEE DWG HP1 TO HP8
9 FOR COMMUTER PLATFORM SECTIONS SEE DWG. X 1.
10 6" CURB PER RSD DWG. G-1
AS BUILT
Contract No.
Date
BUS STOP DETAILS PER CCO# 28
AS-BUILT PER CCO# 25
REV. CONC. SIDEWALK PER BASES PER CCO# 83
DE LEUW CATHER
DESIGNED BY R. H. LUNA 6/8/94
DRAWN BY R. H. LUNA 6/8/94
CHECKED BY D. D. SAHLI 12/01/94
PROJECT ENGR. D. RADLAND
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
TYPICAL SECTIONS AND DETAILS PARKING LOT & WEST BUS BAYS
SCALE HORIZ. 1" = 20' VERT. 1" = 5'
MTDB CONTRACT NO. LRT 552
DRAWING NO. X 5
SHEET NO. 15
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES



FOR GROUND IMPROVEMENT REFER TO GEOTECHNICAL REPORT BY WOODWARD-CLYDE CONSULTANTS LABELED " LIQUEFACTION POTENTIAL EVALUATION, PEDESTRIAN TUNNEL AT OLD TOWN TRANSIT STATION" DATED AUGUST 1994. LIMITS OF GROUND IMPROVEMENTS SHOWN ON THAT REPORT SHALL BE MODIFIED PER THIS DRAWING.

NO.	DATE	REVISIONS	BY	CHK	APVD
1	4-96	CONSTRUCTION REVISIONS			
2		SIDEWALK SOUTH OF CONGRESS			

DE LEUW CATHER

DESIGNED BY R.M.S.	DATE 1/15/94
DRAWN BY P.H.L.	1/15/94
CHECKED BY R.M.S.	1/6/95
MTDB PROJ. ENG. D. RAGLAND	

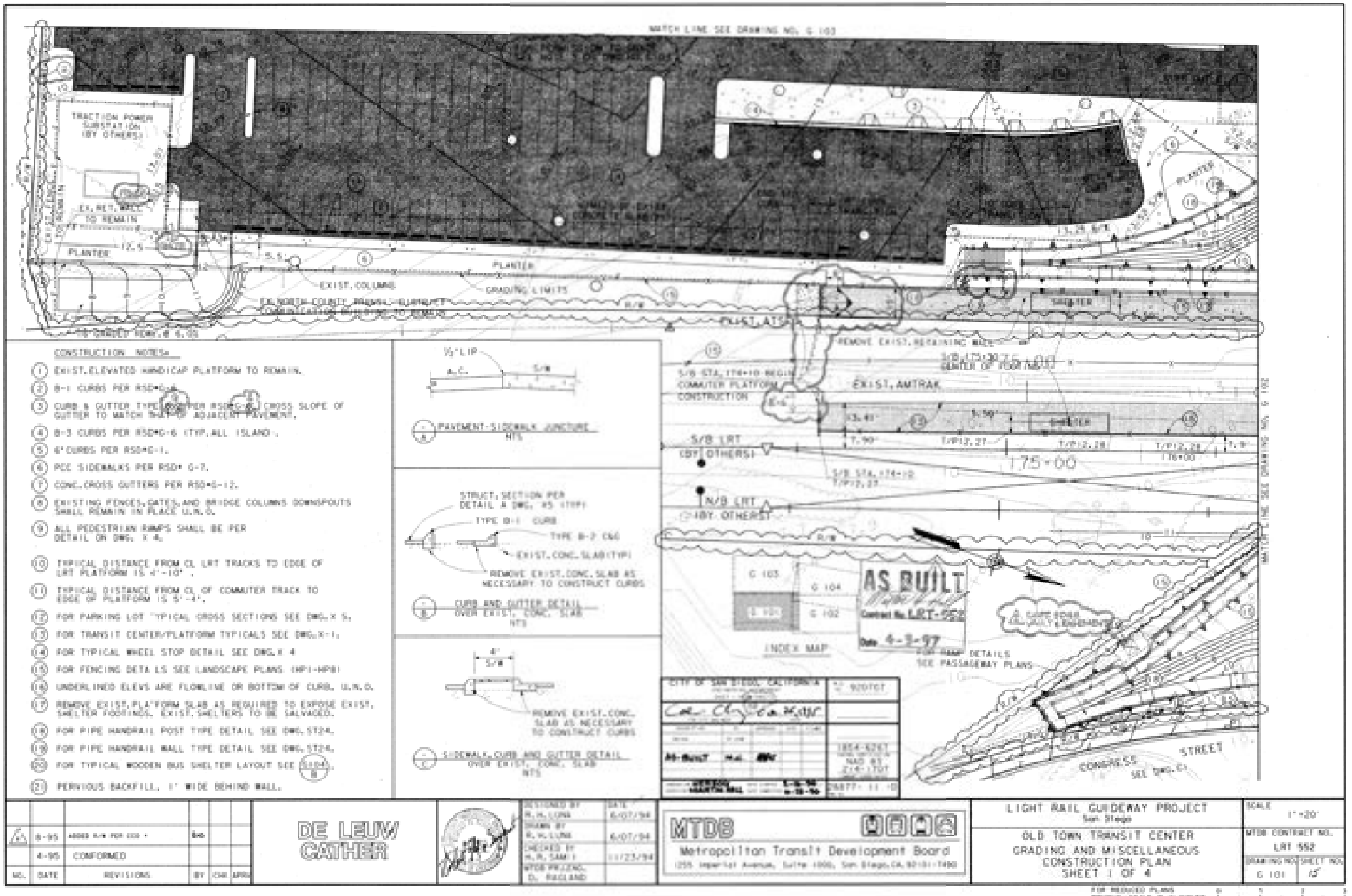
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
SITE PLAN
TRANSIT CENTER-PARKING LOT

SCALE	1"=40'
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	SHEET NO.
G 100	14

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

MTS DOC NO. PWL355022.WOA355-AE-75



CONSTRUCTION NOTES:

1. EXIST. ELEVATED HANDICAP PLATFORM TO REMAIN.
2. B-1 CURBS PER RSD-G-6.
3. CURB & GUTTER TYPE B-2 PER RSD-G-6. CROSS SLOPE OF GUTTER TO MATCH THAT OF ADJACENT PAVEMENT.
4. B-3 CURBS PER RSD-G-6 (TYP. ALL ISLAND).
5. 6" CURBS PER RSD-G-1.
6. PCC SIDEWALKS PER RSD- G-7.
7. CONC. CROSS GUTTERS PER RSD-G-12.
8. EXISTING FENCES, GATES, AND BRIDGE COLUMNS DOWNSPOUTS SHALL REMAIN IN PLACE U.N.O.
9. ALL PEDESTRIAN RAMPS SHALL BE PER DETAIL ON DWG. X 4.
10. TYPICAL DISTANCE FROM CL LRT TRACKS TO EDGE OF LRT PLATFORM IS 4'-10".
11. TYPICAL DISTANCE FROM CL OF COMMUTER TRACK TO EDGE OF PLATFORM IS 5'-4".
12. FOR PARKING LOT TYPICAL CROSS SECTIONS SEE DWG. X 5.
13. FOR TRANSIT CENTER/PLATFORM TYPICALS SEE DWG. X-1.
14. FOR TYPICAL WHEEL STOP DETAIL SEE DWG. X 4
15. FOR FENCING DETAILS SEE LANDSCAPE PLANS (HP1-HP8)
16. UNDERLINED ELEVS ARE FLOWLINE OR BOTTOM OF CURB, U.N.O.
17. REMOVE EXIST. PLATFORM SLAB AS REQUIRED TO EXPOSE EXIST. SHELTER FOOTINGS. EXIST. SHELTERS TO BE SALVAGED.
18. FOR PIPE HANDRAIL POST TYPE DETAIL SEE DWG. ST24.
19. FOR PIPE HANDRAIL WALL TYPE DETAIL SEE DWG. ST24.
20. FOR TYPICAL WOODEN BUS SHELTER LAYOUT SEE (S-6A) B
21. PERVIOUS BACKFILL, 1' WIDE BEHIND WALL.

NO.	DATE	REVISIONS	BY	CHK	APPR
3	8-95	ADDED R/W PER CCO 1	BAD		
2	4-95	CONFORMED			

DE LEUW CATHER

DESIGNED BY H. H. LUNA	DATE 6/07/94
DRAWN BY R. H. LUNA	6/07/94
CHECKED BY H. H. SAMI	11/23/94
MTDB PROJ. ENG. D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

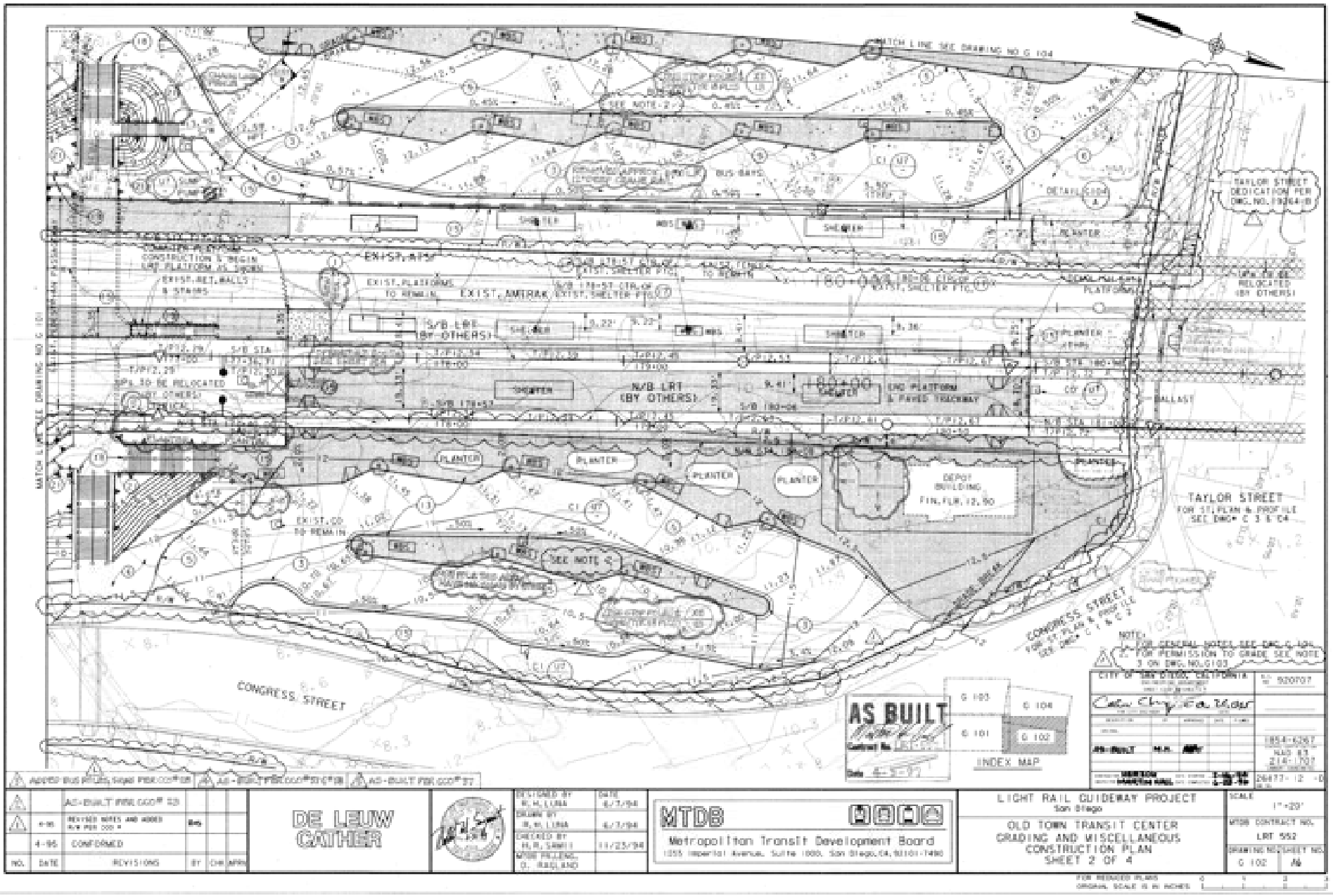
LIGHT RAIL GUIDEWAY PROJECT
San Diego

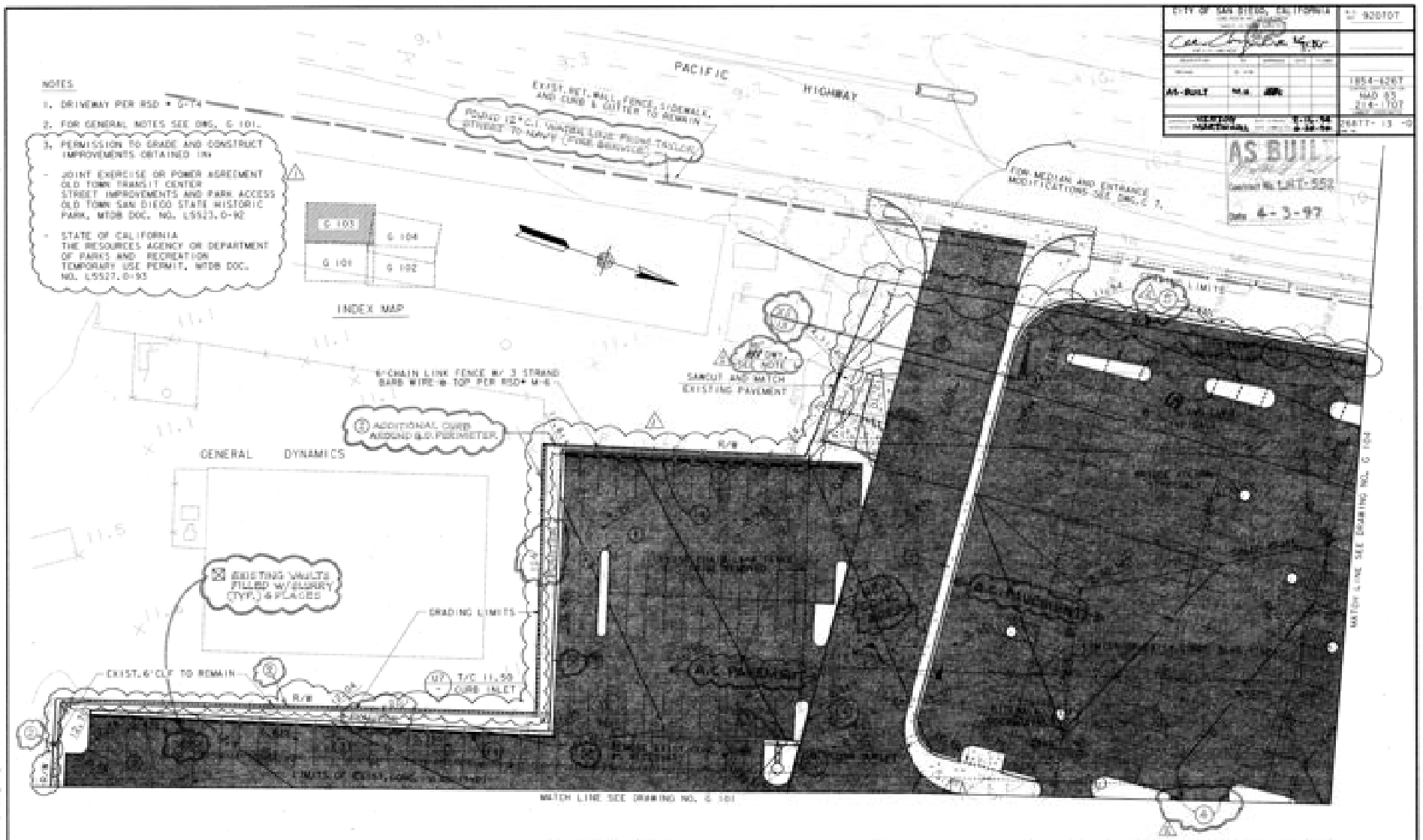
OLD TOWN TRANSIT CENTER
GRADING AND MISCELLANEOUS CONSTRUCTION PLAN
SHEET 1 OF 4

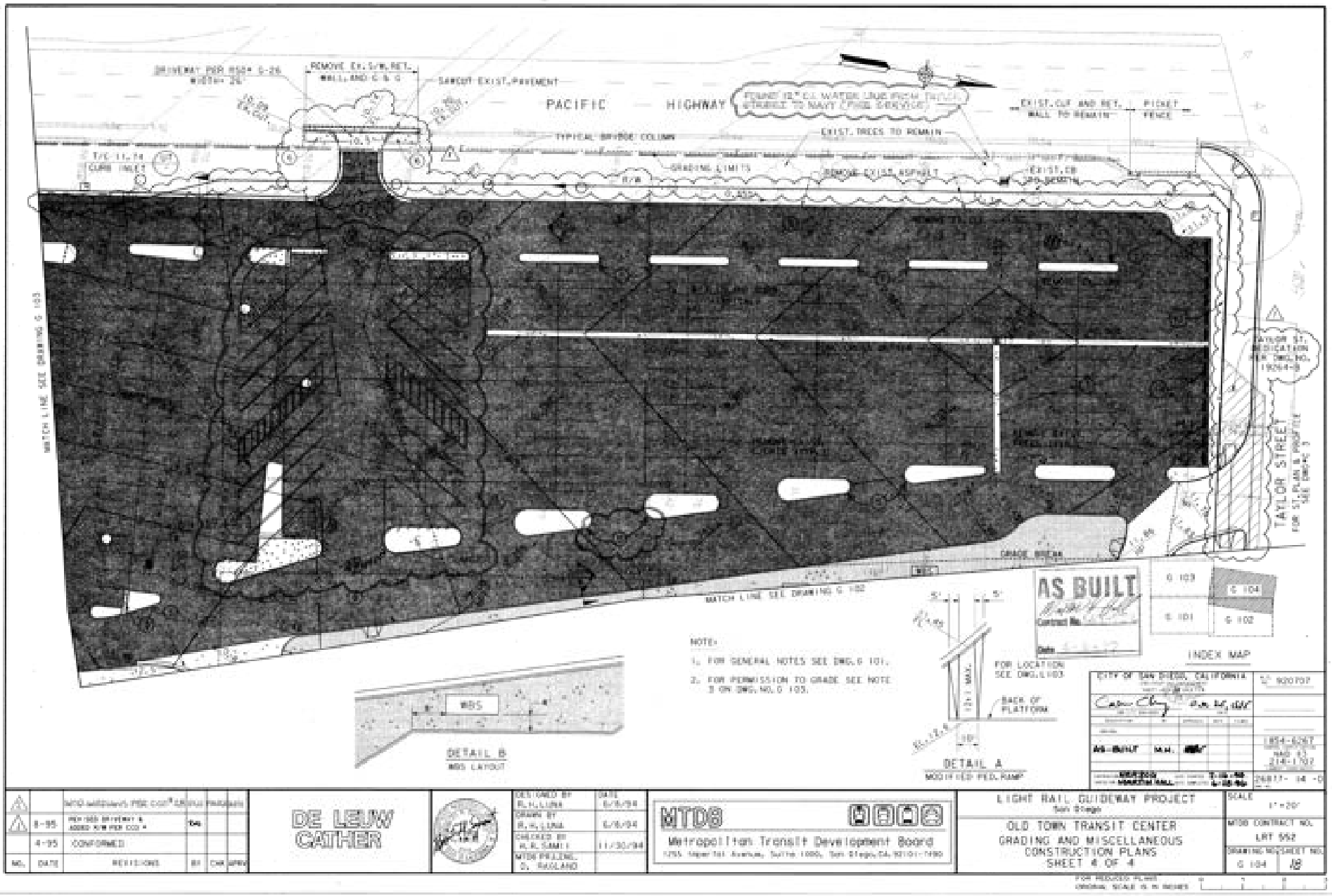
SCALE	1"=20'
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	G 101
SHEET NO.	15

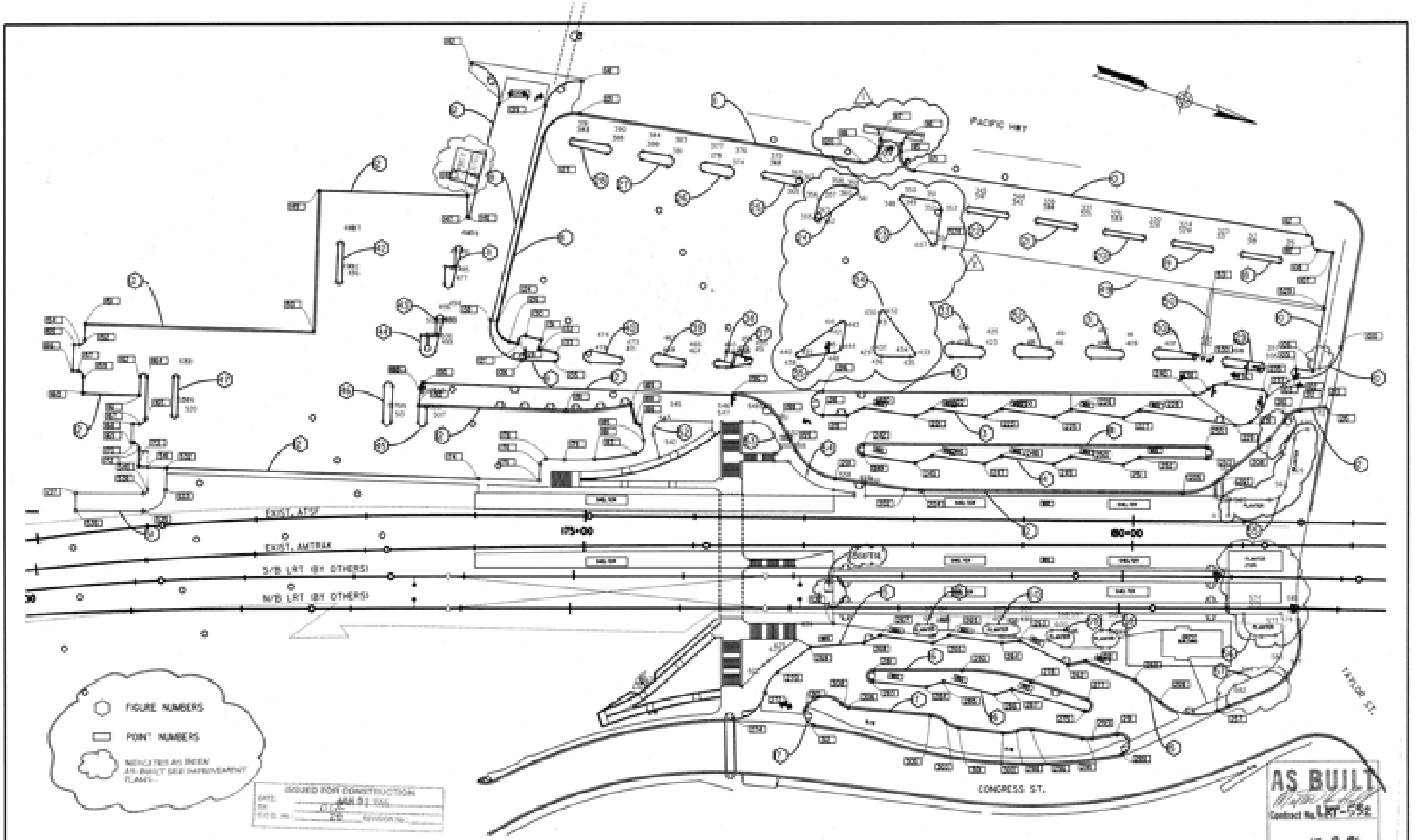
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

MTS DOC NO. PWL355\A22, WOA355-AE-76


MATCH LINE SEE DRAWING NO G 104
MATCH LINE SEE DRAWING NO G 101
TAYLOR STREET DEDICATION PER ORD. NO. 19264 (N)
TAYLOR STREET
FOR ST. PLAN & PROFILE SEE DWG. C 3.5 C4
CONGRESS STREET
FOR ST. PLAN & PROFILE SEE DWG. C 1 & C 2
DEPOT BUILDING FIN. FLR. 12.90
N/B LRT (BY OTHERS)
S/B LRT (BY OTHERS)
EXIST. AMTRAK
EXIST. PLATFORM TO REMAIN
EXIST. RET. WALLS & STAIRS
EXIST. CO TO REMAIN
RELOCATED (BY OTHERS)
BUS BAYS
SHELTER
PLANTER
BALLAST
SEE NOTE 2
SEE NOTE 5
AS BUILT
INDEX MAP
G 103
G 104
G 101
G 102
NOTES:
1. FOR GENERAL NOTES SEE DWG. G 101
2. FOR PERMISSION TO GRADE SEE NOTE 3 ON DWG. NO. G 103
AS-BUILT
CITY OF SAN DIEGO, CALIFORNIA
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
GRADING AND MISCELLANEOUS CONSTRUCTION PLAN
SHEET 2 OF 4
DRAWING NO. G 102
SHEET NO. 46
MTDB CONTRACT NO. LRT 552
SCALE 1"=20'
AS-BUILT PER CCO# 53
REVISED NOTES AND ADDED R/W PER CCO #
CONFORMED
REVISIONS
DESIGNED BY R. H. LUNA
DRAWN BY R. H. LUNA
CHECKED BY H. R. SAMII
MTDB PROJECT O. RAILAND
DATE 6/7/94
6/7/94
11/23/94


NOTES
1. DRIVEWAY PER RSD • G-14
2. FOR GENERAL NOTES SEE DWG. G 101.
3. PERMISSION TO GRADE AND CONSTRUCT IMPROVEMENTS OBTAINED IN:
- JOINT EXERCISE OF POWER AGREEMENT OLD TOWN TRANSIT CENTER STREET IMPROVEMENTS AND PARK ACCESS OLD TOWN SAN DIEGO STATE HISTORIC PARK, MTDB DOC. NO. L5523.0-92
- STATE OF CALIFORNIA THE RESOURCES AGENCY OR DEPARTMENT OF PARKS AND RECREATION TEMPORARY USE PERMIT, MTDB DOC. NO. L5527.0-93
INDEX MAP
G 103
G 104
G 101
G 102
PACIFIC HIGHWAY
EXIST. RET. WALL, FENCE, SIDEWALK, AND CURB & GUTTER TO REMAIN
ROUND 12"C.I. WATER LINE FROM TAYLOR STREET TO HAWK (FIRE SERVICE)
FOR MEDIAN AND ENTRANCE MODIFICATIONS SEE DWG. C 7.
AS BUILT
Contract No. LRT-552
Date 4-3-97
6'-CHAIN LINK FENCE W/ 3 STRAND BARB WIRE @ TOP PER RSD• M-6
SAWCUT AND MATCH EXISTING PAVEMENT
ADDITIONAL CURB ALONG G.D. PERIMETER
GENERAL DYNAMICS
EXISTING VAULTS FILLED W/SLURRY (TYP.) 6 PLACES
GRADING LIMITS
EXIST. 6' CLF TO REMAIN
T/C 11.59 CURB INLET
R/W
A.C. PAVEMENT
MATCH LINE SEE DRAWING NO. G 104
MATCH LINE SEE DRAWING NO. G 101
LIMITS OF EXIST. LAND SLOPE
CITY OF SAN DIEGO, CALIFORNIA
1854-6287
NAD 83
2149-1107
PER CCO # 28
REVISED NOTES AND ADDED R/W PER CCO •
4-95 CONFORMED
NO. DATE REVISIONS BY CHK APPR
DE LEUW CATHER
DESIGNED BY R. H. LUNA 6/7/94
DRAWN BY R. H. LUNA 6/7/94
CHECKED BY W. B. SAWAII 11/30/94
MTDB PROJ. MGR. G. RAGLAND
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-1490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
GRADING AND MISCELLANEOUS CONSTRUCTION PLANS
SHEET 3 OF 4
SCALE 1" = 20'
MTDB CONTRACT NO. LRT 552
DRAWING NO. G 103
SHEET NO. 17
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES
0 1 2 3
MTS DOC NO. PWL355.0422, WOA355-AE-76


PACIFIC HIGHWAY
REMOVE Ex. S/W, RET. WALL AND C & G
SAWCUT EXIST. PAVEMENT
DRIVEWAY PER SDG-E G-26
TYPICAL BRIDGE COLUMN
EXIST. TREES TO REMAIN
EXIST. C/L AND RET. WALL TO REMAIN
PICKET FENCE
GRADING LIMITS
REMOVE EXIST. ASPHALT
EXIST. CB
T/C 11.74 CURB INLET
MATCH LINE SEE DRAWING G 103
MATCH LINE SEE DRAWING G 102
GRADE BREAK
TAYLOR STREET
TAYLOR ST. DEDICATION PER DWG. NO. 19264-B
FOR ST. PLAN & PROFILE SEE DWG. NO. 7
AS BUILT
Contract No.
Date
INDEX MAP
G 103
G 104
G 101
G 102
NOTE:
1. FOR GENERAL NOTES SEE DWG. G 101.
2. FOR PERMISSION TO GRADE SEE NOTE 3 ON DWG. NO. G 103.
MBS
DETAIL B
MBS LAYOUT
FOR LOCATION SEE DWG. G 103
BACK OF PLATFORM
DETAIL A
MODIFIED PED. RAMP
CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT
1854-6267
NAD 83
214-1707
26817-14-D
NO. DATE REVISIONS BY CHK APPV
8-95 REVISED DRIVEWAY & ADDED A/W PER CCO 4 DAL
4-95 CONFORMED
DE LEUW CATHER
DESIGNED BY R.H. LUNA 5/15/94
DRAWN BY R.H. LUNA 5/15/94
CHECKED BY H.R. SAMII 11/30/94
MTDB PROJ. ENG. D. RAVALAND
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
GRADING AND MISCELLANEOUS CONSTRUCTION PLANS
SHEET 4 OF 4
SCALE 1"=20'
MTDB CONTRACT NO. LRT 552
DRAWING NO/SHEET NO. G 104 18
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES
MTS DOC NO. PWL355AD-22, WOA355-AE-75



NO.	DATE	REVISIONS	BY	CHK	APPD
3	12-95	REVISED DRIVER CCD # 24			
2	8-95	REVISED DRIVER CCD #			
1	4-95	CONFORMED			

DE LEUW CATHER

DESIGNED BY HJR,SAMI 12/19/94 DATE
DRAWN BY HJR,SAMI 12/19/94
CHECKED BY
MTDB PROJ.ENG. B.RADLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego,CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
GRADING PLANS
ALIGNMENT DATA
SHEET 1 OF 4

SCALE 1"=40'
MTDB CONTRACT NO. LRT 552
DRAWING NO./SHEET NO. G105 19

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

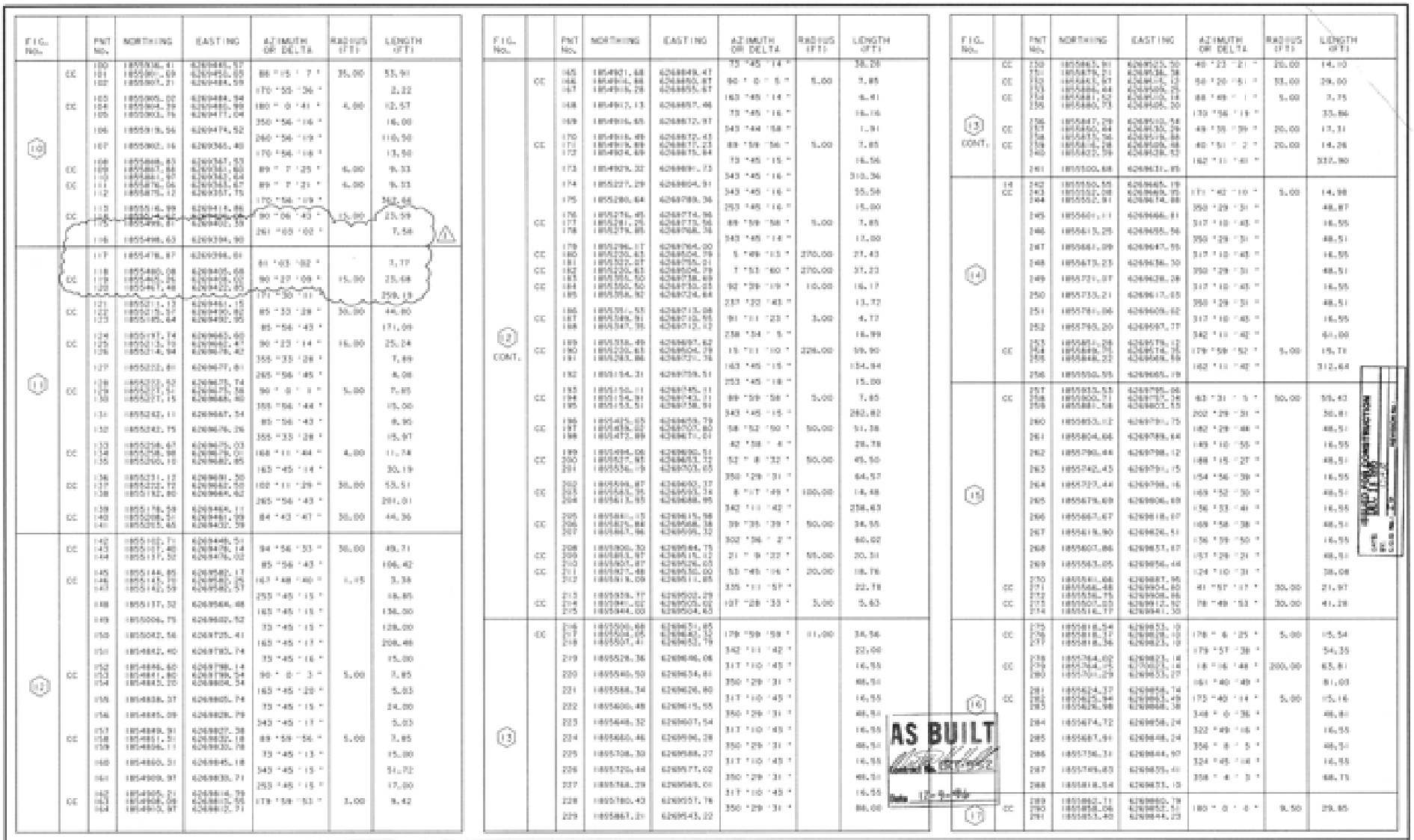


FIG. No.		PNT No.	NORTHING	EASTING	AZIMUTH OR DELTA	RADIUS (FT)	LENGTH (FT)
10	CC	100	1855936.41	6269445.93	88°15'7"	35.00	53.91
		101	1855901.69	6269493.68			
		102	1855901.21	6269488.59	170°55'36"		2.22
	CC	103	1855905.00	6269484.94	180°0'41"	4.00	12.57
		104	1855904.99	6269480.94			
		105	1855900.78	6269417.04	350°56'16"		16.00
		106	1855919.56	6269474.52	260°56'19"		110.50
		107	1855902.16	6269361.48	170°56'16"		13.50
	CC	108	1855888.63	6269367.53	89°7'25"	4.00	9.33
	CC	109	1855883.68	6269367.80			
		110	1855881.58	6269363.80	89°7'21"	4.00	9.33
		111	1855876.34	6269363.90			
		112	1855875.12	6269357.75	170°56'19"		342.66
		113	1855516.99	6269414.86			
	CC	114	1855496.47	6269402.39	90°06'43"	15.00	23.59
		115	1855496.81	6269402.39			
		116	1855498.63	6269394.90	261°05'02"		7.58
11		117	1855478.87	6269396.84			
		118	1855480.08	6269405.68	81°03'02"		3.17
	CC	119	1855483.24	6269408.03	90°27'09"	15.00	25.68
		120	1855467.48	6269421.85			
		121	1855211.13	6269581.15	171°30'01"		259.19
	CC	122	1855213.11	6269582.68	85°33'28"	30.00	44.80
		123	1855185.84	6269491.95			
	CC	124	1855197.74	6269460.60	85°56'43"		171.09
		125	1855213.03	6269443.40	90°23'14"	16.00	25.24
		126	1855214.94	6269376.42			
		127	1855222.61	6269367.61	355°33'28"		7.89
		128	1855222.52	6269367.73	265°56'45"		8.08
	CC	129	1855221.15	6269367.58	90°0'1"	5.00	7.85
		130	1855207.15	6269368.80	355°56'44"		15.00
		131	1855242.11	6269367.54	85°56'43"		8.90
		132	1855243.19	6269376.26	355°33'28"		15.97
	CC	133	1855258.67	6269375.03	168°11'44"	4.00	11.74
	CC	134	1855258.98	6269379.03			
		135	1855260.10	6269381.85	163°45'14"		30.19
		136	1855231.12	6269381.20	100°11'29"	30.00	53.51
	CC	137	1855222.53	6269340.00			
		138	1855192.80	6269369.62	265°56'43"		291.01
		139	1855178.59	6269369.11	84°43'41"	30.00	44.36
		140	1855208.51	6269401.38			
		141	1855215.85	6269403.38			
12	CC	142	1855102.71	6269448.21	94°56'33"	30.00	49.71
		143	1855101.48	6269478.14			
		144	1855117.32	6269476.02	85°56'43"		106.42
	CC	145	1855144.85	6269580.17	167°48'46"	1.15	3.38
		146	1855145.23	6269580.05			
		147	1855142.59	6269580.57	253°45'15"		16.85
		148	1855137.32	6269568.48	165°45'15"		136.00
		149	1855006.75	6269460.52	33°45'15"		128.00
		150	1855042.56	6269735.41	165°45'13"		208.48
		151	1854842.40	6269785.74	33°45'16"		15.00
	CC	152	1854846.60	6269798.14	90°0'3"	5.00	7.85
	CC	153	1854841.80	6269798.34			
		154	1854845.20	6269804.34	165°45'20"		5.03
		155	1854838.37	6269805.74	33°45'15"		24.00
		156	1854845.09	6269828.79	345°45'13"		5.03
	CC	157	1854849.91	6269827.38	89°59'56"	5.00	7.85
	CC	158	1854851.51	6269820.18			
		159	1854836.11	6269830.78	33°45'13"		15.00
		160	1854860.31	6269845.18	345°45'15"		51.72
		161	1854909.97	6269803.71	253°45'15"		17.00
	CC	162	1854905.71	6269816.78	179°59'53"	3.00	9.42
		163	1854908.09	6269812.71			
		164	1854910.97	6269812.71			

FIG. No.		PNT No.	NORTHING	EASTING	AZIMUTH OR DELTA	RADIUS (FT)	LENGTH (FT)
9 CONT.		165	1854901.68	6269849.47	75°45'14"		38.29
	CC	166	1854914.88	6269850.87	90°0'5"	5.00	7.85
		167	1854916.28	6269855.87			
		168	1854917.13	6269857.46	163°45'14"		6.41
		169	1854916.65	6269872.97	73°45'16"		16.16
		170	1854916.49	6269872.45	343°44'58"		1.91
	CC	171	1854916.89	6269877.23	89°59'56"	5.00	7.85
		172	1854924.69	6269876.94			
		173	1854929.32	6269889.73	73°45'15"		16.56
		174	1855227.29	6269864.91	343°45'16"		310.36
		175	1855280.64	6269788.36	343°45'16"		55.56
		176	1855276.45	6269774.96	253°45'16"		15.00
	CC	177	1855281.25	6269773.56	89°59'56"	5.00	7.85
		178	1855278.85	6269768.76			
		179	1855286.17	6269784.00	343°45'16"		13.00
	CC	180	1855230.63	6269804.79	5°49'13"	270.00	27.43
	CC	181	1855231.07	6269755.21	7°53'60"	270.00	37.23
	CC	182	1855305.79	6269738.69			
	CC	183	1855350.50	6269733.03	92°29'19"	10.00	16.17
		184	1855350.50	6269733.03			
		185	1855358.82	6269724.84	237°32'43"		13.72
	CC	186	1855351.53	6269713.08	91°11'23"	3.00	4.72
	CC	187	1855348.91	6269710.55			
		188	1855347.35	6269712.12	238°34'5"		18.99
		189	1855336.49	6269697.62	15°11'10"	226.00	59.90
	CC	190	1855230.63	6269804.79			
		191	1855283.86	6269731.76	163°45'15"		134.84
		192	1855154.31	6269719.51	253°45'18"		15.00
	CC	193	1855156.11	6269745.11	89°59'56"	5.00	7.85
	CC	194	1855154.51	6269743.11			
		195	1855153.51	6269738.91	343°45'15"		282.82
	CC	196	1855405.03	6269859.79	58°52'50"	50.00	51.38
	CC	197	1855418.87	6269827.80			
		198	1855472.89	6269871.01	62°38'8"		28.78
	CC	199	1855494.06	6269880.91	52°8'32"	50.00	45.50
	CC	200	1855517.87	6269853.72			
		201	1855536.19	6269703.65	350°29'31"		64.57
	CC	202	1855599.87	6269690.32	8°17'49"	100.00	14.48
	CC	203	1855583.35	6269688.12			
		204	1855581.55	6269688.95	342°11'42"		258.63
	CC	205	1855581.15	6269815.98	39°35'39"	50.00	34.55
	CC	206	1855611.86	6269868.16			
		207	1855613.96	6269898.12	302°36'2"		60.02
	CC	208	1855800.32	6269894.73	21°9'22"	55.00	20.51
	CC	209	1855813.35	6269915.12			
		210	1855807.87	6269926.63	53°45'16"	20.00	18.78
	CC	211	1855827.48	6269930.80			
		212	1855918.09	6269911.85	335°11'57"		22.78
	CC	213	1855928.77	6269902.29	107°28'33"	5.00	5.63
	CC	214	1855941.02	6269905.62			
		215	1855944.00	6269904.63			
13	CC	216	1855500.68	6269851.45	179°59'59"	11.00	34.56
	CC	217	1855509.05	6269840.07			
		218	1855501.41	6269833.79	342°11'42"		22.00
		219	1855528.36	6269898.08	317°10'45"		16.55
		220	1855540.50	6269834.61	350°29'31"		48.51
		221	1855588.34	6269828.80	317°10'45"		16.55
		222	1855606.48	6269815.55	350°29'31"		48.51
		223	1855648.32	6269807.54	317°10'45"		16.55
	CC	224	1855660.46	6269796.28	350°29'31"		48.51
		225	1855708.30	6269788.27	317°10'45"		16.55
		226	1855720.44	6269777.02	350°29'31"		48.51
		227	1855768.29	6269769.01	317°10'45"		16.55
	CC	228	1855780.43	6269757.76	350°29'31"		86.00
		229	1855867.21	6269743.22			

FIG. No.		PNT No.	NORTHING	EASTING	AZIMUTH OR DELTA	RADIUS (FT)	LENGTH (FT)
13 CONT.	CC	230	1855845.91	6269822.20	40°23'21"	20.00	14.10
	CC	231	1855878.71	6269834.38			
	CC	232	1855847.57	6269847.72	50°20'51"	55.00	29.00
		233	1855884.84	6269905.29			
		234	1855881.32	6269905.29	88°88'1"	5.00	7.75
		235	1855884.73	6269909.30	170°56'15"		33.86
	CC	236	1855847.28	6269910.58			
	CC	237	1855850.48	6269930.26	49°55'39"	20.00	17.31
		238	1855871.36	6269926.68			
	CC	239	1855828.58	6269905.68	40°51'2"	20.00	14.26
		240	1855827.39	6269828.52	182°11'41"		337.80
14	CC	241	1855550.55	6269865.19			
		242	1855550.08	6269869.93	171°40'10"	5.00	14.98
		243	1855552.91	6269874.88	350°29'31"		48.87
		244	1855560.11	6269866.81	317°10'45"		16.55
		245	1855615.25	6269855.56	350°29'31"		48.51
		246	1855681.09	6269847.55	317°10'45"		16.55
		247	1855673.23	6269836.30	350°29'31"		48.51
		248	1855721.07	6269828.28	317°10'45"		16.55
		249	1855733.21	6269817.05	350°29'31"		48.51
		250	1855781.06	6269809.02	317°10'45"		16.55
		251	1855795.20	6269597.77	342°11'42"		61.00
	CC	252	1855851.08	6269579.12			
	CC	253	1855896.70	6269574.26	179°59'52"	5.00	15.71
		254	1855848.22	6269568.59	162°11'42"		312.64
15	CC	255	1855833.55	6269795.06			
	CC	256	1855881.58	6269803.15	63°31'5"	50.00	55.42
		257	1855881.58	6269803.15	202°29'31"		50.81
		258	1855853.12	6269791.75	182°29'48"		48.51
		259	1855804.66	6269788.64	149°10'55"		16.55
		260	1855790.44	6269798.12	188°15'27"		48.51
		261	1855742.45	6269791.15	154°56'39"		16.55
		262	1855737.44	6269798.16	169°52'30"		48.51
		263	1855679.69	6269806.69	156°53'41"		16.55
		264	1855667.67	6269818.67	169°58'38"		48.51
		265	1855619.90	6269826.51	156°59'50"		16.55
		266	1855607.86	6269837.87	151°29'21"		48.51
		267	1855563.05	6269856.44	124°10'31"		38.08
	CC	268	1855561.66	6269887.95			
	CC	269	1855566.48	6269904.85	41°57'17"	35.00	21.97
		270	1855586.79	6269905.68			
	CC	271	1855507.03	6269917.92	78°49'53"	30.00	41.28
		272	1855516.17	6269941.35			
16	CC	273	1855818.54	6269853.10			
		274	1855818.54	6269853.10	178°6'25"	5.00	15.54
		275	1855818.36	6269823.19	179°57'39"		54.35
	CC	276	1855764.02	6269823.18			
	CC	277	1855764.15	6269823.18	18°16'48"	200.00	63.81
		278	1855701.29	6269833.27	161°40'49"		81.03
17	CC	279	1855624.37	6269858.74			
		280	1855623.94	6269843.49	173°40'14"	5.00	15.16
		281	1855624.98	6269848.38	348°0'36"		48.81
		282	1855674.72	6269858.24	322°49'16"		16.55
		283	1855687.91	6269848.24	356°8'5"		48.51
		284	1855736.31	6269844.97	324°49'16"		16.55
		285	1855749.83	6269835.41	358°8'5"		48.75
		286	1855818.64	6269833.19			
18	CC	287	1855862.71	6269860.79			
		288	1855858.04	6269852.51	180°0'6"	9.50	29.85
	CC	289	1855853.40	6269844.23			

AS BUILT

NO.	DATE	REVISIONS	BY	CHK	APPR
1	4-95	REVISED BM, PER CO 4	MG		
0	4-95	CONFORMED			

DE LEUW CATHER

DESIGNED BY: H.R. SAMII — DATE: 12/9/94
DRAWN BY: H.R. SAMII — DATE: 12/9/94
CHECKED BY:
MTDB PROJENG.: G. RAGLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
GRADING PLANS
ALIGNMENT DATA
SHEET 2 OF 4

SCALE: N/A
MTDB CONTRACT NO.: LRT 552
DRAWING NO.: G106
SHEET NO.: 20

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

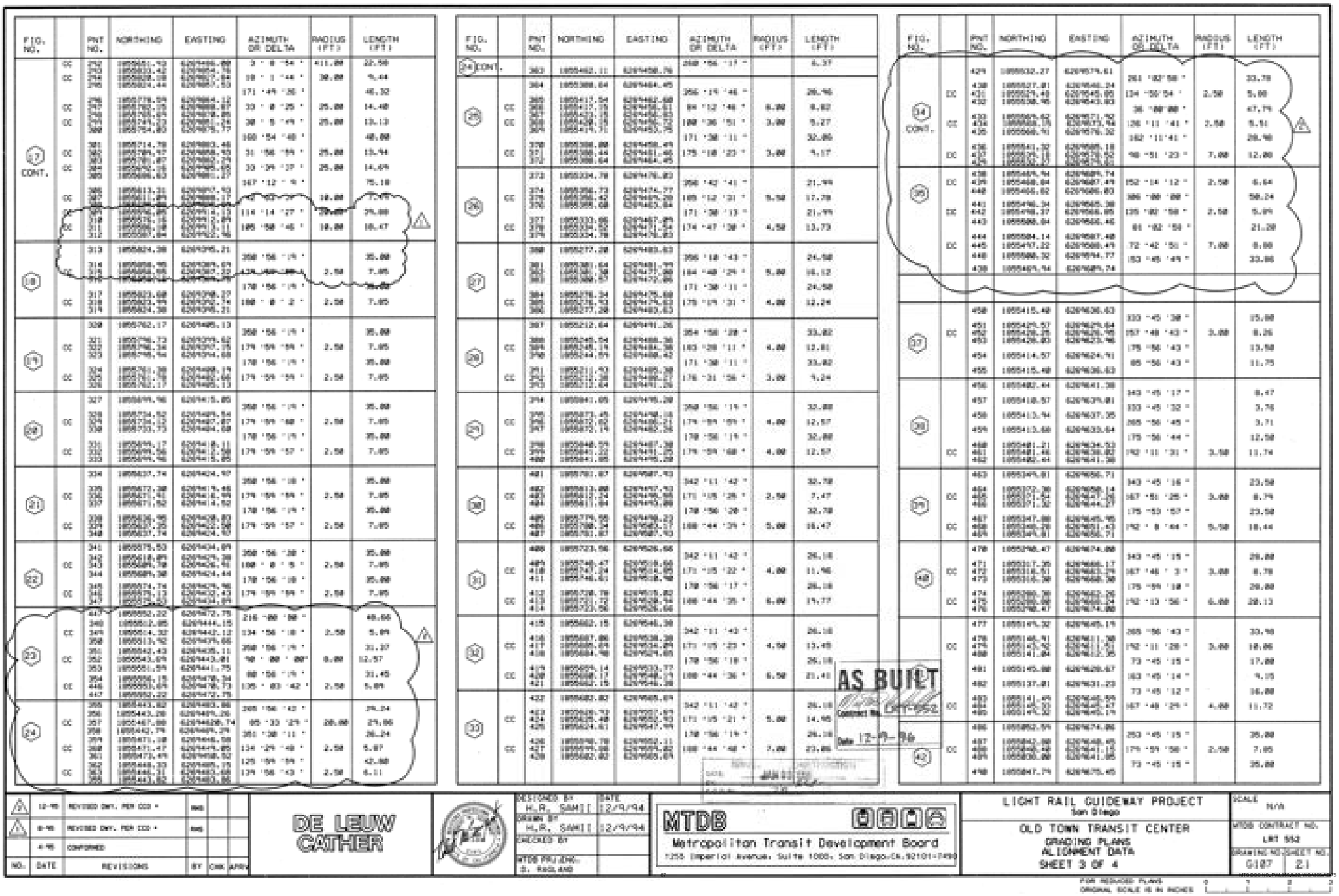


FIG. NO.		PNT NO.	NORTHING	EASTING	AZIMUTH OR DELTA	RADIUS (FT)	LENGTH (FT)
17 CONT.		312	1855851.72	6269195.88	2 ° 0 '54 "	411.00	22.59
	CC	313	1855833.42	6269204.16	10 ° 1 '44 "	30.00	5.44
		314	1855828.38	6269207.64			
		315	1855824.44	6269209.53	171 ° 49 '26 "		46.32
	CC	316	1855778.59	6269884.12	33 ° 0 '25 "	25.00	14.40
		317	1855763.45	6269888.61			
	CC	318	1855747.65	6269878.85	30 ° 5 '49 "	25.00	13.13
		319	1855734.80	6269871.17			
					100 ° 54 '40 "		48.88
	CC	320	1855714.78	6269883.48	31 ° 56 '59 "	25.00	13.94
		321	1855699.19	6269888.53			
	CC	322	1855683.47	6269880.52	33 ° 39 '37 "	25.00	14.69
		323	1855668.83	6269881.13			
					167 ° 12 ' 9 "		75.18
	CC	324	1855613.31	6269917.92			
		325	1855611.84	6269888.12	[illegible]	10.00	7.45
		326	1855604.84	6269883.13			
					114 ° 14 '27 "		29.88
	CC	327	1855579.31	6269916.13			
		328	1855579.16	6269906.16	185 ° 58 ' 46 "	10.00	10.47
18		329	1855824.38	6269395.21			
	CC	330	1855858.98	6269387.63	350 ° 56 ' 19 "		35.00
		331	1855861.88	6269387.32		2.50	7.85
		332	1855854.14	6269384.14			
					170 ° 56 ' 19 "		35.00
	CC	333	1855823.68	6269398.32			
		334	1855823.98	6269396.14	188 ° 0 ' 2 "	2.50	7.85
		335	1855824.38	6269395.21			
19		336	1855762.17	6269385.13			
	CC	337	1855758.72	6269395.62	350 ° 56 ' 19 "		35.00
		338	1855761.62	6269397.13		2.50	7.85
		339	1855765.54	6269394.68	179 ° 59 ' 59 "		
					170 ° 56 ' 19 "		35.00
	CC	340	1855731.38	6269388.19			
		341	1855731.78	6269388.16	179 ° 59 ' 59 "	2.50	7.85
		342	1855731.17	6269385.13			
20		343	1855699.96	6269415.85			
	CC	344	1855724.52	6269385.54	350 ° 56 ' 19 "		35.00
		345	1855726.12	6269387.67	179 ° 59 ' 59 "	2.50	7.85
		346	1855733.13	6269384.68			
					170 ° 56 ' 19 "		35.00
	CC	347	1855695.17	6269388.11			
		348	1855695.56	6269385.08	179 ° 59 ' 57 "	2.50	7.85
		349	1855695.96	6269385.08			
21		350	1855837.74	6269424.97			
	CC	351	1855827.38	6269387.46	350 ° 56 ' 19 "		35.00
		352	1855827.42	6269387.96	179 ° 59 ' 59 "	2.50	7.85
		353	1855827.82	6269424.52			
					170 ° 56 ' 19 "		35.00
	CC	354	1855826.98	6269428.82			
		355	1855827.38	6269427.98	179 ° 59 ' 57 "	2.50	7.85
		356	1855837.74	6269424.97			
22		357	1855875.53	6269434.89			
	CC	358	1855818.89	6269425.38	350 ° 56 ' 20 "		35.00
		359	1855889.38	6269426.47	188 ° 0 ' 5 "	2.50	7.85
		360	1855889.38	6269424.44			
					170 ° 56 ' 19 "		35.00
	CC	361	1855874.74	6269429.98			
		362	1855875.13	6269427.43	179 ° 59 ' 59 "	2.50	7.85
		363	1855875.52	6269434.89			
23		364	1855852.22	6269472.78			
	CC	365	1855852.85	6269441.15	216 ° 00 ' 00 "		48.66
		366	1855814.32	6269442.12	134 ° 56 ' 18 "	2.50	5.89
		367	1855813.92	6269429.66			
	CC	368	1855813.92	6269429.66	350 ° 56 ' 19 "		31.37
		369	1855842.43	6269435.11			
	CC	370	1855843.09	6269443.81	90 ° 00 ' 00 "	8.00	12.57
		371	1855851.59	6269441.75			
		372	1855852.22	6269472.78	88 ° 56 ' 19 "		31.45
	CC	373	1855834.78	6269478.34			
		374	1855834.78	6269478.73	135 ° 03 ' 42 "	2.50	5.89
24		375	1855852.22	6269472.78			
	CC	376	1855863.80	6269483.80	265 ° 56 ' 42 "		34.24
		377	1855863.28	6269485.26			
	CC	378	1855867.88	6269486.74	85 ° 33 '29 "	26.00	29.00
		379	1855842.74	6269489.39			
					351 ° 38 ' 11 "		26.24
	CC	380	1855871.18	6269486.58			
		381	1855871.47	6269489.85	134 ° 29 ' 48 "	2.50	5.87
		382	1855873.89	6269488.52			
	CC	383	1855868.33	6269485.15	125 ° 59 ' 59 "		42.88
		384	1855848.33	6269483.68	139 ° 56 ' 43 "	2.50	6.11
		385	1855841.80	6269483.86			

FIG. NO.		PNT NO.	NORTHING	EASTING	AZIMUTH OR DELTA	RADIUS (FT)	LENGTH (FT)
24 CONT.		383	1855862.11	6269458.76	268 ° 56 ' 19 "		6.37
25		384	1855888.84	6269484.45			
	CC	385	1855887.84	6269482.68	356 ° 19 ' 46 "		26.96
		386	1855887.15	6269482.61			
	CC	387	1855886.31	6269482.72	84 ° 12 ' 46 "	6.00	8.82
		388	1855886.11	6269483.26			
	CC	389	1855884.31	6269485.42	188 ° 36 ' 51 "	3.00	9.27
		390	1855884.11	6269485.96			
					171 ° 38 ' 11 "		32.86
	CC	391	1855888.88	6269458.49			
		392	1855888.44	6269481.68	175 ° 18 '23 "	3.00	9.17
		393	1855888.84	6269484.45			
26		394	1855834.78	6269478.83			
	CC	395	1855836.23	6269478.77	358 ° 42 ' 41 "		21.99
		396	1855858.68	6269483.84			
	CC	397	1855860.68	6269483.84	189 ° 12 ' 21 "	5.50	17.28
		398	1855860.68	6269483.84			
					171 ° 38 ' 11 "		21.99
	CC	399	1855832.86	6269487.85			
		400	1855834.78	6269478.83	174 ° 47 ' 38 "	4.50	13.73
27		401	1855217.28	6269483.83			
	CC	402	1855218.68	6269481.73	356 ° 18 ' 43 "		24.58
		403	1855240.58	6269482.88			
	CC	404	1855242.58	6269482.88	189 ° 48 ' 29 "	5.00	16.12
		405	1855242.58	6269482.88			
					171 ° 38 ' 11 "		24.58
	CC	406	1855278.34	6269479.88			
		407	1855277.34	6269483.83	178 ° 19 ' 31 "	4.00	12.24
		408	1855277.38	6269483.83			
28		409	1855212.84	6269491.26			
	CC	410	1855245.34	6269488.36	354 ° 58 ' 28 "		33.82
		411	1855245.34	6269488.36			
	CC	412	1855244.54	6269488.43	183 ° 28 ' 11 "	4.00	12.81
		413	1855244.54	6269488.43			
					171 ° 38 ' 11 "		33.82
	CC	414	1855211.92	6269489.38			
		415	1855211.84	6269491.26	176 ° 31 ' 56 "	3.00	9.24
		416	1855211.84	6269491.26			
29		417	1855241.85	6269495.28			
	CC	418	1855243.45	6269498.18	358 ° 58 ' 19 "		32.88
		419	1855243.45	6269498.18			
	CC	420	1855242.74	6269498.21	179 ° 59 ' 59 "	4.00	12.57
		421	1855242.74	6269498.21			
					178 ° 58 ' 19 "		32.88
	CC	422	1855240.55	6269497.38			
		423	1855241.35	6269495.25	179 ° 59 ' 59 "	4.00	12.57
		424	1855241.85	6269495.28			
30		425	1855781.87	6269487.43			
	CC	426	1855813.68	6269492.43	342 ° 11 ' 42 "		32.78
		427	1855813.68	6269492.43			
	CC	428	1855811.84	6269495.88	171 ° 05 ' 28 "	2.50	7.47
		429	1855811.84	6269495.88			
					178 ° 58 ' 28 "		32.78
	CC	430	1855779.58	6269498.22			
		431	1855788.34	6269505.17	188 ° 44 ' 39 "	5.00	18.47
		432	1855781.87	6269487.43			
31		433	1855723.56	6269506.66			
	CC	434	1855748.47	6269508.65	342 ° 11 ' 42 "		26.18
		435	1855743.24	6269510.85			
	CC	436	1855746.61	6269518.48	171 ° 05 ' 22 "	4.00	11.96
		437	1855746.61	6269518.48			
					178 ° 58 ' 17 "		26.18
	CC	438	1855728.78	6269519.82			
		439	1855731.62	6269528.44	188 ° 44 ' 35 "	6.00	19.77
		440	1855723.56	6269506.66			
32		441	1855682.15	6269548.38			
	CC	442	1855687.86	6269538.38	342 ° 11 ' 42 "		26.18
		443	1855687.86	6269538.38			
	CC	444	1855684.98	6269541.85	171 ° 05 ' 23 "	4.50	13.45
		445	1855684.98	6269541.85			
					178 ° 58 ' 19 "		26.18
	CC	446	1855688.14	6269523.77			
		447	1855688.14	6269548.15	188 ° 44 ' 36 "	6.50	21.40
		448	1855682.15	6269548.38			
33		449	1855683.83	6269548.89			
	CC	450	1855688.72	6269558.83	342 ° 11 ' 42 "		26.18
		451	1855688.72	6269558.83			
	CC	452	1855687.88	6269561.89	171 ° 05 ' 21 "	5.00	14.95
		453	1855687.88	6269561.89			
					178 ° 58 ' 19 "		26.18
	CC	454	1855698.78	6269552.11			
		455	1855698.78	6269552.11	188 ° 44 ' 48 "	7.00	23.86
		456	1855682.83	6269548.89			

FIG. NO.		PNT NO.	NORTHING	EASTING	AZIMUTH OR DELTA	RADIUS (FT)	LENGTH (FT)
		429	1855532.27	6269579.61			
34 CONT.		430	1855527.81	6269568.24	261 ° 02 ' 58 "		33.78
	CC	431	1855523.48	6269565.85	124 ° 55 ' 54 "	2.50	5.88
		432	1855538.98	6269543.83			
					36 ° 58 ' 00 "		47.79
	CC	433	1855569.52	6269571.92			
		434	1855568.78	6269573.94	126 ° 11 ' 41 "	2.50	5.51
		435	1855568.91	6269578.32			
					162 ° 11 ' 41 "		28.96
	CC	436	1855541.32	6269585.18			
		437	1855543.24	6269575.62	98 ° 51 ' 23 "	7.00	12.08
		438	1855541.32	6269585.18			
35		439	1855489.74	6269689.74			
	CC	440	1855488.84	6269687.49	152 ° 14 ' 12 "	2.50	6.64
		441	1855488.82	6269686.83			
					386 ° 28 ' 00 "		58.24
	CC	442	1855498.34	6269565.38			
		443	1855498.37	6269566.85	135 ° 02 ' 58 "	2.50	5.89
		444	1855488.84	6269568.48			
					81 ° 02 ' 58 "		21.20
	CC	445	1855584.14	6269587.48			
		446	1855497.22	6269588.49	72 ° 42 ' 50 "	7.00	8.88
		447	1855488.32	6269594.77			
					153 ° 45 ' 49 "		33.86
		448	1855489.74	6269689.74			
36		449	1855489.74	6269689.74			
	CC	450	1855488.84	6269687.49	152 ° 14 ' 12 "	2.50	6.64
		451	1855488.82	6269686.83			
					386 ° 28 ' 00 "		58.24
	CC	452	1855498.34	6269565.38			
		453	1855498.37	6269566.85	135 ° 02 ' 58 "	2.50	5.89
		454	1855488.84	6269568.48			
					81 ° 02 ' 58 "		21.20
	CC	455	1855584.14	6269587.48			
		456	1855497.22	6269588.49	72 ° 42 ' 50 "	7.00	8.88
		457	1855488.32	6269594.77			
					153 ° 45 ' 49 "		33.86
		458	1855489.74	6269689.74			
37		459	1855415.48	6269636.63			
	CC	460	1855429.57	6269629.64	333 ° 45 ' 38 "		15.88
		461	1855429.29	6269628.98			
	CC	462	1855428.83	6269623.98	157 ° 48 ' 43 "	3.88	8.26
		463	1855428.83	6269623.98			
					179 ° 56 ' 43 "		13.58
		464	1855414.57	6269624.91			
					89 ° 56 ' 43 "		11.75
		465	1855415.48	6269636.63			
38		466	1855482.64	6269641.38			
	CC	467	1855418.57	6269639.81	343 ° 45 ' 17 "		8.47
		468	1855413.94	6269637.35	333 ° 45 ' 32 "		3.76
	CC	469	1855413.68	6269633.84	265 ° 56 ' 45 "		3.71
		470	1855481.21	6269634.53	175 ° 56 ' 44 "		12.58
	CC	471	1855481.46	6269638.82	192 ° 11 ' 31 "	3.58	11.74
		472	1855482.64	6269641.38			
39		473	1855349.81	6269656.71			
	CC	474	1855352.26	6269658.24	343 ° 45 ' 16 "		23.58
		475	1855351.62	6269647.26	167 ° 51 ' 25 "	3.88	8.79
	CC	476	1855351.62	6269644.27	175 ° 53 ' 57 "		23.58
		477	1855347.88	6269645.95			
	CC	478	1855348.29	6269651.63	192 ° 8 ' 44 "	5.58	18.44
		479	1855349.81	6269656.71			
40		480	1855298.47	6269674.88			
	CC	481	1855317.35	6269688.17	343 ° 45 ' 15 "		20.88
		482	1855318.51	6269683.28	167 ° 48 ' 3 "	3.88	8.78
	CC	483	1855318.38	6269688.38	175 ° 59 ' 18 "		20.88
		484	1855288.28	6269683.26			
	CC	485	1855288.88	6269688.24	192 ° 13 ' 56 "	6.88	20.13
		486	1855298.47	6269674.88			
41		487	1855249.32	6269685.19			
	CC	488	1855248.41	6269681.38	265 ° 56 ' 43 "		33.98
		489	1855248.41	6269681.38	192 ° 11 ' 28 "	3.88	18.86
		490	1855241.94	6269681.35			
					73 ° 45 ' 15 "		17.88
		491	1855145.88	6269629.67			
					163 ° 45 ' 14 "		9.05
		492	1855137.81	6269631.23			
					73 ° 45 ' 12 "		16.88
	CC	493	1855141.45	6269648.55			
		494	1855145.03	6269647.27	167 ° 48 ' 29 "	4.88	11.72
		495	1855149.32	6269645.19			
42		496	1855852.59	6269674.88			
	CC	497	1855843.88	6269648.69	253 ° 45 ' 15 "		25.88
		498	1855841.18	6269641.25	174 ° 59 ' 58 "	2.58	7.85
		499	1855830.88	6269641.35			
					73 ° 45 ' 15 "		25.88
		498	1855847.74	6269675.45			

AS BUILT
Contract No. LRT-552
Date 12-19-96

NO.	DATE	REVISIONS	BY	CHK	APPV
3	12-95	REVISED DWY. PER CCO *	RMG		
2	8-95	REVISED DWY. PER CCO *	RMG		
1	4-95	CONFORMED			

DE LEUW CATHER

DESIGNED BY H.R. SAMII 12/9/94
DRAWN BY H.R. SAMII 12/9/94
CHECKED BY
MTDB PROJ.MGR. S. RAGLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego,CA.92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
GRADING PLANS
ALIGNMENT DATA
SHEET 3 OF 4

SCALE N/A
MTDB CONTRACT NO. LRT 552
DRAWING NO. G107 SHEET NO. 21

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

FIG. No.		PNT No.	NORTHING	EASTING	AZIMUTH OR DELTA	RADIUS (FT)	LENGTH (FT)
42 CONT.	CC	491	1855020.19	6269874.76	179 °59 '59 "	2.50	7.85
		492	1855093.59	6269874.06			
43		493	1855152.16	6269892.43			
		494	1855151.10	6269867.37	265 °56 '43 "		15.10
	CC	495	1855147.65	6269857.62	192 °11 '23 "	3.50	11.78
		496	1855144.24	6269878.60	75 °45 '19 "		15.50
		497	1855148.58	6269893.48	345 °45 '18 "		3.73
		498	1855152.16	6269892.43			
44		499	1855153.28	6269906.23			
		500	1855152.27	6269893.96	265 °56 '43 "		14.50
		501	1855143.41	6269896.55	163 °45 '19 "		9.23
		502	1855141.97	6269896.97	163 °45 ' 7 "		1.50
		503	1855136.08	6269898.68	165 °45 '16 "		6.13
		504	1855129.58	6269910.68	75 °45 '15 "		13.50
	CC	505	1855146.70	6269908.72	167 °48 '32 "	7.00	20.90
		506	1855153.28	6269906.23			
45		507	1855166.46	6269772.64			
		508	1855162.41	6269758.71	253 °45 '18 "		14.50
		509	1855154.75	6269760.95	163 °45 '15 "		8.00
		510	1855156.78	6269774.87	75 °45 '19 "		14.50
	CC	511	1855162.42	6269773.75	180 ° 0 ' 5 "	4.00	12.57
		512	1855166.46	6269772.64			
46		513	1855135.74	6269781.59			
		514	1855126.79	6269760.87	253 °45 '17 "		32.00
	CC	515	1855122.95	6269751.98	179 °59 '57 "	4.00	12.57
		516	1855119.11	6269753.10	73 °45 '16 "		32.00
	CC	517	1855126.06	6269783.83	179 °59 '56 "	4.00	12.57
		518	1855131.90	6269782.31			
		519	1855135.74	6269781.59			
47		520	1854948.47	6269837.72			
		521	1854928.68	6269804.12	253 °45 '15 "		35.00
	CC	522	1854926.27	6269804.82	179 °59 '60 "	3.50	7.85
		523	1854933.87	6269805.52	73 °45 '15 "		35.00
	CC	524	1854945.67	6269839.12	179 °59 '58 "	2.50	7.85
		525	1854946.07	6269838.40			
		526	1854946.47	6269837.72			
		527	1855176.07	6269829.53			
49		528	1855586.10	6269471.57	350 °56 '23 "		350.57
		529	1855910.29	6269416.37			
50		530	1855819.89	6269499.36			
		531	1855806.35	6269432.62	259 °34 '40 "		68.79
51		532	1854953.46	6269885.22			
		533	1854959.06	6269904.42	73 °45 '16 "		20.00
	CC	534	1854928.85	6269950.02	88 °24 ' 4 "	20.00	30.86
		535	1854945.98	6269929.05	162 ° 9 '20 "		61.75
		536	1854887.20	6269947.98	252 ° 9 '21 "		16.00
		537	1854882.30	6269932.75	342 ° 9 '20 "		61.75
		538	1854941.08	6269913.82	88 °23 '60 "	4.00	6.17
	CC	539	1854928.85	6269950.02	253 °45 '16 "		20.00
		540	1854945.69	6269908.90			
		541	1854938.10	6269888.70			
52		542	1855317.67	6269735.37			
		543	1855305.87	6269716.94	237 °22 '42 "		21.67
	CC	544	1855314.34	6269711.95	108 °22 '33 "	10.00	18.57
		545	1855317.30	6269710.95	343 °45 '15 "		43.50
		546	1855413.26	6269688.78	73 °45 '16 "		6.29
		547	1855415.02	6269695.82			
53		548	1855439.39	6269681.42	341 °38 '15 "		10.93
		549	1855448.76	6269677.98			

FIG. No.		PNT No.	NORTHING	EASTING	AZIMUTH OR DELTA	RADIUS (FT)	LENGTH (FT)
53 CONT.	CC	550	1855408.03	6269695.87	60 °58 '45 "	20.00	21.29
		551	1855403.63	6269682.31	42 °58 ' 5 "		15.17
		552	1855480.76	6269682.53	116 °39 '38 "		6.28
		553	1855477.94	6269698.14	161 °38 '46 "		2.17
		554	1855475.88	6269698.82			
54		555	1855478.09	6269705.46			
		556	1855490.44	6269701.32	341 °39 '22 "		15.17
	CC	557	1855527.93	6269693.31	47 °57 '26 "	60.50	50.29
		558	1855537.99	6269713.39	350 °29 '30 "		18.91
		559	1855556.57	6269710.27	72 °11 '39 "		2.50
		560	1855552.33	6269712.65	342 °11 '42 "		10.00
		561	1855546.85	6269709.59	252 °11 '41 "		11.15
		562	1855543.44	6269698.98			
55		563	1855885.57	6269598.74	72 °11 '42 "		29.25
		564	1855874.51	6269626.59	341 °53 ' 2 "		13.09
		565	1855886.95	6269622.54	251 °57 ' 2 "		14.99
		566	1855882.31	6269608.28	342 °11 '42 "		31.24
		567	1855913.77	6269586.89	79 °50 '25 "	15.00	20.82
	CC	568	1855913.18	6269582.91	262 °41 '02 "		43.94
		569	1855928.06	6269580.70	89 °59 '59 "	10.00	15.71
	CC	570	1855922.41	6269577.12			
		571	1855933.38	6269585.84			
		572	1855931.11	6269595.90			
56		573	1855960.97	6269602.74			
		574	1855928.16	6269700.54	161 °46 '22 "		34.54
		575	1855925.65	6269708.62	71 °46 '18 "		5.54
	CC	576	1855944.08	6269700.98	94 °50 ' 3 "	15.00	24.83
		577	1855949.98	6269711.75	336 °56 '15 "		12.96
		578	1855961.87	6269712.65	91 °29 '28 "	7.00	11.18
	CC	579	1855975.13	6269708.22	246 °47 '26 "		11.98
		580	1855965.50	6269700.30			
		581	1855960.97	6269602.74			
57		582	1855941.62	6269787.36			
		583	1855952.83	6269777.68	83 °56 ' 8 "	15.00	21.97
	CC	584	1855941.82	6269761.30	318 °58 '24 "		29.75
		585	1855964.26	6269747.77	73 °28 '36 "	15.00	19.24
	CC	586	1855974.11	6269756.08			
		587	1855982.16	6269748.85			
58		588	1855821.91	6269771.12			
		589	1855819.28	6269762.32	180 ° 0 ' 1 "	8.00	25.13
	CC	590	1855816.87	6269755.95	161 °59 '21 "		7.00
		591	1855810.25	6269758.18	180 ° 0 ' 1 "	8.00	25.13
	CC	592	1855813.74	6269773.32	341 °59 '20 "		7.00
		593	1855815.26	6269771.12			
		594	1855821.91	6269771.12			
59		595	1855780.50	6269784.02			
		596	1855776.49	6269776.12	206 °36 ' 6 "	8.00	28.85
	CC	597	1855776.95	6269768.51	161 °59 '21 "		12.69
		598	1855766.81	6269777.52	153 °23 '55 "	5.00	15.39
	CC	599	1855768.48	6269787.13	8 °15 '28 "		12.69
		600	1855767.76	6269780.20			
		601	1855780.52	6269784.02			
60		602	1855758.68	6269787.26			
		603	1855757.58	6269780.48	173 °17 '16 "	4.75	14.37
	CC	604	1855753.08	6269778.85	161 °59 '22 "		24.20
		605	1855716.11	6269786.06	171 °46 '55 "	4.50	15.49
	CC	606	1855711.52	6269784.39	349 °52 '33 "		12.19
		607	1855712.32	6269782.62	14 °55 '45 "	10.00	2.61
	CC	608	1855724.32	6269782.78	334 °56 '59 "		10.81
		609	1855720.56	6269781.89			
		610	1855726.80	6269787.26			
61		611	1855736.59	6269787.26			
		612	1855667.07	6269810.38			

FIG. No.		PNT No.	NORTHING	EASTING	AZIMUTH OR DELTA	RADIUS (FT)	LENGTH (FT)
61 CONT.	CC	613	1855663.63	6269806.75	154 °54 ' 19 "	5.00	13.52
		614	1855662.06	6269800.00	181 °39 '20 "		12.78
	CC	615	1855649.93	6269806.00	171 °60 ' 41 "	4.50	13.48
		616	1855651.34	6269810.29	349 °58 '38 "		11.42
		617	1855652.13	6269814.72	33 °24 '52 "	5.00	2.92
	CC	618	1855663.37	6269812.78	316 °33 '44 "		1.55
		619	1855662.50	6269800.81			
		620	1855665.94	6269811.44			
		621	1855667.07	6269810.38			
62		622	1855515.22	6269818.12	296 °29 ' 7 "		27.62
	CC	623	1855527.53	6269805.40	7 °41 '23 "	43.51	5.84
		624	1855528.48	6269824.80	304 °10 '51 "		31.06
	CC	625	1855550.48	6269820.56			
		626	1855547.93	6269834.67			

AS BUILT
Contract No. LRT-552
Date 12-12-96

NO.	DATE	REVISIONS	BY	CHK	APP'D
	4-96	Engineer			

DE LEUW CATHER

DESIGNED BY H. R. SAMII 12/9/94
DRAWN BY H. R. SAMII 12/9/94
CHECKED BY
MTDB PROJ'NG. G. RAGLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
GRADING PLANS
ALIGNMENT DATA
SHEET 4 OF 4

SCALE N/A
MTDB CONTRACT NO. LRT 552
DRAWING NO. C108 SHEET NO. 22

FOR REDUCED PLANS: ORIGINAL SCALE IS IN INCHES
MTS DOC NO. PWL355-042, WO355-AE-75

LEGEND

FEATURE	SDSD	SYMBOL
EXISTING CONTOUR		30
EXISTING RAIL ALIGNMENT		
EXISTING STORM DRAIN LINE		
EXISTING WATER LATERAL		
EXISTING WATER LINE		
EXISTING SEWER LINE		
EXISTING GAS LINE		
EXISTING TELEPHONE LINE		
EXISTING OVERHEAD ELECTRIC		
EXISTING UNDERGROUND ELECTRIC		
CABLE TELEVISION		CATV
EXISTING GUY WIRE		
EXISTING SEWER LATERAL		
EXISTING SEWER MANHOLE		
EXISTING UTILITY POLE		
EXISTING SIGNAL POLE (W/ DIRECTION OF MAST)		
EXISTING GUY POLE		
EXISTING STEEL CASING		
EXISTING CONCRETE CASING		
EXISTING FIRE HYDRANT		
EXISTING WATER VALVE		
PROPOSED FIRE HYDRANT (3-WAY)	W-11, W-10, SDW-100 SDW-104, W-19	
CONSTRUCT CATCH BASIN	D-8 TYPE C	
CONSTRUCT CURB INLET	D-2 TYPE B	
CONSTRUCT CURB INLET	D-2 TYPE B-1	
CONSTRUCT CURB INLET	D-1 TYPE A-2	

FEATURE	SDSD	SYMBOL
CONSTRUCT 4" PVC SEWER LATERAL TO REPLACE EXIST LATERAL	S-13, S-19 SDS-103	
CONSTRUCT NEW 4" PVC SEWER LATERAL		
CONSTRUCT STORM DRAIN CLEANOUT	D-9 TYPE A	
CONSTRUCT STORM DRAIN		
CONSTRUCT 12" & 16" PVC WATER LINE	W-17, W-18, W-20 W-21, W-23, SDW-100	
CONSTRUCT 8" & 12" PVC SEWER LINE	S-41, SDS-100 SDS-101	
CONSTRUCT SEWER MANHOLE (PVC LINED)	S-17, SDS-100, W-3	
CONSTRUCT 1" COPPER WATER SERVICE TO REPLACE EXIST WATER SERVICE	W-1, W-15A3, W-25 SDW-100, SDW-112	
CONSTRUCT NEW 1" COPPER WATER SERVICE	W-1, W-15A, W-25 SDW-100, SDW-112	
CONSTRUCT NEW 2" PVC WATER SERVICE	W-2, W-13A2, W-25 SDW-100, SDW-113	2"
CONSTRUCT 2" MANUAL AIR RELEASE	W-3, SDW-108	
CONSTRUCT 3" BLOW OFF ASSEMBLY	SDW-106	
UTILITIES TO BE ABANDONED		
EXISTING ABANDONED UTILITIES		
CONSTRUCT LUG CONNECTION	D-63	
CONSTRUCT PIPE COLLAR	D-62	

SPECIAL WATER & SEWER NOTES:

1. EACH LOT SHALL RECEIVE A 1" WATER SERVICE AND A 4" SEWER HOUSE CONNECTION, UNLESS OTHERWISE INDICATED ON THE PLANS OR SPECIAL SPECIFICATIONS. LOCATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER OF WORK. THE "AS-BUILT" LOCATIONS SHALL BE SHOWN ON THESE PLANS AND THE SEWER LATERAL TABLE COMPLETED PRIOR TO ACCEPTANCE OF THE WATER AND SEWER FACILITIES.

2. LOCATE WATER SERVICE AND SEWER HOUSE CONNECTIONS OUT OF DRIVEWAYS. THE SEWER HOUSE CONNECTION SHALL BE A MINIMUM OF 5 FEET DISTANCE DOWNHILL FROM THE WATER SERVICE.

3. ALL CONNECTIONS TO EXISTING WATER MAINS ARE TO BE DONE BY THE CITY'S WATER UTILITIES DEPARTMENT FOR WHICH THE FOLLOWING FEES WILL BE CHARGED, IF THE CONNECTIONS ARE NOT READY TO BE MADE AND THE FEES PAID BEFORE DECEMBER 13, 1995 THE CITY RESERVES THE RIGHT TO ADJUST THE FEES ACCORDING TO THE FEE SCHEDULE IN EFFECT AT THE TIME THE CONNECTION IS MADE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXPOSE THE EXISTING MAIN AT THE CONNECTION POINT AND TO INSTALL THE NEW MAIN AT THE ALIGNMENT AND GRADE WHICH WILL PERMIT THE CITY TO MAKE A "STRAIGHT-IN" CONNECTION WITHOUT USING MORE THAN 10 LINEAL FEET OF PIPE.

ITEM #1: $ 2175.00 6" GAP-OFF FIRE HYDRANT LATERAL @ MAIN (DWG U-6)
ITEM #2: $ 2175.00 6" GAP-OFF FIRE HYDRANT LATERAL @ MAIN (DWG U-6)
ITEM #3: $ 2338.00 CUT AND PLUG EXIST 12" ACP INITIALLY AND LATER MAKE CONNECTION OF NEW MAIN WITH EXIST LINE (DWG U-5), SEE NOTE 3A
ITEM #4: $ 2338.00 CUT AND PLUG EXIST 16" CI INITIALLY AND LATER MAKE CONNECTION OF NEW MAIN WITH EXIST LINE (DWG U-6), SEE NOTE 3A, PLUS HIGHLINE
ITEM #5: $ 240.00 6" WET TAP (LABOR ONLY) DWG U-6
ITEM #6: $ 240.00 6" WET TAP (LABOR ONLY) DWG U-6
ITEM #7: $ 2338.00 CUT AND PLUG EXIST 12" ACP INITIALLY AND LATER MAKE CONNECTION OF NEW MAIN WITH EXIST LINE (DWG U-5), SEE NOTE 3A
ITEM #8: $ 2338.00 CUT AND PLUG EXIST 12" ACP INITIALLY AND LATER MAKE CONNECTION OF NEW MAIN WITH EXIST LINE (DWG U-5), SEE NOTE 3A
ITEM #9: $ 2338.00 CUT AND PLUG EXIST 16" CI INITIALLY AND LATER MAKE CONNECTION OF NEW MAIN WITH EXIST LINE (DWG U-6), SEE NOTE 3A, PLUS HIGHLINE
ITEM #10: $ 15000.00 RELOCATE EXIST 4" UNDERGROUND COMPOUND METER

3A. CITY FORCES WILL BE RESPONSIBLE TO CUT AND PLUG THEN AFTER TESTING OF NEW MAIN IS COMPLETED CITY FORCES WILL CONNECT THE MAIN.

4. ALL VALVES WILL BE FLANGED TO CROSSES AND TEES.

5. ALL DUCTILE AND GRAY CAST IRON FITTINGS, VALVES, AND APPURTENANCES DIRECTLY BURIED IN THE GROUND SHALL BE WRAPPED IN ACCORDANCE WITH AWWA C-217 PETROLATUM WAX TAPE COATING SYSTEM. POLYETHYLENE IS NOT ACCEPTABLE.

6. NEW PVC WATERLINES SHALL HAVE METALIC LOCATOR TAPE PER SDSD DWG W-25. AT VALVES THE LOCATOR TAPE SHALL RUN UP INTO THE VALVE WELL TO ALLOW ACCESS FOR CONNECTION TO THE TAPE.

7. ALL NEW/PROPOSED SANITARY SEWER LINES SHALL BE TV'D

8. CONTRACTOR TO MAINTAIN ACTIVE SANITARY SEWER SERVICES AND/OR THE SANITARY SEWER AT ALL TIMES.

AS BUILT
Contract No. LRT-552
Date 5-20-97

CONTINUATION OF NOTES FOR DWG U-6

14. ABANDON EXIST 16" CI WATER LINE. REMOVE SECTIONS OF EXIST LINE AS REQUIRED FOR CONSTRUCTION OF PROP 16"PVC WATERLINE.

15. CONTRACTOR TO INSTALL 24" BUTTERFLY VALVE W/ VALVE BOX AND COVER (2 PLACES) IN EXIST 24" STEEL WATER LINE. CITY FORCES TO SHUT OFF WATER PRIOR TO VALVING INSTALLATION. BUTTERFLY VALVES SHALL BE PER AWWA C-504 CLASS 150B, WITH FLANGED END, 2" OPERATOR FOR BURIED SERVICE. VALVE TO BE FUSION BONDED EPOXY LINED AND COATED PER AWWA C550. ONLY BUTTERFLY VALVES ON THE CITY OF SAN DIEGO WUD DEPT. "APPROVED MATERIALS LIST" SHALL BE PROVIDED.

EACH VALVE INSTALLATION SHALL INCLUDE 2-24" 150 LB. WELDING NECK FLANGE AND 2-24" INSULATING KITS. EACH WELDING NECK FLANGE SHALL BE COATED AND LINED AS REQUIRED BY THE CITY OF SAN DIEGO. THE EXIST 24" STEEL LINE SHALL BE CUT (SECTION REMOVED) AND 24" VALVE ASSEMBLY WELDED IN PLACE. THE COMPLETE VALVING INSTALLATION MUST MEET THE CITY OF SAN DIEGO APPROVAL INCLUDING ANY OTHER INSTALLATION REQUIREMENTS NOT SPECIFIED.

PAYMENT: THE CONTRACT UNIT PRICE FOR EACH 24" BUTTERFLY VALVE SHALL INCLUDE FULL COMPENSATION FOR FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS AND FOR DOING ALL THE WORK OF 24" BUTTERFLY VALVE COMPLETE AND INPLACE AS INDICATED.

16. A. 16" 45° BEND

B. 16"x12" TEE (ALL FLANGED END)
2-16" GATE VALVES W/BYPASS
1-12" GATE VALVE

C. 12"x12" TEE (ALL FLANGED END)
1-12" GATE VALVE
ADD/USE FLANGED x MECHANICAL JOINT ADAPTORS AS REQUIRED.

GENERAL NOTES:

1. CITY AS-BUILT DRAWINGS WERE USED WHERE POSSIBLE TO LOCATE EXISTING UTILITIES. SOME UTILITIES WERE LOCATED BY POT HOLING. THE CONTRACTOR SHOULD LOCATE THE CONNECTION POINTS AND ANY OTHER CRITICAL LOCATIONS PRIOR TO CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR HAVING COMPLETELY OR PRECISELY SHOWN SUCH EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT THE SEVERAL UTILITY COMPANIES AND AGENCIES BEFORE TRENCHING, AND SHALL COORDINATE HIS WORK WITH THEM.

2. CONTACT WATER UTILITIES SYSTEMS HYDRAULIC CONTROL (TELEPHONE 527-7462 THIRTY (30) DAYS PRIOR TO SHUTDOWN OF PIPELINES.

3. PROPOSED GRADES SHOWN ON THE PROFILE DRAWINGS ARE APPROXIMATE FINISH GRADES FOR TRACK WORK.

4. BEARINGS AND DISTANCES GIVEN IN SEWER LINE DATA TABLES ARE FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. BEARINGS AND DISTANCES FOR STORM DRAIN DATA ARE FROM CENTER OF PIPE AT INSIDE FACE OF STRUCTURE.

5. THESE PLANS, DRAWINGS U-3 & U-6, ARE FOR THE DISPOSITION, RELOCATION, ABANDONMENT, AND CONSTRUCTION OF WATER, SEWER, AND STORM DRAIN FACILITIES ONLY. THE DISPOSITION, RELOCATION, ABANDONMENT, AND CONSTRUCTION OF OTHER FACILITIES SUCH AS ELECTRIC, GAS, TELEPHONE, CABLE, ETC., ARE NOT NECESSARILY SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING OTHER UTILITY WORK WITH THE WORK SHOWN ON THESE DRAWINGS.

6. TRENCH RESURFACING SHALL CONFORM TO SDSD , SDG 107, & SDG 108. ALSO SEE SPECIFICATIONS.

WATER MAIN RETIREMENT TABLE FOR DWG U-6

SIZE	TYPE	LENGTH	YEAR INSTALLED	LOCATION
12"	ACP	140'	1970	SAN DIEGO AVE
16"	CI	440'	1967 LINED 16" LINE	TAYLOR

LOCATION MAP

SEE DWG W-5, SHT 3

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING DEPT.
APPROVED
Carlos Quiroz Date 4-28-97

NO.	DATE	REVISIONS	BY	CHK	APPD
1	4-97	CLOUD ADDED AS-BUILT			

FRASER ENGINEERING, inc.

DESIGNED BY	DATE
W.S.	03/23/95
DRAWN BY	
W.S.B.	03/23/95
CHECKED BY	
D.A.W.	03/23/95
MTDB PRJ.ENG.	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
LEGEND AND NOTES

SCALE	NONE
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	SHEET NO.
U-1	89

26877-15-0

PLAN DRAWING NO.	PIPE DESIGNATION	PROFILE NO./DWG.	DESCRIPTION
			SEWER
U-5, U-6	① ② ③ ④ ⑤ ⑪	S-1/SS-1	REMOVE AND REPLACE 8" SEWER IN CONGRESS STREET, RECONNECT ALL LATERALS TO NEW 8" PVC. CONSTRUCT 12" PVC SEWER IN NEW CONGRESS STREET.
U-5	⑥	S-2/SS-1	REMOVE AND REPLACE 8" SEWER IN SMITH STREET, RECONNECT ALL LATERALS TO NEW 8" PVC.
U-5	⑧ ⑨ ⑩	S-3/SS-1	REMOVE AND REPLACE 8" SEWER IN WALLACE STREET, RECONNECT LATERALS OF EXIST. 6" AND 8" SEWER TO NEW 8" PVC.
U-5	⑫	S-4/SS-1	CONSTRUCT SAN DIEGO TO CONGRESS SEWER.
U-6	⑬	S-5/SS-2	CONSTRUCT 8" SEWER IN TAYLOR ST.

				8" PVC	12" PVC	5'-0" MH	LATERALS ALL SIZES	24" STL CASING	JACKED 24" STL CASING		
			TOTAL	813'	799'	10	470'	51'	60'		

			WATER	30" STL CASING OPEN CUT	30" STL CASING JACKED	16" GV W/BYPASS	24" BUTTERFLY VALVE	8" GATE VALVE	16" PVC (235 PSI)	8" PVC	16"x8" TEE	8"x8" TEE	3 OUTLET FIRE HYDRANT	12" PVC	12" GATE VALVE	COMPLETE WATER SERVICES 2" OR LESS	42" SPLIT STL CASING	2" BD PER SDW-105
U-5	⑭ ⑮ ⑯ ⑰ ⑱	W-1/W-2 W-1A/W-2	CONSTRUCT 12" WATER LINE IN CONGRESS ST CONSTRUCT 12" WATER LINE IN WALLACE											310'	2			1
U-5, U-6	② ③ ⑤ ⑦ ⑧ ④ ⑧	W-2/W-1 W-2A/W-1	CONST. 12" WATER LINE IN CONGRESS ST CONST. 12" WATER LINE IN SAN DIEGO AVENUE									2		250'	3	4		1
U-5			CONST. FIRE HYDRANT ASSEMBLY 9+83 CONGRESS ST										1					
U-6			CONST. FIRE HYDRANT ASSEMBLY 18+04 CONGRESS ST 13+27 TAYLOR ST				PURCHASED BUT NOT INSTALLED											
U-6	⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮	W-4, W-5, W6/W-1 W-3/W-1	CONSTRUCT 16" PVC AND 12" PVC WATERLINE IN TAYLOR CONSTRUCT 42" SPLIT STEEL CASING ON EXIST 24" WATER MAIN INSTALL 24" BUTTERFLY VALVES	65'	66'	3	1	1	487'	20'	1	1	1	62'	1	1	56'	1
			TOTAL	65'	66'	3	1	1	487'	20'	1	1	4	620'	6	5	56'	3

			STORM DRAIN	18"RCP D-2000	48"RCP D-3000	24"RCP D-2000	24"RCP D-3000	TYPE "A" C.I. (U.T. CONC)	TYPE "B" INLET (U.T. CONC)	TYPE "C" INLET (U.T. CONC)	TYPE "D" C.B. (U.T. CONC)	MISC. IRON & STEEL LBS	MODIFY EXIST CLEANOUT	MODIFY EXIST INLET	JUNCTION STRUCTURE (U.T. CONC)
U-6	INLET	SD-1/D-1	13+14 TAYLOR STREET					4.00				330			
U-6	INLET, EXIST CLEANOUTS	SD-2/D-1	14+38 TAYLOR STREET, MODIFY/RECONSTRUCT EXIST CLEANOUT AT 14+80 AND 15+52 TAYLOR STREET					4.00				660	2	1	
U-6, D-5	①	SD-3/D-1	TAYLOR STREET & JUAN	12"				4.45				330		2	
U-6	②	SD-6/D-1	TAYLOR STREET & PACIFIC HWY.	80'				3.60				330			
U-6	③	SD-5/D-2	10+90 TAYLOR STREET 60' LT		66.5'							785			42"
U-6	④	SD-6/D-2	10+80 TAYLOR STREET 80' LT				56'								
U-6	⑤ ⑥ ⑦	SD-7/D-2	10+80 TAYLOR STREET 130' LT				73'	2.70				780			42"
			TOTAL	92'	66.5'		129'	18.70				3550	2	3	84"

*FINAL PAY ITEM MINOR CONCRETE (MINOR STRUCTURES)

AS BUILT
Contract No. LRT-552
Date 4-4-97

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING DEPT.
RECOMMENDED FOR APPROVAL
APPROVED

DESCRIPTION	BY	APPROVED	DATE
As-Built	Powell M.H.		

ENGINEER OF WORK: MEEKER
SURVEYOR: MARTIN HALL
CITY

26877-16-D

NO.	DATE	REVISIONS	BY	CHK
1	4-98	ECO # ADD STORM DRAIN ITEMS		

FRASER ENGINEERING, INC.

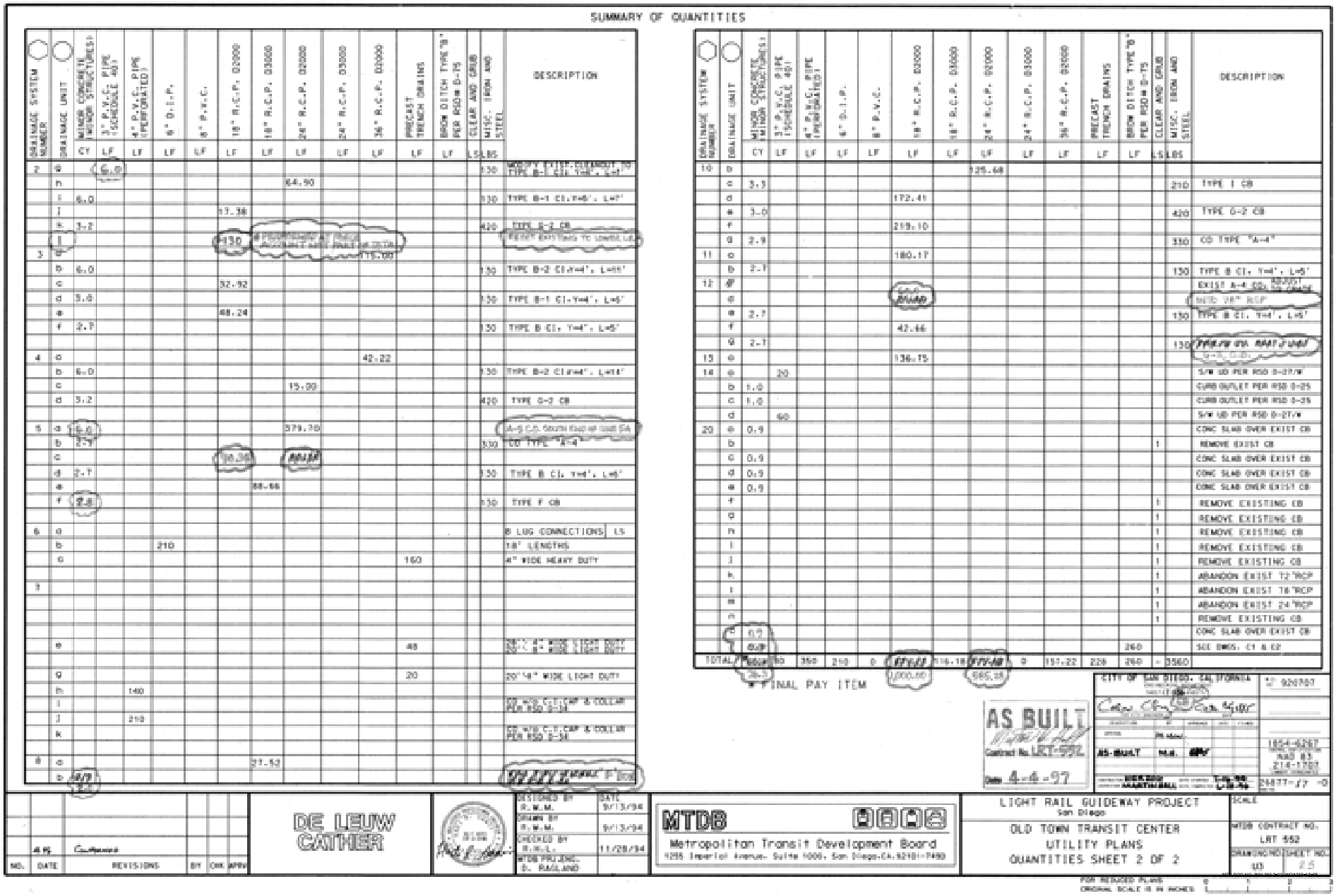
		DATE
DESIGNED BY	M.A.	03/23/95
DRAWN BY	M.S.B.	03/23/95
CHECKED BY	D.W.	03/23/95
MTDB PROJ. ENG.		

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
QUANTITIES, SHT 1 OF 2

SCALE
MTDB CONTRACT NO. LRT 552
DRAWING NO. U-2
SHEET NO. 2 of

MTS DOC NO. PWL355A5-22, WOA355-AE-75



SUMMARY OF QUANTITIES

DRAINAGE SYSTEM NUMBER	DRAINAGE UNIT	MINOR CONCRETE (MINOR STRUCTURES)	3" P.V.C. PIPE (SCHEDULE 40)	4" P.V.C. PIPE (PERFORATED)	6" D.I.P.	8" P.V.C.	18" R.C.P. D2000	18" R.C.P. D3000	24" R.C.P. D2000	24" R.C.P. D3000	36" R.C.P. D2000	PRECAST TRENCH DRAINS	BROW DITCH TYPE "B" PER RSD M-75	CLEAR AND GRUB	MISC. IRON AND STEEL	DESCRIPTION
		CY	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LS	LBS	
2	g		6.0												130	MODIFY EXIST. CLEANOUT TO TYPE B-1 CI. Y=4', L=4'
	h								64.90							
	i	6.0													130	TYPE B-1 CI. Y=6', L=7'
	j						17.38									
	k	3.2													420	TYPE G-2 CB
	l						13.0									REMOVE EXISTING TO LOWER LEG
3	a											115.00				
	b	6.0													130	TYPE B-2 CI. Y=4', L=15'
	c						32.92									
	d	5.0													130	TYPE B-1 CI. Y=4', L=6'
	e						48.24									
	f	2.7													130	TYPE B CI. Y=4', L=5'
4	a										42.22					
	b	6.0													130	TYPE B-2 CI.Y=4', L=14'
	c								15.00							
	d	3.2													420	TYPE G-2 CB
5	a	6.0							379.70							A-5 C.O. SOUTH END OF 108' DR.
	b	3.9					16.38		80.00						330	CO TYPE "A-4"
	c															
	d	2.7													130	TYPE B CI. Y=4', L=5'
	e							88.66								
	f	2.8													130	TYPE F CB
6	a															8 LUG CONNECTIONS LS
	b				210											18' LENGTHS
	c											160				4" WIDE HEAVY DUTY
7																
	e											45				30" W. 4" WIDE LIGHT DUTY 30" W. 8" WIDE LIGHT DUTY
	g											20				20' W. 4" WIDE LIGHT DUTY
	h			140												20' W. C.I. CAP & COLLAR PER RSD D-31
	i															
	j			210												20' W. C.I. CAP & COLLAR PER RSD D-31
	k															
8	a							27.52								
	b	4.7														REMOVE EXIST 8' BOX

DRAINAGE SYSTEM NUMBER	DRAINAGE UNIT	MINOR CONCRETE (MINOR STRUCTURES)	3" P.V.C. PIPE (SCHEDULE 40)	4" P.V.C. PIPE (PERFORATED)	6" D.I.P.	8" P.V.C.	18" R.C.P. D2000	18" R.C.P. D3000	24" R.C.P. D2000	24" R.C.P. D3000	36" R.C.P. D2000	PRECAST TRENCH DRAINS	BROW DITCH TYPE "B" PER RSD M-75	CLEAR AND GRUB	MISC. IRON AND STEEL	DESCRIPTION
		CY	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LS	LBS	
10	b								125.68							
	c	3.1													210	TYPE I CB
	d						172.41									
	e	3.0													420	TYPE G-2 CB
	f						219.10									
	g	2.9													330	CO TYPE "A-4"
11	a						180.17									
	b	3.1													130	TYPE B CI. Y=4', L=5'
12	f															EXIST A-4 CO. REMOVE
	g															REMOVE 24" RCP
	e	2.7													130	TYPE B CI. Y=4', L=5'
	f						42.66									
	g	2.1													130	TYPE B CI. Y=4', L=5'
13	a						136.75									G-5, C.O.
14	a		20													S/W UD PER RSD D-27/W
	b	1.0														CURB OUTLET PER RSD D-25
	c	1.0														CURB OUTLET PER RSD D-25
	d		60													S/W UD PER RSD D-27/W
20	a	0.9														CONC SLAB OVER EXIST CB
	b													1		REMOVE EXIST CB
	c	0.9														CONC SLAB OVER EXIST CB
	d	0.9														CONC SLAB OVER EXIST CB
	e	0.9														CONC SLAB OVER EXIST CB
	f													1		REMOVE EXISTING CB
	g													1		REMOVE EXISTING CB
	h													1		REMOVE EXISTING CB
	i													1		REMOVE EXISTING CB
	j													1		REMOVE EXISTING CB
	k													1		ABANDON EXIST 12"RCP
	l													1		ABANDON EXIST 18"RCP
	m													1		ABANDON EXIST 24"RCP
	n													1		REMOVE EXISTING CB
	c	0.2														CONC SLAB OVER EXIST CB
		SUB											260			SEE DWG. C1 & C2
TOTAL		38.3	30	350	210	0	1000.00	116.18	696.38	0	157.22	220	260	-	3560	

* FINAL PAY ITEM

AS BUILT
Contract No. LRT-552
Date 4-4-97

CITY OF SAN DIEGO, CALIFORNIA — DRAWING NO. 926787

NO.	DATE	REVISIONS	BY	CHK	APPD
		AS BUILT			

DE LEUW CATHER

		DATE
DESIGNED BY	R.W.M.	9/13/94
DRAWN BY	R.W.M.	9/13/94
CHECKED BY	R.W.L.	11/28/94
MTDB PROJ. MGR.	D. RAILAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
QUANTITIES SHEET 2 OF 2

1824-6287 NAD 83 214-1702 26877-77 -0

SCALE
MTDB CONTRACT NO. LRT 552
DRAWING NO. U3 SHEET NO. 25

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

DRAINAGE SYSTEM NUMBER	DRAINAGE UNIT	LOCATION OR BEARING
2	g	CONGRESS ST. STA 12+80.79 LT 20.25' SEE DWG. C1
	h	S 73°50'08" E
	i	CONGRESS ST. STA 11+95.00 RT 25.77' SEE DWG. C1
	j	S 72°12'46" E
	k	N 1855460.55 E 6270039.10 N 1855458.91 E 6270034.37
3	a	DELTA=13°10'40", R=500.00', CC @ N 1855824.61 E 6269429.94, CHORD BRG.=N 22°01'23"E
	b	CONGRESS ST. STA 14+48.95 LT 20.25' SEE DWG. C1
	c	N 43°12'02"W
	d	N 1855720.01 E 6269886.77 N 1855715.32 E 6269883.61
	e	S 69°20'05" W
	f	N 1855700.89 E 6269853.67 N 1855698.36 E 6269838.72
4	a	N 84°22'57" E
	b	CONGRESS ST. STA 14+48.99 RT 21.97' SEE DWG. C1
	c	S 47°11'06" E
	d	N 1855684.91 E 6269871.50 N 1855683.89 E 6269972.02
5	a	N 18°20'52" W
	b	N 1855909.15 E 6269887.04 N 1855914.19 E 6269885.60
	c	N 59°37'28"E
	d	CONGRESS ST. STA 17+73.00 LT 32.25' SEE DWG. C2
	e	S 87°19'48"E
	f	N 1855955.26 E 6269858.85 N 1855956.21 E 6269862.61
6	g	SPACING @ 75' ON CENTER PER DWG. U7
	h	SPACING @ 75' ON CENTER PER DWG. U7
	i	SPACING @ 75' ON CENTER PER DWG. U7
7	a	N 70°53'35" E
	b	N 1855542.27 E 6269836.51 N 1855537.18 E 6269836.04
	c	S 28°48'55"E
		N 1855527.13 E 6269843.82 PI
	d	S 13°47'58" E
	e	SEE DWGS. ST6, D5, & U7
	f	DELTA=24°24'57", R=100', CC @ N 1855444.93 E 6269643.32, CHORD BRG.=S 20°36'07"E
	g	SEE DWGS. ST6 & U-7
	h	SEE DWGS. D5 & U-7
	i	SEE DWGS. D5 & U-7
	j	SEE DWGS. D5 & U-7
	k	SEE DWGS. D5 & U-7
8	a	N 50°02'16" E
	b	N 1855179.38 E 6269833.04

DRAINAGE SYSTEM NUMBER	DRAINAGE UNIT	LOCATION OR BEARING
10	b	DELTA=22°30'10", R=520', CC @ N 1855281.28 E 6269897.42, CHORD BRG.=S 37°31'04"W
	c	N 1855420.44 E 6269609.36 N 1855424.43 E 6269612.39
	d	S 15°55'55" E
	e	N 1855250.72 E 6269657.45 N1855255.66 E 6269660.20
	f	S 15°55'55" E
	g	N 1855036.18 E 6269718.71 N 1855041.14 E 6269721.45
11	a	S 70°03'56" W
	b	N 1855357.55 E 6269434.98 N 1855362.10 E 6269438.35
12	c	SEE DWG U-7, NOTE 4
	d	S 83°01'06" E
	e	N 1855787.41 E 6269589.39 N 1855792.44 E 6269591.97
	f	S 80°45'55" E
	g	N 1855781.78 E 6269635.51 N 1855786.82 E 6269637.89
13	a	N 36°26'13" W
14	a	SEE DWG U-7
	b	
	c	
	d	
20	a	
	b	
	c	
	d	
	e	
	f	
	g	
	h	
	i	
	j	
	k	
	l	
	m	
	n	
	o	SEE DWG U-7

AS BUILT
Contract No. 1255-5266
Date 5-30-97

NOTES:

1. FOR PLAN SEE DWG. U7.
2. ALL COORDINATES ARE AT OPPOSING CORNERS OF THE INSIDE FACE OF STRUCTURES.
3. STATION AND OFFSETS ARE TO CENTERLINE OF STRUCTURES AT INSIDE FACE OF BOX.

CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT M.M.
HERBERT MARTIN HALL R.C.E. 36486 5-30-97
920T07
854-626T
NAD 83
214-170T
24677-7B-D

NO.	DATE	REVISIONS	BY	CHK	APPD
4	9/13/94	Per Addendum			

DE LEUW CATHER

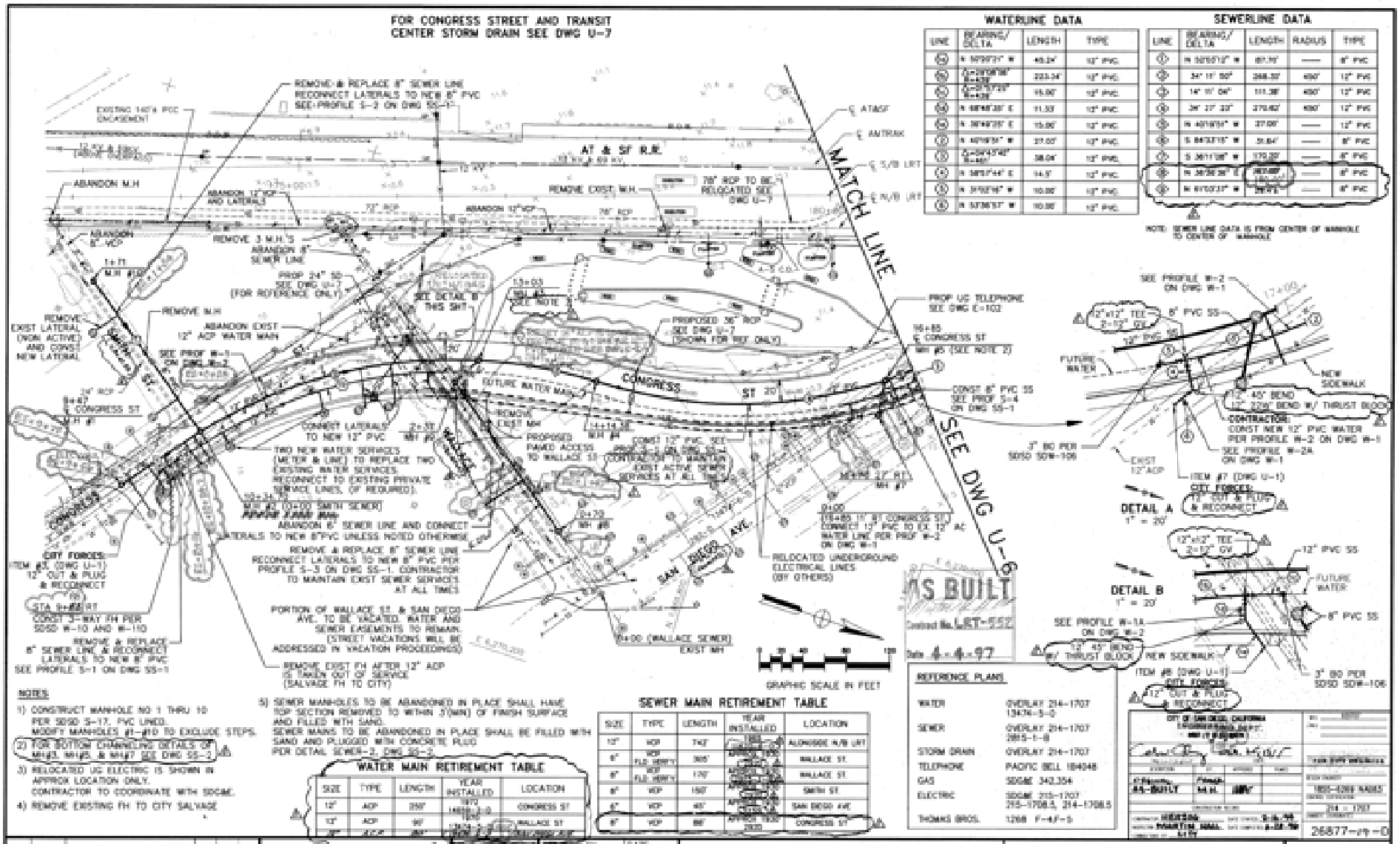
DESIGNED BY	R. M. M.	DATE 9/13/94
DRAWN BY	R. M. M.	9/13/94
CHECKED BY	R. H. L.	12/07/94
MTDB PROJ. ENG.	D. RAGLAND	

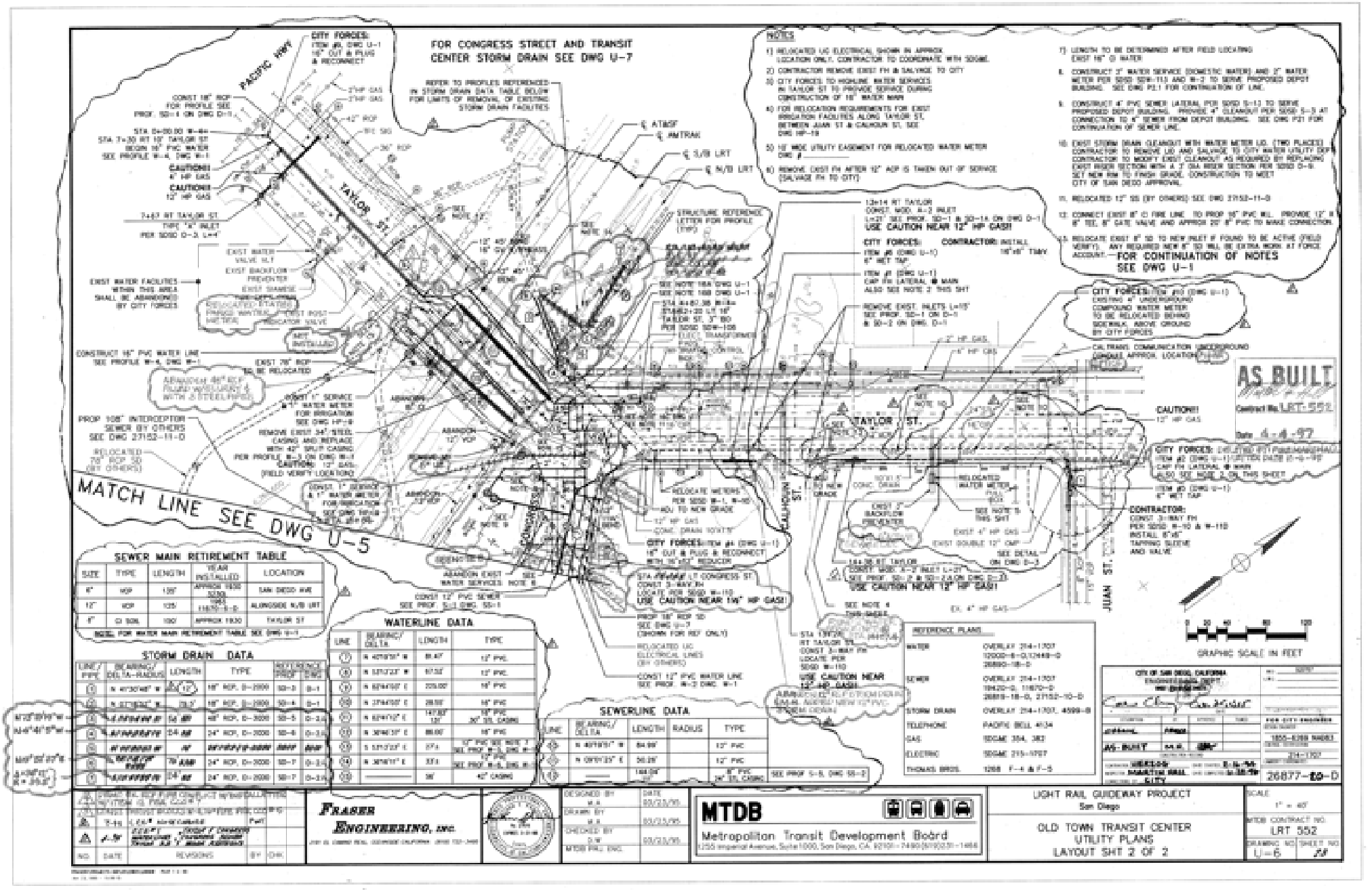
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

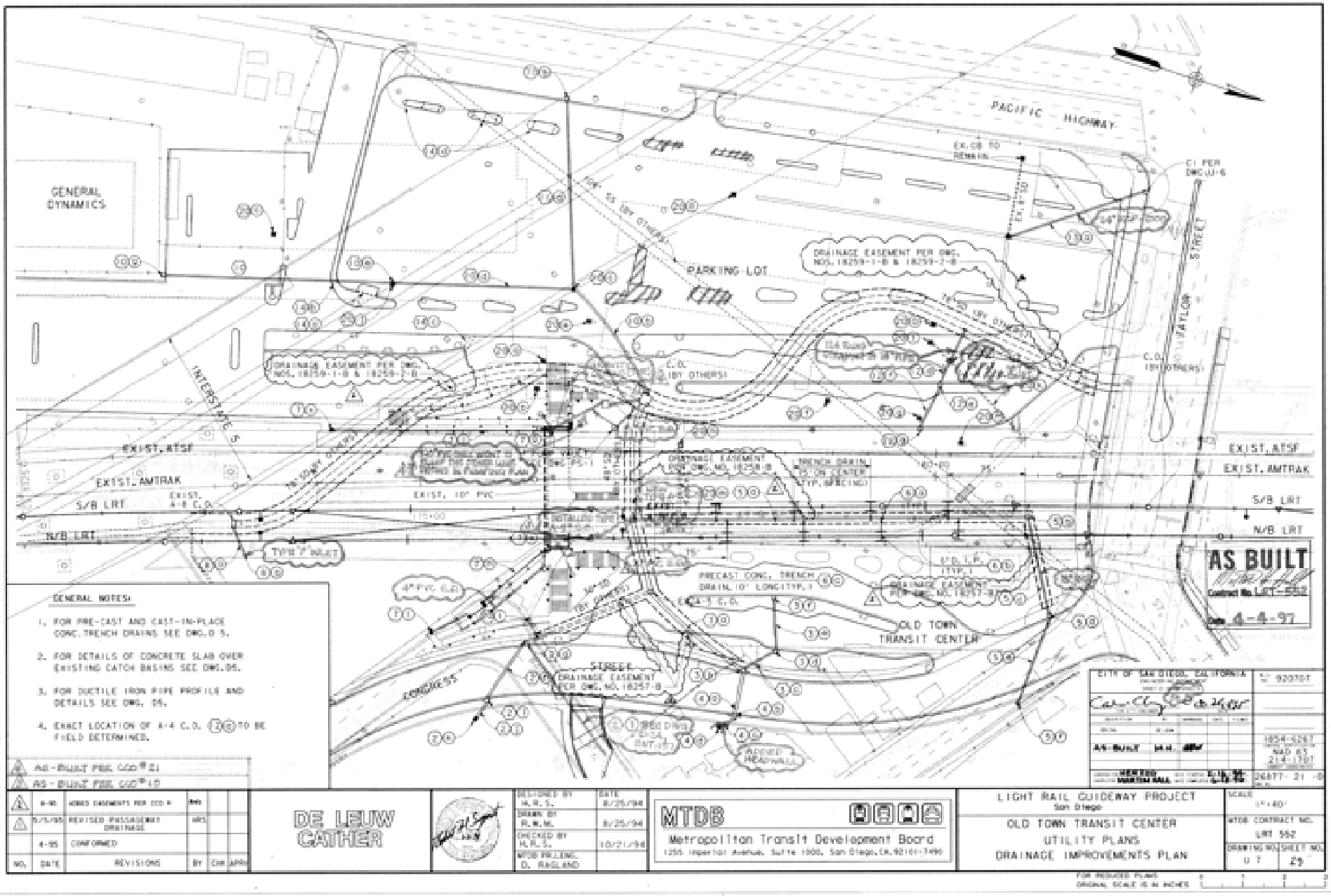
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
DRAINAGE ALIGNMENT DATA

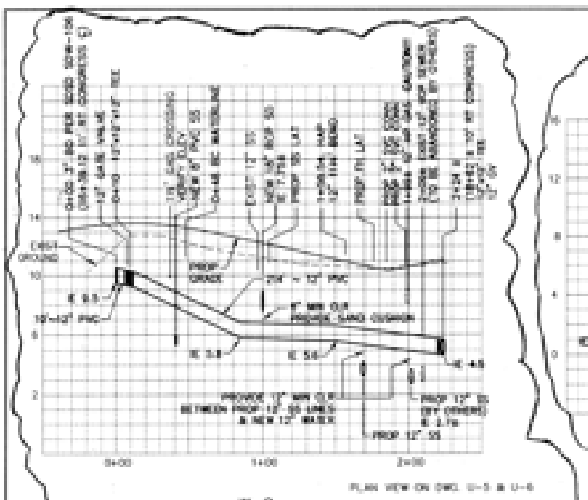
SCALE
MTDB CONTRACT NO. LRT 552
DRAWING NO/SHEET NO. U4 20

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3

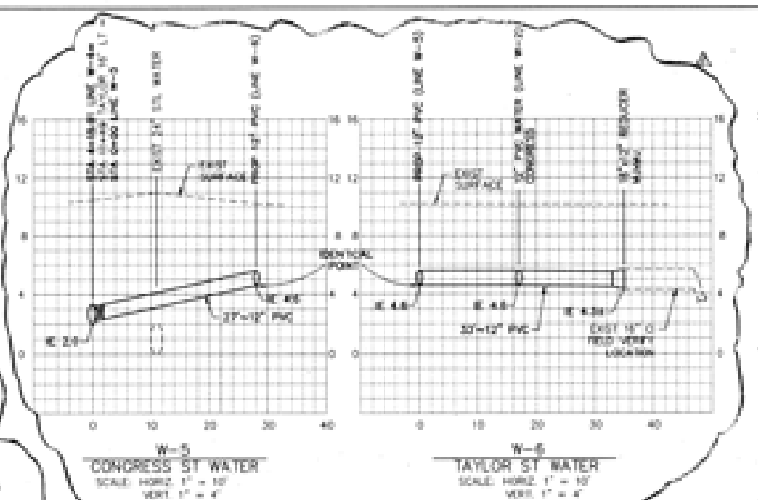

FOR CONGRESS STREET AND TRANSIT CENTER STORM DRAIN SEE DWG U-7
WATERLINE DATA
SEWERLINE DATA
MATCH LINE
SEE DWG U-6
CONGRESS ST
AT & SF R.R.
REMOVE & REPLACE 8" SEWER LINE RECONNECT LATERALS TO NEW 8" PVC SEE PROFILE S-3 ON DWG SS-1
ABANDON M.H
REMOVE 3 M.H.'S ABANDON 8" SEWER LINE
REMOVE EXIST LATERAL (NON ACTIVE) AND CONST NEW LATERAL
REMOVE M.H
ABANDON EXIST 12" ACP WATER MAIN
CONNECT LATERALS TO NEW 12" PVC
TWO NEW WATER SERVICES (METER & LINE) TO REPLACE TWO EXISTING WATER SERVICES. RECONNECT TO EXISTING PRIVATE SERVICE LINES, (IF REQUIRED).
ABANDON 8" SEWER LINE AND CONNECT LATERALS TO NEW 8"PVC UNLESS NOTED OTHERWISE
REMOVE & REPLACE 8" SEWER LINE RECONNECT LATERALS TO NEW 8" PVC PER PROFILE S-3 ON DWG SS-1. CONTRACTOR TO MAINTAIN EXIST SEWER SERVICES AT ALL TIMES
PORTION OF WALLACE ST. & SAN DIEGO AVE. TO BE VACATED. WATER AND SEWER EASEMENTS TO REMAIN. (STREET VACATIONS WILL BE ADDRESSED IN VACATION PROCEEDINGS)
REMOVE EXIST FH AFTER 12" ACP IS TAKEN OUT OF SERVICE (SALVAGE FH TO CITY)
CITY FORCES: ITEM #3 (DWG U-1) 12" CUT & PLUG & RECONNECT
STA 9+88.81 RT CONST 3-WAY FH PER SDSD W-10 AND W-110
REMOVE & REPLACE 8" SEWER LINE & RECONNECT LATERALS TO NEW 8" PVC SEE PROFILE S-1 ON DWG SS-1
PROPOSED PAVED ACCESS TO WALLACE ST
CONST 12" PVC SEWER (CONTRACTOR TO MAINTAIN EXIST ACTIVE SEWER SERVICES AT ALL TIMES)
RELOCATED UNDERGROUND ELECTRICAL LINES (BY OTHERS)
PROPOSED 36" RCP SEE DWG U-7 (SHOWN FOR REF ONLY)
PROP UG TELEPHONE SEE DWG E-102
CONST 8" PVC SS SEE PROF S-4 ON DWG SS-1
7" BO PER SDSD SDW-106
SEE PROFILE W-2 ON DWG W-1
SEE PROFILE W-2A ON DWG W-1
NEW SIDEWALK
45° BEND 12" 220# BEND W/ THRUST BLOCK
CONTRACTOR: CONST NEW 12" PVC WATER PER PROFILE W-2 ON DWG W-1
EXIST 12" ACP
ITEM #7 (DWG U-1) CITY FORCES: 12" CUT & PLUG & RECONNECT
DETAIL A 1" = 20'
DETAIL B 1" = 20'
12"x12" TEE 2-12" GV
12" PVC SS
8" PVC SS
FUTURE WATER
SEE PROFILE W-1A ON DWG W-2
12" 45° BEND W/ THRUST BLOCK
ITEM #8 (DWG U-1) CITY FORCES: 12" CUT & PLUG & RECONNECT
AS BUILT
Contract No. LRT-552
Date 4-4-97
GRAPHIC SCALE IN FEET
NOTES:
1) CONSTRUCT MANHOLE NO 1 THRU 10 PER SDSD S-17. PVC LINED. MODIFY MANHOLES #1-#10 TO EXCLUDE STEPS.
2) FOR BOTTOM CHANNELING DETAILS OF MH#3, MH#5, & MH#7 SEE DWG SS-2
3) RELOCATED UG ELECTRIC IS SHOWN IN APPROX LOCATION ONLY. CONTRACTOR TO COORDINATE WITH SDG&E.
4) REMOVE EXISTING FH TO CITY SALVAGE
5) SEWER MANHOLES TO BE ABANDONED IN PLACE SHALL HAVE TOP SECTION REMOVED TO WITHIN 3'(MIN) OF FINISH SURFACE AND FILLED WITH SAND. SEWER MAINS TO BE ABANDONED IN PLACE SHALL BE FILLED WITH SAND AND PLUGGED WITH CONCRETE PLUG PER DETAIL SEWER-2, DWG SD-2.
WATER MAIN RETIREMENT TABLE
SEWER MAIN RETIREMENT TABLE
REFERENCE PLANS
WATER OVERLAY 214-1707 13476-5-D
SEWER OVERLAY 214-1707 2815-1-B
STORM DRAIN OVERLAY 214-1707
TELEPHONE PACIFIC BELL 184048
GAS SDG&E 342.354
ELECTRIC SDG&E 215-1707 215-1708.5, 214-1708.5
THOMAS BROS. 1268 F-4,F-5
AS-BUILT
M.H. 88'
FRASER ENGINEERING, inc.
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
LAYOUT SHT 1 OF 2
MTDB CONTRACT NO. LRT 552
DRAWING NO. U-5
SHEET NO. 27
26877-19-0


FOR CONGRESS STREET AND TRANSIT CENTER STORM DRAIN SEE DWG U-7
NOTES
MATCH LINE SEE DWG U-5
TAYLOR ST.
PACIFIC HWY
CALHOUN ST.
JUAN ST.
AS BUILT
Contract No. LRT-552
Date 4-4-97
SEWER MAIN RETIREMENT TABLE
STORM DRAIN DATA
WATERLINE DATA
SEWERLINE DATA
REFERENCE PLANS
GRAPHIC SCALE IN FEET
FRASER ENGINEERING, inc.
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
LAYOUT SHT 2 OF 2
LRT 552
U-6
26877-69-D


PACIFIC HIGHWAY
GENERAL DYNAMICS
PARKING LOT
TAYLOR STREET
INTERSTATE 5
EXIST. ATSF
EXIST. AMTRAK
S/B LRT
N/B LRT
EXIST. 10" PVC
TYPE 7 INLET
DRAINAGE EASEMENT PER ORD. NOS. 18259-1-B & 18259-2-B
DRAINAGE EASEMENT PER ORD. NO. 18258-B
DRAINAGE EASEMENT PER ORD. NO. 18257-B
TRENCH DRAIN 15' ON CENTER (TYP. SPEC'ING)
PRECAST CONC. TRENCH DRAIN, 10' LONG (TYP.)
OLD TOWN TRANSIT CENTER
STREET
CONGRESS
AS BUILT
Contract No. LRT-552
Date 4-4-97
GENERAL NOTES:
1. FOR PRE-CAST AND CAST-IN-PLACE CONC. TRENCH DRAINS SEE DWG. D 5.
2. FOR DETAILS OF CONCRETE SLAB OVER EXISTING CATCH BASINS SEE DWG. D5.
3. FOR DUCTILE IRON PIPE PROFILE AND DETAILS SEE DWG. D5.
4. EXACT LOCATION OF A-4 C.O. TO BE FIELD DETERMINED.
AS-BUILT PER CCO #21
AS-BUILT PER CCO #10
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-3490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
DRAINAGE IMPROVEMENTS PLAN
MTDB CONTRACT NO. LRT 552
DRAWING NO. U T
SHEET NO. 29

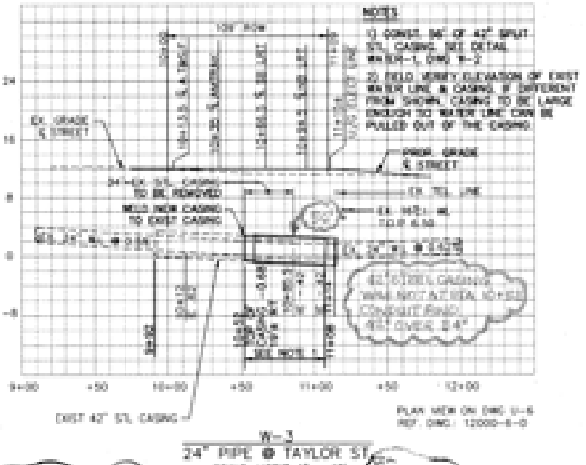


W-2
12" WATER LINE ON CONGRESS
SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

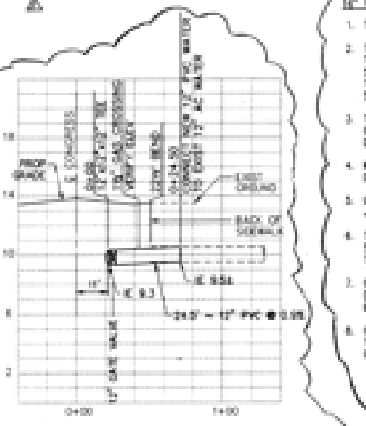


W-5
CONGRESS ST WATER
SCALE: HORIZ. 1" = 10'
VERT. 1" = 4'

W-6
TAYLOR ST WATER
SCALE: HORIZ. 1" = 10'
VERT. 1" = 4'



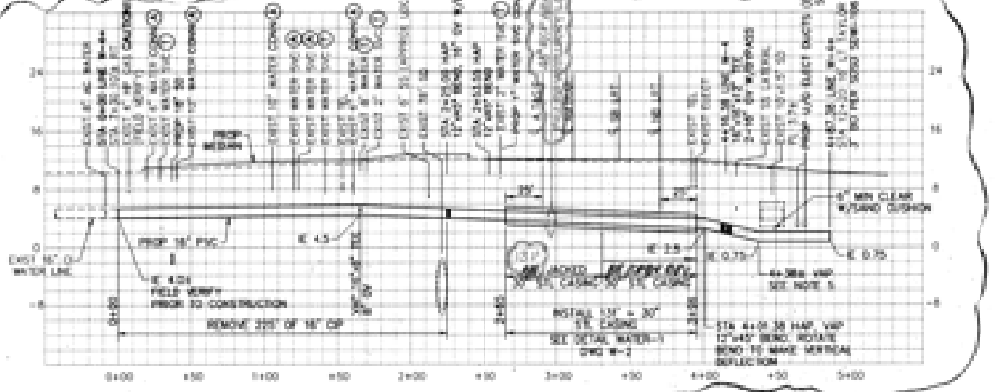
W-3
24" PIPE @ TAYLOR ST.
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'



W-2A
12" WATER LINE CONGRESS TO SAN DIEGO AVE.
SCALE: HORIZ. 1" = 20'
VERT. 1" = 4'

12" WATER LINE (LINE W-4) NOTES:

1. THE 16" PVC LINE SHALL BE AWWA C-900, 235 PSI.
2. THE 16" PVC LINE SHALL BE THRUST RESTRAINED UTILIZING CONCRETE THRUST BLOCKS/RESTRAINTS PER DETAIL ON DWG W-3. (NO SEPARATE PAY) THE 16" WATER LINE IN THE 30" STL CASING SHALL BE THRUST RESTRAINED WITH MECHANICAL RESTRAINING DEVICES PER SPECIAL PROVISION SECTION 10-7.19.
3. THE 16" PVC LINE INSTALLATION MUST MEET THE APPROVAL OF THE CITY OF SAN DIEGO INCLUDING ANY ADDITIONAL DESIGN/CONSTRUCTION REQUIREMENTS NOT INDICATED.
4. MAXIMUM ALLOWABLE DEFLECTION AT ANY JOINT SHALL BE 1.5 DEGREES.
5. UTILIZED A 16" DI SLEEVE (MJ X MJ), LONG LENGTH, W/RESTRAINED JOINTS TO MAKE VERTICAL DEFLECTION AT THIS LOCATION.
6. THE CITY SHALL HIGHLINE AS REQUIRED TO MAINTAIN WATER SERVICES ALONG TAYLOR. CONTRACTOR TO COORDINATE WORK WITH THE CITY OF SAN DIEGO AS REQUIRED.
7. CONTRACTOR TO COORDINATE CONSTRUCTION OF THE 16" WATER (VERTICAL ALIGNMENT) WITH THE PROP I.E. DUCT WORK THAT IS DONE BY OTHERS.
8. CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED 16" WATER LINE PRIOR TO CONSTRUCTION OF THE 16" WATER LINE.



W-4
16" PIPE @ TAYLOR ST.
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

VAP = VERTICAL ANGLE POINT
HAP = HORIZONTAL ANGLE POINT

(A) - ABANDON EXIST WATER SERVICE OR CONNECTION. DO NOT CONNECT TO NEW 16" PVC WATER LINE.

(T) - TRANSFER OR CONNECT EXIST WATER SERVICE TO NEW 16" PVC WATER LINE

PLAN VIEW ON DWG W-5

AS BUILT
Prepared by: [illegible]
Contract No. LRT-552
Date 4-4-97

NO.	DATE	REVISIONS	BY	CHK
1	4-15-97	AS-BUILT / CHANGES / ADDITIONS		

FRASER ENGINEERING, INC.

DESIGNED BY	DATE
M.A.	03/23/95
DRAWN BY	
M.S.S.	03/23/95
CHECKED BY	
D.R.	03/23/95
MTDB PROJ. ENG.	

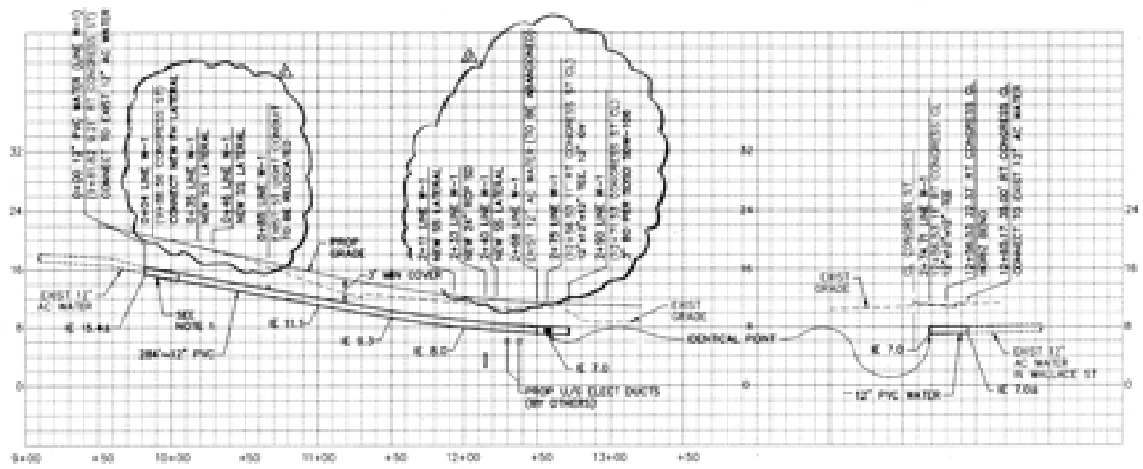
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
WATER PROFILES, SHT 1 OF 2

SCALE	AS SHOWN
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	W-1
SHEET NO.	

26877-22-D

MTS DOC NO. PWL355/A02, WOA355-WE45



NOTE:
1) REMOVE THE PORTION OF PIPE WHICH FALLS IN THIS TRENCH

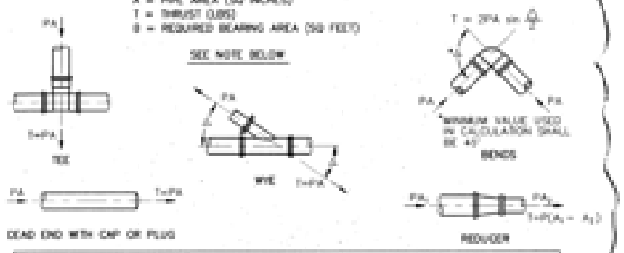
W-1
CONGRESS ST WATER
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

PLAN VIEW ON DWG. U-5 & U-6
(DWG. NOT 14650-)-D

W-1A
12" PVC/ACP TIE-IN
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

NOTES:

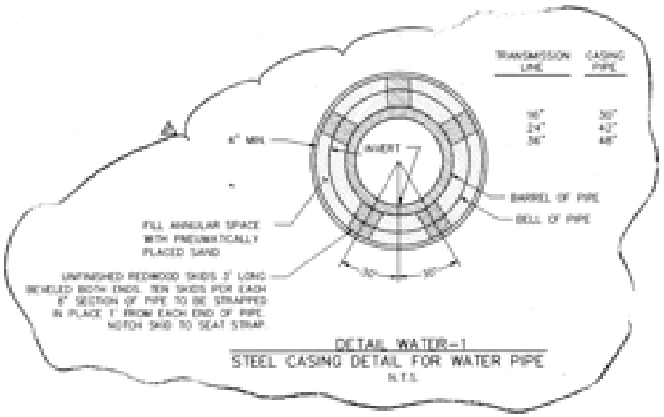
1. THRUST BLOCKS SHALL BE INSTALLED IN ACCORDANCE WITH SD W-17 EXCEPT ALL CONCRETE SHALL BE 560-C-3250 AND BEARING AREAS SHALL BE COMPUTED PER NOTE 9, AS SHOWN IN PLACE OF SD W-10.
2. THRUST ANCHOR FOR REDUCERS (4" THROUGH 16" LINES) SHALL BE IN ACCORDANCE WITH SD W-22 UTILIZING 560-C-3250 CONCRETE AND BEARING AREAS REQUIRED COMPUTED PER NOTE 9.
3. CONCRETE ANCHOR BLOCKS FOR VERTICAL BENDS, USED ONLY WHEN APPROVED, SHALL BE PER PER SD W-20 UTILIZING 560-C-3250 CONCRETE. VOLUME OF CONCRETE SHALL BE BASED ON (1.5 x PIPE PRESSURE CLASS) PSI PRESSURE.
4. CONCRETE VALVE BLOCKING SHALL BE IN ACCORDANCE WITH SD W-18, TYPE A UTILIZING 560-C-3250 CONCRETE.
5. FITTINGS TO RECEIVE PETROLATUM WAX TAPE COATING SYSTEM SHALL BE WRAPPED PRIOR TO POURING THRUST BLOCK.
6. THRUST BLOCKS SHALL BE POURED SOLIDLY AGAINST FIRM UNDISTURBED SOIL.
7. CONCRETE SHALL NOT EXTEND BEYOND THE END OF PIPE FITTING WITHOUT APPROVAL OF MTDB'S REPRESENTATIVE.
8. PASSIVE SOIL PRESSURE
   THRUST BLOCK SIZES SHALL BE BASED ON A UNIT PASSIVE SOIL PRESSURE OF 300 POUNDS PER SQUARE FOOT (PSF) PER FOOT OF DEPTH WITH THE FIRST FOOT OF SOIL IGNORED. DEPTH SHALL BE MEASURED FROM TOP OF GRADE TO CENTER OF PIPE.
   THRUST BLOCKS SHALL BE POURED AGAINST FIRM UNDISTURBED SOIL.
   IF LOOSE OR PREVIOUSLY BACKFILLED SOILS ARE ENCOUNTERED THE CONTRACTOR SHALL NOTIFY MTDB'S REPRESENTATIVE.
9. CONCRETE THRUST BLOCK BEARING AREA CALCULATIONS FOR VARIOUS FITTINGS ARE CALCULATED AS FOLLOWS:
   WHERE: P = PRESSURE (1.5 x PIPE PRESSURE CLASS)
   FOR PRESSURE CLASS 150 PIPE: P = 225 PSI
   FOR PRESSURE CLASS 200 PIPE: P = 300 PSI
   A = PIPE AREA (SQ INCHES)
   T = THRUST (LBS)
   B = REQUIRED BEARING AREA (SQ FEET)



$$B = \frac{\text{THRUST (DETERMINED BY FORMULAS ABOVE)}}{\text{PASSIVE SOIL PRESSURE (DETERMINED FROM NOTE 8)}} = \text{REQUIRED BEARING AREA OF THRUST BLOCK IN SQ FEET}$$

CONCRETE THRUST
RESTRAINTS/BLOCKS DETAIL
NTS

NOTE:
THRUST BLOCK BEARING AREAS FOR THE 16" PVC WATER LINE SHALL BE BASED ON PRESSURE CLASS 200 PIPE. USE CLASS 150 FOR ALL OTHER LINES.



DETAIL WATER-1
STEEL CASING DETAIL FOR WATER PIPE
N.T.S.

AS BUILT
Contract No. LRT-552
Date 4-5-97

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING DEPT.
WATER DIVISION
APPROVED
DATE
FOR CITY ENGINEER
DESIGN
DRAWN PHILIP
AS-BUILT MAR
CHECKED
QUANTITIES
SURVEY CONTROL
STRUCTURAL
CONSTRUCTION
CONTRACTOR MARTONE BROS.
DATE COMPLETED 2-6-96
ENGINEER IN CHARGE LETT
DATE COMPLETED 4-5-96
26877-23-D

NO.	DATE	REVISIONS	BY	CHK
4	4-96	2"ø 8" ; ANCHOR CONCRETE ADDED NOTES & DETAILS		

FRASER ENGINEERING, INC.

DESIGNED BY M.R.S.	DATE 01/23/95
Drawn BY M.R.S.	01/23/95
CHECKED BY D.R.M.	01/23/95
MTDB PROJ. ENG.	

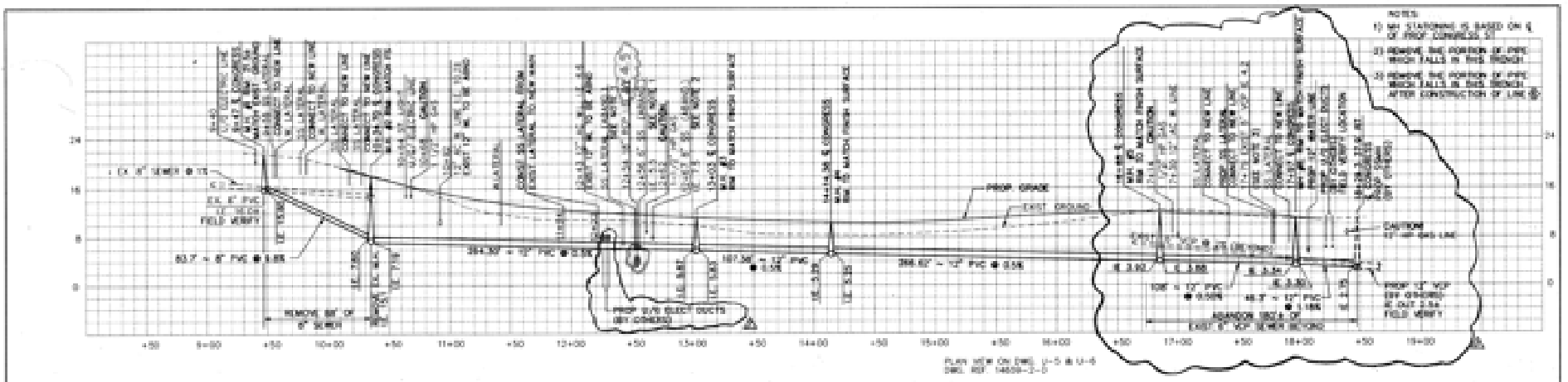
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-7490/(619)231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
WATER PROFILES, SHT 2 OF 2

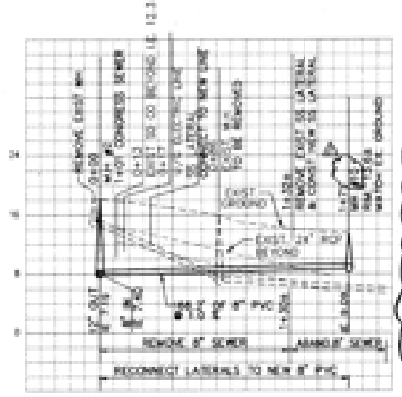
SCALE AS NOTED
MTDB CONTRACT NO. LRT 552
DRAWING NO. W-2
SHEET NO. 41

97

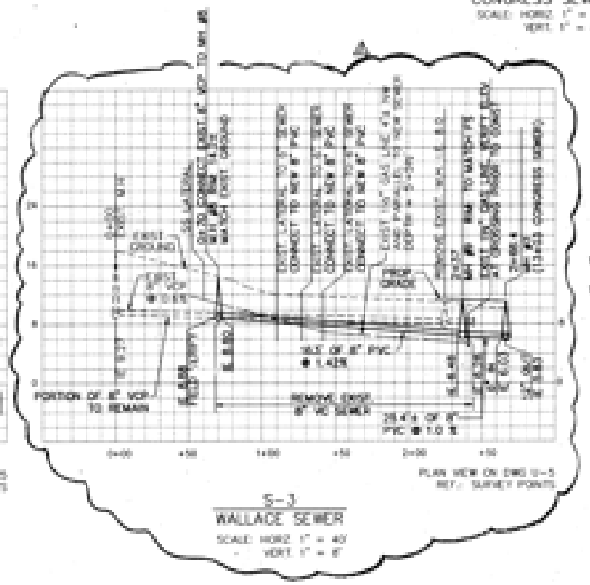
MTS DOC NO. PWL355/A42, WOA355-4E-75



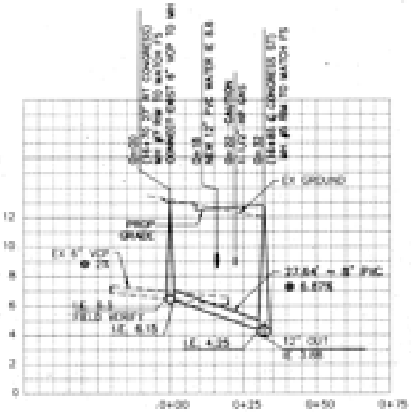
S-1
CONGRESS SEWER
SCALE: HORZ. 1" = 40'
VERT. 1" = 8'



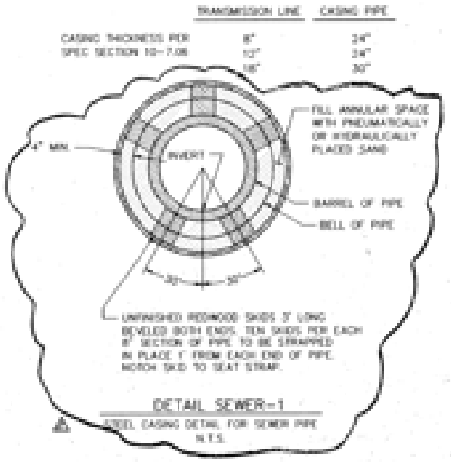
S-2
SMITH SEWER
SCALE: HORZ. 1" = 40'
VERT. 1" = 8'



S-3
WALLACE SEWER
SCALE: HORZ. 1" = 40'
VERT. 1" = 8'



S-4
SAN DIEGO TO CONGRESS SEWER
SCALE: HORZ. 1" = 20'
VERT. 1" = 4'



DETAIL SEWER-1
STEEL CASING DETAIL FOR SEWER PIPE
N.T.S.

AS BUILT

Contract No. LRT-552

Date 4-5-97

26877-2Y-D

2	4-98	CCO # ; ADDED SD SDG DUCTS ; GROUP MOUNT / SWITCH HEATERS					
NO.	DATE	REVISIONS	BY	CHK			

FRASER ENGINEERING, INC.

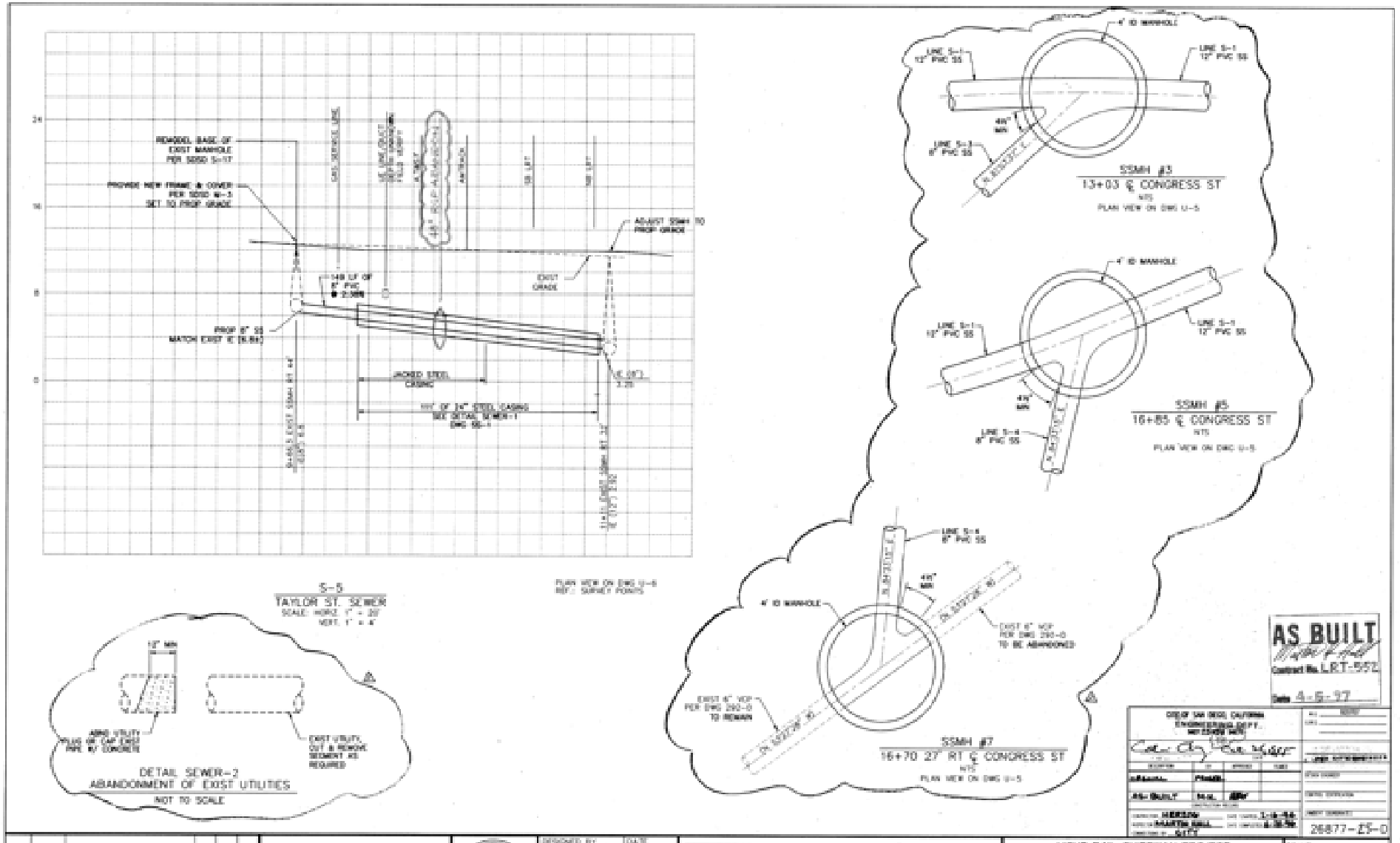
DESIGNED BY	D.A.W.	05/23/95
DRAWN BY	M.S.	05/23/95
CHECKED BY	D.A.W.	05/23/95
MTDB PROJ. ENG.		

MTDB
Metropolitan Transit Development Board
255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
SANITARY SEWER PROFILES, SHT 1 OF 2

SCALE: AS NOTED
MTDB CONTRACT NO. LRT 552
DRAWING NO. SS-1
SHEET NO. 32

MTS DOC NO. PWL355.0-22, WO#357-4E476



AS BUILT
Contract No. LRT-552
Date 4-6-97

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING DEPT.
RECOMMENDED FOR APPROVAL
APPROVED
DESCRIPTION | INITIAL | DATE
AS BUILT | [illegible]
CONSTRUCTION BY: HERZOG / MARTIN BELL
DATE STARTED: 3-16-96
DATE COMPLETED: 8-30-96
CHECKED BY: SCTT
26877-2S-D

NO.	DATE	REVISIONS	BY	CHK
1	4-97	AS BUILT	[illegible]	

FRASER ENGINEERING, inc.

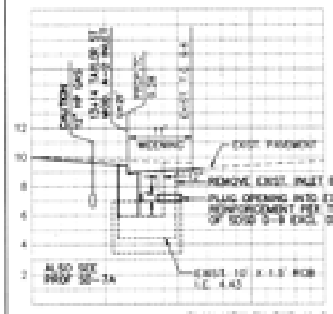
DESIGNED BY D.R.W.	DATE 01/23/95
DRAWN BY M.A.	01/23/95
CHECKED BY D.R.W.	01/23/95
MTDB PROJ. ENG.	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

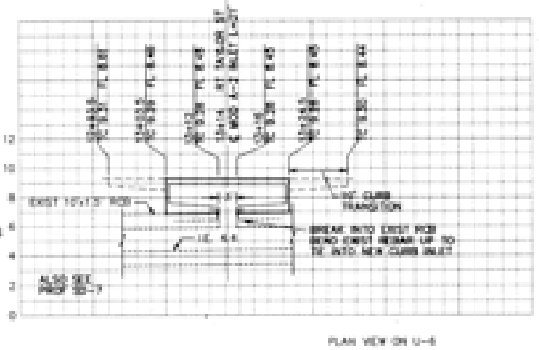
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
SANITARY SEWER PROFILES, SHT 2 OF 2

SCALE: AS NOTED
MTDB CONTRACT NO. LRT 552
DRAWING NO. SS-2
SHEET NO. 33

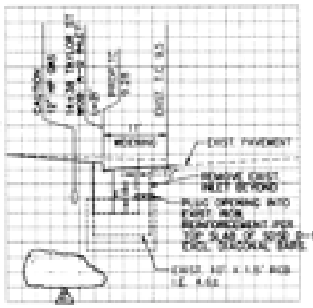
MTS DOC NO. PWL355.0-22, WOA355-4E-75



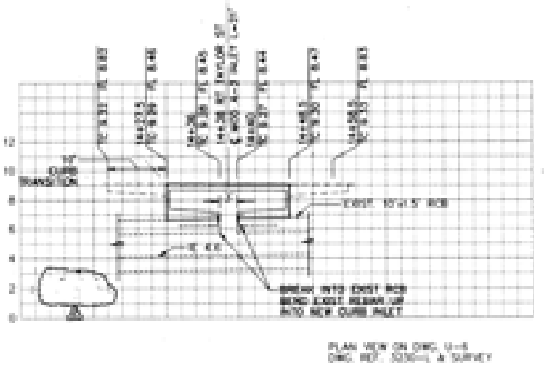
SD-1
INLET @ TAYLOR & CALHOUN, WEST
LOOKING WEST
SCALE: HORIZ. 1" = 10'
VERT. 1" = 4'



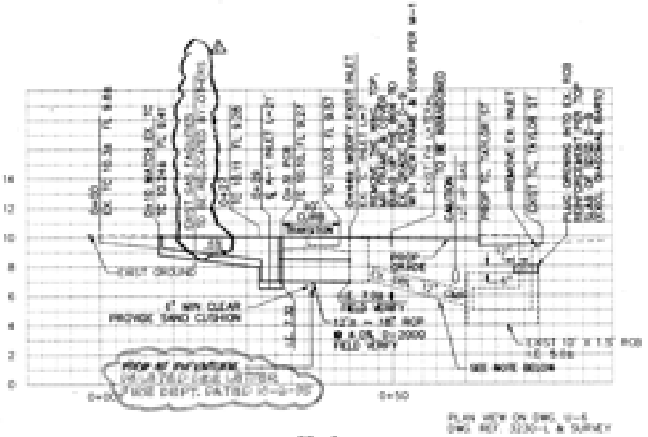
SD-1A
INLET @ TAYLOR & CALHOUN, WEST
SCALE: HORIZ. 1" = 10'
VERT. 1" = 4'



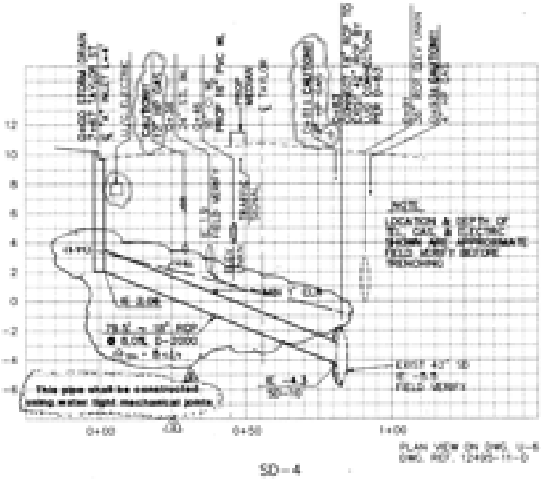
SD-2
INLET @ TAYLOR & CALHOUN, EAST
LOOKING WEST
SCALE: HORIZ. 1" = 10'
VERT. 1" = 4'



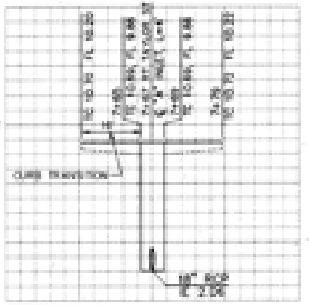
SD-2A
INLET @ TAYLOR & CALHOUN, EAST
SCALE: HORIZ. 1" = 10'
VERT. 1" = 4'



SD-3
INLET @ TAYLOR & JUAN
LOOKING WEST
SCALE: HORIZ. 1" = 10'
VERT. 1" = 4'



SD-4
SD @ TAYLOR & PACIFIC HWY
SCALE: HORIZ. 1" = 20'
VERT. 1" = 4'



SD-4A
INLET @ TAYLOR & PACIFIC HWY
SCALE: HORIZ. 1" = 10'
VERT. 1" = 4'

AS BUILT
Date 4-5-97

NO.	DATE	REVISIONS	BY	CHK
3	8-96		BAS	
2	7-96		PWT	
1	4-96			

FRASER ENGINEERING, INC.

DESIGNED BY M.A. 01/23/95
DRAWN BY M.S.B. 01/23/95
CHECKED BY D.W. 01/23/95
MTDB PROJ. ENG.

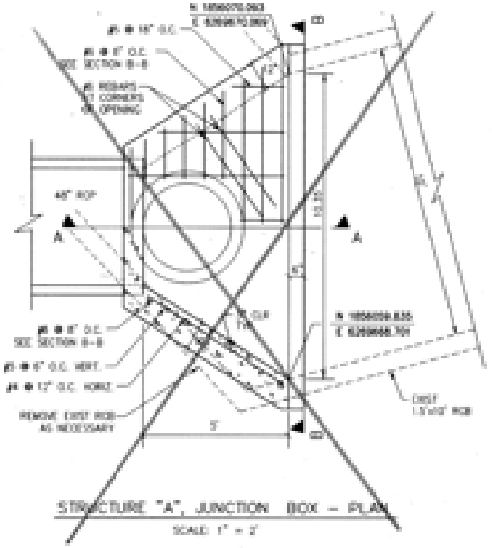
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
STORM DRAIN PROFILES, SHT 1 OF 6

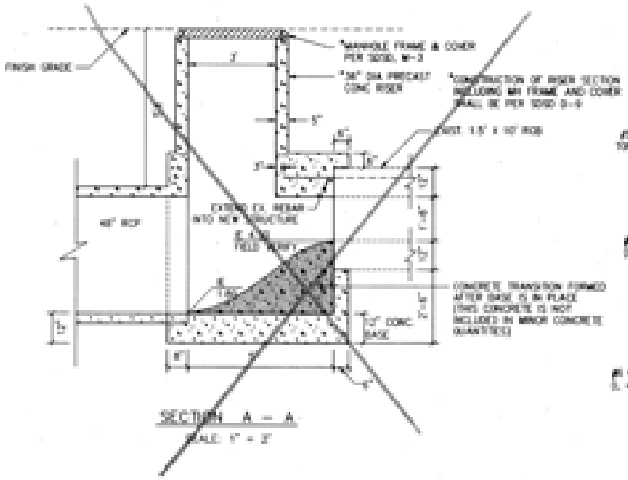
SCALE: AS SHOWN
MTDB CONTRACT NO. LRT 552
DRAWING NO. D-1
SHEET NO. 3rd

26877-2E-D

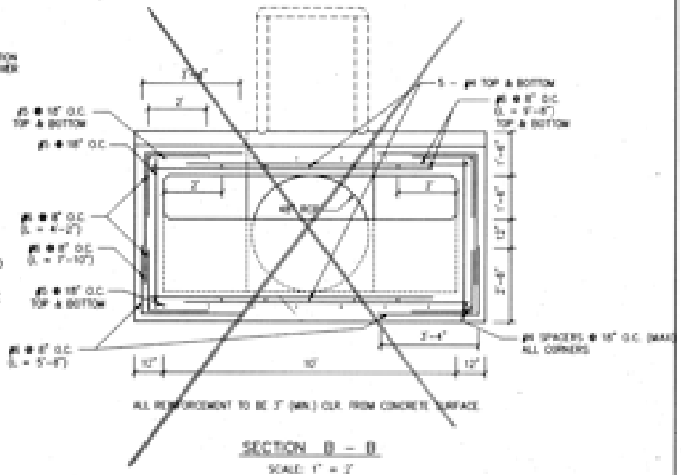
MTS DOC NO. PWL355J-22, WOA355-AE-76



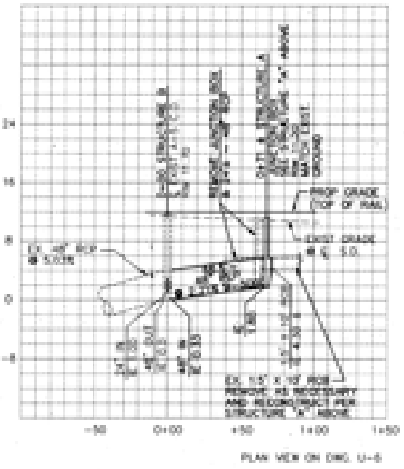
STRUCTURE "A", JUNCTION BOX – PLAN
SCALE: 1" = 2'



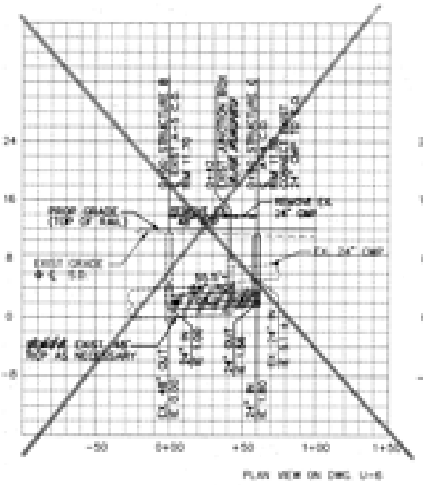
SECTION A – A
SCALE: 1" = 2'



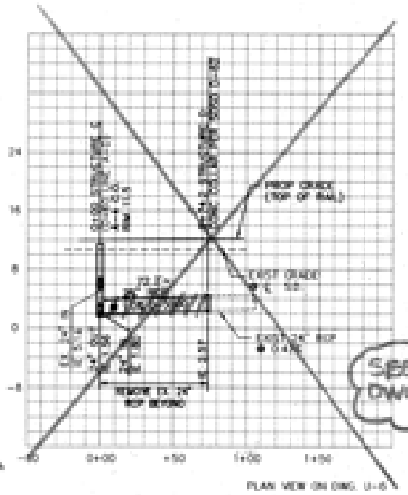
SECTION B – B
SCALE: 1" = 2'



SD-5
TAYLOR ST. LINE A–B
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

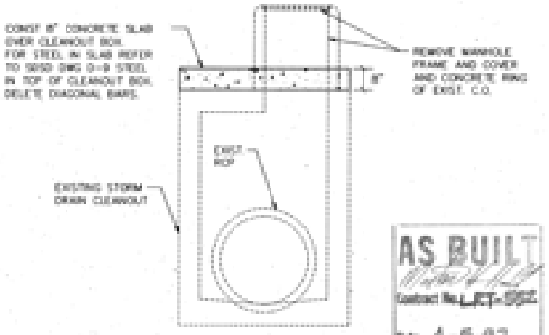


SD-6
TAYLOR ST. LINE B–C
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'



SD-7
TAYLOR ST. LINE C–D
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'

SEE NEW PROFILE DWG-D-24, SHT. 157



DETAIL STORM–1
MODIFY EXISTING STORM DRAIN CLEANOUT
NTS

AS BUILT
Contract No. LRT-552
Date 4-9-97

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING DEPT.
UNIT OF WORK NO. 26877-27-D

NO.	DATE	REVISIONS	BY	CHK

FRASER ENGINEERING, INC.

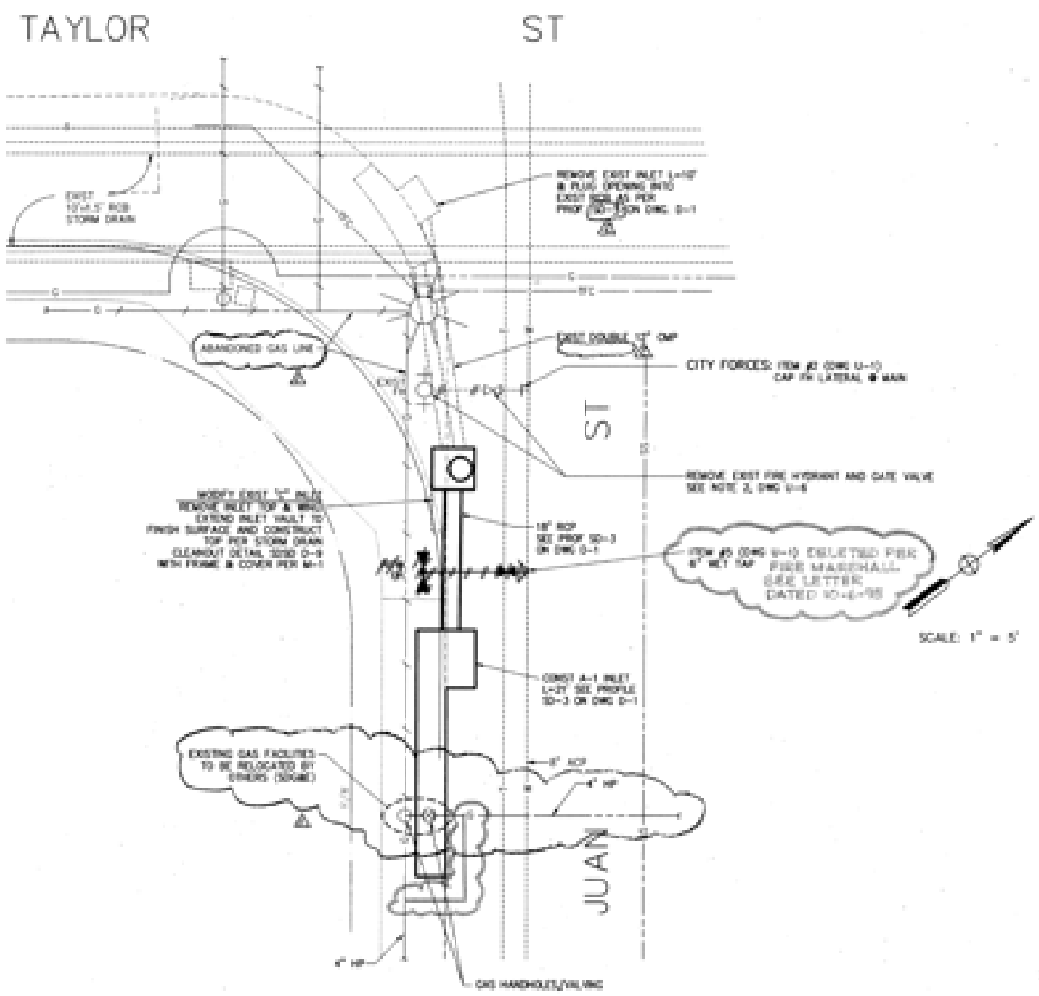
DESIGNED BY R.A.	DATE 03/23/95
DRAWN BY R.S.B.	03/23/95
CHECKED BY D.W.	03/23/95
MTDB PROJ. ENG.	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
STORM DRAIN PROFILES, SHT 2 OF 6

SCALE: AS SHOWN
MTDB CONTRACT NO. LRT 552
DRAWING NO. D-2
SHEET NO. 35

MTS DOC NO. PWL355.0422, WOA355-AE-79



AS BUILT
Contract No. LRT-552
Date 4-5-97

NO.	DATE	REVISIONS	BY	CHK
2	7-96	CCD # 2 ADDED, ITEM #5 DELETED, BASE LINE		
1	4-96	BASE LINE		

FRASER ENGINEERING, INC.

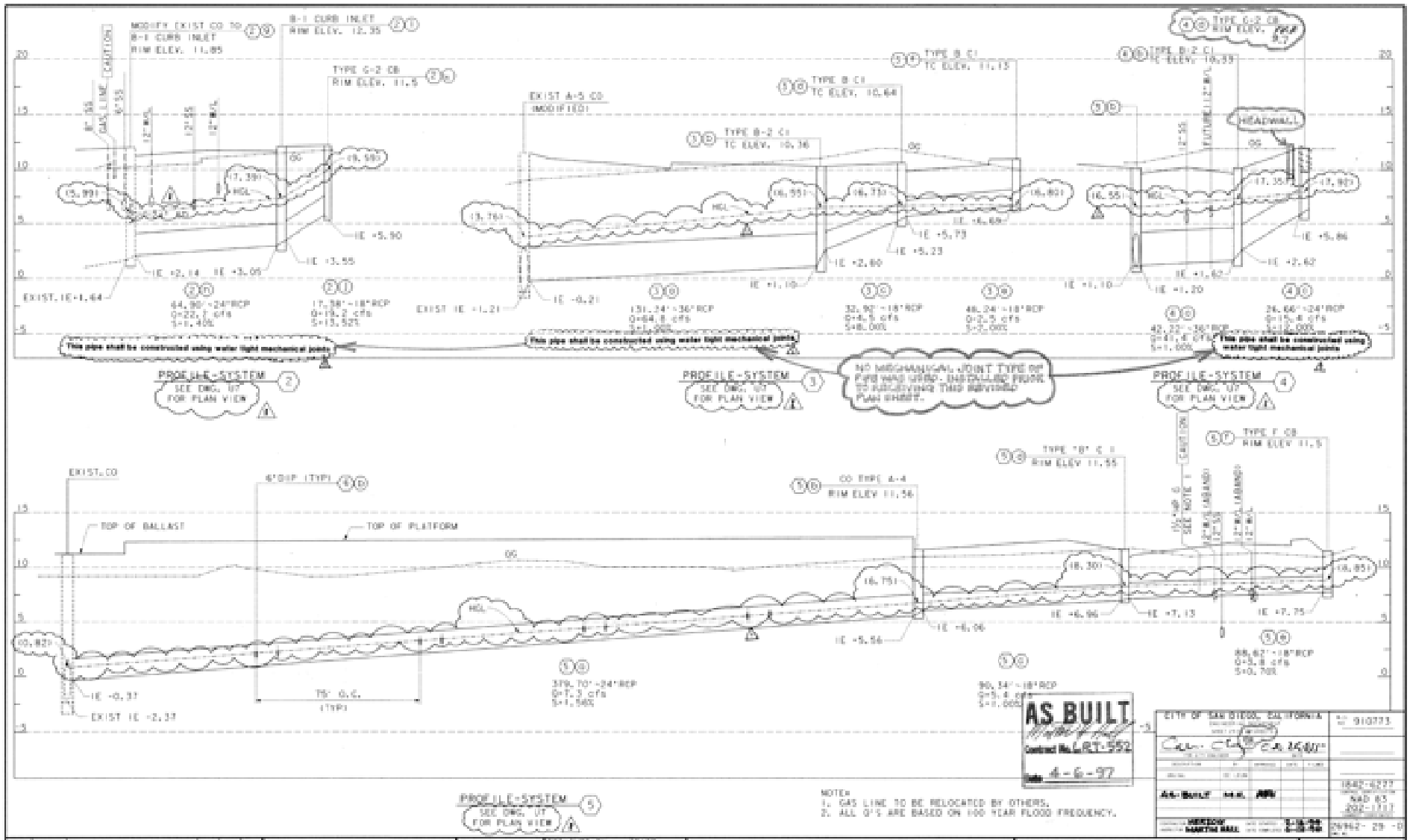
		DATE
DESIGNED BY	M.S.	03/23/95
DRAWN BY	M.S.	03/23/95
CHECKED BY	D.W.	03/23/95
MTDB FILE ENG.		

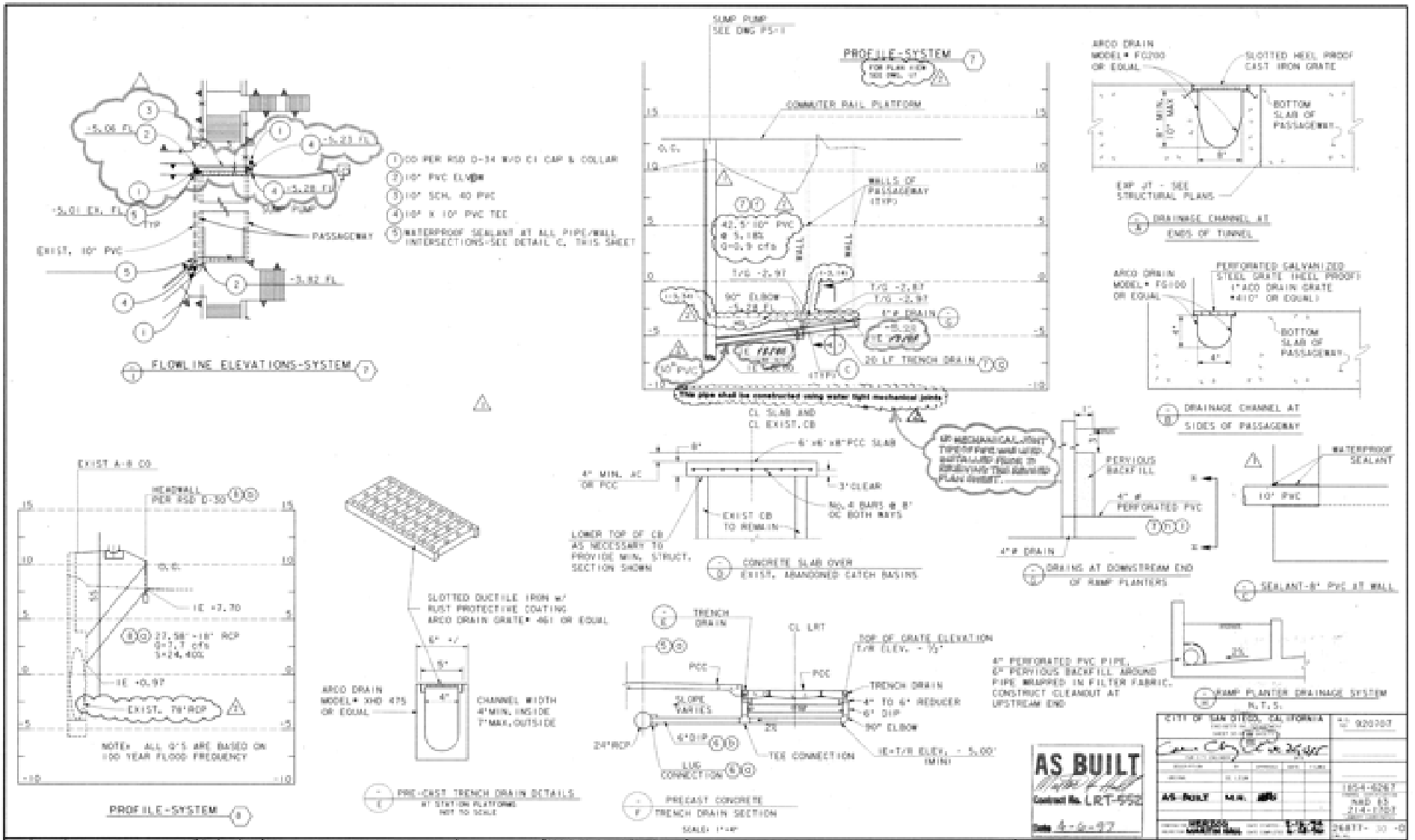
MTDB
Metropolitan Transit Development Board
(255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

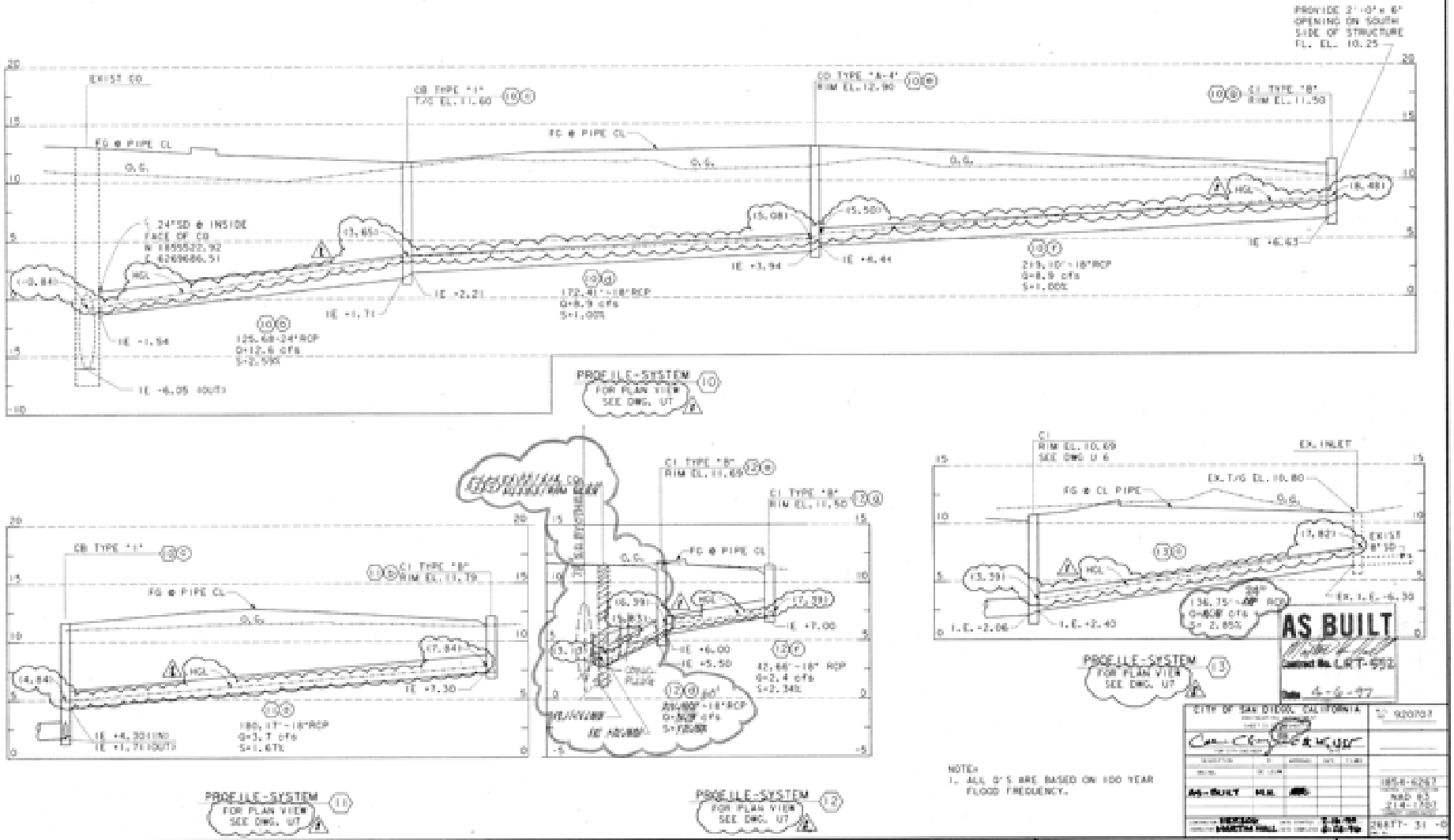
LIGHT RAIL GUIDEWAY PROJECT
San Diego

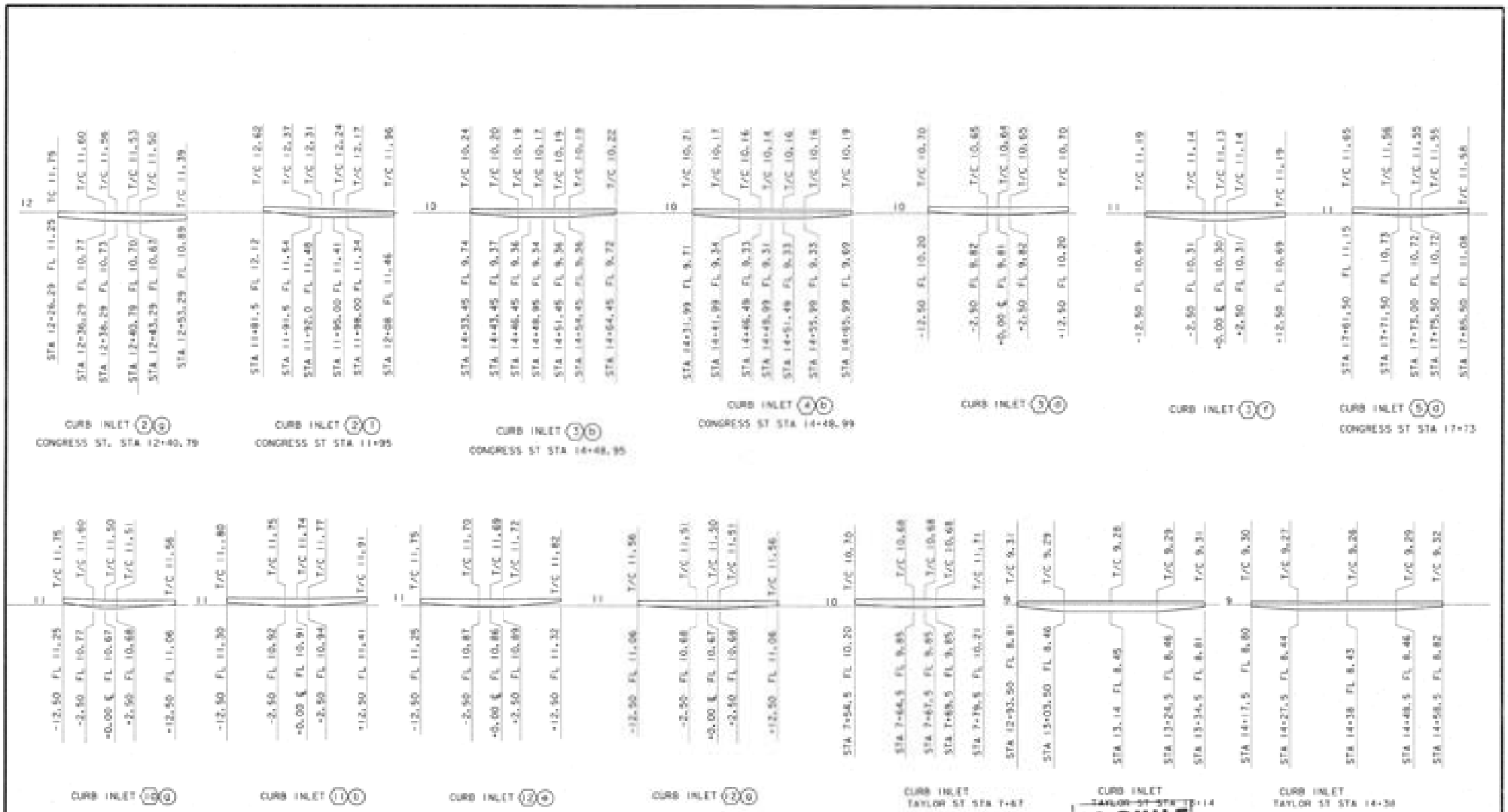
OLD TOWN TRANSIT CENTER
UTILITY PLANS
STORM DRAIN PROFILES, SHT 3 OF 6

SCALE: AS SHOWN
MTDB CONTRACT NO. LRT 552
DRAWING NO. D-3
SHEET NO. 16


MODIFY EXIST CO TO B-1 CURB INLET RIM ELEV. 11.85
B-1 CURB INLET RIM ELEV. 12.35
TYPE G-2 DB RIM ELEV. 11.5
EXIST A-5 CO (MODIFIED)
TYPE B C.I. TC ELEV. 10.36
TYPE B C.I. TC ELEV. 10.64
TYPE B C.I. TC ELEV. 11.15
TYPE B-2 C.I. TC ELEV. 16.39
TYPE G-2 DB RIM ELEV. PAD 8.7
HEADWALL
FUTURE (12'-0" W.)
GAS LINE (CAUTION)
EXIST. CO
6'OSP (TYP)
TOP OF BALLAST
TOP OF PLATFORM
CO TYPE A-4 RIM ELEV 11.56
TYPE "B" C.I. RIM ELEV 11.55
TYPE F CB RIM ELEV 11.5
CAUTION (GAS LINE) SEE NOTE 1
75'± O.C. (TYP)
EXIST. IE +1.64
EXIST IE +1.21
EXIST IE -2.37
44.90'-24"RCP Q=22.1 cfs S=1.40%
17.38'-18"RCP Q=15.2 cfs S=15.52%
131.24'-36"RCP Q=64.8 cfs S=1.00%
32.92'-18"RCP Q=4.5 cfs S=8.00%
46.24'-18"RCP Q=2.5 cfs S=2.00%
42.22'-36"RCP Q=61.6 cfs S=1.00%
26.66'-24"RCP Q=15.8 cfs S=12.00%
379.70'-24"RCP Q=7.3 cfs S=1.56%
90.34'-18"RCP Q=5.8 cfs S=1.00%
88.62'-18"RCP Q=5.8 cfs S=0.70%
This pipe shall be constructed using water tight mechanical joints
NO MECHANICAL JOINT TYPE OF PIPE WAS USED. DUE TO LARGE FRUIT ST. RESERVING THIS REVISED PLAN SHEET.
PROFILE-SYSTEM 2 SEE DWG. 07 FOR PLAN VIEW
PROFILE-SYSTEM 3 SEE DWG. 07 FOR PLAN VIEW
PROFILE-SYSTEM 4 SEE DWG. 07 FOR PLAN VIEW
PROFILE-SYSTEM 5 SEE DWG. 07 FOR PLAN VIEW
AS BUILT
Contract No. LRT-552
Date 4-6-97
NOTES:
1. GAS LINE TO BE RELOCATED BY OTHERS.
2. ALL Q'S ARE BASED ON 100 YEAR FLOOD FREQUENCY.
CITY OF SAN DIEGO, CALIFORNIA
R.C.E. 35611
No. 910773
1842-6222
NAD 83
2002-1111
26962-29-D
NO. DATE REVISIONS BY CHK APPD
4-95 CONFORMED
DE LEUW CATHER
DES. CHKD BY R.R.S. 8/25/94
DRAWN BY R.M.M. 8/30/94
CHECKED BY R.R.S. 11/30/94
MTDB PROJ. ENG. D. RAGLAND
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN LRT CONSTRUCTION
UTILITY PLANS
STORM DRAIN PROFILES
SHEET 4 OF 6
SCALE HORIZ 1"=20' VERT 1"=4'
MTDB CONTRACT NO. LRT 553
DRAWING NO. D 4
SHEET NO. 37
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES


SUMP PUMP
SEE DWG PS-1
PROFILE-SYSTEM 7
COMMUTER RAIL PLATFORM
WALLS OF PASSAGEWAY (TYP)
42.5' 10" PVC @ S=.18% Q=0.9 cfs
WALL
1/G -2.97
90° ELBOW
1" ø DRAIN
20 LF TRENCH DRAIN 7 C
90° PVC
CL SLAB AND CL EXIST. CB
6' x6' x8" PCC SLAB
4" MIN. AC OR PCC
3' CLEAR
No. 4 BARS @ 8" OC BOTH WAYS
EXIST CB TO REMAIN
LOWER TOP OF CB AS NECESSARY TO PROVIDE MIN. STRUCT. SECTION SHOWN
CONCRETE SLAB OVER EXIST. ABANDONED CATCH BASINS
EXIST A-R CO.
HEADWALL PER RSD D-30 8 D
27.98' -18" RCP Q=3.7 cfs S=24.40%
IE +2.70
IE -0.97
EXIST. 78" RCP
NOTE: ALL Q'S ARE BASED ON 100 YEAR FLOOD FREQUENCY
PROFILE-SYSTEM 8
SLOTTED DUCTILE IRON w/ RUST PROTECTIVE COATING ARCO DRAIN GRATE #461 OR EQUAL
ARCO DRAIN MODEL# XHD 475 OR EQUAL
CHANNEL WIDTH 4" MIN. INSIDE 7" MAX. OUTSIDE
PRE-CAST TRENCH DRAIN DETAILS AT STATION PLATFORMS NOT TO SCALE
TRENCH DRAIN
CL LRT
TOP OF GRATE ELEVATION T/W ELEV. -.10'
PCC
SLOPE VARIES
24" RCP
6" DIP
TEE CONNECTION
4" TO 6" REDUCER
90° ELBOW
IE=T/W ELEV. - 5.00' (MIN)
LUG CONNECTION 8 C
PRECAST CONCRETE TRENCH DRAIN SECTION
SCALE: 1"=4"
ARCO DRAIN MODEL# FG1200 OR EQUAL
SLOTTED HEEL PROOF CAST IRON GRATE
BOTTOM SLAB OF PASSAGEWAY
EXP JT - SEE STRUCTURAL PLANS
DRAINAGE CHANNEL AT ENDS OF TUNNEL
PERFORATED GALVANIZED STEEL GRATE (HEEL PROOF) 1" ACO DRAIN GRATE #410" OR EQUAL)
DRAINAGE CHANNEL AT SIDES OF PASSAGEWAY
PERVIOUS BACKFILL
4" ø PERFORATED PVC 7 D 1
4"ø DRAIN
DRAINS AT DOWNSTREAM END OF RAMP PLANTERS
WATERPROOF SEALANT
10" PVC
SEALANT-8" PVC AT WALL
4" PERFORATED PVC PIPE, 6" PERVIOUS BACKFILL AROUND PIPE WRAPPED IN FILTER FABRIC. CONSTRUCT CLEANOUT AT UPSTREAM END
RAMP PLANTER DRAINAGE SYSTEM N.T.S.
1 FLOWLINE ELEVATIONS-SYSTEM 7
(1) CO PER RSD D-34 W/D CI CAP & COLLAR
(2) 10" PVC ELBOW
(3) 10" SCH. 40 PVC
(4) 10" X 10" PVC TEE
(5) WATERPROOF SEALANT AT ALL PIPE/WALL INTERSECTIONS-SEE DETAIL C, THIS SHEET
-5.06 FL
-5.23 FL
-5.01 EX. FL
-5.28 FL
-5.82 FL
EXIST. 10" PVC
PASSAGEWAY
TYP
AS BUILT
Contract No. LRT-552
Date 4-6-97
CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT
NAD 83
1854-6267
2411-30-D
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PROFILES
STORM DRAIN PROFILES
SHEET 5 OF 6
SCALE HORIZ 1"=20' VERT 1"=4'
MTDB CONTRACT NO. LRT 552
DRAWING NO. D 5
SHEET NO. 38
DESIGNED BY H.R.S. 8/25/94
DRAWN BY P.B.M. 8/30/94
CHECKED BY (R.M.) 12/16/94
MTDB PROJ. ENG. D. RAGLAND
NO. DATE REVISIONS BY CHK APPV
4-95 CONFORMED
8/15/95 PASSAGEWAY DRAINAGE REVISED HRS
ADDED 6" DRAIN LINE @ CB #8 PER CHANGE NO. 002 & 003
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES


PROVIDE 2'-0" x 8" OPENING ON SOUTH SIDE OF STRUCTURE FL. EL. 10.25
EXIST CO
CB TYPE "1"
CO TYPE "A-4"
CI TYPE "B"
FG @ PIPE CL
24"SD @ INSIDE FACE OF CB
N 1855522.92
E 6269686.51
125.68-24"RCP
Q=12.6 cfs
S=2.59%
172.41'-18"RCP
Q=8.9 cfs
S=1.00%
219.10'-18"RCP
Q=8.9 cfs
S=1.00%
IE -1.94
IE -6.05 (OUT)
IE +2.21
IE +1.71
IE +3.94
IE +6.44
IE +6.63
PROFILE-SYSTEM 10
FOR PLAN VIEW SEE DWG. U7
CB TYPE "1"
CI TYPE "B"
RIM EL. 11.19
FG @ PIPE CL
180.17'-18"RCP
Q=3.7 cfs
S=1.67%
IE +4.32 (IN)
IE +1.71 (OUT)
PROFILE-SYSTEM 11
FOR PLAN VIEW SEE DWG. U7
CI TYPE "B"
RIM EL. 11.69
CI TYPE "B"
RIM EL. 11.50
FG @ PIPE CL
EXIST 18" RCP
84.00'-18" RCP
Q=8.9 cfs
S=1.19%
42.66'-18" RCP
Q=2.4 cfs
S=2.34%
IE +7.00
IE +6.00
IE +5.50
PROFILE-SYSTEM 12
FOR PLAN VIEW SEE DWG. U7
CI
RIM EL. 10.69
SEE DWG. U 6
EX. INLET
EX. T/G EL. 10.80
FG @ CL PIPE
EXIST 8" SD
136.75'-18" RCP
Q=8.9 cfs
S=2.85%
I.E. +2.06
I.E. +2.40
EX. I.E. +6.30
PROFILE-SYSTEM 13
FOR PLAN VIEW SEE DWG. U7
AS BUILT
Contract No. LRT-552
Date 4-6-97
NOTE:
1. ALL Q'S ARE BASED ON 100 YEAR FLOOD FREQUENCY.
CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT
NAD 83
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
STORM DRAIN PROFILES
SHEET 6 OF 6
6-96 NOTE CHANGES PER CCO 9
4-95 CONFORMED
DESIGNED BY H.R.S. 8/22/94
DRAWN BY R.W.W. 8/22/94
CHECKED BY R.H.L. 12/08/94
MTDB PROJ.ENG. D. RAGLAND
SCALE HORIZ 1"=20' VERT 1"=5'
MTDB CONTRACT NO. LRT 552
DRAWING NO. U 6
SHEET NO. 39
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES



AS BUILT
Contract No. LRT-552
3-18-97

NOTE:
CENTERLINE STATIONS SHOWN ARE TO THE CENTER OF THE DRAINAGE STRUCTURE.

NO.	DATE	REVISIONS	BY	CHK	APVD
1	12/94	Guardrail			

DE LEUW CATHER

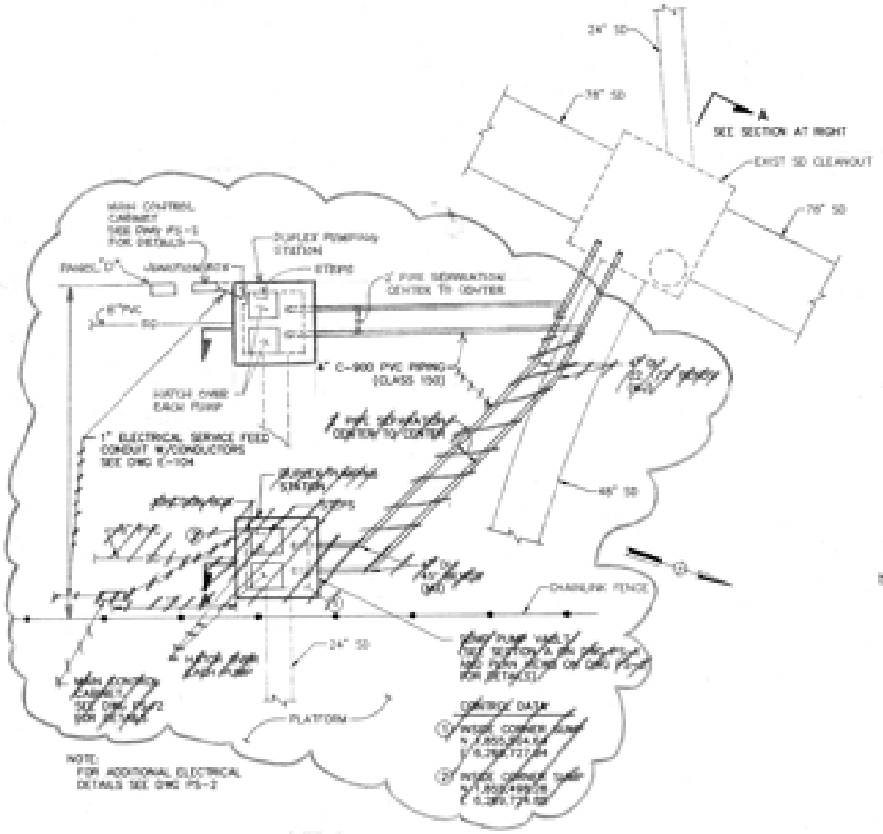
DESIGNED BY HRS 12/1/94
DRAWN BY RBM 12/1/94
CHECKED BY
MTDB PROJ. ENG. D. RAGLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
CURB INLET PROFILES

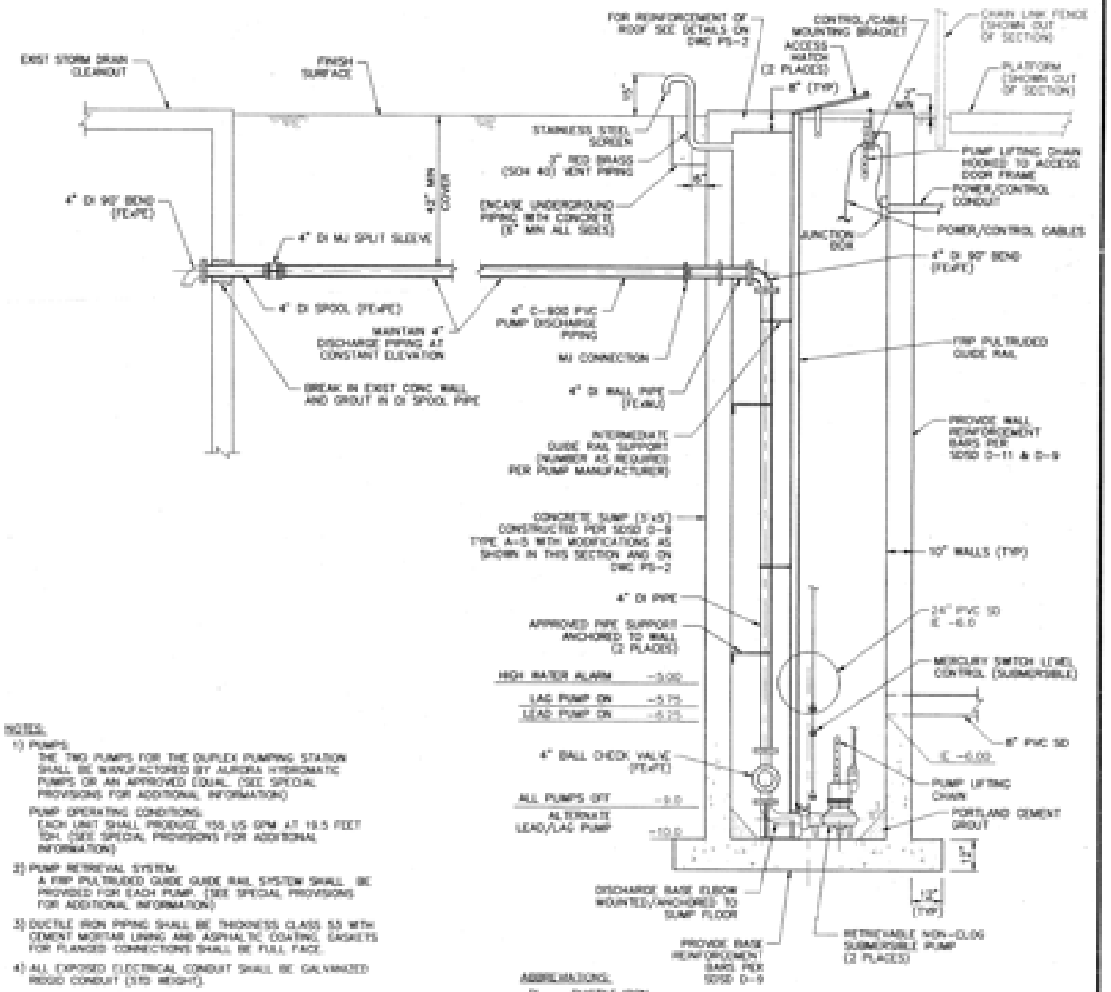
SCALE HORIZ 1"=10'
VERT 1"=5'
MTDB CONTRACT NO. LRT 552
DRAWING NO. BY
SHEET NO. 80
MTDB DOC. NO. RW355.W2.W3355.MDOS

FOR REDUCED PLANS



SITE PLAN

SCALE: 1" = 5'



SECTION A

SCALE: 1" = 2'

NOTES:

1) PUMPS:
THE TWO PUMPS FOR THE DUPLEX PUMPING STATION SHALL BE MANUFACTURED BY AURORA HYDROMATIC PUMPS OR AN APPROVED EQUAL. (SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)

PUMP OPERATING CONDITIONS:
EACH UNIT SHALL PRODUCE 155 US GPM AT 19.5 FEET TDH. (SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)

2) PUMP RETRIEVAL SYSTEM:
A FRP PULTRUDED GUIDE GUIDE RAIL SYSTEM SHALL BE PROVIDED FOR EACH PUMP. (SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)

3) DUCTILE IRON PIPING SHALL BE THICKNESS CLASS 53 WITH CEMENT MORTAR LINING AND ASPHALTIC COATING. GASKETS FOR FLANGED CONNECTIONS SHALL BE FULL FACE.

4) ALL EXPOSED ELECTRICAL CONDUIT SHALL BE GALVANIZED RIGID CONDUIT (STD WEIGHT).

5) UNDERGROUND PUMP DISCHARGE PIPING:
A) THE UNDERGROUND PUMP DISCHARGE PIPING SHALL BE CONSTRUCTED AND TESTED IN CONFORMANCE WITH THE SPECIFIED CONSTRUCTION/INSTALLATION REQUIREMENTS FOR THE CITY OF SAN DIEGO PUBLIC WATER FACILITIES AND WITH MODIFICATIONS SPECIFIED HEREIN.
B) PVC PIPING SHALL BE C-900, CLASS 150 OR 18.
C) THE 4" PVC DISCHARGE LINES SHALL BE COMPLETELY THRUST RESTRAINED UTILIZING MECHANICAL RESTRAINING DEVICES PER SPECIAL PROVISION SECTION 10-7.19.
D) DISINFECTION OF PIPING IS NOT REQUIRED.

ABBREVIATIONS:
DI – DUCTILE IRON
PE – PLAIN END
MJ – MECHANICAL JOINT
FE – FLANGE END

AS BUILT
Contract No. LRT-552
Date 12-24-96

NO.	DATE	REVISIONS	BY	CHK	APPV

FRASER ENGINEERING, INC.

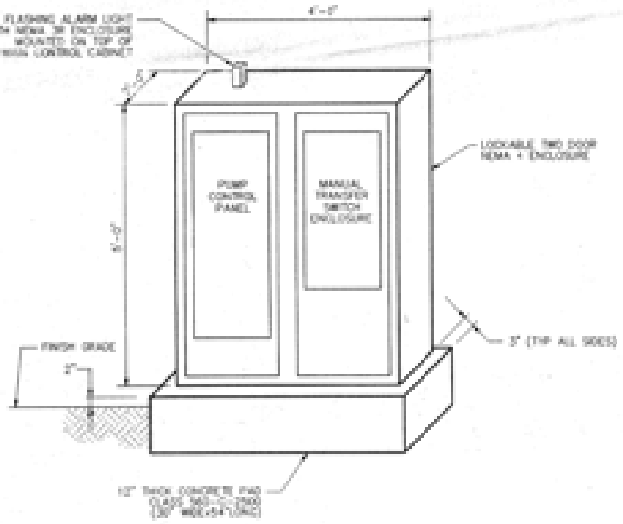
DESIGNED BY	DRN	DATE 02/21/95
DRAWN BY	MAS	02/21/95
CHECKED BY	DRN	02/21/95
MTDB PROJ ENG.		

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
UTILITY PLANS
STORM WATER PUMPING STATION SHT 1 OF 2

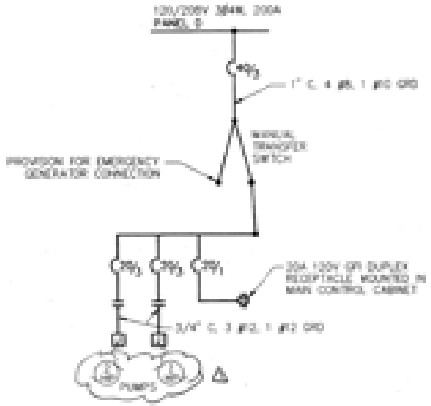
SCALE	
AS SHOWN	
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	SHEET NO.
PS-1	41



NOTE:
ENCLOSURES/PANELS SHALL BE SECURELY MORNED TO THE BACK PLATE(PANEL) OF THE MAIN CONTROL CABINET

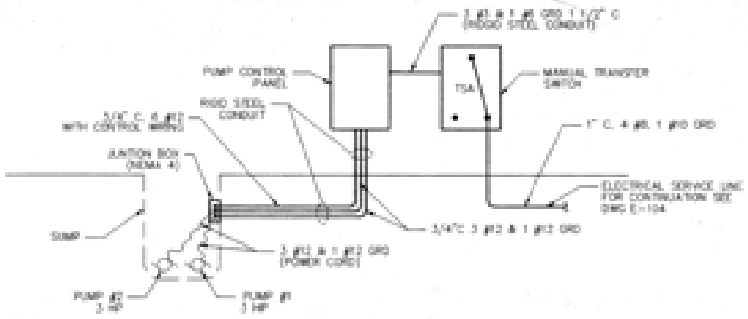
MAIN CONTROL CABINET

NOT TO SCALE



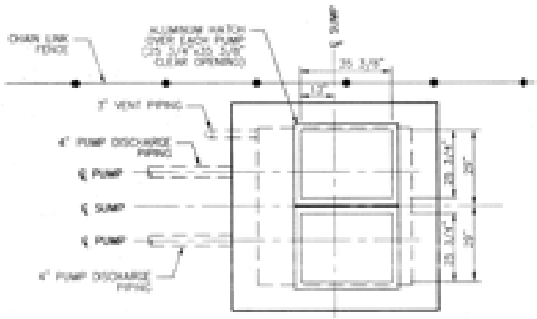
SINGLE LINE DIAGRAM

NOT TO SCALE



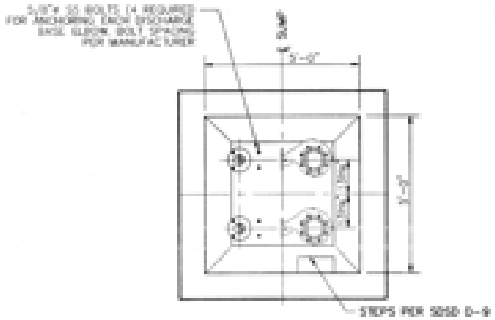
ELECTRICAL RISER DIAGRAM

NOT TO SCALE



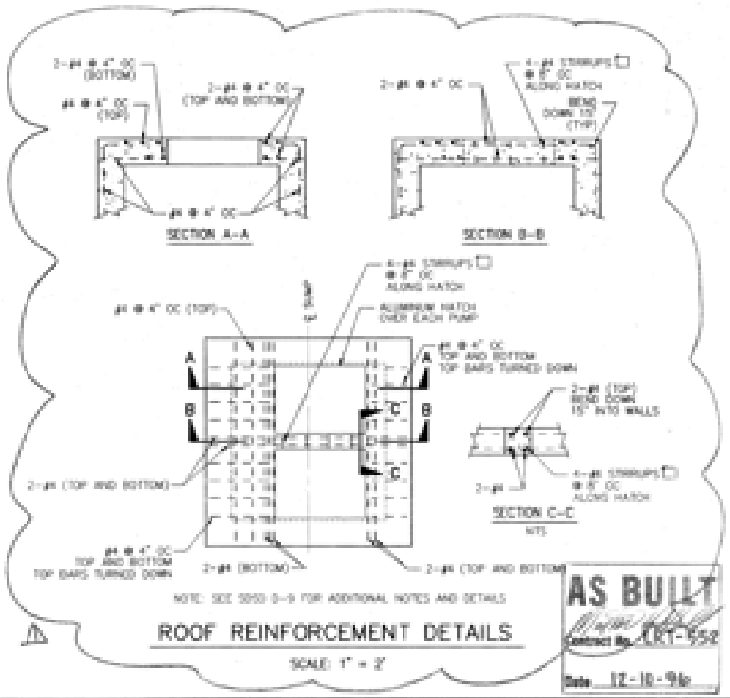
PUMP STATION AT GRADE ELEVATION – PLAN

SCALE: 1" = 2'



SUMP BASE ELEVATION – PLAN

SCALE: 1" = 2'



ROOF REINFORCEMENT DETAILS

SCALE: 1" = 2'

AS BUILT
Contract No. LRT-552
Date 12-18-96

NO.	DATE	REVISIONS	BY	CHK	APVD
1	4-96	ADD'L ...			

FRASER ENGINEERING, INC.

		DATE
DESIGNED BY	DRW	03/22/95
DRAWN BY	MAT	03/22/95
CHECKED BY	DAW	03/22/95
MTDB PROJ. ENG.		

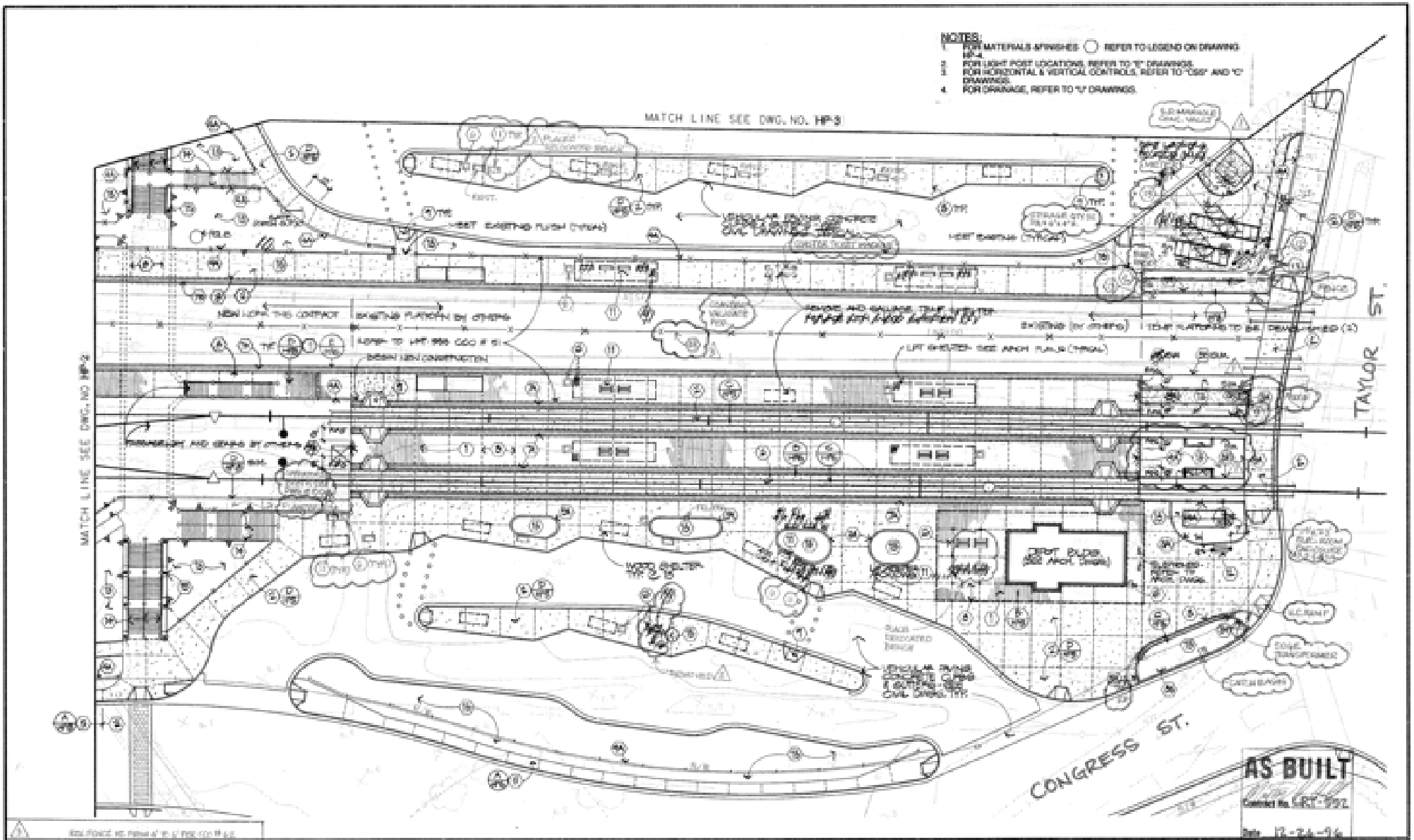
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

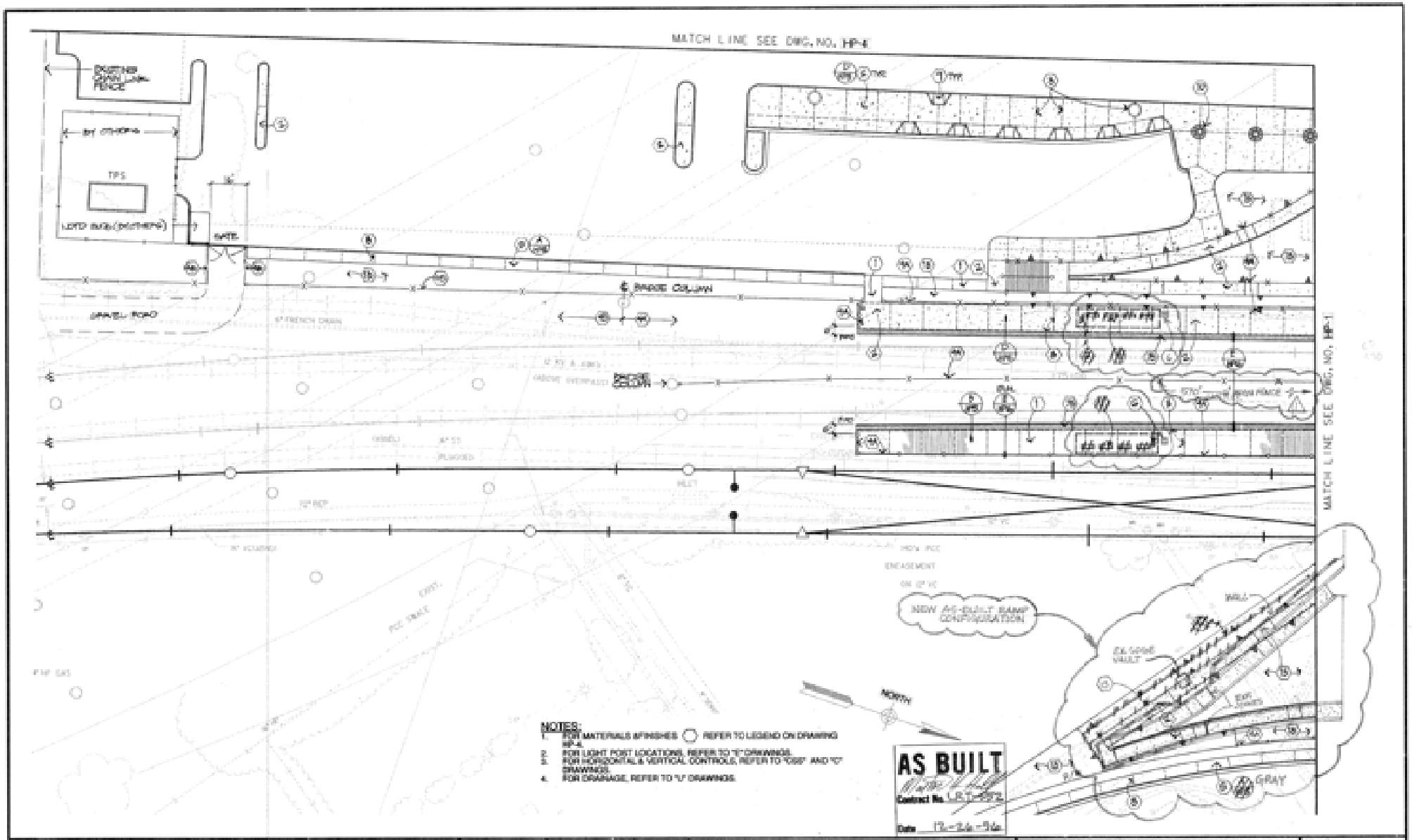
LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
UTILITY PLANS
STORM WATER PUMPING STATION, SHT 2 OF 2

SCALE	AS SHOWN
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	PS-2
SHEET NO.	42

MTS DOC NO. PWL355422.WOA355442-75


NOTES:
1. FOR MATERIALS &FINISHES ◯ REFER TO LEGEND ON DRAWING HP-4.
2. FOR LIGHT POST LOCATIONS, REFER TO "E" DRAWINGS.
3. FOR HORIZONTAL & VERTICAL CONTROLS, REFER TO "CSS" AND "C" DRAWINGS.
4. FOR DRAINAGE, REFER TO "L" DRAWINGS.
MATCH LINE SEE DWG. NO. HP-3
MATCH LINE SEE DWG. NO. HP-2
TAYLOR ST.
CONGRESS ST.
AS BUILT
Contract No. LRT-552
Date 12-24-96
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
URBAN DESIGN PLAN
SHEET 1 OF 4
MTDB CONTRACT NO.
LRT 552
DRAWING NO.
HP-1
SHEET NO.
45
DESIGNED BY PDL 9/94
DRAWN BY RAJU 9/94
CHECKED BY RAJT 9/94
MTDB PROJ.ENG. D. RAGLAND
SCALE 1"=20'
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES



NO.	DATE	REVISIONS	BY	CHK	APPD
		AS-BUILT PRELOCC 90%			

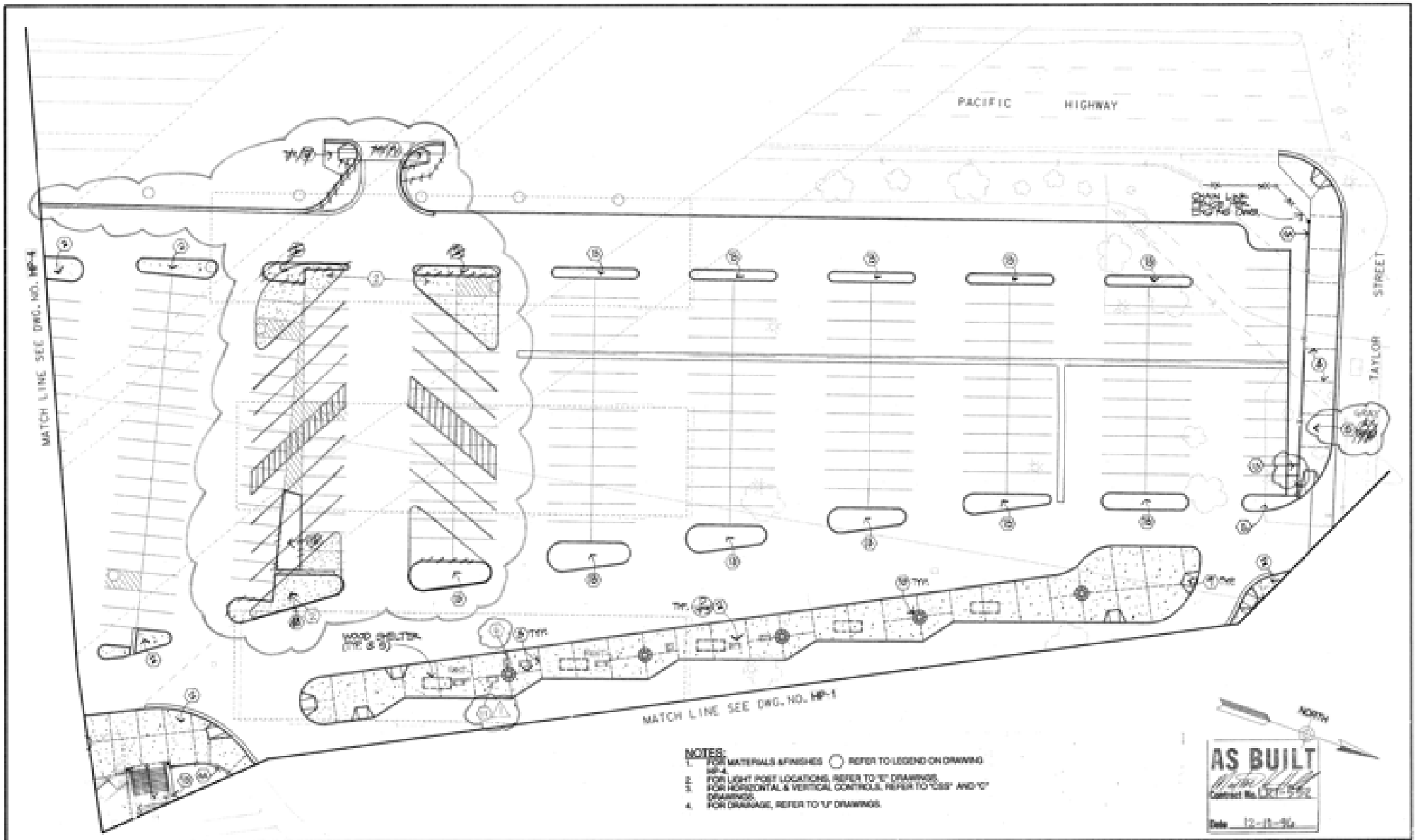
DESIGNED BY: PBL — DATE: 9/94
DRAWN BY: MJJ — DATE: 9/94
CHECKED BY: MAT — DATE: 9/94
MTDB PROJECT MGR.: D. RAGLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-1490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
URBAN DESIGN PLAN
SHEET 2 OF 4

SCALE: 1"=20'
MTDB CONTRACT NO.: LRT 552
DRAWING NO.: HP-2
SHEET NO.: 44

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES



NO.	DATE	REVISIONS	BY	CHK	APPR
4	4/94	Guideway			

DESIGNED BY: RGL — DATE: 9/94
DRAWN BY: MAJ — 9/94
CHECKED BY: MAF — 9/94
MTDB PROJECT ENG.: D. RAGLAND

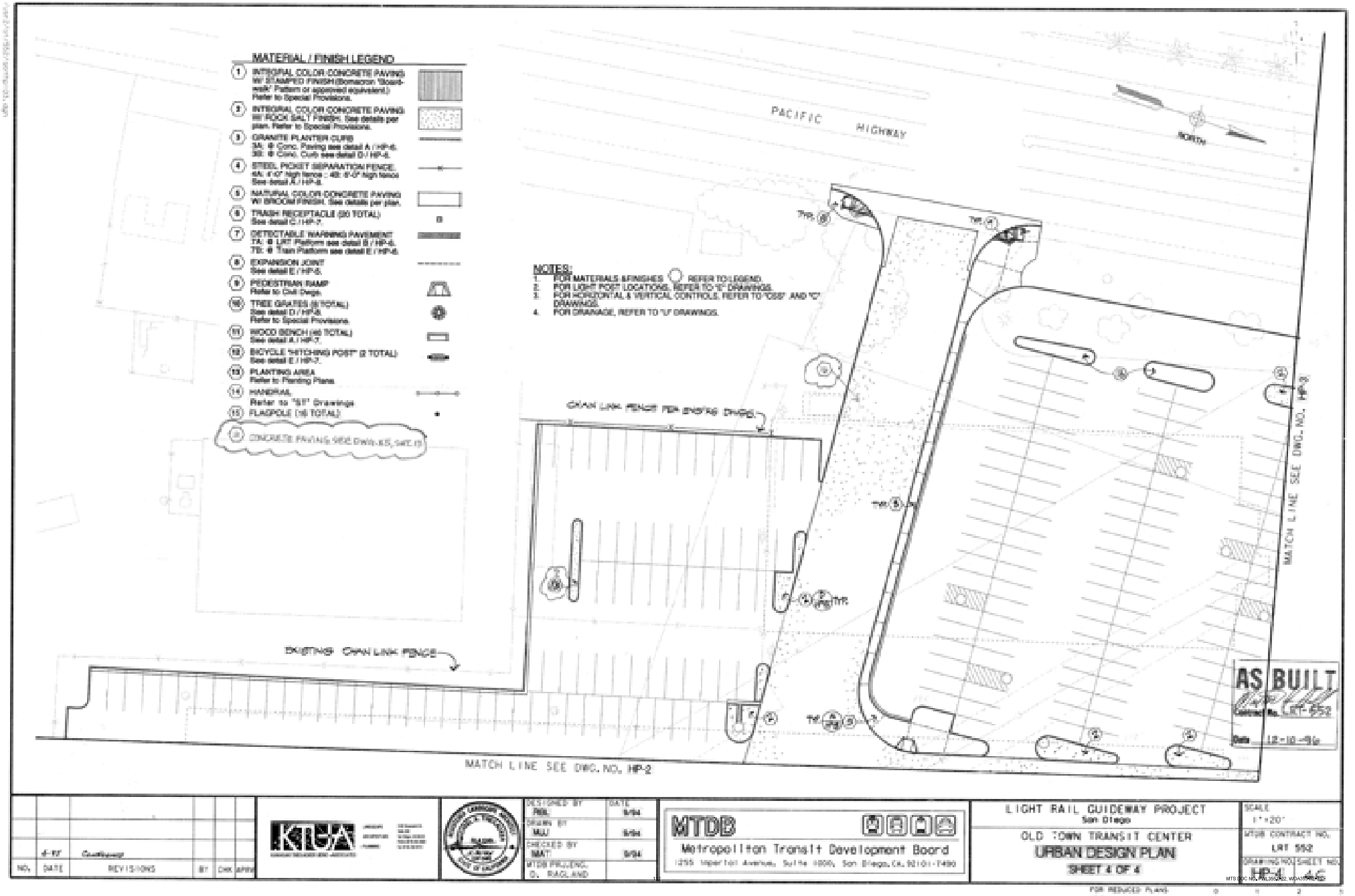
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490

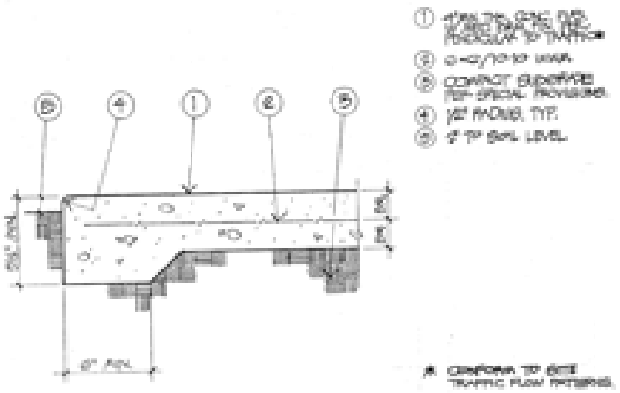
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
URBAN DESIGN PLAN
SHEET 3 OF 4

SCALE: 1"=20'
MTDB CONTRACT NO.: LRT 552
DRAWING NO.: HP-3
SHEET NO.: 45

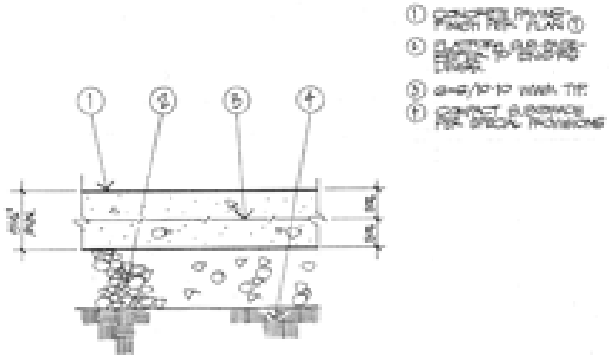
FOR REDUCED PLANS: ORIGINAL SCALE IS IN INCHES 0 1 2 3
MTD DOC NO. PM3552-22 WOA355-AE-75

111

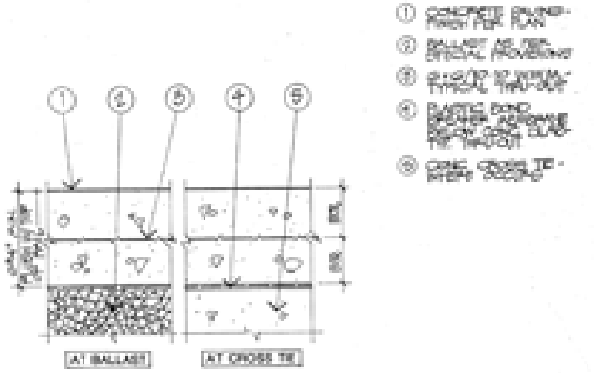

MATERIAL / FINISH LEGEND
1 INTEGRAL COLOR CONCRETE PAVING W/ STAMPED FINISH (Bomanite "Boardwalk" Pattern or approved equivalent) Refer to Special Provisions.
2 INTEGRAL COLOR CONCRETE PAVING W/ ROCK SALT FINISH. See details per plan. Refer to Special Provisions.
3 GRANITE PLANTER CURB 3A: @ Conc. Paving see detail A / HP-6. 3B: @ Conc. Curb see detail D / HP-6.
4 STEEL PICKET SEPARATION FENCE. 4A: 4'-0" high fence - 4B: 6'-0" high fence See detail A / HP-6.
5 NATURAL COLOR CONCRETE PAVING W/ BROOM FINISH. See details per plan.
6 TRASH RECEPTACLE (20 TOTAL) See detail C / HP-7.
7 DETECTABLE WARNING PAVEMENT 7A: @ LRT Platform see detail D / HP-6. 7B: @ Train Platform see detail E / HP-6.
8 EXPANSION JOINT See detail E / HP-6.
9 PEDESTRIAN RAMP Refer to Civil Dwgs.
10 TREE GRATES (6 TOTAL) See detail D / HP-6. Refer to Special Provisions.
11 WOOD BENCH (46 TOTAL) See detail A / HP-7.
12 BICYCLE "HITCHING POST" (2 TOTAL) See detail E / HP-7.
13 PLANTING AREA Refer to Planting Plans.
14 HANDRAIL Refer to "S1" Drawings
15 FLAGPOLE (16 TOTAL)
12 CONCRETE PAVING SEE DWG. #S, SHT. #
NOTES:
1. FOR MATERIALS &FINISHES ○ REFER TO LEGEND.
2. FOR LIGHT POST LOCATIONS, REFER TO "E" DRAWINGS.
3. FOR HORIZONTAL & VERTICAL CONTROLS, REFER TO "CSS" AND "C" DRAWINGS.
4. FOR DRAINAGE, REFER TO "U" DRAWINGS.
PACIFIC HIGHWAY
NORTH
CHAIN LINK FENCE PER EXISTING DWGS.
EXISTING CHAIN LINK FENCE
MATCH LINE SEE DWG. NO. HP-2
MATCH LINE SEE DWG. NO. HP-3
AS BUILT
Contract No. LRT-552
Date 12-10-96
NO. DATE REVISIONS BY CHK APPR
KTGY
DESIGNED BY RBL 9/94
DRAWN BY MJJ 9/94
CHECKED BY MAT 9/94
MTDB PROJ. ENG. D. RAGLAND
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
URBAN DESIGN PLAN
SHEET 4 OF 4
SCALE 1"=20'
MTDB CONTRACT NO. LRT 552
DRAWING NO. HP-4
SHEET NO. 4 of
MTS DOC NO. 350322 WO# 5000-1523
FOR REDUCED PLANS 0 1 2 3



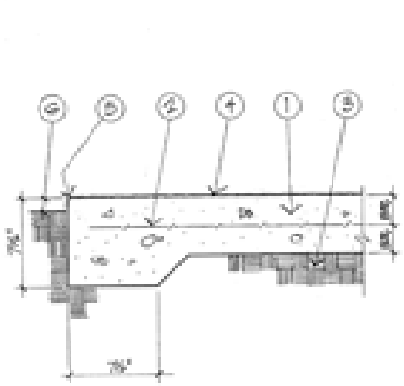
A CONCRETE PAVING - SIDEWALKS NOT TO SCALE



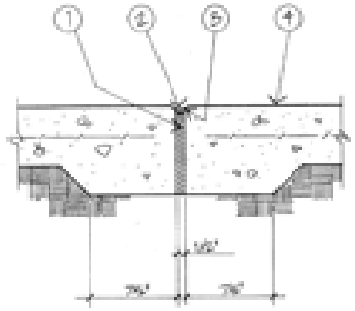
B STAMPED CONCRETE PAVING NOT TO SCALE



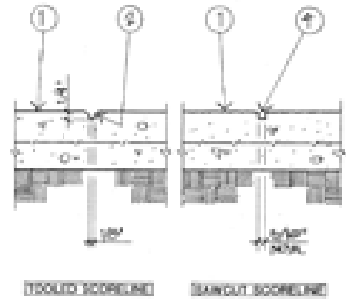
C CONCRETE PAVING @ TRACK NOT TO SCALE



D ROCK SALT FINISH CONC. PAVING NOT TO SCALE



E EXPANSION JOINT NOT TO SCALE



F TOOLED & SAWCUT SCORELINES NOT TO SCALE

AS BUILT
Contract No. LRT-552
Date 12-10-96

NO.	DATE	REVISIONS	BY	CHK	APPD
1	4-96	Conformed			

KTUA

DESIGNED BY PBL 9/94
DRAWN BY MJJ 9/94
CHECKED BY MAT 9/94
MTDB Proj. Engr. D. ENGLAND

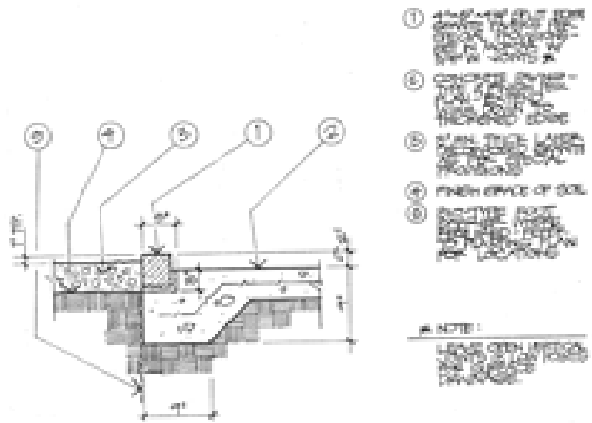
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
CONSTRUCTION DETAILS
SHEET 1 OF 1

SCALE AS NOTED
MTDB CONTRACT NO. LRT-552
DRAWING NO. HP-5
SHEET NO. 47

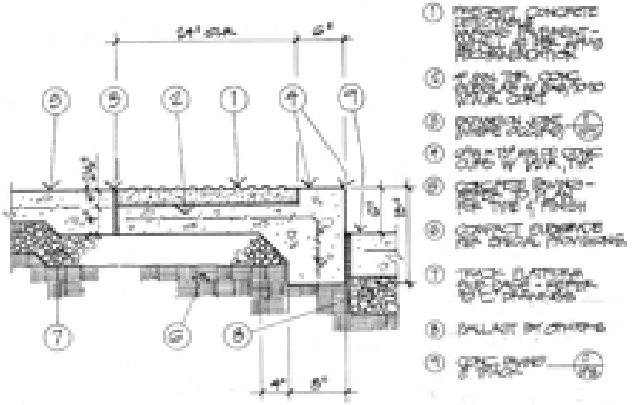
113

MTS DOC NO. PWL355/A22; WOA355-AE-25



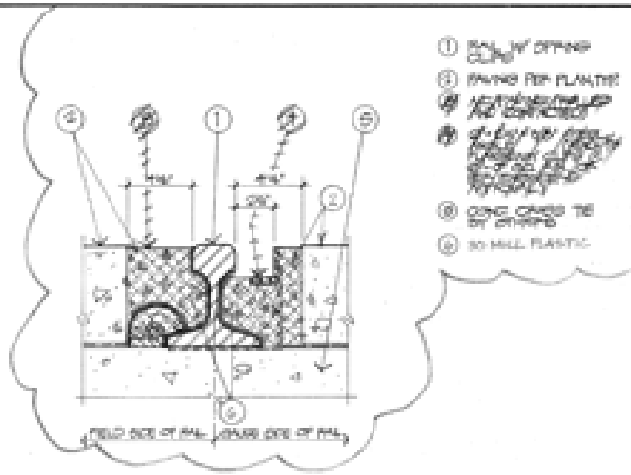
A GRANITE PLANTER CURB at Concrete Paving

SCALE: 1-1/2" = 1'-0"



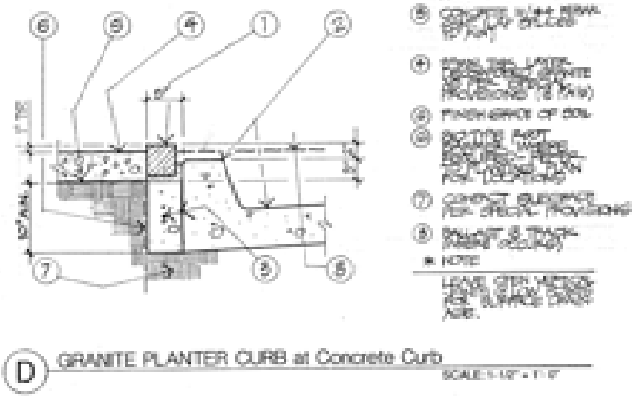
B DETECTABLE WARNING PAVEMENT at LRT Platform

SCALE: 1-1/2" = 1'-0"



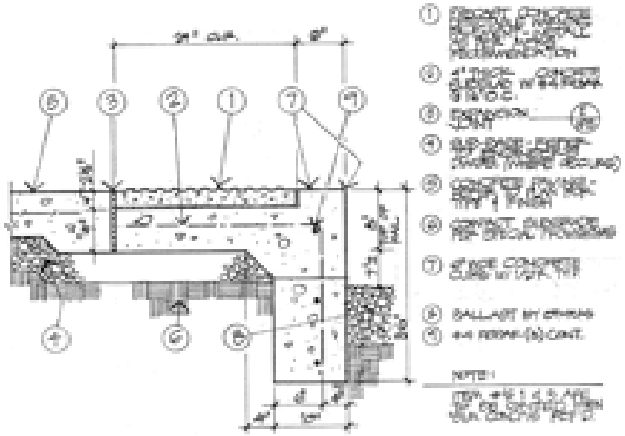
C RAIL DETAIL

NOT TO SCALE



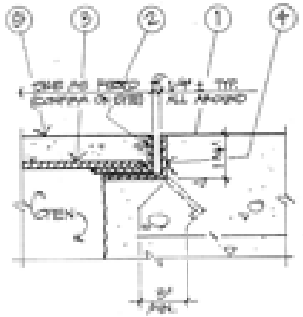
D GRANITE PLANTER CURB at Concrete Curb

SCALE: 1-1/2" = 1'-0"



E DETECTABLE WARNING PAVEMENT at Train Platform

SCALE: 1-1/2" = 1'-0"



F VAULT / PULL BOX DETAIL

NOT TO SCALE

AS BUILT

Contract No. LRT-552

Date 12-10-96

KTUA

MTDB

Metropolitan Transit Development Board

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

LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
CONSTRUCTION DETAILS
SHEET 2 OF 4

SCALE: AS NOTED

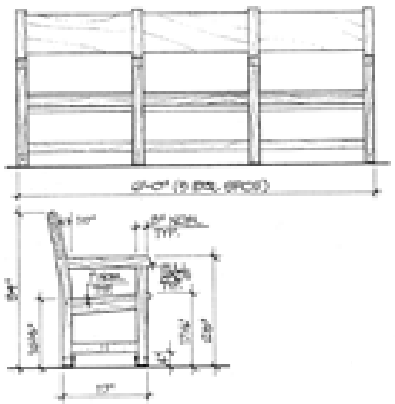
MTDB CONTRACT NO. LRT-552

DRAWING NO. HP-6 | SHEET NO. 48

DESIGNED BY: RSL | DATE: 3/94
DRAWN BY: MJJ | DATE: 3/94
CHECKED BY: MAT | DATE: 3/94
MTDB PROJ. ENGR.: D. RAGLAND

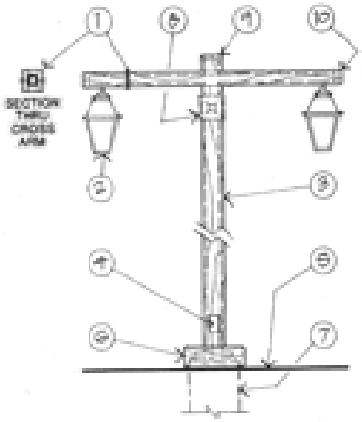
NO. | DATE | REVISIONS | BY | CHK | APP'D

MTS DOC NO. PWL355Sh22, WOA355-AE-25



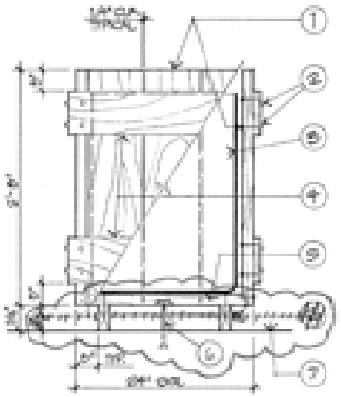
A WOOD BENCH

SCALE: 1" = 1'-0"



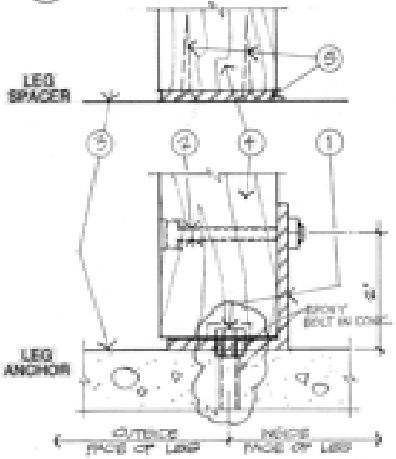
B WOOD CLAD LIGHT POST

NOT TO SCALE



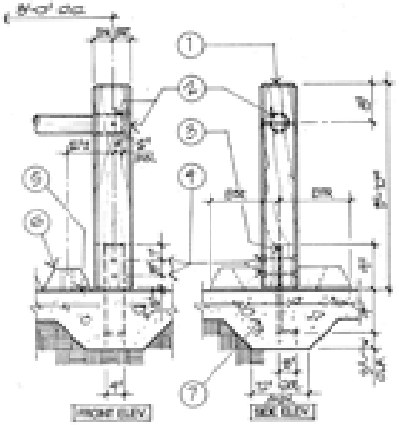
C TRASH RECEPTACLE

SCALE: 1 1/2" = 1'-0"



D WOOD BENCH ANCHORAGE

NOT TO SCALE



E BICYCLE "HITCHING POST"

NOT TO SCALE

AS BUILT

Control No. LRT-552

Date 12-12-96

NO.	DATE	REVISIONS	BY	CHK	APPV
4	8/97				

KTUA

DESIGNED BY: RBL 9/96
DRAWN BY: MJJ 9/96
CHECKED BY: MAT 9/96
MTDB PROJ. ENG.: D. RAGLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

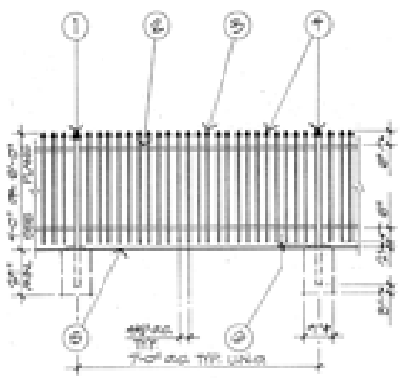
LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
CONSTRUCTION DETAILS
SHEET 3 OF 4

SCALE: AS NOTED
MTDB CONTRACT NO.: LRT-552
DRAWING NO.: HP-7
SHEET NO.: 43

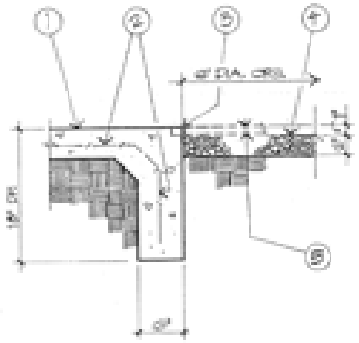
115

MTS DOC NO. PWL355A-22, WOA355-AE-75



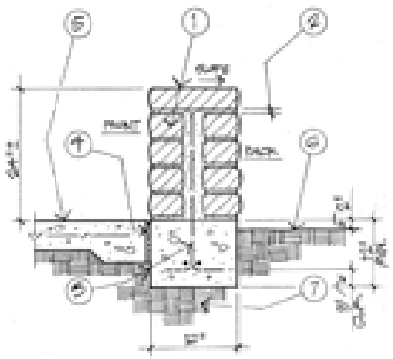
A STEEL PICKET SEPARATION FENCE

NOT TO SCALE



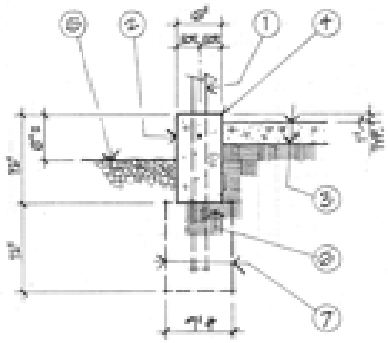
B TREE WELL DETAIL

NOT TO SCALE



C ADOBE SEAT WALL

NOT TO SCALE



D CONCRETE CURB AT FENCE

SCALE: 1-1/2" = 1'-0"

AS BUILT

Contract No. LRT-552

Date 12-10-14

NO.	DATE	REVISIONS	BY	CHK	APPV

KTUA

DESIGNED BY: MIL — DATE: 8/14
DRAWN BY: MLU — 8/14
CHECKED BY: * MAT — 8/14
PETER PILZ ENGINEERING, INC.

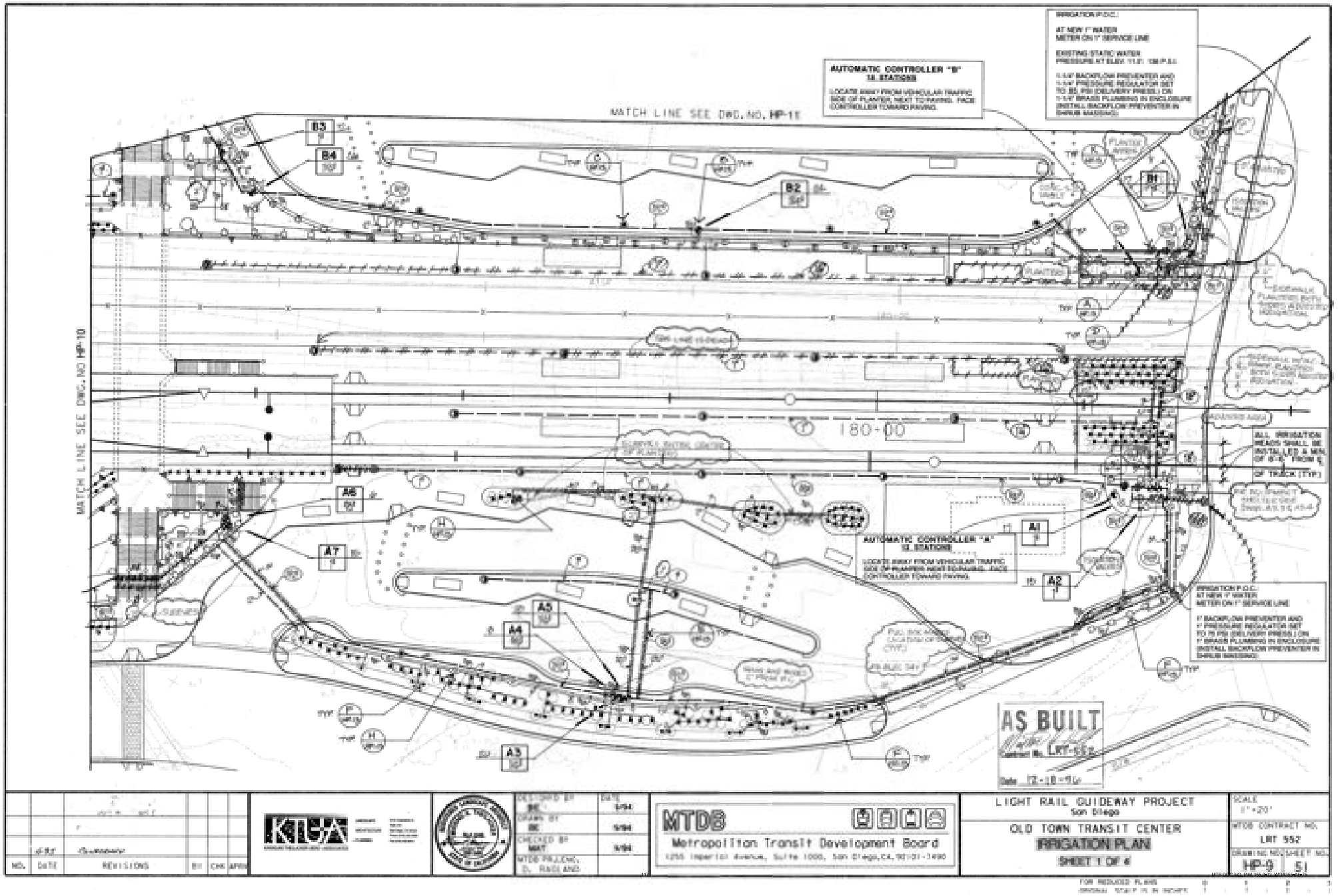
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
CONSTRUCTION DETAILS
SHEET 4 OF 4

SCALE: AS NOTED
MTDB CONTRACT NO.: LRT-552
DRAWING NO.: HP-8
SHEET NO.: 50

MTS DOC NO. PWL355Sh22, WOA355-HE-25



NO.	DATE	REVISIONS	BY	CHK	APPVD

KTUA

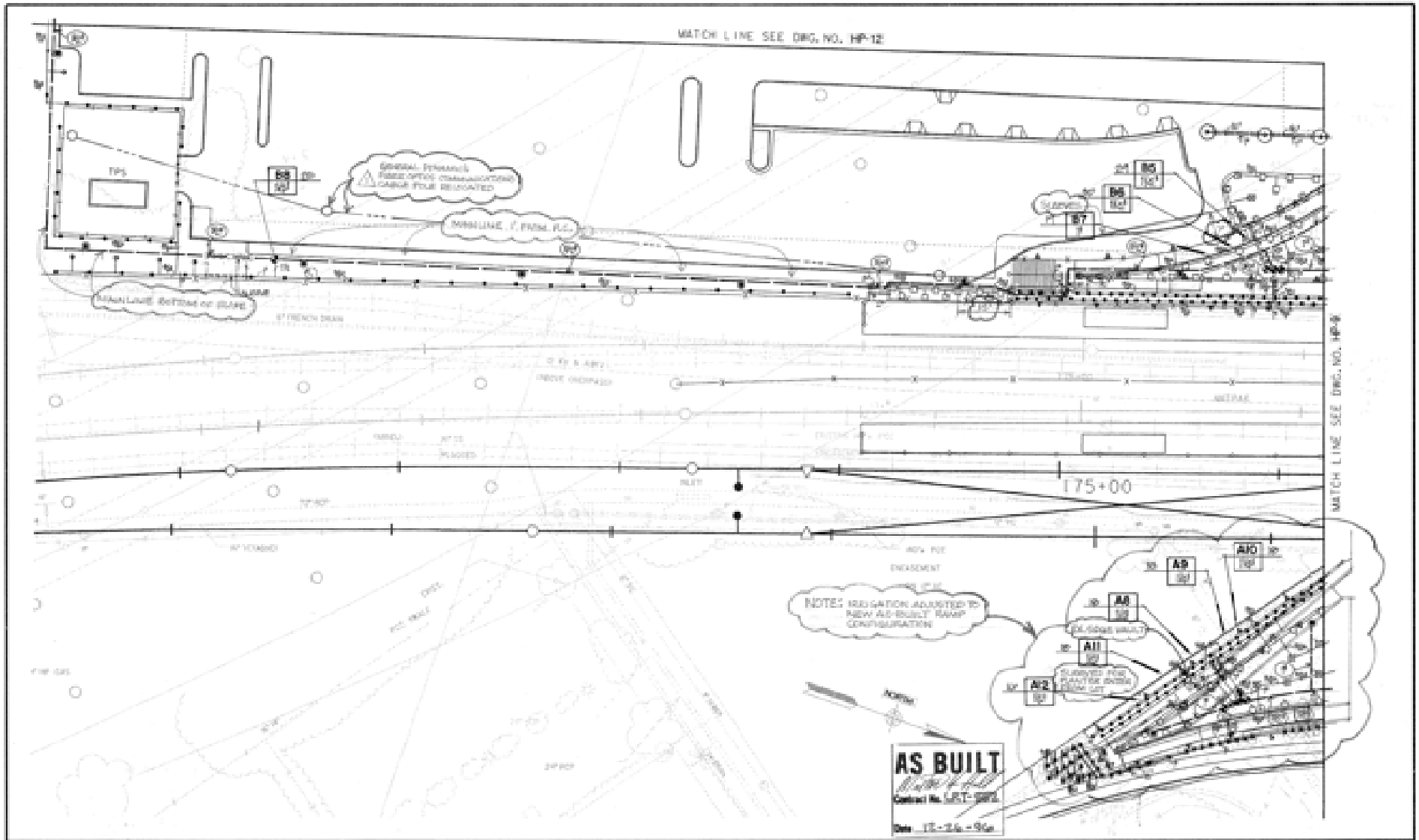
DESIGNED BY BC — DATE 9/94
DRAWN BY BC — 9/94
CHECKED BY MAT — 9/94
MTDB PROJECT ENGR. D. RADLAND

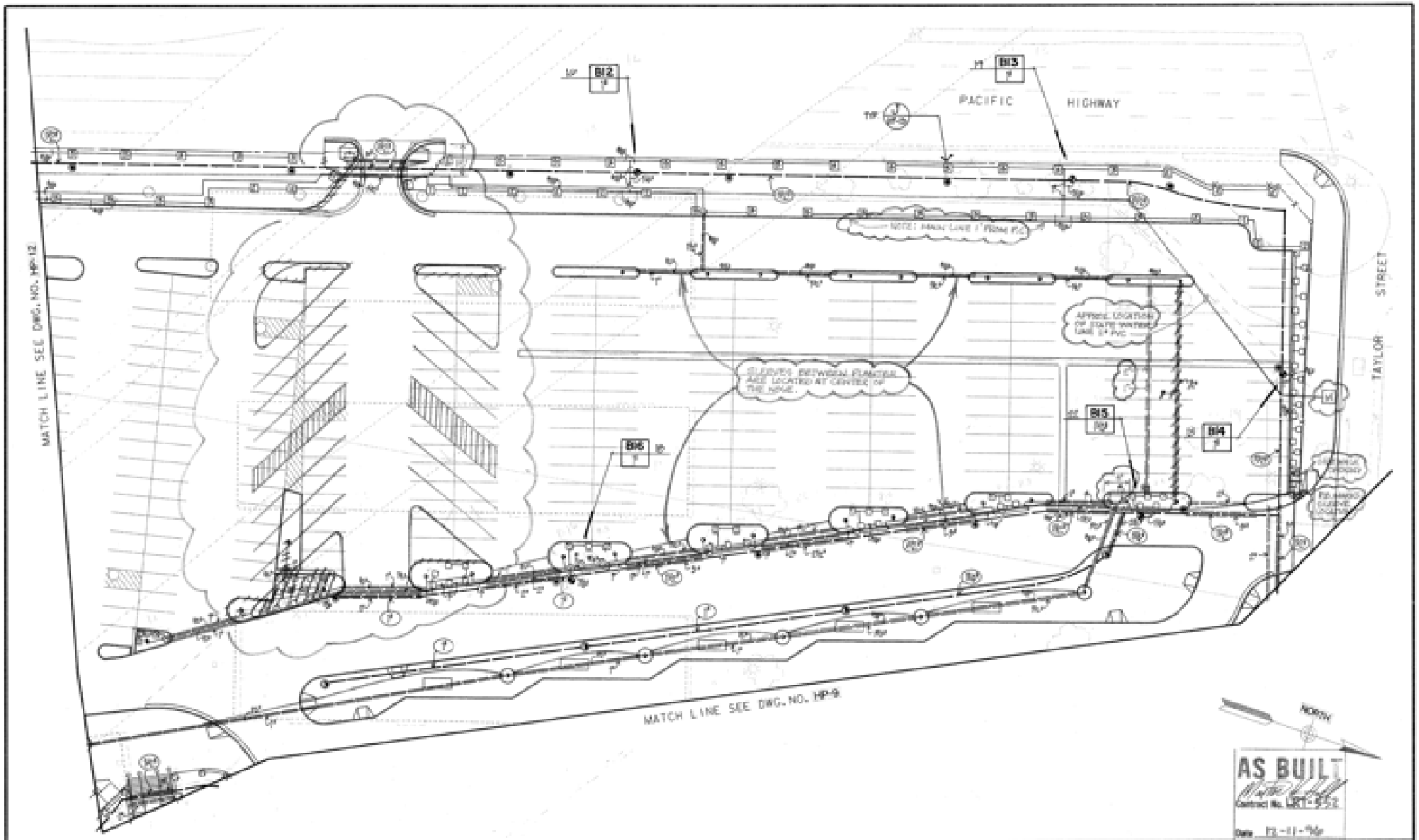
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
IRRIGATION PLAN
SHEET 1 OF 4

SCALE 1"=20'
MTDB CONTRACT NO. LRT 552
DRAWING NO/SHEET NO. HP-9 51

FOR REDUCED PLANS


MATCH LINE SEE DRG. NO. HP-12
MATCH LINE SEE DRG. NO. HP-9
175+00
NOTE: IRRIGATION ADJUSTED TO NEW AS-BUILT RAMP CONFIGURATION
AS BUILT
Contract No. LRT-552
Date 12-26-96
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
IRRIGATION PLAN
SHEET 2 OF 4
MTDB CONTRACT NO. LRT 552
DRAWING NO. HP-10
SHEET NO. 52



NO.	DATE	REVISIONS	BY	CHK	APPV

KLSA

DESIGNED BY BE 9/94
DRAWN BY BE 9/94
CHECKED BY MAT 9/94
MTDB PROJ.ENG. D. RAGLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER

IRRIGATION PLAN

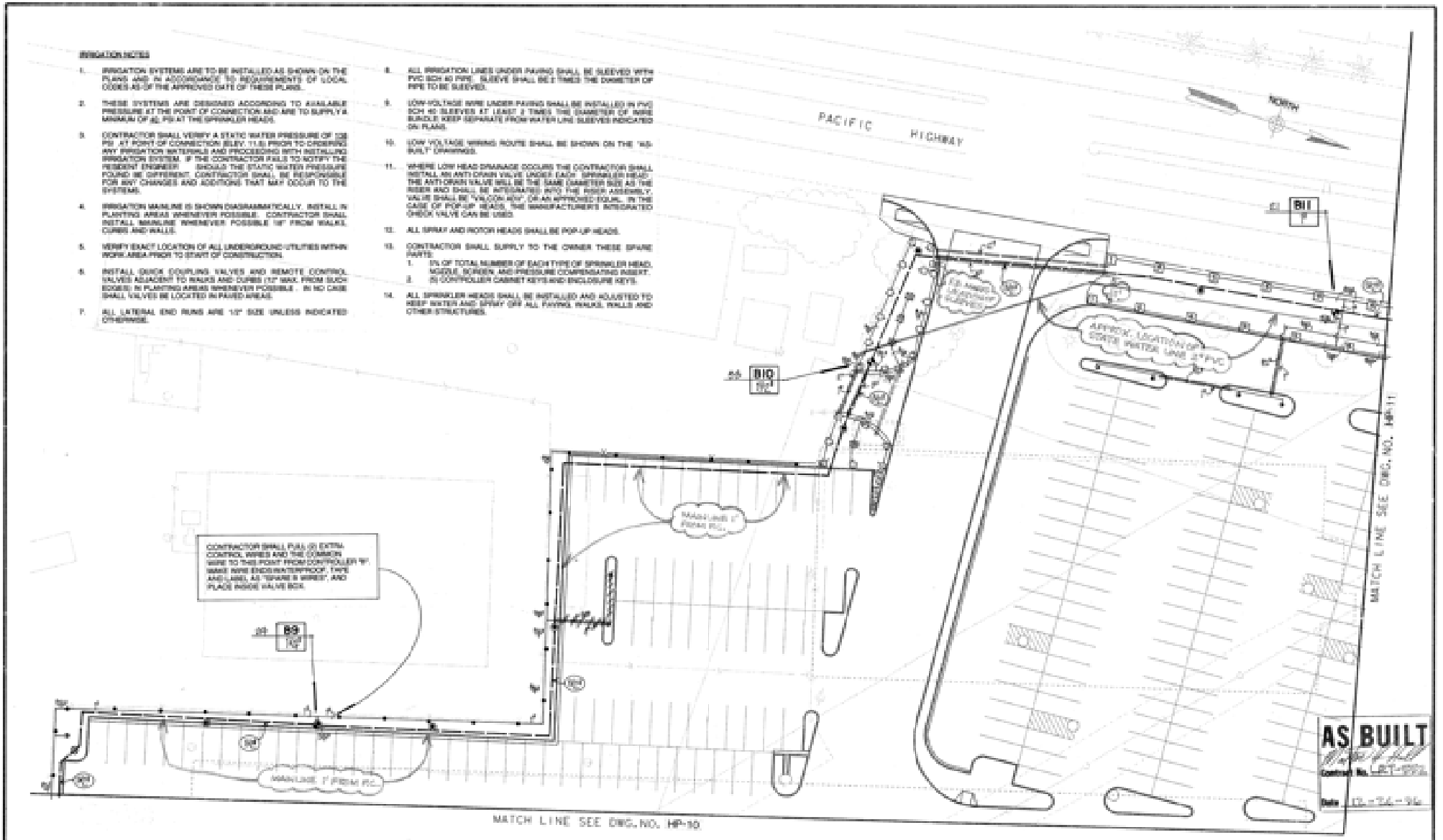
SHEET 3 OF 4

SCALE 1"=20'
MTDB CONTRACT NO. LRT 552
DRAWING NO. HP-11
SHEET NO. 58

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3
MTS DOC NO. PW1355422, WO3554425

IRRIGATION NOTES

1. IRRIGATION SYSTEMS ARE TO BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE TO REQUIREMENTS OF LOCAL CODES AS OF THE APPROVED DATE OF THESE PLANS.
2. THESE SYSTEMS ARE DESIGNED ACCORDING TO AVAILABLE PRESSURE AT THE POINT OF CONNECTION AND ARE TO SUPPLY A MINIMUM OF 40 PSI AT THE SPRINKLER HEADS.
3. CONTRACTOR SHALL VERIFY A STATIC WATER PRESSURE OF 108 PSI AT POINT OF CONNECTION (ELEV. 11.5) PRIOR TO ORDERING ANY IRRIGATION MATERIALS AND PROCEEDING WITH INSTALLING IRRIGATION SYSTEM. IF THE CONTRACTOR FAILS TO NOTIFY THE RESIDENT ENGINEER SHOULD THE STATIC WATER PRESSURE FOUND BE DIFFERENT, CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES AND ADDITIONS THAT MAY OCCUR TO THE SYSTEMS.
4. IRRIGATION MAINLINE IS SHOWN DIAGRAMMATICALLY. INSTALL IN PLANTING AREAS WHENEVER POSSIBLE. CONTRACTOR SHALL INSTALL MAINLINE WHENEVER POSSIBLE 18" FROM WALKS, CURBS AND WALLS.
5. VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES WITHIN WORK AREA PRIOR TO START OF CONSTRUCTION.
6. INSTALL QUICK COUPLING VALVES AND REMOTE CONTROL VALVES ADJACENT TO WALKS AND CURBS (12" MAX. FROM SUCH EDGES) IN PLANTING AREAS WHENEVER POSSIBLE. IN NO CASE SHALL VALVES BE LOCATED IN PAVED AREAS.
7. ALL LATERAL END RUNS ARE 1/2" SIZE UNLESS INDICATED OTHERWISE.
8. ALL IRRIGATION LINES UNDER PAVING SHALL BE SLEEVED WITH PVC SCH 40 PIPE. SLEEVE SHALL BE 2 TIMES THE DIAMETER OF PIPE TO BE SLEEVED.
9. LOW VOLTAGE WIRE UNDER PAVING SHALL BE INSTALLED IN PVC SCH 40 SLEEVES AT LEAST 2 TIMES THE DIAMETER OF WIRE BUNDLE. KEEP SEPARATE FROM WATER LINE SLEEVES INDICATED ON PLANS.
10. LOW VOLTAGE WIRING ROUTE SHALL BE SHOWN ON THE "AS-BUILT" DRAWINGS.
11. WHERE LOW HEAD DRAINAGE OCCURS THE CONTRACTOR SHALL INSTALL AN ANTI-DRAIN VALVE UNDER EACH SPRINKLER HEAD. THE ANTI-DRAIN VALVE WILL BE THE SAME DIAMETER SIZE AS THE RISER AND SHALL BE INTEGRATED INTO THE RISER ASSEMBLY. VALVE SHALL BE "VILCON #35" OR AN APPROVED EQUAL. IN THE CASE OF POP-UP HEADS, THE MANUFACTURER'S INTEGRATED CHECK VALVE CAN BE USED.
12. ALL SPRAY AND ROTOR HEADS SHALL BE POP-UP HEADS.
13. CONTRACTOR SHALL SUPPLY TO THE OWNER THESE SPARE PARTS:
    1. 5% OF TOTAL NUMBER OF EACH TYPE OF SPRINKLER HEAD, NOZZLE, SCREEN, AND PRESSURE COMPENSATING INSERT.
    2. (5) CONTROLLER CABINET KEYS AND ENCLOSURE KEYS.
14. ALL SPRINKLER HEADS SHALL BE INSTALLED AND ADJUSTED TO KEEP WATER AND SPRAY OFF ALL PAVING, WALKS, WALLS AND OTHER STRUCTURES.



NO.	DATE	REVISIONS	BY	CHK	APPD
1	4/11	Addendum			

KLEA

DESIGNED BY: BET — DATE: 9/94
DRAWN BY: BE — DATE: 9/94
CHECKED BY: MAT — DATE: 9/94
MTDB PROJECT MGR.: D. PAGLIARO

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
IRRIGATION PLAN
SHEET 4 OF 4

SCALE: 1"=20'
MTDB CONTRACT NO.: LRT 552
DRAWING NO.: HP-12
SHEET NO.: 54

MTS DOC NO. PW552JA22 WO#3540-ARCH

FOR REDUCED PLANS 0 1 2 3

IRRIGATION EQUIPMENT LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER / MODEL OR EQUAL	REMARKS	DETAIL
POC	POINT OF CONNECTION	———	AT THIS NEW WATER METERS ALL NOTES ON PLANS	—
	MASTER METER OR IRRIGATION ONLY	———	REFER TO DRAWINGS FOR SIZE AND LOCATION	—
	AUTOMATIC CONTROLLER 'A' & 'B'	SPECTRUM MODEL OR EQUAL	SEE DRAWING FOR CONTROLLER SIZE	A
	IRRIGATION CONTROLLER ENCLOSURE	AS SPECIFIED MODEL & P/N WITH DOOR OPTION DOOR	INSTALL IN SHRUB AREAS	A
	REMOTE CONTROL VALVE	RAINBIRD, DEL, TORO OR EQUAL	INSTALL APPROXIMATELY 6' BACK OF SIDEWALK OR CURB	B
	QUICK COUPLING VALVE	RAINBIRD, DEL, TORO OR EQUAL	FOR SUPPLY IN AREAS, INSTALL WITHIN 6' WHERE SHOWN	C
	BACKFLOW PREVENTER	WILKINS, CLAY	SEE PLANS FOR SIZE & INCLUDE DIMENSIONS WITH METER	D
	BACKFLOW PREVENTER ENCLOSURE	LEAD LIFT BOX, 30"(L) x 18"(W) x 24"(D), 4" BOLT CIRCLE	SECURE ENCLOSURE PER MANUFACTURER'S INSTRUCT.	D
	PRESSURE REGULATOR (1-1/4" & 1")	WILKINS 350 WITH LOCKING SPRING, 70# - 125 PSI	INSTALL IN DOWNSTREAM LEG OF BACKFLOW PREVENTER	D
	POC WARNING (SAY AS SHOWN)	ROCKEY INDUSTRY OR EQUAL	ADAPTER	SPECIAL
	GATE VALVE	AS SPECIFIED	IN PIPING	—
	GATE VALVE (FINAL LINE SIZE, NO SHOWN)	ROCKEY, AMERICAN OR EQUAL	SIZE PER PLANS	SPECIAL
	PVC SLEEVE FOR PIPE	ROCKEY, AMERICAN OR EQUAL	PVC SCH 40, SIZED MIN DIA. OF PIPE TO BE SLEEVED	SPECIAL
	PVC SLEEVE FOR WIRE	ROCKEY, AMERICAN OR EQUAL	PVC SCH 40, SIZED MIN DIA. OF WIRE BUNDLE	SPECIAL
	TRENCH W/ PIPE & WIRES	—	FOR PIPING CROSSING EXISTING PAVEMENT	E
	QUICK COUPLING VALVE (SHRUB)	RAINBIRD 33-DRC	ADJUSTED VALVE PER DETAIL AT DIA SHT. HP-5	—
	GATE VALVE	KING BROS. W-777 SERIES OR EQUAL	MARK WE SHT. FOR MARK INDICATION	A
	VALVE TAG FOR	WATER - CHISELED, SYST. ING. "RAINGUARD NO-VALVE"	INSTALL ON CONTROLLER ENCLOSURE	A
	VALVE CALLOUT:			
	CONTROLLER	A1	STATION SEQUENCE	
	VALVE/GPM	#2	VALVE SIZE	
	CAPPING GAL PER MIN.			
	REMOTE CONTROL VALVE (WIRELESS)	RAINBIRD 150-PEB-S (SIZE AS SHOWN)	INSTALL NEXT TO PAVING APPROX. WHERE SHOWN	B

IRRIGATION HEAD LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER / MODEL	RAD (FT)	GALLONS PER MINUTE	DETAIL
	4" SHRUB POP-UP SPRAY HEAD	TORO T53-04-PRO-CV W/ PRS 30 SERIES	12 - 15	30	F
	4" SHRUB POP-UP SPRAY HEAD	TORO T53-04-PRO-CV W/ PRS 30 SERIES	13 - 15	30	F
	4" SHRUB POP-UP SPRAY HEAD	TORO T53-04-PRO-CV W/ PRS 30 SERIES	11 - 14	30	F
	4" SHRUB POP-UP SPRAY HEAD	TORO T53-04-PRO-CV W/ PRS 30 SERIES	8 - 10	30	F
	4" SHRUB POP-UP SPRAY HEAD	TORO T53-04-PRO-CV W/ PRS 30 SERIES	5 - 8	30	F
	FIXED FLOW BUBBLER HEAD	TORO T53-04-BP - WITH 23-CNL	4' - 0"	40	0.25	—	F
	TREE BUBBLER HEAD	TORO T53-04-BP WITH 23-CNL	—	40	—	0.25	F
	TREE BUBBLER HEAD	TORO T53-04-BP WITH 23-CNL	—	80	—	0.50	F
	6" SHRUB POP-UP SPRAY HEAD	TORO T53-06-PRO-CV W/ PRS 30 SERIES	1 - 3	30			F

NOTE: ALL POP-UP SPRAY HEADS TO BE INSTALLED WITH 6" RISER ASSEMBLY UNLESS NOTED OTHERWISE ON PLANS

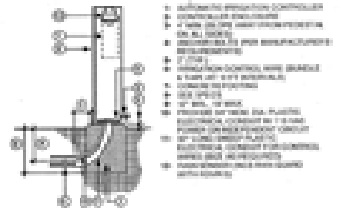
ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ										
							POP-UP GEAR DRIVEN ROTOR HD	HUNTER PGJ-ADV	15 - 50	40	—	—	—	—	1.50	2.80	3.50	—

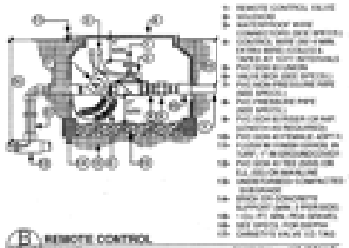
* GPM AT UNADJUSTED FULL FLOW — ** = NOZZLE SIZE, SEE NOZZLE CHART

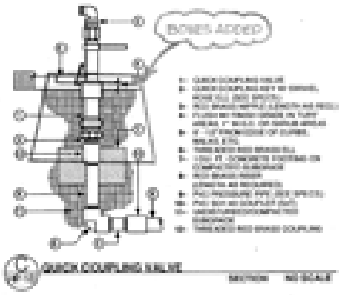
NOTE: ADJUST SPRAY TO SUIT LOCAL CONDITIONS — ADJ = ADJUSTABLE ARC NOZZLE — F = FULL CIRCLE

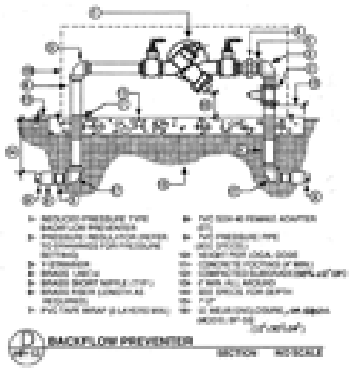
FOR HUNTER HEADS, NUMBER IN HEAD SYMBOL INDICATES NOZZLE SIZE TO BE USED

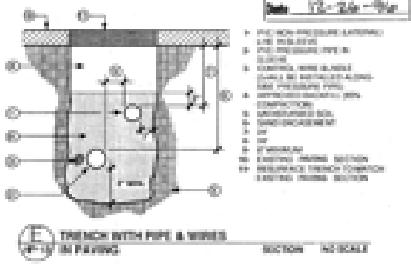
AS BUILT
Contract No. LRT-532
Date 12-24-96

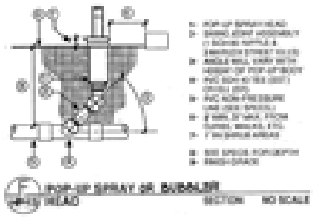


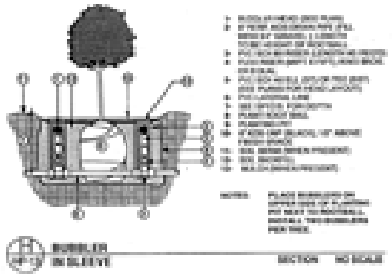


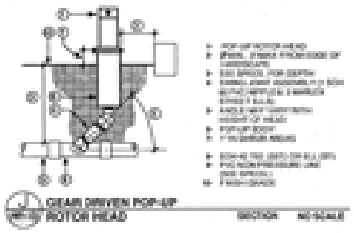


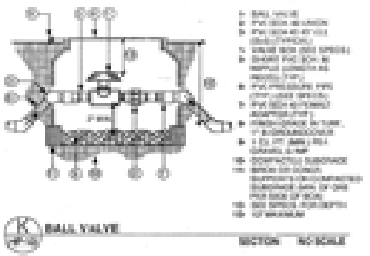












NO	DATE	REVISIONS	BY	CHK	APPD

KTUA

DESIGNED BY DE 3/94
DRAWN BY DE 3/94
CHECKED BY RHT 3/94
MTDB PROJ. ENG. D. FAGLIANO

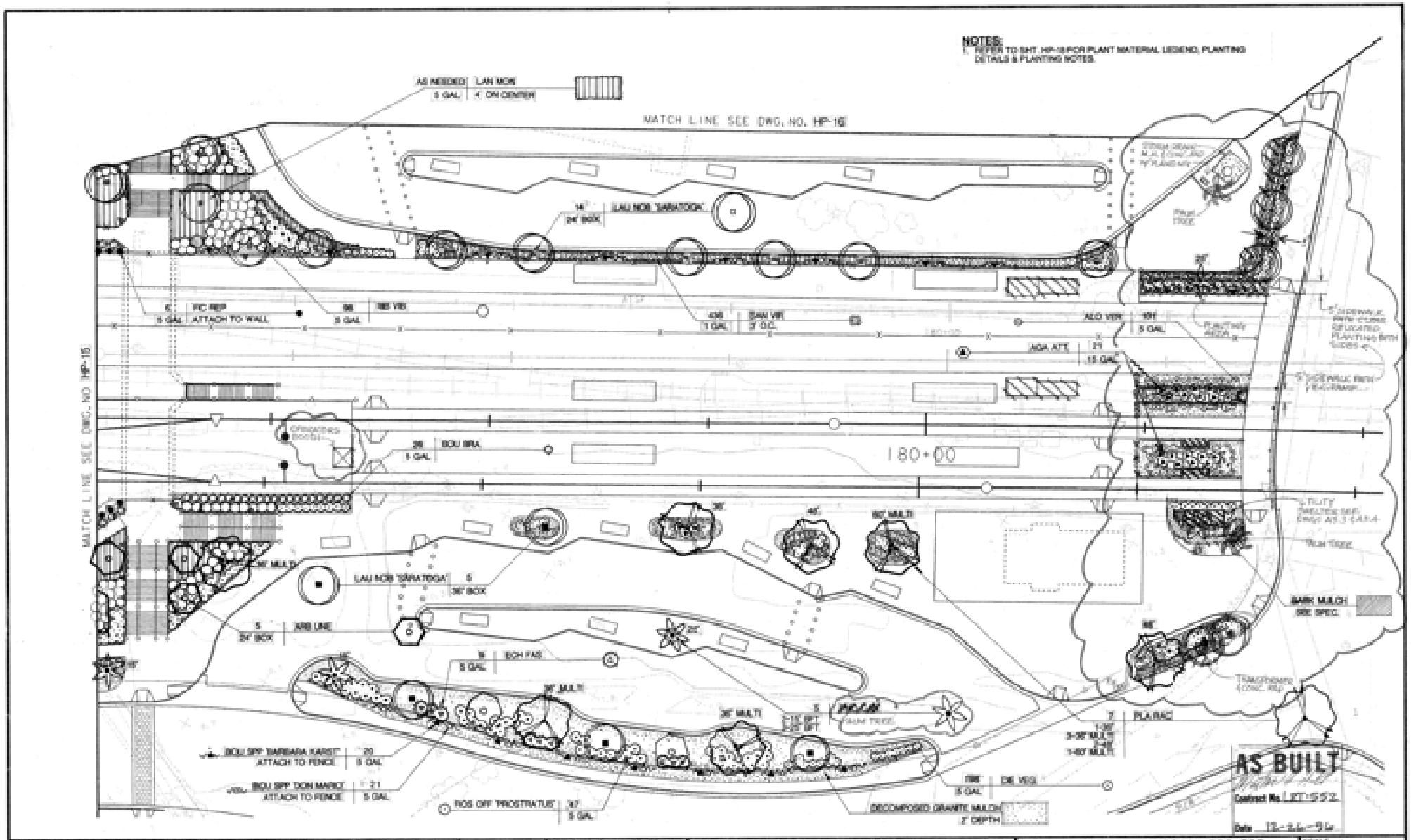
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

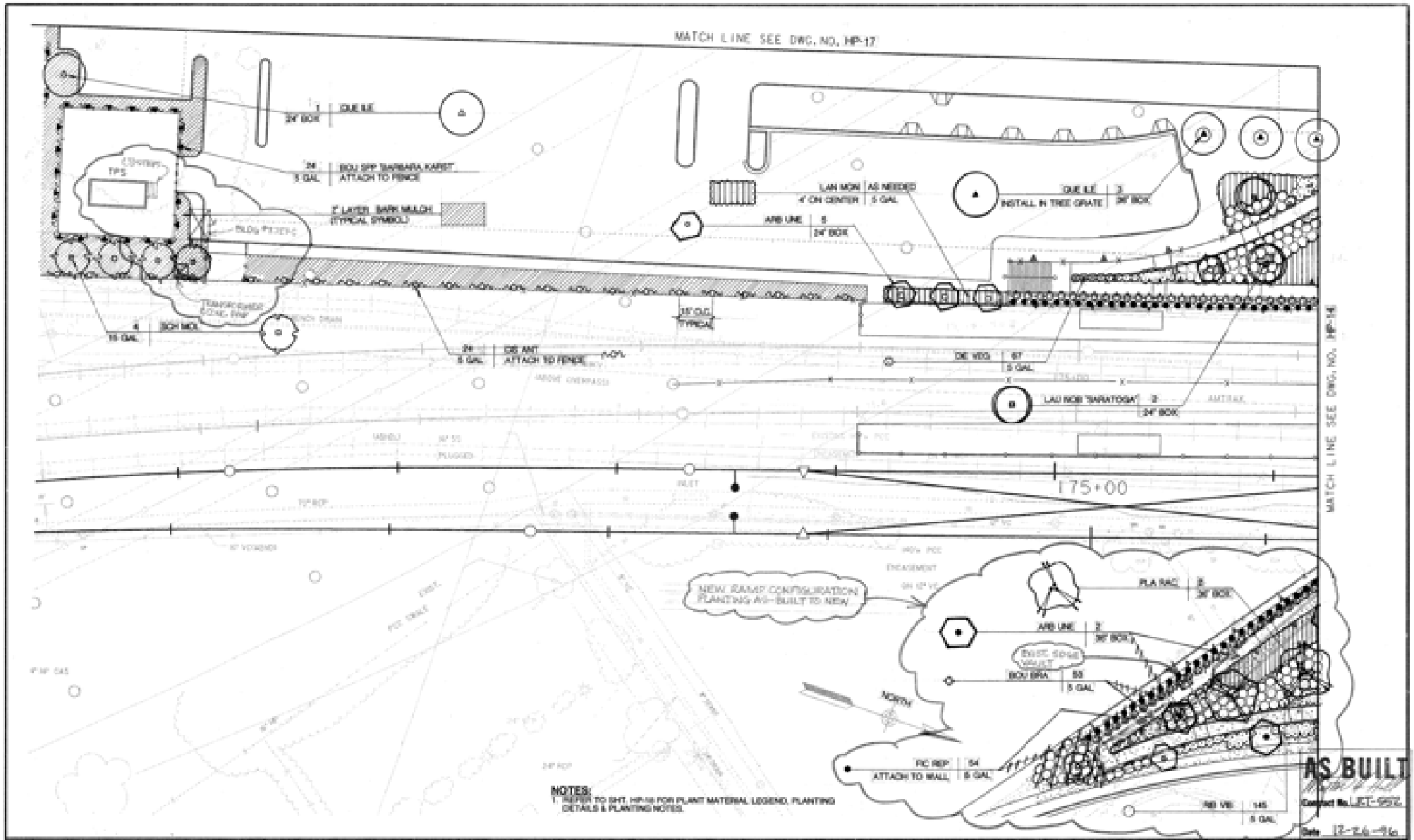
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
IRRIGATION LEGEND & DETAILS

SCALE AS NOTED
MTDB CONTRACT NO. LRT-532
DRAWING NO. HP-13
SHEET NO. 55

121

MTS DOC NO. PWL355-A22; WOA355-AE-25


NOTES:
1. REFER TO SHT. HP-18 FOR PLANT MATERIAL LEGEND, PLANTING DETAILS & PLANTING NOTES.
MATCH LINE SEE DWG. NO. HP-16
MATCH LINE SEE DWG. NO. HP-15
180+00
LAU NOB 'SARATOGA'
BOU BRA
ARB LINE
ECH FAS
ROS OFF 'PROSTRATUS'
DECOMPOSED GRANITE MULCH 2" DEPTH
BARK MULCH SEE SPEC.
AS BUILT
Contract No. LRT-552
Date 12-22-96
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-1490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PLANTING PLAN
SHEET 1 OF 4
MTDB CONTRACT NO. LRT 552
DRAWING NO. HP-14
SHEET NO. 56



NO.	DATE	REVISIONS	BY	CHK	APPV
	4-97	Construction			

KTUA

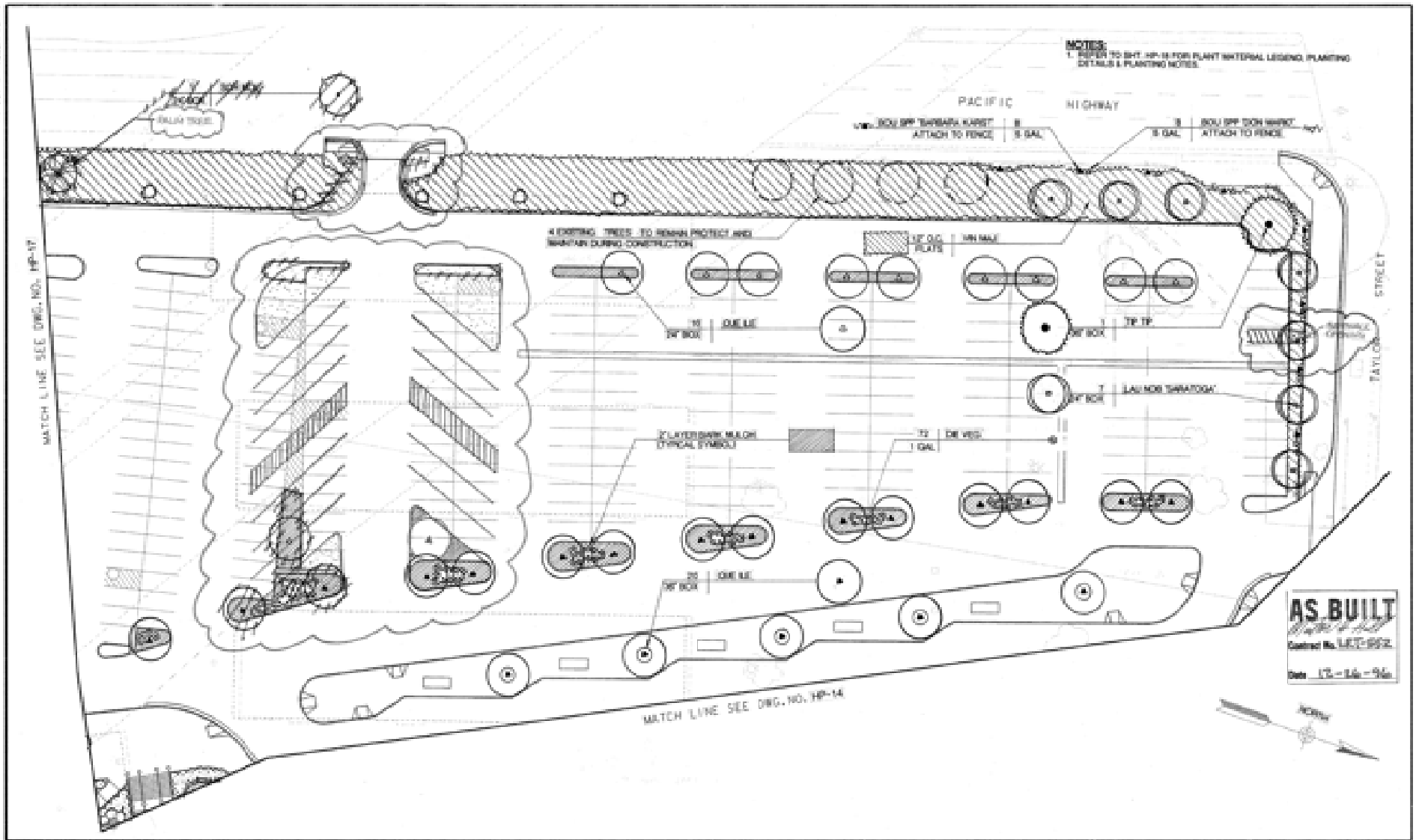
DESIGNED BY	RBL	DATE 9/94
DRAWN BY	RBL	9/94
CHECKED BY	MAT	9/94
MTDB PROJECT MGR.	D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-7490

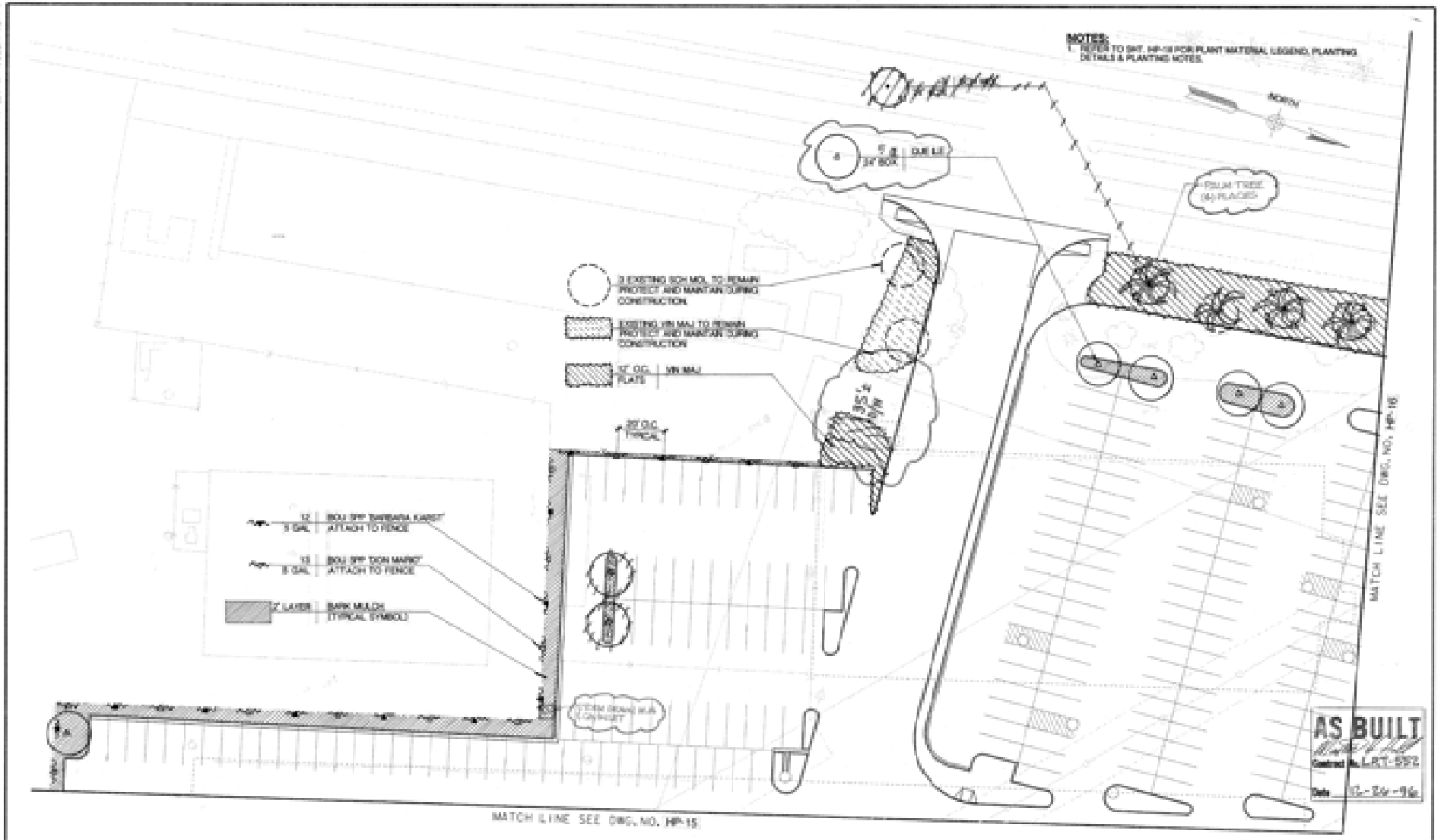
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PLANTING PLAN
SHEET 2 OF 4

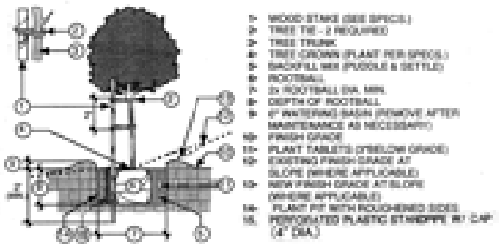
SCALE	1"=20'
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	HP-15
SHEET NO.	57

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

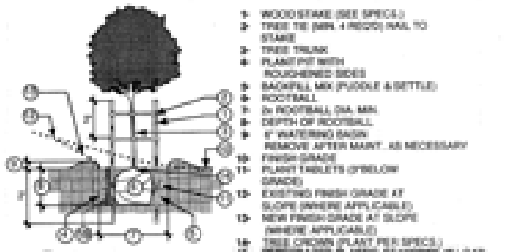


NO.	DATE	REVISIONS	BY	CHK	APVD	DESIGNED BY PBL 9/94	DRAWN BY PBL 9/94	CHECKED BY MAT 9/94	DATE	MTDB Metropolitan Transit Development Board 1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490	LIGHT RAIL GUIDEWAY PROJECT San Diego OLD TOWN TRANSIT CENTER PLANTING PLAN SHEET 3 OF 4	SCALE 1"=20' MTDB CONTRACT NO. LRT 552 DRAWING NO. HP-16 SHEET NO. 58

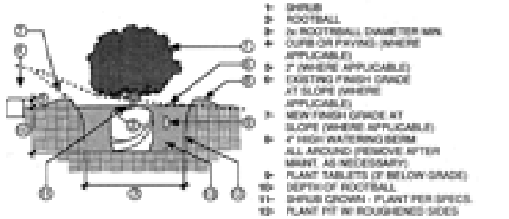

NOTES:
1. REFER TO SHT. HP-18 FOR PLANT MATERIAL LEGEND, PLANTING DETAILS & PLANTING NOTES.
NORTH
EXISTING SCH MOL TO REMAIN PROTECT AND MAINTAIN DURING CONSTRUCTION
EXISTING VIN MAJ TO REMAIN PROTECT AND MAINTAIN DURING CONSTRUCTION
VIN MAJ
BARK MULCH (TYPICAL SYMBOL)
MATCH LINE SEE DWG. NO. HP-15
MATCH LINE SEE DWG. NO. HP-16
AS BUILT
Contract No. LRT-552
Date 12-24-96
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PLANTING PLAN
SHEET 4 OF 4
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
SCALE 1"=20'
MTDB CONTRACT NO. LRT 552
DRAWING NO/SHEET NO. HP-17 59



A TREE PLANTING - SINGLE STAKE
HP-18 SECTION — NO SCALE



B TREE PLANTING W/DOUBLE STAKING
HP-18 SECTION — NO SCALE

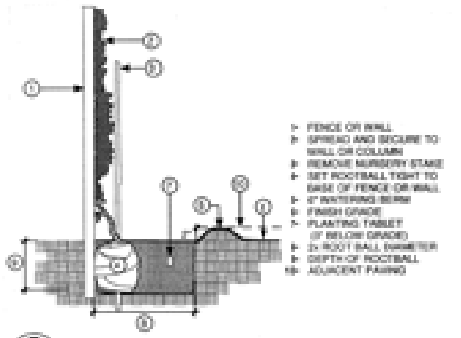


C SHRUB PLANTING
HP-18 SECTION — NO SCALE

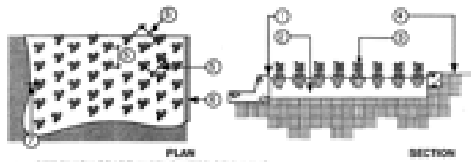
Caution: Bougainvilleas have fragile roots that are very sensitive to disturbance. Handle plants and containers with care. The following procedure must be followed to ensure survival:

For plastic containers: Cut out bottoms and place containers in planting holes. Then cut container sides from top to bottom and remove sides.

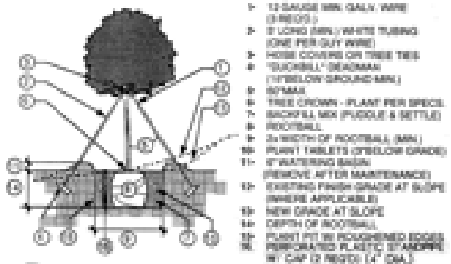
For metal containers: Poke 6-8 holes in sides and bottom of cans before setting them in holes. Fill in around cans with backfill mix. The metal will rust away.



D VINE @ FENCE OR WALL
HP-18 SECTION — NO SCALE

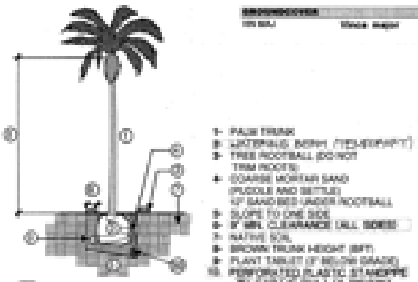


E GROUNDCOVER PLANTING (TRIANGULAR)
HP-18 SECTION — NO SCALE



F TREE PLANTING W/GUYING
HP-18 SECTION — NO SCALE

AS BUILT
Contract No. LBT-552
Date 12-14-06



G PALM TREE PLANTING
HP-18 SECTION — NO SCALE

PLANT MATERIAL SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT	SPREAD	REMARKS
TREES						
ARB LINE	Arbutus unedo	Strawberry Tree	24" box	8'	5'	Multi-trunk, full head, good caliper, double stake
ARB LINE	Arbutus unedo	Strawberry Tree	36" box	8'	7'	Multi-trunk, full head, good caliper, guy
LAU NOB SARATOGA	Laurus nobilis 'Saratoga'	Sweet Bay	24" box	10'	4'	Standard, full head, good color, double stake
LAU NOB SARATOGA	Laurus nobilis 'Saratoga'	Sweet Bay	36" box	12'	6'	Standard, full head, good color, guy
PLA RAC	Platanus racemosa	California Sycamore	36" box	10'	7'	Straight trunk, full head, guy
PLA RAC MULTI	Platanus racemosa	California Sycamore	36" box	14'	8'	Multi-trunk, full head,guy
PLA RAC	Platanus racemosa	California Sycamore	48" box	20'	12'	Straight trunk, full head, guy
PLA RAC MULTI	Platanus racemosa	California Sycamore	60" box	22'	10'	Multi-trunk, full head, guy
QUE AGR	Quercus ilex	Holly Oak	24" box	8'	4'	Straight trunk, full head, good color, double stake
QUE AGR	Quercus ilex	Holly Oak	36" box	10'	5'	Straight trunk, full head, good color
SCH MOL	Schinus molle	California Pepper Tree	15 gal	8'	3'	Straight trunk, full head, single stake
SCH MOL	Schinus molle	California Pepper Tree	24" box	11'	4'	Straight trunk, full head, double stake
TIP TIP	Tipuana tipa	Tipu Tree	36" box	14'	7'	Straight trunk, full head, guy
PALMS						
PHO CAN	Phoenix canariensis	Canary Island Palm	15' BRT	25'	N/A	Straight trunk, full fronds, good color
PHO CAN	Phoenix canariensis	Canary Island Palm	25' BRT	35'	N/A	Straight trunk, full fronds, specimen
SHRUBS						
AGA ATT	Agave attenuata	Fox-tail Agave	15 gal	3'	3'	Multi-stemmed, healthy leaves, good color
ALO VER	Aloe Vera	Barbados Aloe	05 gal	10"	10"	Well rooted, good color, unscarred leaves
BOU SPA	Bougainvillea 'Brasilliensis'	Bougainvillea	5 gal	3'	3'	Full & spreading, good color, purple flower
DIE VEN	Dietes vegeta	Fortnight Lily	01 gal	12"	10"	Full clumps, good color
DIE VEN	Dietes vegeta	Fortnight Lily	05 gal	18"	18"	Full clumps, good color
ECH FAS	Echium fastuosum	Pride of Madeira	05 gal	18"	18"	Full & bushy to ground, good color
LAN MON	Lantana montevidensis	Purple Lantana	05 gal	18"	2'	Full & spreading, good color
RIB VIB	Ribes viburnifolium	Evergreen Currant	05 gal	18"	2'	Full & bushy to ground, good color
ROS OFF	Rosmarinus officinalis 'Prostratus'	Dwarf Rosemary	05 gal	18"	18"	Prostrate & bushy to ground,good color
SAV VIR	Santolina virens	Lavender Cotton	01 gal	8"	8"	Full to ground, good color
VINES						
BOU ELA	Bougainvillea 'Barbara Karst'	Bougainvillea	05 gal	5'	N/A	Full & spreading vine, good color, secure to fence
BOU SPA'	Bougainvillea 'Bon Marki'	Bougainvillea	05 gal	5'	N/A	Full & spreading vine, color - purple red, secure to fence
DIS ART	Disosa antarctica	Kangaroo Treetone	05 gal	5'	2'	Full vine, attach to adjacent surface.
FIC REP	Ficus repens	Creeping Fig	05 gal	4'	10'	Full vine, good color, attach to adjacent surface
GROUNDCOVER						
VIN MAJ	Vinca major	Periwinkle	Flats	—	—	10" o.c. full flats, well rooted, good color

PLANTING NOTES:

1. CONTRACTOR SHALL REMOVE ALL ASPHALT PAVING & CONCRETE IN AREAS TO RECEIVE PLANTING. PLANTING AREAS THAT WERE PREVIOUSLY COVERED WITH ASPHALT PAVING SHALL BE TREATED WITH AN ACTIVATED CHARCOAL SLURRY, SEE SPECIAL PROVISIONS.
2. PRIOR TO PLANTING, IRRIGATION SYSTEM SHALL BE FULLY OPERATIONAL AND ALL AREAS SHALL BE WATERED IMMEDIATELY AFTER PLANTING.
3. THE **RESIDENT ENGINEER** SHALL APPROVE ALL TREES UPON DELIVERY TO THE PROJECT SITE. NO TREES SHALL BE PLANTED WITHOUT APPROVAL.
4. THE **RESIDENT ENGINEER** SHALL APPROVE PLACEMENT OF ALL SPECIMEN TREES IN 24" BOX SIZE OR LARGER. THE **RESIDENT ENGINEER** SHALL DETERMINE THE BEST ORIENTATION OF EACH SPECIMEN TREE PRIOR TO BACKFILLING OF PLANT PIT.

NO.	DATE	REVISIONS	BY	CHK	APPV

KTUA

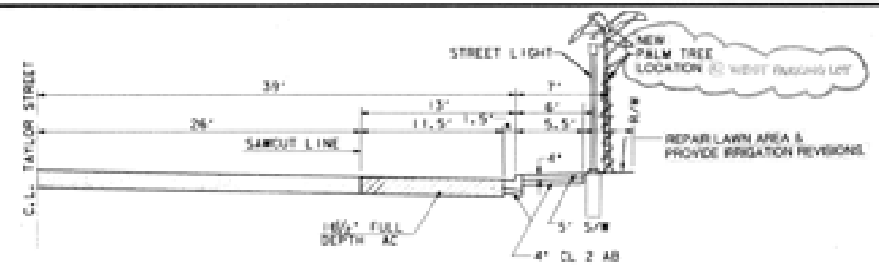
DESIGNED BY	PDL	5/'04
DRAWN BY	PDL	5/'04
CHECKED BY	MAT	5/'04
MTDB PM/ENG	D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, Ca. 92101-7490 (619)231-1466

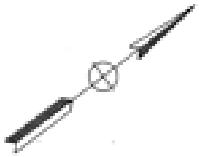
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PLANTING LEGEND & DETAILS

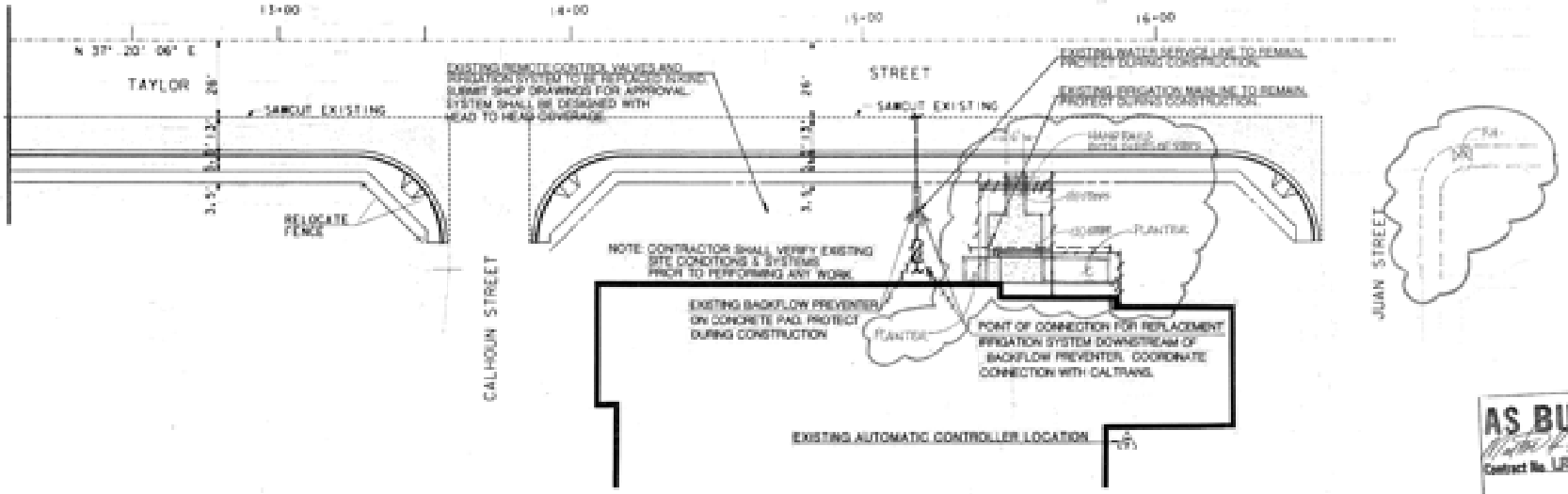
SCALE: AS NOTED
MTDB CONTRACT NO. LBT-552
DRAWING NO. HP-18 | SHEET NO. 60

MTS DOC NO. PWL355/J-22, WOA355-AE-75



TYPICAL CROSS SECTION
TAYLOR STREET
(FROM CONGRESS ST TO JUAN ST)
SCALE 1"=5'





AS BUILT
Contract No. LRT-552
Date 12-14-94

NO.	DATE	REVISIONS	BY	CHK	APPR
4	4/97	Revised			

KTGY

DESIGNED BY	BE	8/94
DRAWN BY	BE	8/94
CHECKED BY	MAT	8/94
MTDB PROJ. ENG.	D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

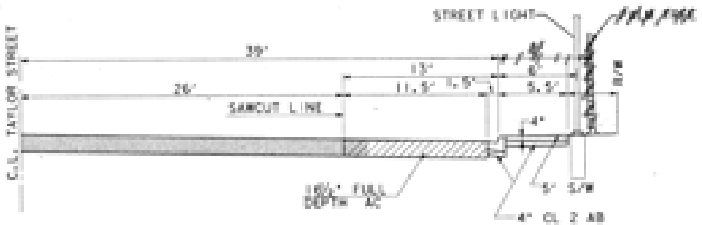
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
TAYLOR STREET WIDENING
IRRIGATION

SCALE 1"=20'
MTDB CONTRACT NO. LRT 552
DRAWING NO. HP-19
SHEET NO. 61

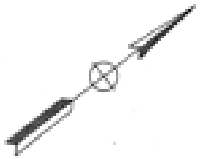
127

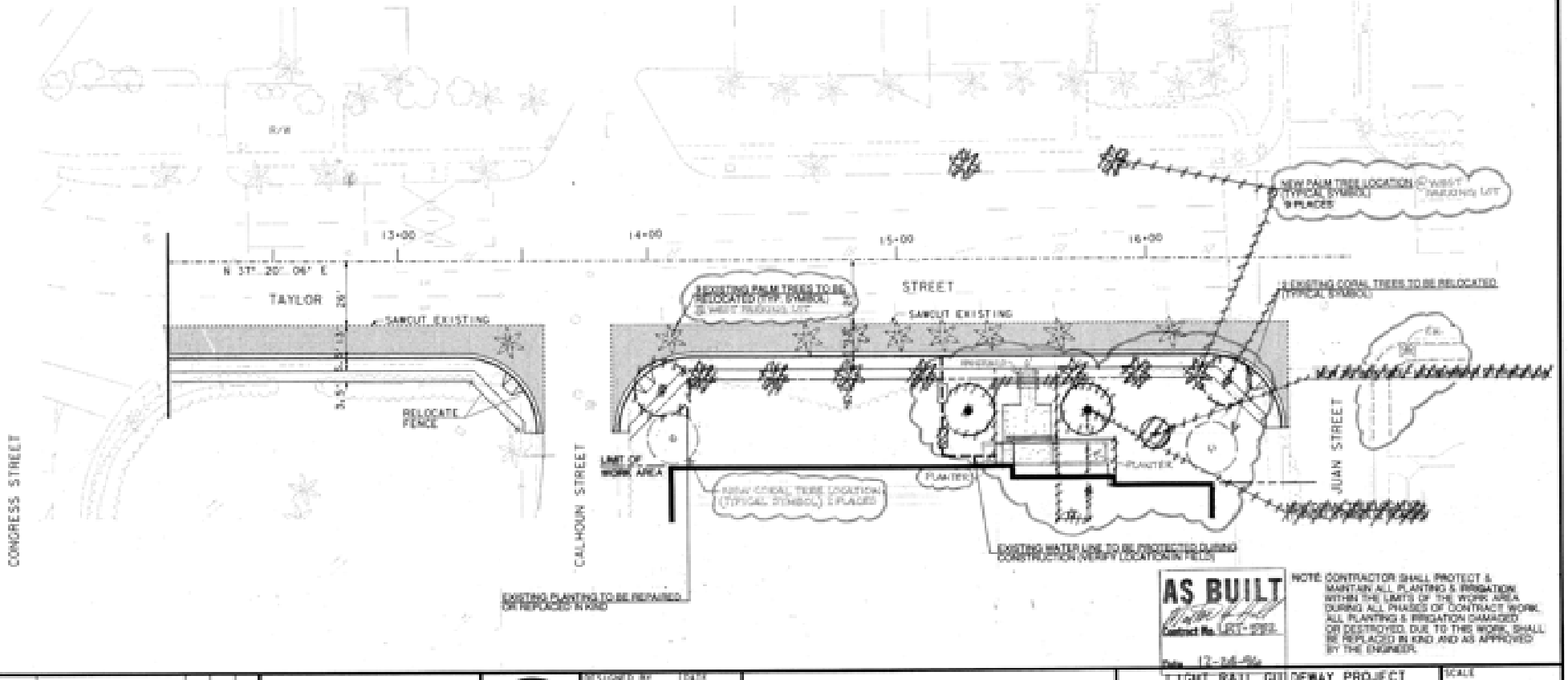
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3
MTS DOC NO. PW1350422, WOA380-4675

NOTES:
1. REFER TO SHT. HP-18 FOR PLANT MATERIAL LEGEND, PLANTING DETAILS & PLANTING NOTES.



TYPICAL CROSS SECTION
TAYLOR STREET
(FROM CONGRESS ST TO JUAN ST)
SCALE 1"=5'





AS BUILT
Contract No. LRT-552
Date 12-16-04

NOTE: CONTRACTOR SHALL PROTECT & MAINTAIN ALL PLANTING & IRRIGATION WITHIN THE LIMITS OF THE WORK AREA DURING ALL PHASES OF CONTRACT WORK. ALL PLANTING & IRRIGATION DAMAGED OR DESTROYED DUE TO THIS WORK, SHALL BE REPLACED IN KIND AND AS APPROVED BY THE ENGINEER.

NO.	DATE	REVISIONS	BY	CHK	APPD
	4-15	Guideway			

KLUA

DESIGNED BY	DATE
RBL	5/04
DRAWN BY	
RBL	5/04
CHECKED BY	
MAT	5/04
MTDB PROJ. ENG.	
S. RADLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490

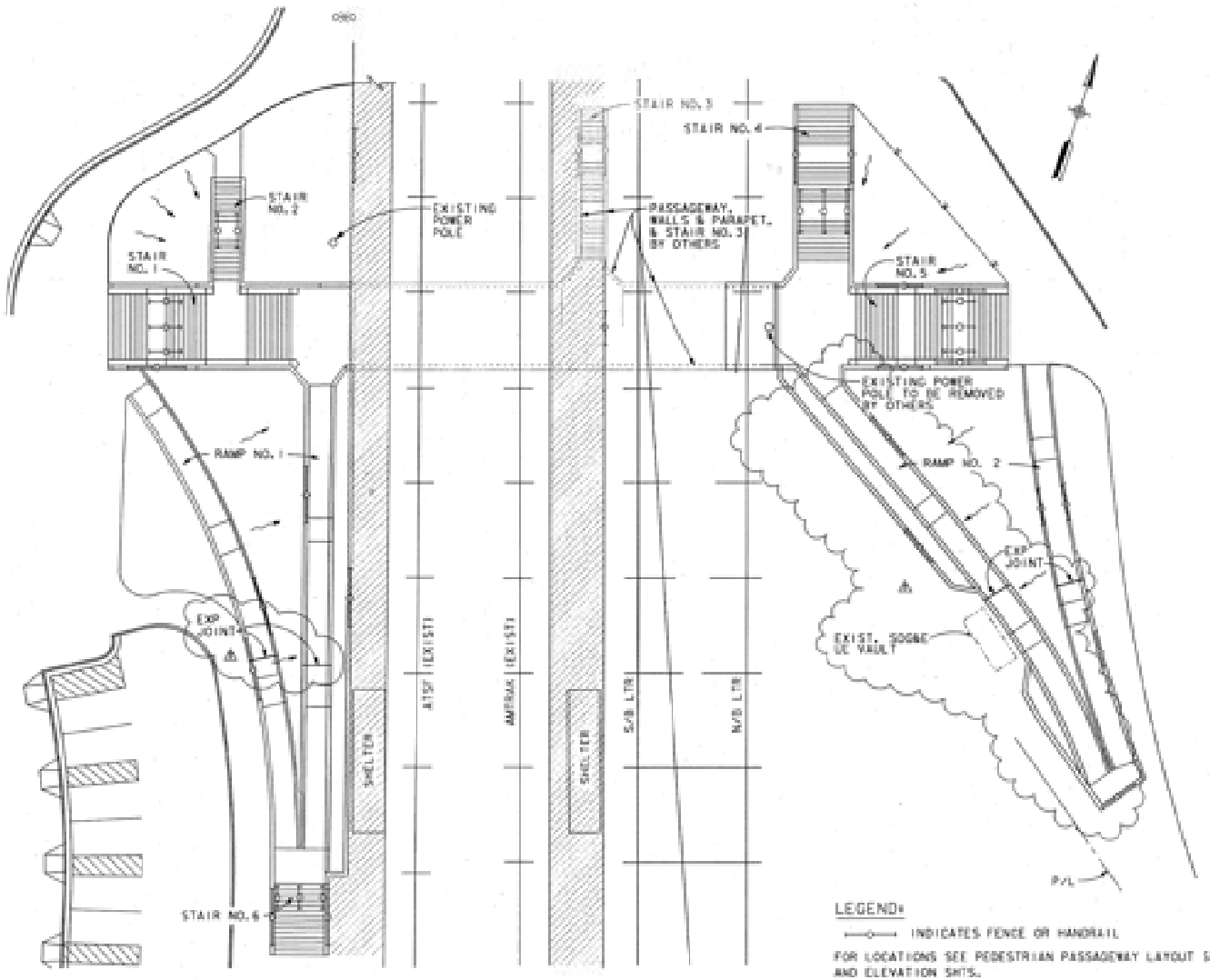
LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER

TAYLOR STREET WIDENING
PLANTING

SCALE	1"=20'
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	HP-20
SHEET NO.	62

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3



LEGEND:

INDICATES FENCE OR HANDRAIL

FOR LOCATIONS SEE PEDESTRIAN PASSAGEWAY LAYOUT SHTS AND ELEVATION SHTS.

BENCH MARKS

FOR BENCH MARKS SEE DRAWING "CSS1" AND " CSS2".

GENERAL NOTES

DESIGN

BRIDGE DESIGN SPECIFICATIONS: 1983 AASHTO WITH INTERIMS AND REVISIONS BY CALTRANS.

LIVE LOAD

COOPER E-80 TRAIN LOAD

EARTH PRESSURE LOAD

ACTIVE PRESSURE	+35H-20Hw (psf)
AT-REST	+10H (psf)
HYDROSTATIC PRESSURE	+62.4Hw (psf)
DYNAMIC PRESSURE	+70HT (psf) (PASSAGEWAY)
	+35H (psf) (RETAINING WALLS)
ALLOWABLE BEARING PRESSURE RETAINING WALLS	=2ksf

WHERE H=TOTAL HEIGHT
Hw=HEIGHT OF WATER TABLE
HT=HEIGHT OF PASSAGEWAY

REINFORCED CONCRETE

fy = 60,000 psi
f'c = 3,250 psi

INDEX TO PLANS

SHEET NO.	TITLE
ST1	GENERAL PLAN
ST2	PLAN AND PROFILE
ST3	PASSAGEWAY DETAILS-1
ST4	RAMP NO. 1
ST5	RAMP NO. 2
ST6	RAMP DETAILS
ST7	STAIRS-1
ST8	STAIRS-2
ST9	STAIR DETAILS
ST10	WATERPROOFING DETAILS
ST11	MISCELLANEOUS DETAILS
ST12	STRAY CURRENT DETAILS
ST20	LAYOUT SHEET 1 OF 2
ST21	LAYOUT SHEET 2 OF 2
ST22	ELEVATIONS SHEET 1 OF 2
ST23	ELEVATIONS SHEET 2 OF 2
ST24	STAIR & HANDRAIL DETAILS

CALTRANS STANDARD PLANS DATED JULY 1992

A62-C	LIMITS OF PAYMENT FOR EXCAVATIONS AND BACKFILL
BD-3	BRIDGE DETAILS
ES-8	PULL BOX DETAILS

NOTES:

1. ALL STRUCTURES ARE CAST-IN-PLACE.
2. FOR GEOMETRIC LAYOUT, ALIGNMENTS, AND ELEVATIONS SEE PEDESTRIAN PASSAGEWAY LAYOUT SHTS AND ELEVATION SHTS.
3. EXPOSED CONCRETE NOT RECEIVING FORM LINER SHALL BE INTEGRAL COLOR ROCK SALT FINISH.

AS BUILT
Contract No. LRT-552
Date 12-11-96

NO.	DATE	REVISIONS	BY	CHK	APPR
2	07/18/95	REVISED RAMP ALIGNMENT & ADDED NOTE	EM		
1	03/30/95	CONFORM	EM		

DeLEUW CATHER

DESIGNED BY	A. ORLELLE	DATE 06/08/94
DRAWN BY	T. MATANGUIHAN	11/28/94
CHECKED BY	E. MOBO	11/28/94
MTDB PROJ. ENG.	D. RAGLAND	

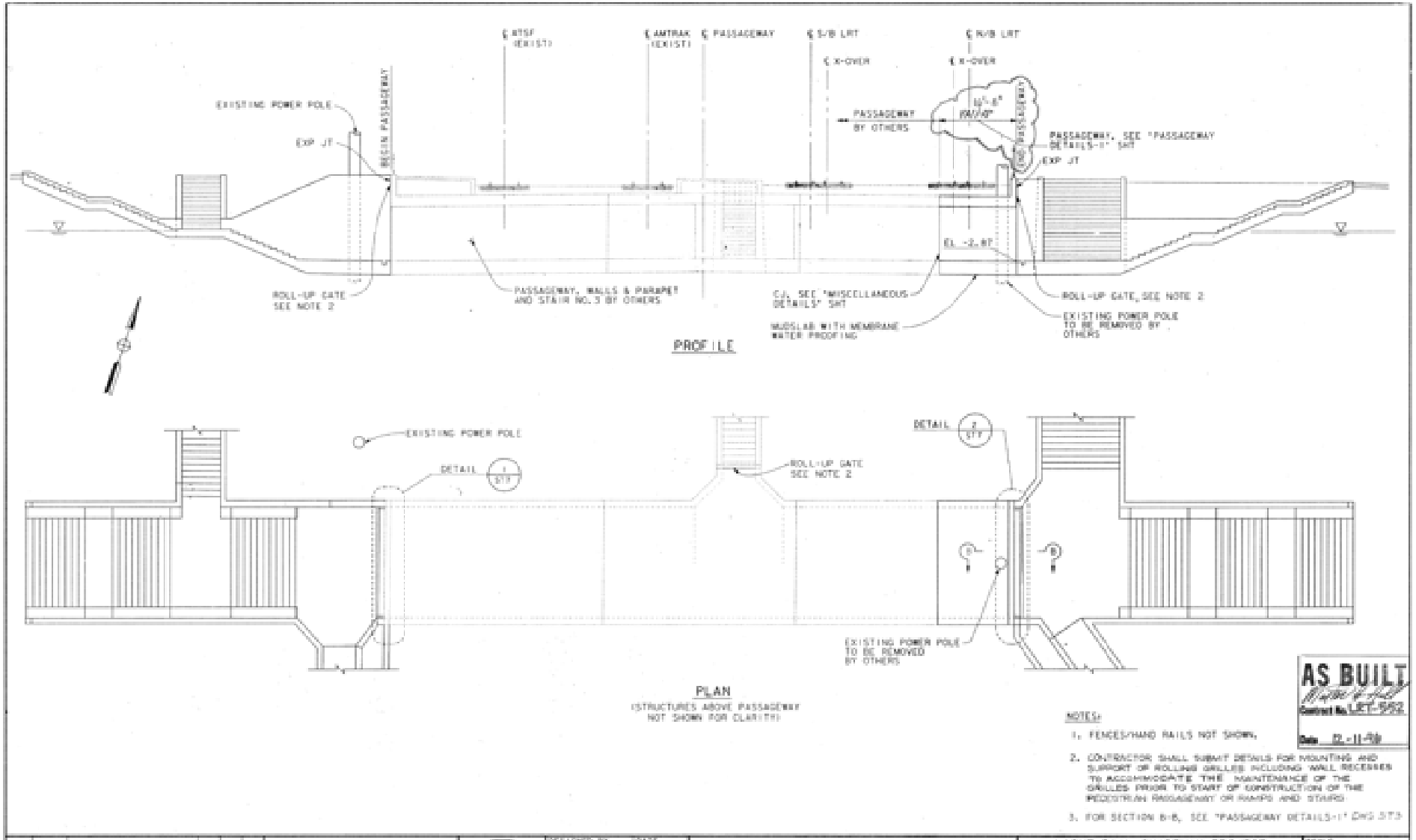
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
GENERAL PLAN

SCALE 1" = 15'
MTDB CONTRACT NO. LRT 552
DRAWING NO. ST1
SHEET NO. 63

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES



AS BUILT
Contract No. LRT-552
Date 12-11-98

NOTES:

1. FENCES/HAND RAILS NOT SHOWN.
2. CONTRACTOR SHALL SUBMIT DETAILS FOR MOUNTING AND SUPPORT OF ROLLING GRILLES INCLUDING WALL RECESSES TO ACCOMMODATE THE MAINTENANCE OF THE GRILLES PRIOR TO START OF CONSTRUCTION OF THE PEDESTRIAN PASSAGEWAY OR RAMPS AND STAIRS.
3. FOR SECTION B-B, SEE "PASSAGEWAY DETAILS-1" DWG ST3

NO.	DATE	REVISIONS	BY	CHK.	APPR.
1	6-30-98	Summary			

DeLEUW CATHER

DESIGNED BY A. ORTIZ II	DATE 04/06/94
DRAWN BY T. MATSUSHIMA	11/28/94
CHECKED BY S. MOBO	11/28/94
MTDB PROJ. ENG. D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
PLAN AND PROFILE

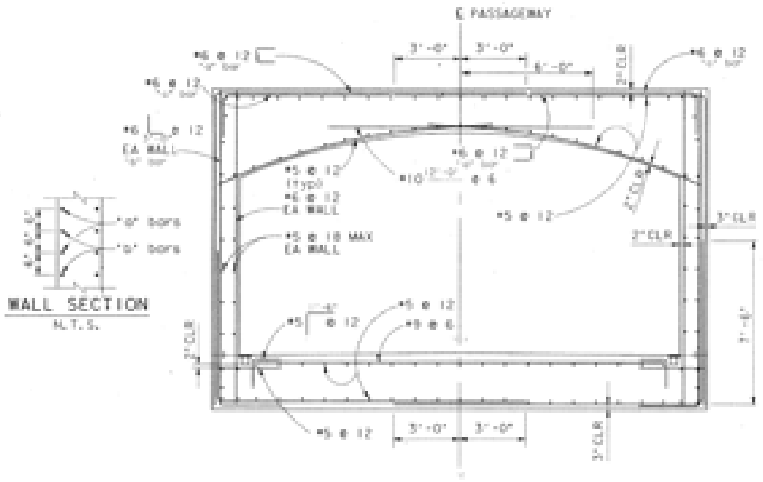
SCALE	1/8" = 1'-0"
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	572
SHEET NO.	64

PLOT DATE: 23-NOV-1994 08:29 FILE ID: w:\d0880\drawings\st572.dgn
PEN TABLE: stan

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

130

MTS DOC NO. PWL355/602, WOA355-AE-75



TYPICAL SECTION REINFORCEMENT

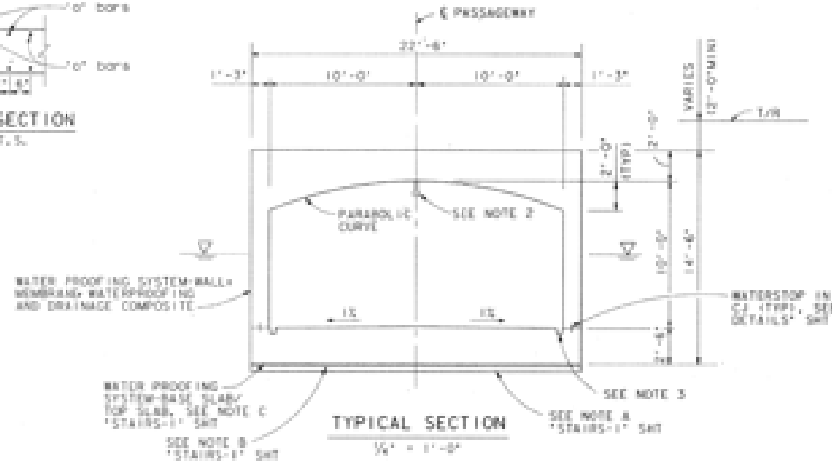
3/8" = 1'-0"

WALL SECTION

N.T.S.

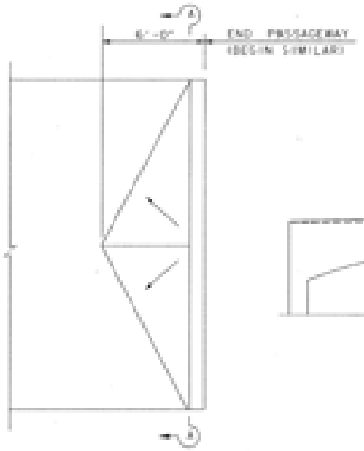
ROOF SECTION

N.T.S.



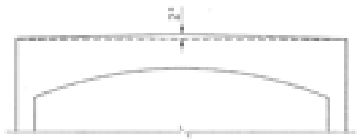
TYPICAL SECTION

1/4" = 1'-0"



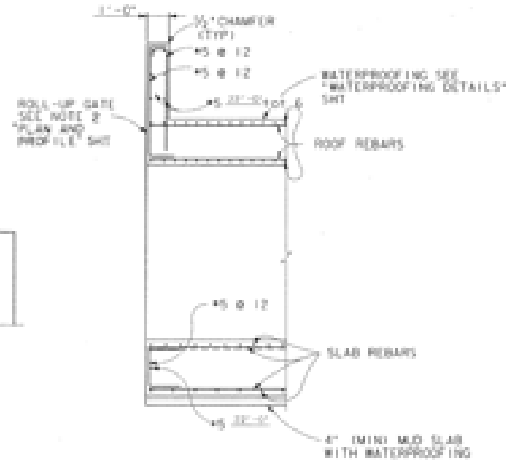
ROOF ELEVATION AT BEGIN / END FOR DRAINAGE

1/4" = 1'-0"



SECTION A-A

1/4" = 1'-0"



SECTION B-B

3/8" = 1'-0"

NOTES:

1. FOR WATERPROOFING DETAILS SEE "WATERPROOFING DETAILS" SHEET.
2. FOR PRIMARY LIGHT SOURCE SEE "SITE PLAN TRANSIT CENTER-PARKING LOT" SHT.
3. FOR DRAINAGE DETAILS SEE "UTILITY PLANS STORM DRAIN PROFILES" SHEETS.

AS BUILT

Contract No. LRT-552

Date 12-11-96

NO.	DATE	REVISIONS	BY	CHK	APPD

DeLEUW CATHER

DESIGNED BY R. ORSLEE	DATE 06/06/94	
DRAWN BY F.C. LEE	11/28/94	
CHECKED BY E. WONG	11/28/94	
MTDB PROJ. ENG. D. RAGLAND		

MTDB

Metropolitan Transit Development Board

1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY

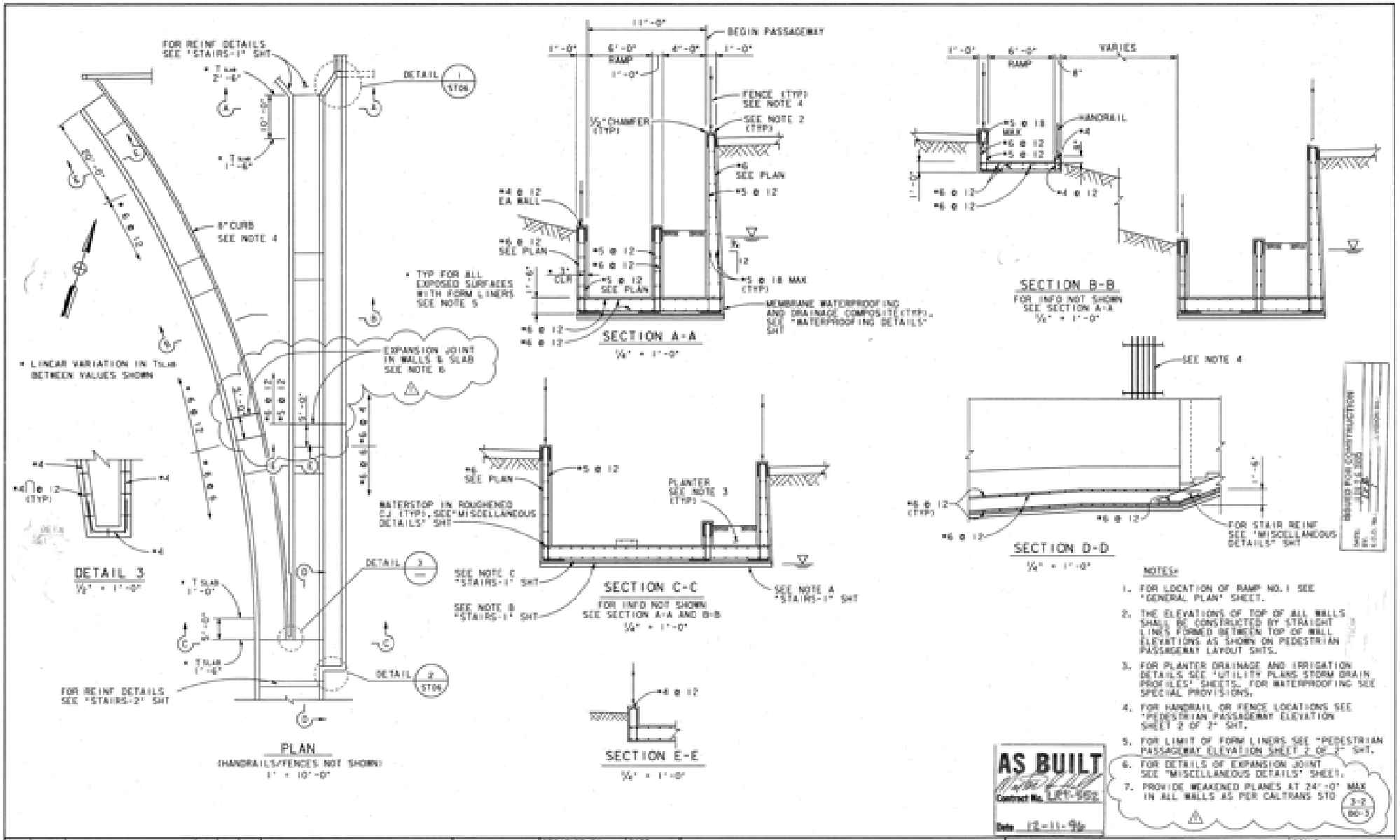
PASSAGEWAY DETAILS-1

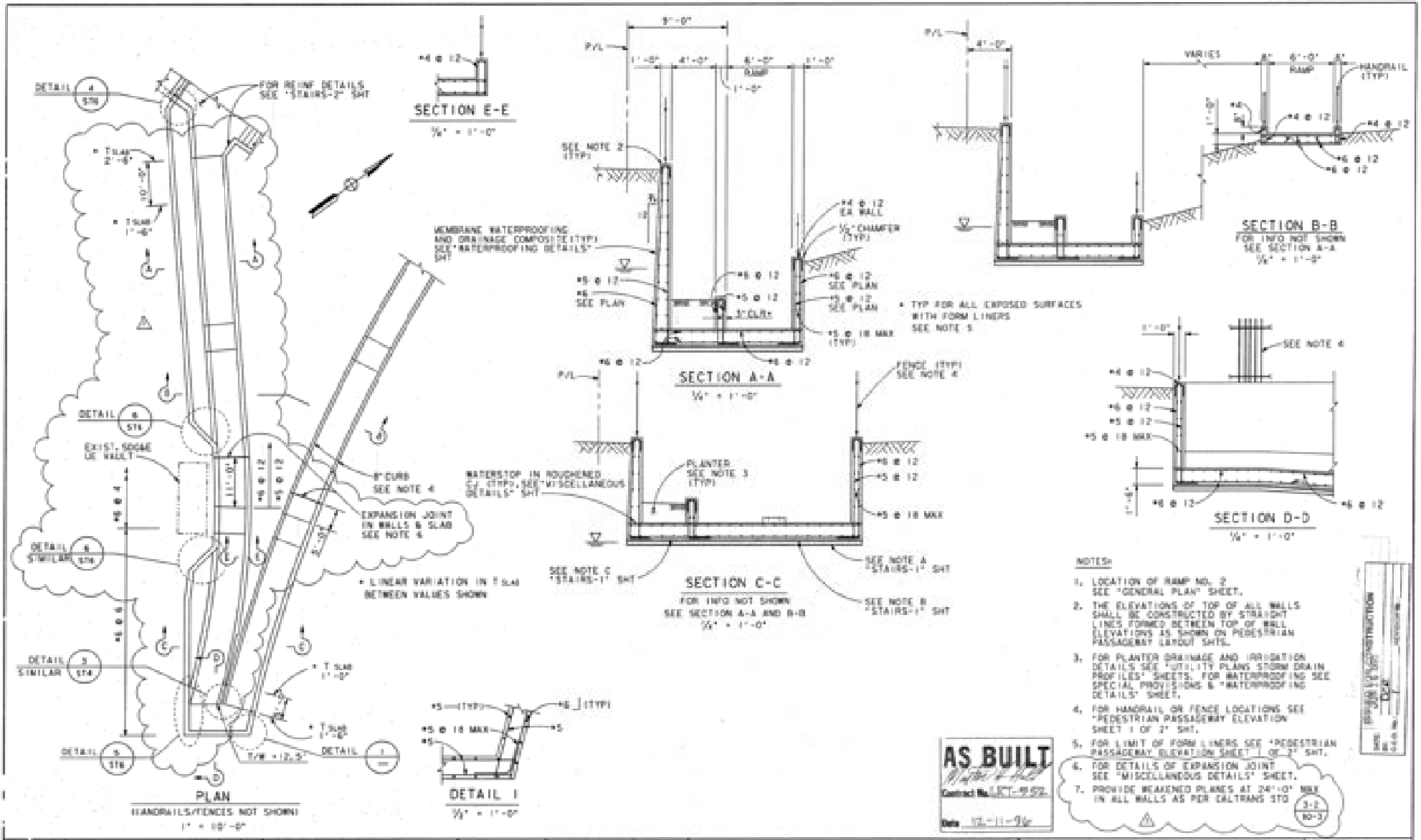
SCALE	AS NOTED
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	ST3
SHEET NO.	6 of

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

131

MTS DOC NO. PWL355462; WOA355462-E76


FOR REINF DETAILS SEE "STAIRS-1" SHT
DETAIL 1 ST06
8" CURB SEE NOTE 4
EXPANSION JOINT IN WALLS & SLAB SEE NOTE 6
* LINEAR VARIATION IN T SLAB BETWEEN VALUES SHOWN
DETAIL 3
DETAIL 3 ST06
DETAIL 2 ST06
FOR REINF DETAILS SEE "STAIRS-2" SHT
PLAN
(HANDRAILS/FENCES NOT SHOWN)
1" = 10'-0"
BEGIN PASSAGEWAY
RAMP
FENCE (TYP) SEE NOTE 4
½" CHAMFER (TYP)
SEE NOTE 2
SEE PLAN
* TYP FOR ALL EXPOSED SURFACES WITH FORM LINERS SEE NOTE 5
MEMBRANE WATERPROOFING AND DRAINAGE COMPOSITE (TYP). SEE "WATERPROOFING DETAILS" SHT
SECTION A-A
½" = 1'-0"
VARIES
HANDRAIL
SECTION B-B
FOR INFO NOT SHOWN SEE SECTION A-A
½" = 1'-0"
WATERSTOP IN ROUGHENED CJ (TYP). SEE "MISCELLANEOUS DETAILS" SHT
PLANTER SEE NOTE 3 (TYP)
SEE NOTE C "STAIRS-1" SHT
SEE NOTE B "STAIRS-1" SHT
SEE NOTE A "STAIRS-1" SHT
SECTION C-C
FOR INFO NOT SHOWN SEE SECTION A-A AND B-B
½" = 1'-0"
SECTION E-E
½" = 1'-0"
SEE NOTE 4
FOR STAIR REINF SEE "MISCELLANEOUS DETAILS" SHT
SECTION D-D
½" = 1'-0"
ISSUED FOR CONSTRUCTION
NOTES:
1. FOR LOCATION OF RAMP NO. 1 SEE "GENERAL PLAN" SHEET.
2. THE ELEVATIONS OF TOP OF ALL WALLS SHALL BE CONSTRUCTED BY STRAIGHT LINES FORMED BETWEEN TOP OF WALL ELEVATIONS AS SHOWN ON PEDESTRIAN PASSAGEWAY LAYOUT SHTS.
3. FOR PLANTER DRAINAGE AND IRRIGATION DETAILS SEE "UTILITY PLANS STORM DRAIN PROFILES" SHEETS. FOR WATERPROOFING SEE SPECIAL PROVISIONS.
4. FOR HANDRAIL OR FENCE LOCATIONS SEE "PEDESTRIAN PASSAGEWAY ELEVATION SHEET 2 OF 2" SHT.
5. FOR LIMIT OF FORM LINERS SEE "PEDESTRIAN PASSAGEWAY ELEVATION SHEET 2 OF 2" SHT.
6. FOR DETAILS OF EXPANSION JOINT SEE "MISCELLANEOUS DETAILS" SHEET.
7. PROVIDE WEAKENED PLANES AT 24'-0" MAX IN ALL WALLS AS PER CALTRANS STD
AS BUILT
Contract No. LRT-552
Date 12-11-96
DeLEUW CATHER
DESIGNED BY A. OPULENTE 06/06/94
DRAWN BY T. MATANDUHAN 11/28/94
CHECKED BY C. MOBO 11/28/94
MTDB PROJ. ENG. D. RAGLAND
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
RAMP NO. 1
SCALE AS NOTED
MTDB CONTRACT NO. LRT 552
DRAWING NO. ST4
SHEET NO. 66
NO. DATE REVISIONS BY CHK APPV
05/19/95 ADDED NOTES EM



NO.	DATE	REVISIONS	CT	CHK	APPV
1	09/17/98	REVISED RAMP ALIGNMENT & ADDED NOTES	DM		

DeLEUW CATHER

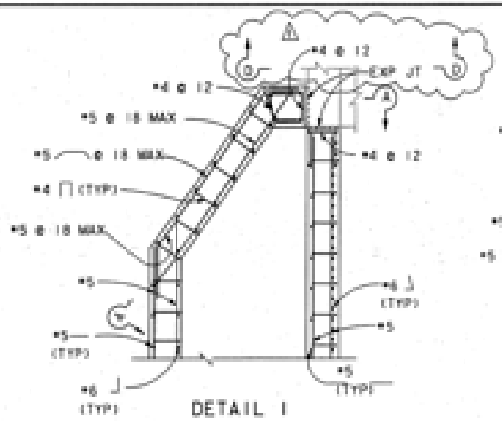
DESIGNED BY A. ORSILLO	DATE 06/06/94
DRAWN BY T. MATANGUIHAN	11/28/94
CHECKED BY E. MOBO	11/28/94
MTDB PROJ. ENG. D. RADLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

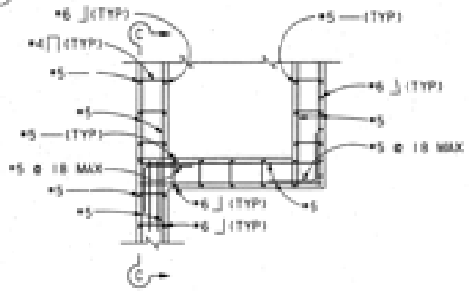
LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
RAMP NO. 2

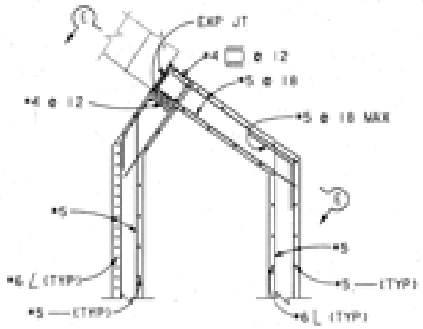
SCALE	
AS NOTED	
MTDB CONTRACT NO.	
LRT 552	
DRAWING NO.	SHEET NO.
515	67



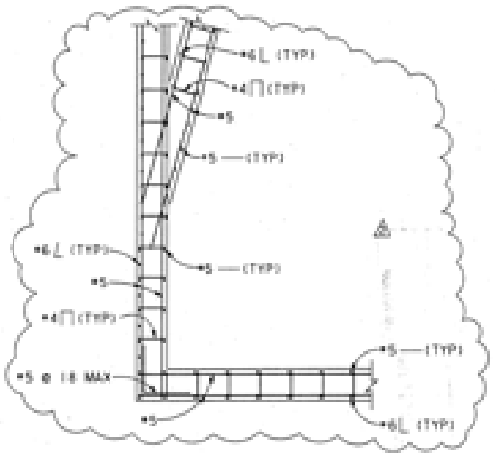
DETAIL 1
FENCE NOT SHOWN
½" = 1'-0"



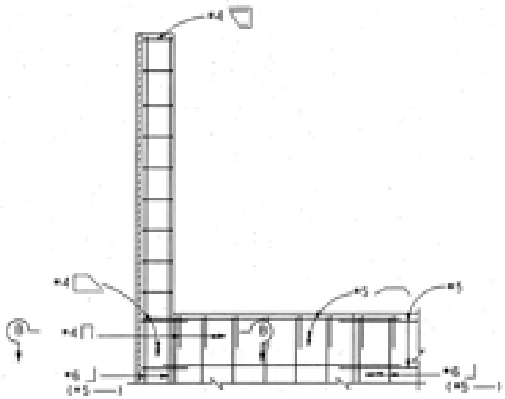
DETAIL 2
½" = 1'-0"



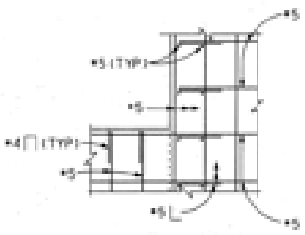
DETAIL 4
½" = 1'-0"



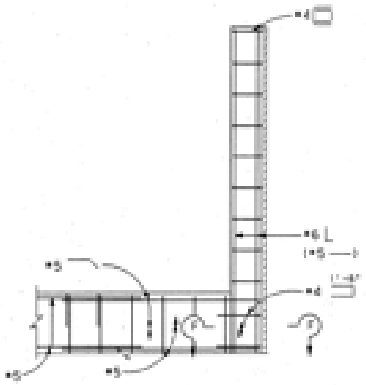
DETAIL 5
½" = 1'-0"



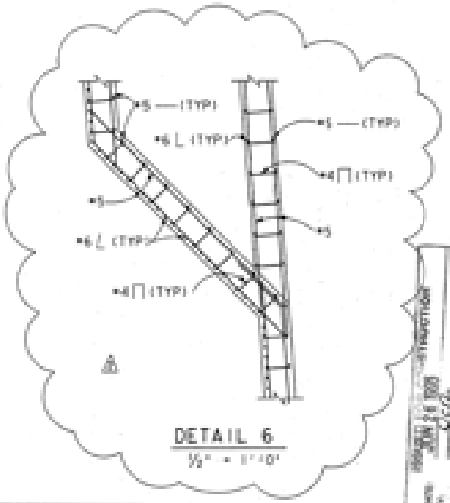
SECTION A-A
½" = 1'-0"



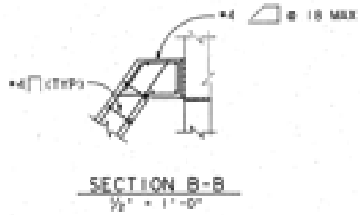
SECTION C-C
½" = 1'-0"



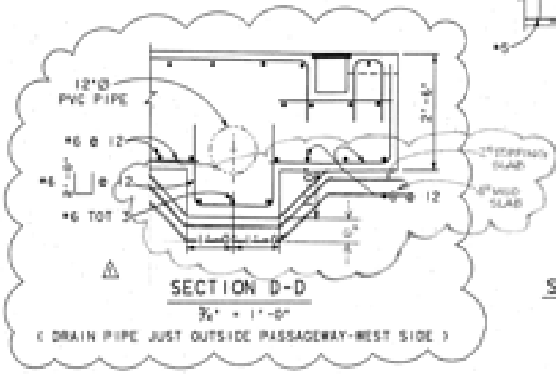
SECTION E-E
½" = 1'-0"



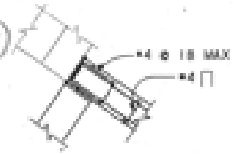
DETAIL 6
½" = 1'-0"



SECTION B-B
½" = 1'-0"



SECTION D-D
¾" = 1'-0"
(DRAIN PIPE JUST OUTSIDE PASSAGEWAY-WEST SIDE)



SECTION F-F
½" = 1'-0"

AS BUILT
Contract No. LRT-552
Date 12-11-96

NOTES:
1. FOR LOCATION OF DETAIL 1 SEE DETAIL 2 SEE 'RAMP NO.1' SHT. FOR LOCATION OF DETAIL 4 & DETAIL 5 SEE 'RAMP NO.2' SHT.

NO.	DATE	REVISIONS	BY	CHK	APPV
2	7/19/96	ADDED DETAIL AS PER REVISED RAMP ALIGNMENT	DM		
1	04/17/96	ADDED SECTION AS PER REVISED DRAIN PIPE LOCATION	DM		

DeLEUW CATHER

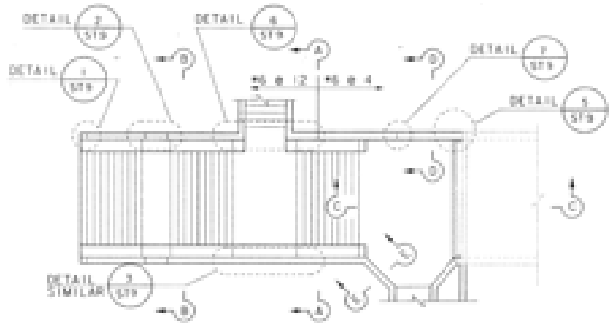
DESIGNED BY A. ORSLETE	DATE 06/06/94
DRAWN BY F.C. LEE	11/28/94
CHECKED BY C. MOBO	11/28/94
MTDB PROJ. ENG. D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego

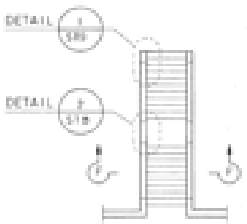
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
RAMP DETAILS

SCALE	AS NOTED
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	SHEET NO.
STS	G-8



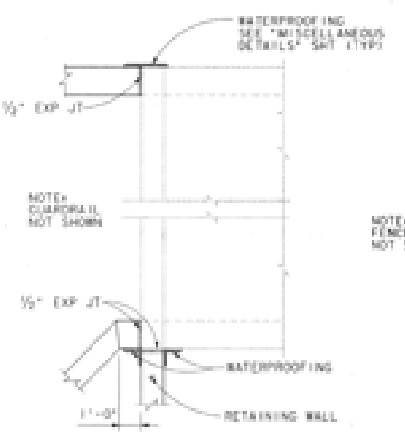
PLAN STAIR NO. 1

1" = 10'-0"



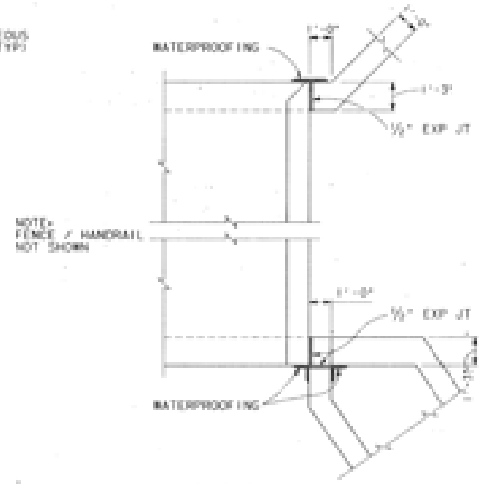
PLAN STAIR NO. 2

1" = 10'-0"



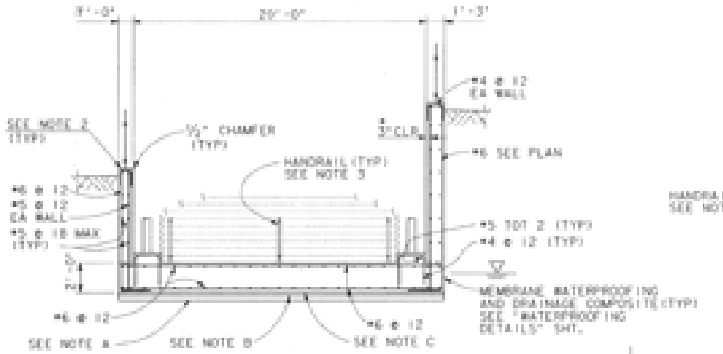
DETAIL 1

¾" = 1'-0"



DETAIL 2

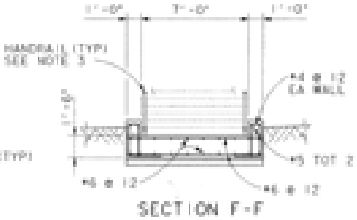
¾" = 1'-0"



SECTION A-A

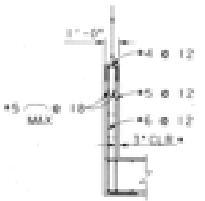
½" = 1'-0"

* TYP ON ALL SURFACES WITH FORM LINERS SEE NOTE 4



SECTION F-F

½" = 1'-0"



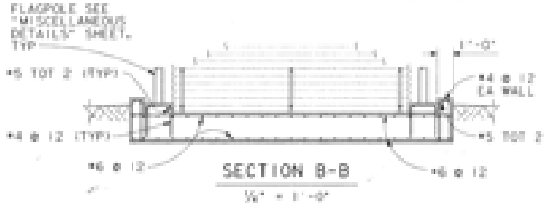
SECTION E-E

½" = 1'-0"

NOTE A: 4" (MIN) MUD SLAB, CAST ON UNDISTURBED SOIL (TYP)

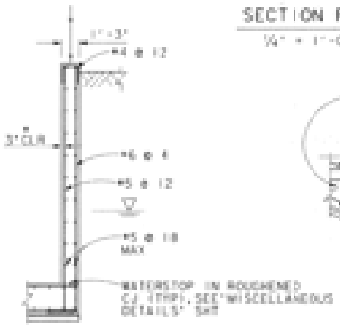
NOTE B: 2" CONCRETE PROTECTION OVER ASPHALT HARDBOARDS

NOTE C: 2 LAYERS OF ½" THICK ASPHALTIC HARDBOARD PROTECTION OVER MEMBRANE WATERPROOFING



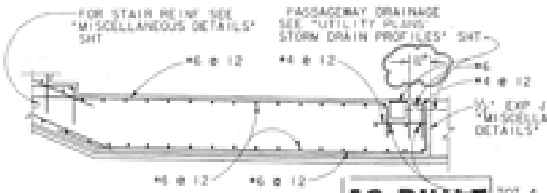
SECTION B-B

½" = 1'-0"



SECTION D-D

½" = 1'-0"



SECTION C-C

¾" = 1'-0"

AS BUILT

Contract No. LRT-552

Date 12-11-96

NOTES:

1. FOR LOCATION OF STAIR NO.1 AND 2 SEE "GENERAL PLAN" SHT. FOR LOCATION OF DETAILS 1 & 2 SEE "PLAN AND PROFILE" SHT.
2. THE ELEVATIONS OF TOP OF ALL WALLS SHALL BE CONSTRUCTED BY STRAIGHT LINES FORMED BETWEEN TOP OF WALL ELEVATIONS AS SHOWN ON PEDESTRIAN PASSAGEWAY LAYOUT SHTS.
3. FOR HANDRAIL OR FENCE LOCATIONS SEE "PEDESTRIAN PASSAGEWAY ELEVATION SHEET 2 OF 2" SHT.
4. FOR LIMIT OF FORM LINERS SEE "PEDESTRIAN PASSAGEWAY ELEVATION SHEET 2 OF 2" SHT.

NO.	DATE	REVISIONS	BY	CHK	APPV
4	8/96	Surveyor			

DeLEUW CATHER

DESIGNED BY	A. ORLICH	DATE 08/08/94
DRAWN BY	T. MATANGUIHAN	11/28/94
CHECKED BY	E. MORO	11/28/94
MTDB PELLING	D. RAGLAND	

MTDB

Metropolitan Transit Development Board

1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-1490

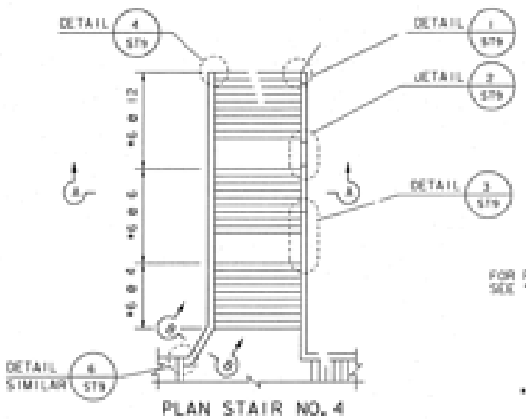
LIGHT RAIL GUIDEWAY PROJECT
San Diego

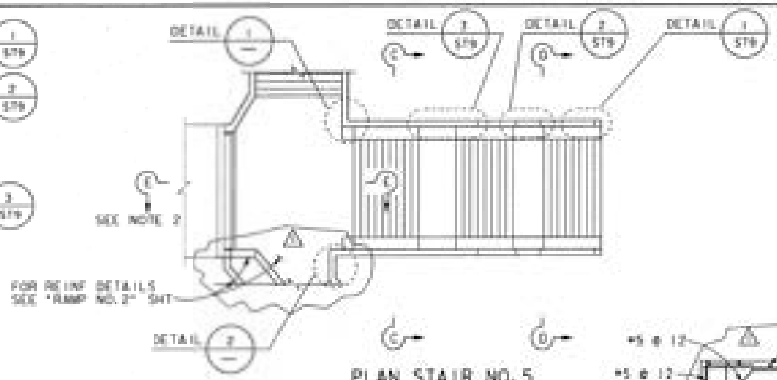
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
STAIRS-1

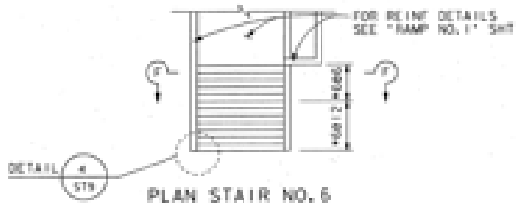
SCALE	
AS NOTED	
MTDB CONTRACT NO.	
- LRT 552	
DRAWING NO.	SHEET NO.
519	69

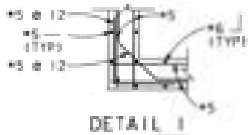
FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

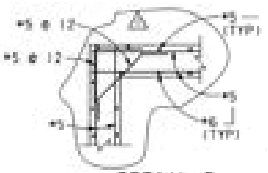
MTS DOC NO. PWL355452, WOA355-AE-79

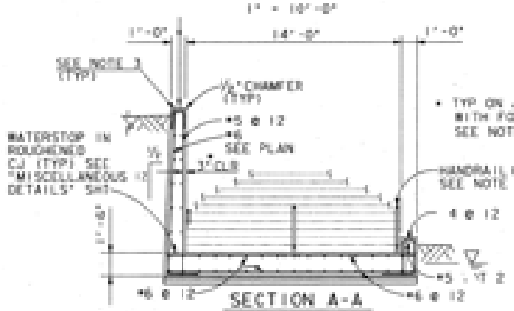


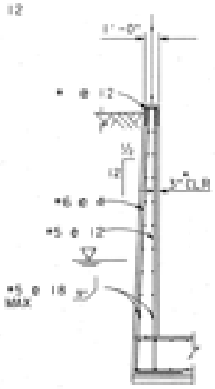


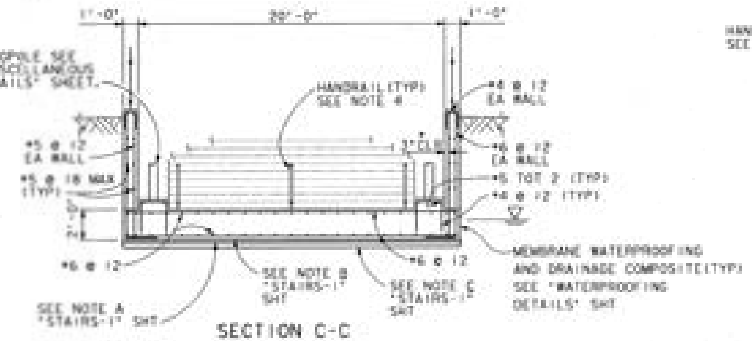


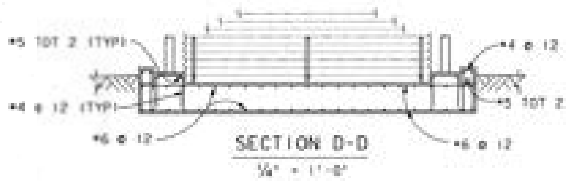


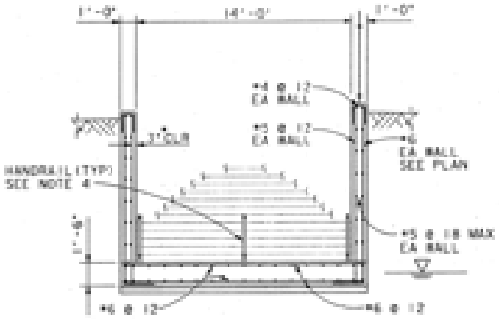












AS BUILT
Contract No. LRT-552
Date 12-18-96

NOTES:

1. FOR LOCATION OF STAIR NO. 4, 5, AND 6 SEE "GENERAL PLAN" SHT.
2. SECTION C-E IS SIMILAR TO SECTION C-C "STAIRS-1" SHT.
3. THE ELEVATIONS OF TOP OF ALL WALLS SHALL BE CONSTRUCTED BY STRAIGHT LINES FORMED BETWEEN TOP OF WALL ELEVATIONS AS SHOWN ON PEDESTRIAN PASSAGEWAY LAYOUT SHTS.
4. FOR HANDRAIL OR FENCE LOCATIONS SEE "PEDESTRIAN PASSAGEWAY ELEVATION SHEET 1 OF 2" SHT.
5. FOR LIMIT OF FORM LINERS SEE "PEDESTRIAN PASSAGEWAY ELEVATION SHEET 1 OF 2" SHT.

NO.	DATE	REVISIONS	BY	CHK	APPR
1	04/27/95	REVISED RAMP ALIGNMENT	EM		

DeLEUW CATHER

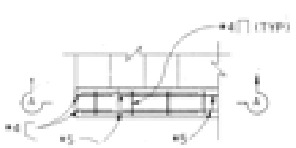
DESIGNED BY A. ORSLEIE	DATE 06/06/94
DRAWN BY T. WATANDUHAN	11/25/94
CHECKED BY E. MORO	11/28/94
MTDB PROJECT MGR. D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
STAIRS-2

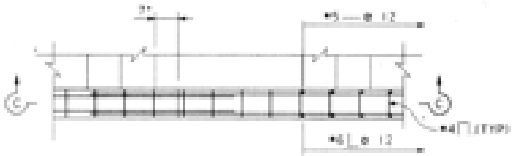
SCALE	AS NOTED
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	STS
SHEET NO.	70

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

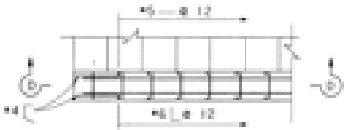


DETAIL 1
½" = 1'-0"

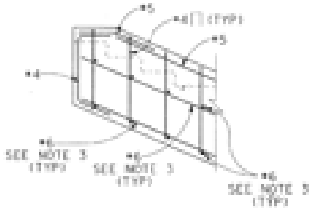
DETAIL 2
½" = 1'-0"



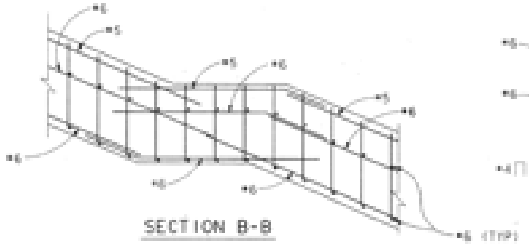
DETAIL 3
½" = 1'-0"



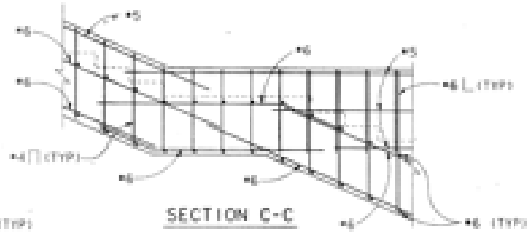
DETAIL 4
½" = 1'-0"



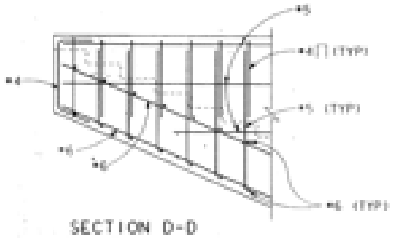
SECTION A-A
½" = 1'-0"



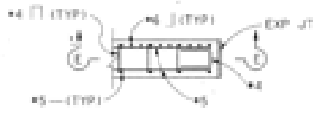
SECTION B-B
½" = 1'-0"



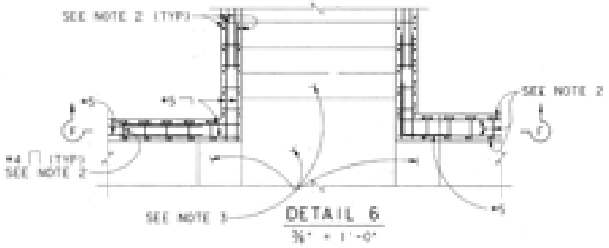
SECTION C-C
½" = 1'-0"



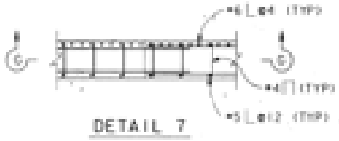
SECTION D-D
½" = 1'-0"



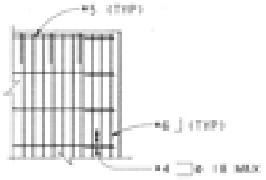
DETAIL 5
½" = 1'-0"



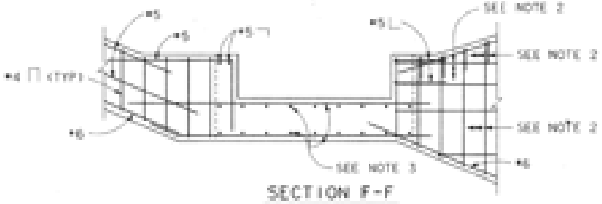
DETAIL 6
¾" = 1'-0"



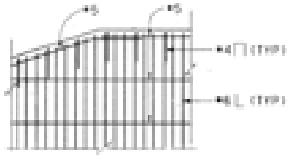
DETAIL 7
½" = 1'-0"



SECTION E-E
½" = 1'-0"



SECTION F-F
¾" = 1'-0"



SECTION G-G
½" = 1'-0"

AS BUILT
Contract No. LRT-552
Date 12-11-96

NOTES:

1. FOR LOCATION OF DETAIL 1, DETAIL 2, DETAIL 3, DETAIL 4, DETAIL 5, DETAIL 6 & DETAIL 7 SEE "STAIRS-1" AND "STAIRS-2" SHT.
2. FOR WALL REINF SEE "STAIRS - 1" SHT.
3. FOR STAIR REINF SEE "MISCELLANEOUS DETAILS" SHT.
4. FENCE OR HANDRAIL NOT SHOWN ON ANY DETAILS.

NO.	DATE	REVISIONS	BY	CHK APPD

DeLEUW CATHER

DESIGNED BY A. ORSLE-E — DATE 06/05/94
DRAWN BY T. MATANGUIHAN — 11/28/94
CHECKED BY E. MOBO — 11/28/94
MTDB PROJ. ENG. O. PAGLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

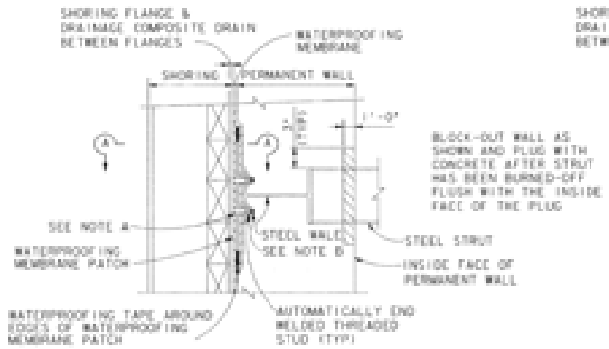
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
STAIR DETAILS

SCALE: AS NOTED
MTDB CONTRACT NO. LRT 552
DRAWING NO./SHEET NO. STR / 77

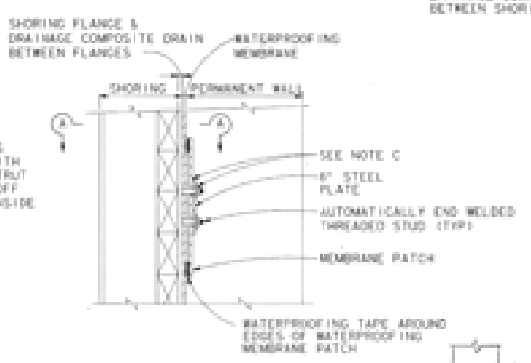
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

137

MTS DOC NO. PWL355/402, WOA355-AE-75

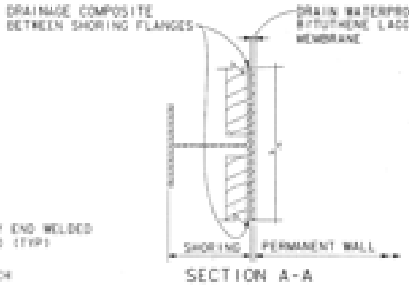


OPTION 1
(WALE AND/OR STRUT CAST INTO WALL)



OPTION 2
(WALE AND/OR STRUT REMOVED)

AT WALE AND/OR STRUT CONNECTION

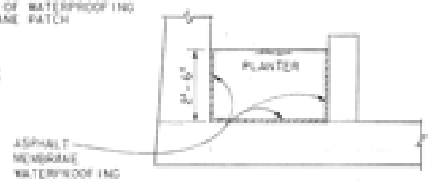


SECTION A-A

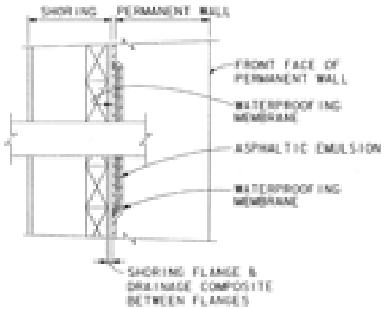
NOTE A:
SEAL PROTRUSIONS OF THE STUDS THROUGH THE WATERPROOFING MEMBRANE WITH ASPHALTIC EMULSION AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

NOTE B:
SEAL ALL STUD THREADS WITH TEFLON TAPE.

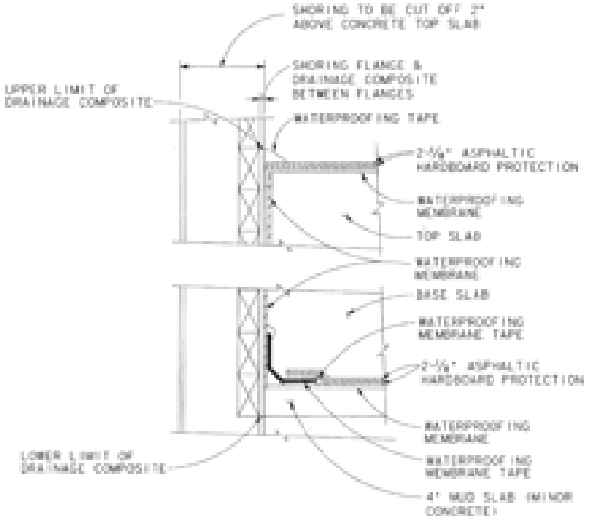
NOTE C:
AFTER WALE AND/OR STRUT IS REMOVED, RESEAL PROTRUSIONS OF THE STUDS THROUGH THE WATERPROOFING MEMBRANE WITH ASPHALTIC EMULSION AND A WATERPROOFING MEMBRANE & -6" STEEL PLATE. THE PATCH SHALL EXTEND 6" BEYOND THE OUTSIDE DIMENSION OF THE STEEL PLATE. APPLY WATERPROOFING TAPE AT THE EDGES OF THE PATCH TO SECURE IT IN PLACE, REINSTALL NUTS AND WASHERS AND RESEAL ALL STUD THREADS WITH TEFLON TAPE.



PLANTER RETAINING WALLS

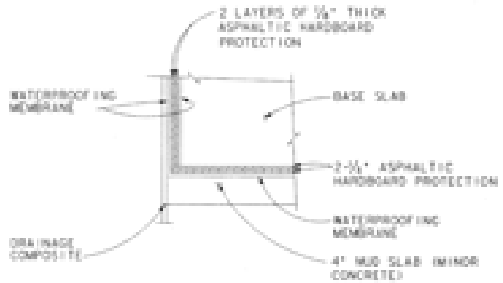


PROTRUSION DETAIL



BASE SLAB AND TOP SLAB TIE-IN DETAIL

THE UPPER LIMIT OF THE MEMBRANE WATERPROOFING FOR RAMPS AND STAIRS SHALL BE ELEVATION +7.0 (MSL), THE UPPER LIMIT OF THE DRAINAGE COMPOSITE SHALL BE 1'-0" BELOW THE FINISHED GROUND.
FOR T/W ELEVATIONS EQUAL OR LESS THAN +7.0, UPPER LIMIT OF DRAINAGE COMPOSITE SHALL BE AT SAME ELEVATION AS TOP OF MEMBRANE WATERPROOFING.



STAIRS AND RAMPS RETAINING WALLS

AS BUILT
Contract No. LRT 552
Date 12-11-96

NOTES:
1. IN ADDITION TO THE DETAILS SHOWN, THE WATERPROOFING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE SPECIAL PROVISIONS.
2. PENETRATIONS THROUGH THE MEMBRANE WATERPROOFING SYSTEM OF THE PERMANENT STRUCTURE BY THE CONTRACTOR'S TEMPORARY DEWATERING SCHEME WILL NOT BE PERMITTED.
3. FOR ADDITIONAL INFORMATION RELATING TO THE MEMBRANE WATERPROOFING SYSTEM AND THE DRAINAGE COMPOSITE SEE THE SPECIAL PROVISIONS.

NO.	DATE	REVISIONS	BY	CHK	APP'D

DeLEUW CATHER

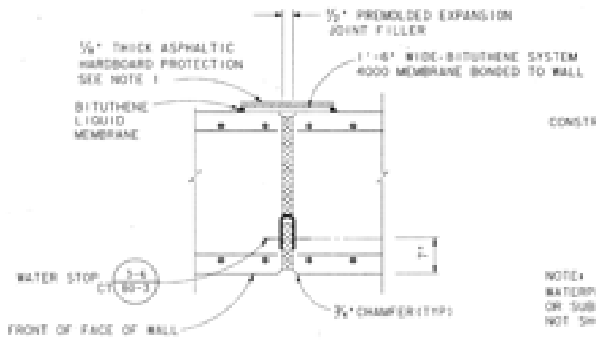
DESIGNED BY	DATE
A. ORGLETZ	08/06/94
DRAWN BY	
T. MATSUGUCHIN	11/28/94
CHECKED BY	
L. MORO	11/28/94
MTDB PROJ. ENG.	
D. RADLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

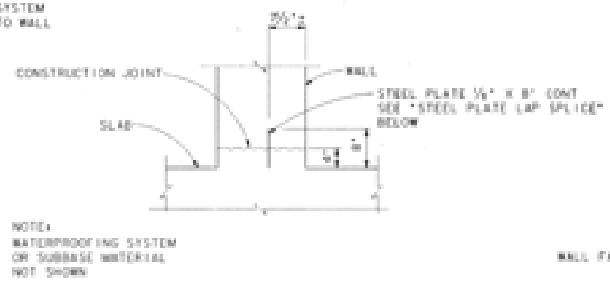
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
WATERPROOFING DETAILS

SCALE	
N. T. S.	
MTDB CONTRACT NO.	
LRT 552	
DRAWING NO.	SHEET NO.
ST10	72

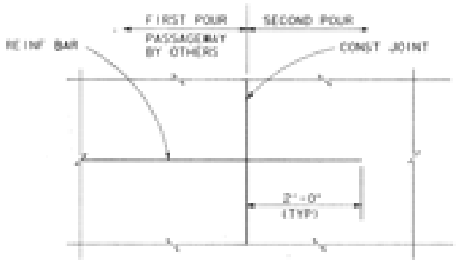
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3



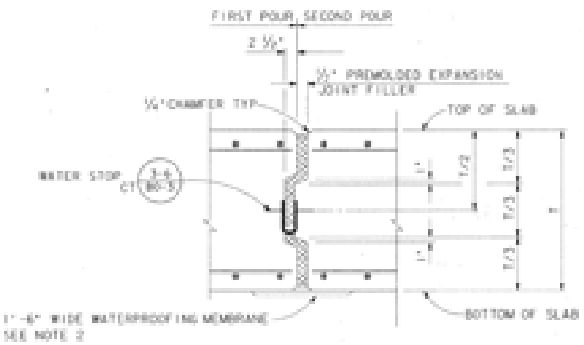
TYPICAL EXPANSION JOINT-WALL
N.T.S.



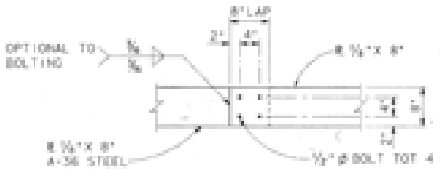
WALL CONSTRUCTION JOINT
N.T.S.



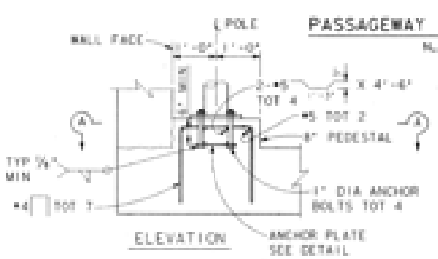
PASSAGEWAY CONSTRUCTION JOINT
N.T.S.

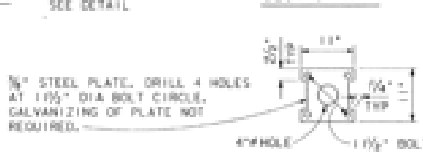


TYPICAL EXPANSION JOINT-SLAB
N.T.S.

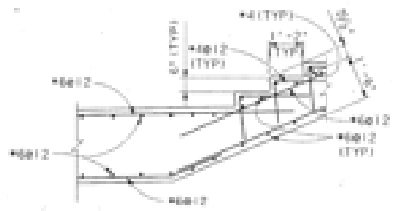


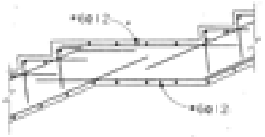
STEEL PLATE LAP SPLICE
1"=1'-0"



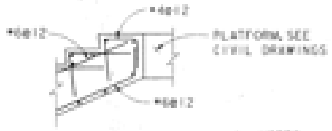


AS BUILT
Contract No. 52-1-97.2
Date: DEC-11-98

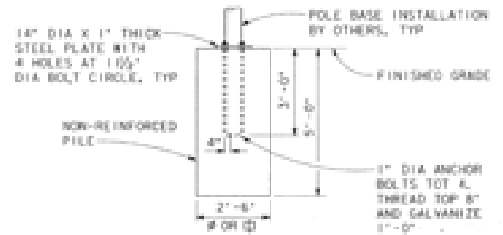




TYPICAL STAIR SECTION
RAILING NOT SHOWN
½" = 1'-0"



NOTES:
1. BACKFILL MATERIAL AND EQUIPMENT SHALL NOT CUT, SCRATCH, DEPRESS OR CAUSE ANY OTHER DAMAGE.
2. FOR WATERPROOFING MEMBRANE DETAILS, SEE BASE SLAB DETAIL "WATERPROOFING DETAILS" SHT.



FLAGPOLE ANCHORAGE DETAILS
N.T.S.

NO.	DATE	REVISIONS	BY	CHK	APPD
#10		Addendum			

DeLEUW CATHER

		SUBMITTED
DESIGNED BY	A. ORTLIEB	06/04/94
DRAWN BY	T. NATARAJAN	11/28/94
CHECKED BY	E. MOBO	11/28/94
MTDB RELEASE	D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
MISCELLANEOUS DETAILS

SCALE	AS NOTED
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	SHEET NO.
5711	78

PLOT DATE: 23-NOV-1994 12:49
FILE ID:

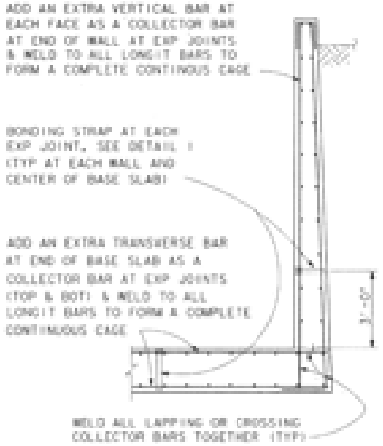
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

139

MTS DOC NO. PWL385N-22, WOA355-AE-75

NOTES:

1. ELECTRICAL BONDS SHALL BE LOCATED AT EXP JOINTS AT EACH END OF THE STRUCTURAL UNIT.
2. BOND LOCATIONS ARE APPROXIMATE, ADJUST LOCATION AS REQUIRED TO AVOID ELECTRICAL CONDUITS, ETC.
3. TYPICAL BONDING DETAILS SHALL APPLY TO ALL CONCRETE STRUCTURES.
4. ALL UNDERGROUND STRUCTURES SHALL HAVE PERIMETER ELEMENTS BONDED BY METHODS SIMILAR TO THOSE INDICATED IN THIS DRAWING TO FORM A COMPLETE DOUBLE CAGE AND ADJACENT UNITS SHALL BE BONDED TOGETHER.
5. WHERE IT IS NECESSARY TO PLACE A COPPER CONDUCTOR IN EARTH, IT SHALL BE INSULATED.

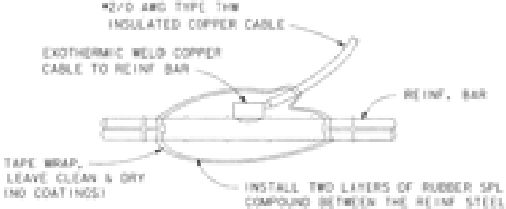


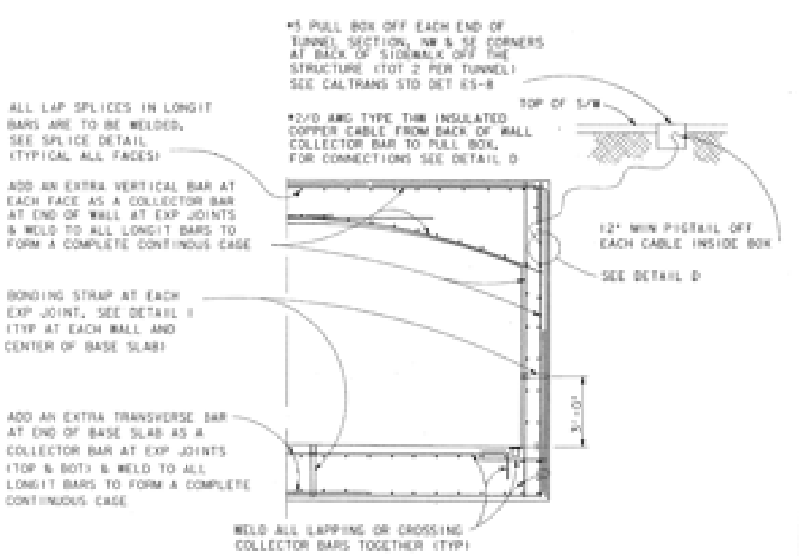
TYPICAL DETAILS AT EXPANSION JOINTS

N.T.S.

BAR LAP SPLICE WELD DETAIL

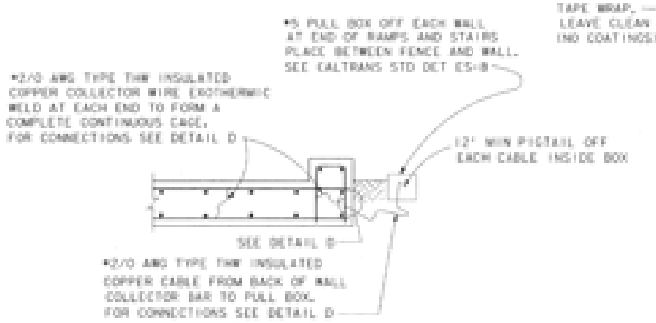
N.T.S.





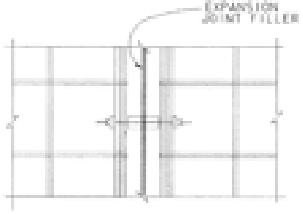
TYPICAL DETAIL AT EACH END OF PASSAGEWAY

N.T.S.



TYPICAL DETAIL AT EACH END OF RAMPS AND STAIRS

N.T.S.

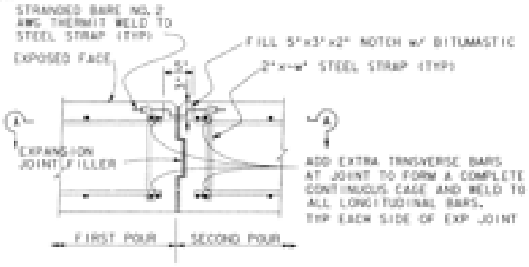


DETAIL D

N.T.S.

SECTION A-A

N.T.S.



TYPICAL BONDING DETAIL 1

N.T.S.

AS BUILT
Contract No. LRT-552
Date 12-11-96

NO.	DATE	REVISIONS	BY	CHK	APPV
1	12/96	Grounding			

DeLEUW CATHER

DESIGNED BY	DATE
A. ORSILETE	06/06/94
DRAWN BY	
F.S. LEE	11/28/94
CHECKED BY	
E. MOSO	11/28/94
MTDB PROJECT ENG.	
D. RAGLAND	

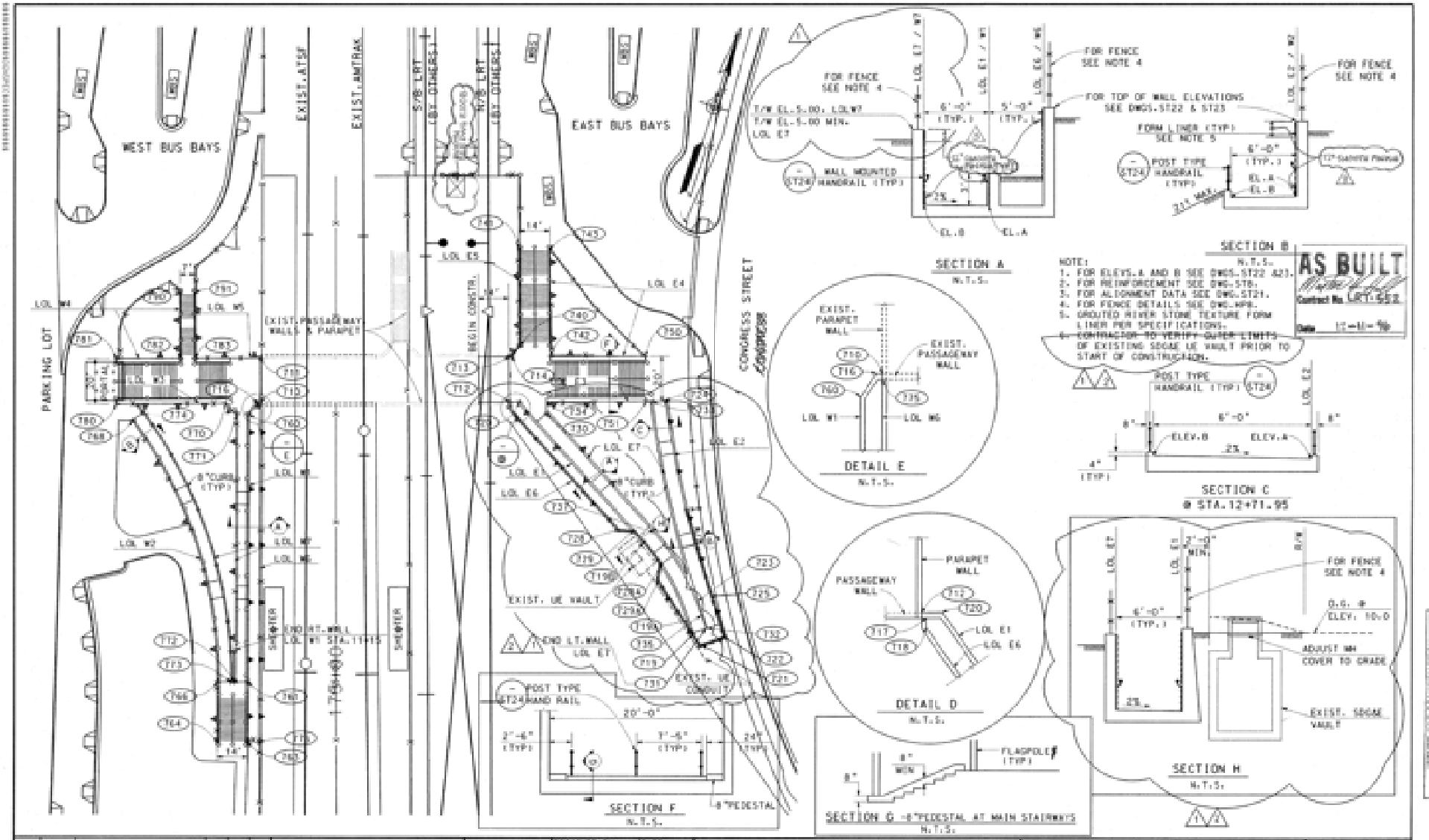
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
STRAY CURRENT DETAILS

SCALE	
N.T.S.	
MTDB CONTRACT NO.	
LRT 552	
DRAWING NO.	SHEET NO.
5712	74

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

MTS DOC NO. PWL355/402, WOA355-AE-75



NO.	DATE	REVISIONS	BY	CHK	APPV
3		(3"RENIVAL PER CCO # 29			
2	12/1/95	REVISED RAMP ALIGNMENT	MAS		
1	7/10/95	REVISED RAMP ALIGNMENT	MAS		

DE LEUW CATHER

DESIGNED BY M.R.S.	DATE 9/12/94
DRAWN BY R.M.L.	9/12/94
CHECKED BY R.M.L.	11/15/94
MTDB PROJ. ENG. D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
LAYOUT SHEET 1 OF 2

SCALE	1"=20' U.N.O.
MTDB CONTRACT NO.	LRT 352
DRAWING NO.	5720
SHEET NO.	75

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

ISSUED FOR CONSTRUCTION
DATE 4-1-96
BY A.G.
P.E. No.

WEST SIDE - GEOMETRY DATA

COORD. NO.	COORDINATES NORTHING	COORDINATES EASTING	TANGENT or ARC LENGTH (FT.)	BEARING or DELTA	RADIUS (FT.)	REMARKS
						LOL RAMP W1
T10	1855440.73	6269749.03				
T16	1855440.32	6269743.78	1.32	S 71°39'21"W		
T60	1855436.36	6269745.83	6.21	S 18°05'16"W		
T61	1855317.73	6269783.29	122.56	S 17°48'18"E		
T63	1855291.07	6269791.85	28.00	S 17°48'18"E		
						LOL WALL W4
T75	1855439.55	6269749.42				
T76	1855292.60	6269796.62	154.34	S 17°48'18"E		
T63	1855291.07	6269791.85	5.00	S 72°11'42"W		
						LOL WALL W2 / LOL RAMP W2
T64	1855286.79	6269778.53	28.00	N 17°48'18"W		
T66	1855313.45	6269769.96				
T67	1855252.29	6269579.54	127.92	36° 38'44"	200.00	CURVE CENTER
T68	1855415.02	6269695.82				
						LOL WALL W2
T71	1855432.53	6269740.12				
T72	1855315.89	6269777.58	122.50	S 17°48'18"E		
T73	1855315.28	6269775.68	2.00	S 72°11'42"W		
T67	1855252.29	6269579.54	131.75	36° 38'44"	206.00	CURVE CENTER
T74	1855419.90	6269699.31				
						LOL WALL W3
T71	1855432.53	6269740.12				
T70	1855435.72	6269733.91	6.98	N 62°48'18"W		
T80	1855420.04	6269636.61	49.83	S 71°39'21"W		
						LOL WALL W4
T81	1855439.02	6269680.31				
T82	1855448.20	6269708.00	29.17	N 71°39'21"E		
T90	1855476.39	6269698.45	30.33	N 18°20'39"W		
						LOL WALL W5
T91	1855479.19	6269705.10				
T83	1855450.40	6269714.64	30.33	S 18°20'39"E		
T11	1855459.12	6269742.74	29.62	N 71°39'21"E		

EAST SIDE - GEOMETRY DATA

COORD. NO.	COORDINATES NORTHING	COORDINATES EASTING	TANGENT or ARC LENGTH (FT.)	BEARING or DELTA	RADIUS (FT.)	REMARKS
						LOL RAMP E1 & E2
T12	1855476.61	6269867.24				
T20	1855478.13	6269869.82	4.82	N 71° 39'21"E		
T190	1855454.77	6269916.13	86.04	S 59° 44'15"E		
T26	1855348.40	6269885.73	40.90	23°26'13"	100.00	CURVE CENTER
T19A	1855407.60	6269964.32				
T25	1855401.93	6269970.49	7.03	S 36°18'02"E		
T21	1855388.42	6269874.91	5.45	S 51°33'44"E		
T22	1855405.04	6269883.92	11.18	N 53° 41'27"E		
T25	1855420.46	6269912.59	19.13	N 36° 18'33"W		
T23A	1855716.53	6270375.51	91.98	10°52'24"	500.00	CURVE CENTER
T24	1855459.16	6269926.23				
						LOL WALL E7
T34	1855482.00	6269873.49	4.88	S 18° 20'39"E		
T30	1855477.37	6269845.05	74.25	S 59°44'17"E		
T37	1855459.95	6269939.15				
T26	1855348.40	6269885.73	43.36	54°03'09"	106.00	CURVE CENTER
T38	1855411.15	6269877.16	6.48	S 36° 18'02"E		
T31	1855485.53	6269975.00	0.61	N 36° 18'34"W		
T32	1855406.33	6269875.54	13.13	N 36° 18'34"W		
T23	1855416.51	6269867.76	93.86	11° 19'24"	506.00	CURVE CENTER
T23A	1855716.53	6270375.51				
T33	1855487.25	6269919.49				
						LOL WALL E5
T13	1855495.60	6269850.95	1.32	N 71°39'21"E		
T14	1855496.01	6269852.20	6.21	N 17°59'41"E		
T40	1855501.92	6269854.12	44.67	N 18°20'39"W		
T41	1855544.31	6269840.06				
						LOL WALL E4
T43	1855548.72	6269851.35	45.67	S 18°20'39"E		
T42	1855501.98	6269864.98	43.50	N 71°39'21"E		
T50	1855515.27	6269810.27				
						LOL WALL E3
T51	1855886.28	6269816.56	45.38	S 71°39'21"W		
T34	1855482.00	6269873.49				
						LOL WALL E6
T17	1855475.74	6269858.56	1.97	S 18°20'39"E		
T18	1855473.87	6269855.20	74.25	S 59°44'15"E		
T28	1855436.45	6269928.84	7.11	N 28°43'45"E		
T29	1855438.26	6269940.22	-	-		
T28A	1855427.61	6269940.77	3.59	S 04°48'44"E		
T29A	1855420.07	6269947.64	29.17	55°55'44"E		
T39	1855401.95	6269930.49	5.65	55°55'44"E		
T21	1855396.42	6269938.91				

PC LOL E1
POC LOL E1

AS BUILT
Contract No. URT-552
Date 12-11-96

NO.	DATE	REVISIONS	BY	CHK	APPV
2	12/1/95	REVISED RAMP ALIGNMENT	PWL		
1	7/10/95	REVISED RAMP ALIGNMENT	MTS		

DE LEUW CATHER

		DATE
ASSIGNED BY H.R.S.		9/21/94
DRAWN BY R.W.L.		9/21/94
CHECKED BY R.H.L.		11/14/94
MTDB PROJ. NO. D. RAGLAND		

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

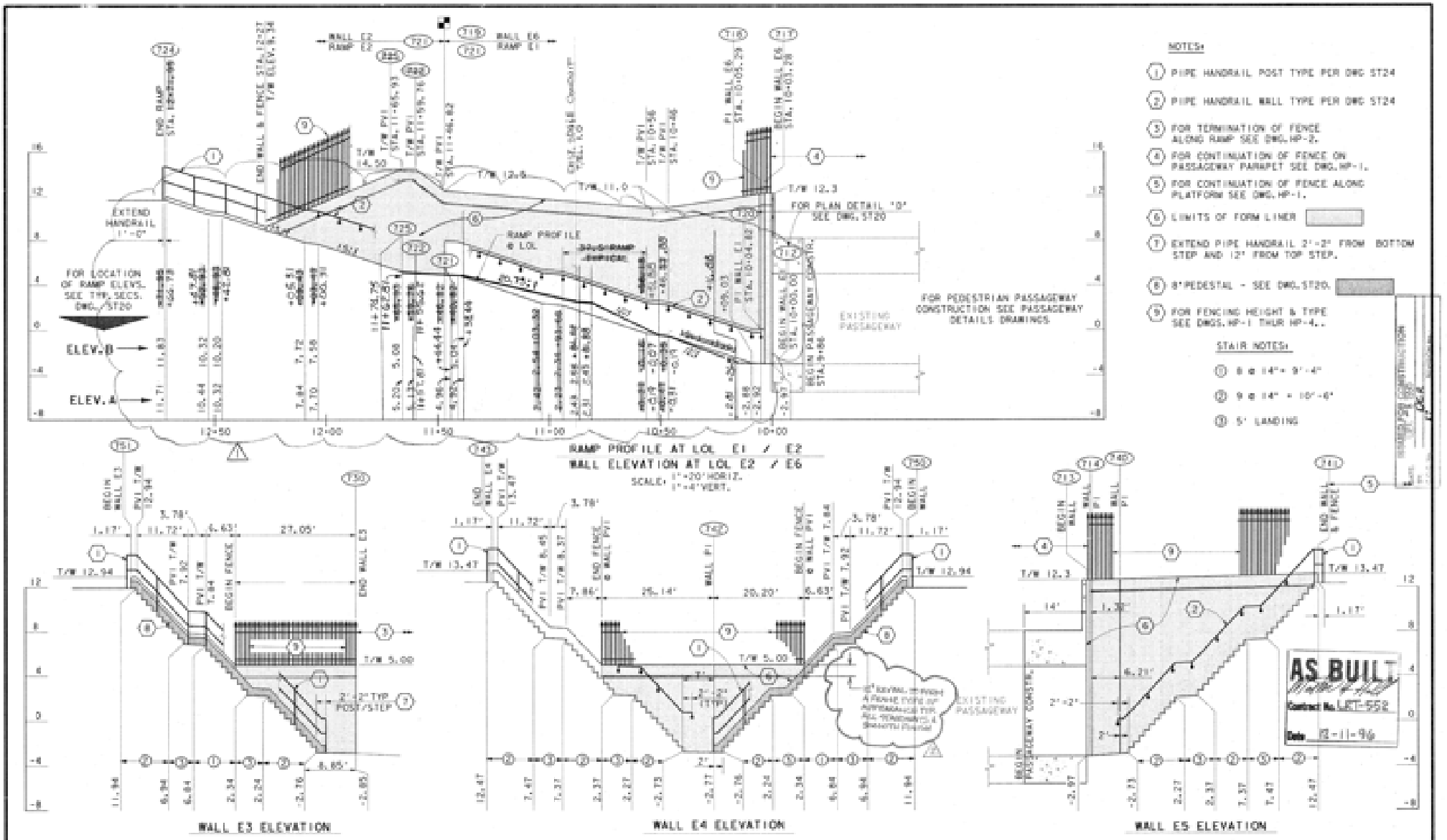
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
LAYOUT SHEET 2 OF 2

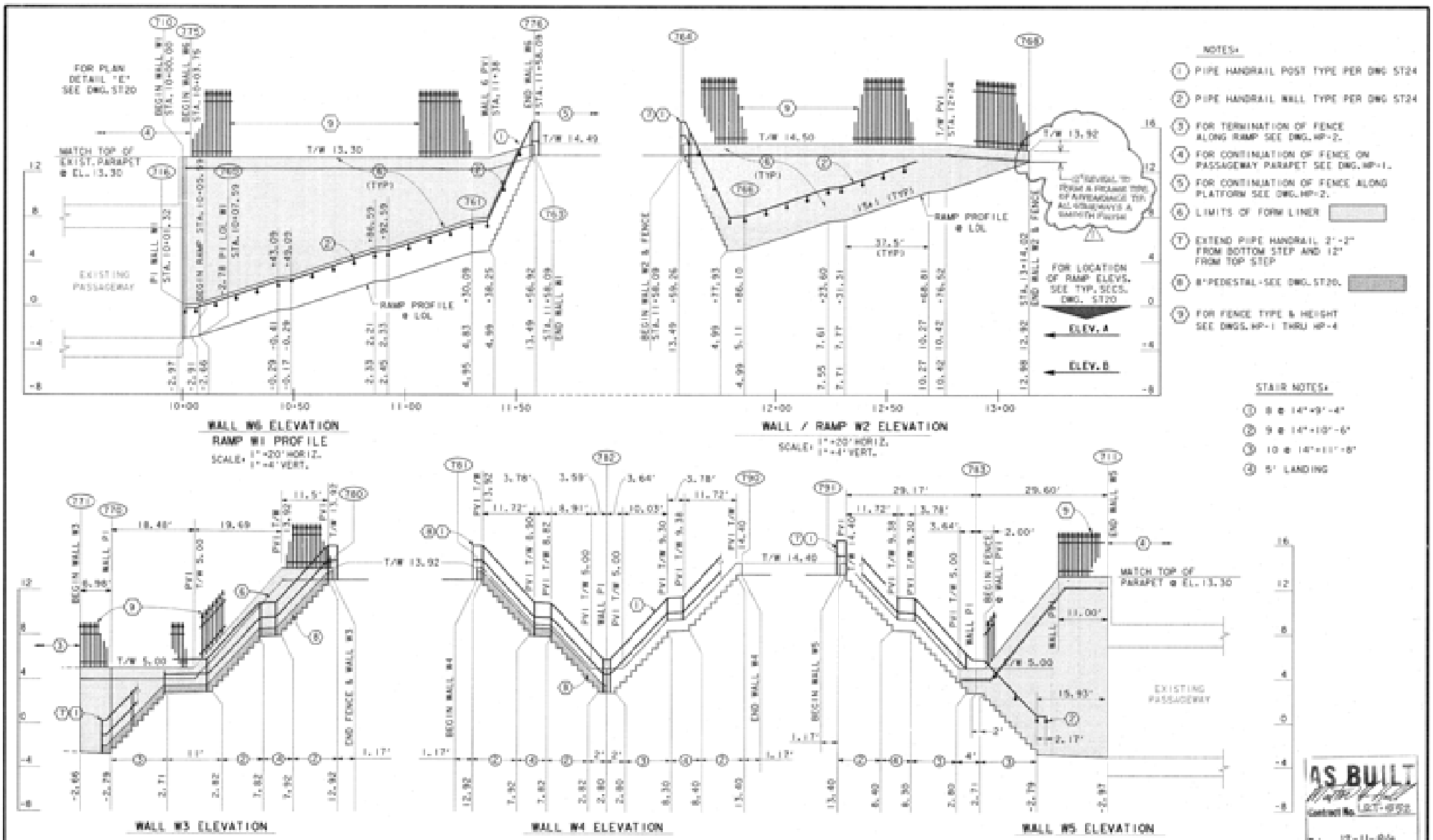
SCALE: N/A
MTDB CONTRACT NO. URT 552
DRAWING WORKSHEET NO. 5121 | 76

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

142

MTS DOC NO. PWL355/A02, WO43554-E45


NOTES:
1 PIPE HANDRAIL POST TYPE PER DWG ST24
2 PIPE HANDRAIL RAIL TYPE PER DWG ST24
3 FOR TERMINATION OF FENCE ALONG RAMP SEE DWG. HP-2.
4 FOR CONTINUATION OF FENCE ON PASSAGEWAY PARAPET SEE DWG. HP-1.
5 FOR CONTINUATION OF FENCE ALONG PLATFORM SEE DWG. HP-1.
6 LIMITS OF FORM LINER
7 EXTEND PIPE HANDRAIL 2'-2" FROM BOTTOM STEP AND 12" FROM TOP STEP.
8 8" PEDESTAL - SEE DWG. ST20.
9 FOR FENCING HEIGHT & TYPE SEE DWGS. HP-1 THUR HP-4..
STAIR NOTES:
① 8 @ 14" = 9'-4"
② 9 @ 14" = 10'-6"
③ 5' LANDING
RAMP PROFILE AT LOL E1 / E2
WALL ELEVATION AT LOL E2 / E6
SCALE: 1"=20' HORIZ. 1"=4' VERT.
WALL E3 ELEVATION
WALL E4 ELEVATION
WALL E5 ELEVATION
AS BUILT
Contract No. LRT-552
Date 12-11-96
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
ELEVATION SHEET 1 OF 2
DESIGNED BY H.R.S. 8/15/94
DRAWN BY R.M.M. 8/19/94
CHECKED BY R.M.L. 11/15/94
MTDB PROJ. ENG. D. RADLAND
MTDB CONTRACT NO. LRT 552
DRAWING NO. ST22
SHEET NO. 72
FOR PEDESTRIAN PASSAGEWAY CONSTRUCTION SEE PASSAGEWAY DETAILS DRAWINGS
EXISTING PASSAGEWAY



NO.	DATE	REVISIONS	BY	CHK	APPR
1	4/97	AS-BUILT PER CCO #10			

DE LEUW CATHER

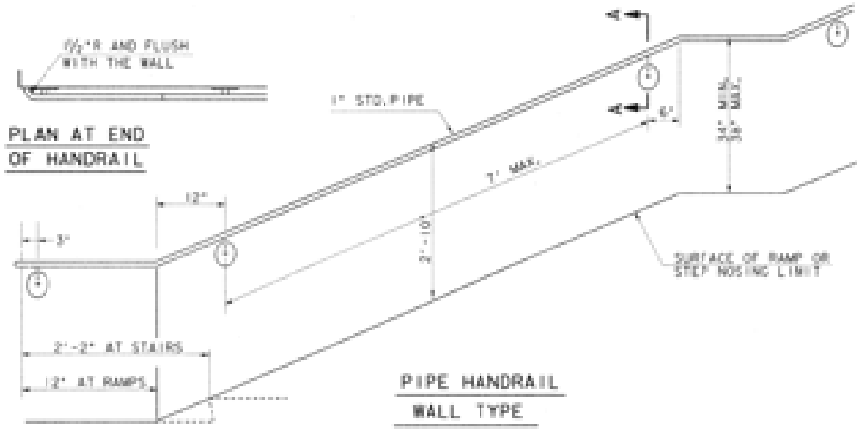
DESIGNED BY R. & S.	DATE 3/19/94
DRAWN BY R.H.L.	8/18/94
CHECKED BY R.H.L.	11/15/94
MTDB PROJECT D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
ELEVATION SHEET 2 OF 2

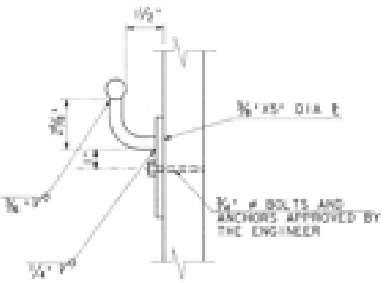
SCALE	1"=10' HORIZ. 1"=4' VERT. U.N.O.
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	SHEET NO.
ST23	78

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

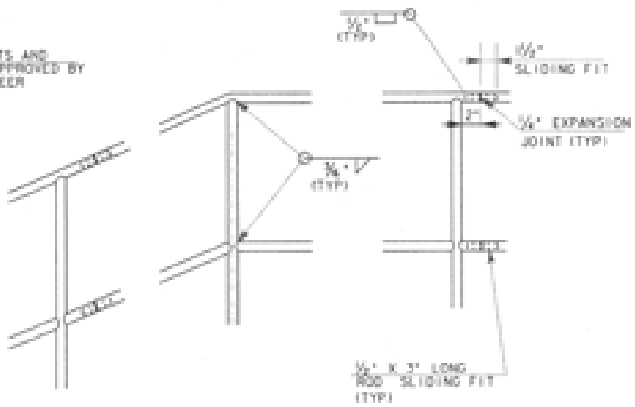


PLAN AT END OF HANDRAIL

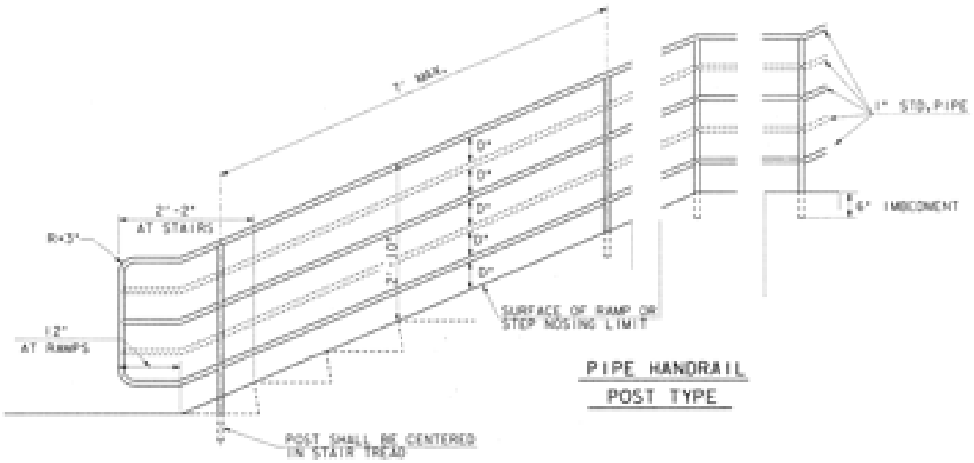
PIPE HANDRAIL
WALL TYPE



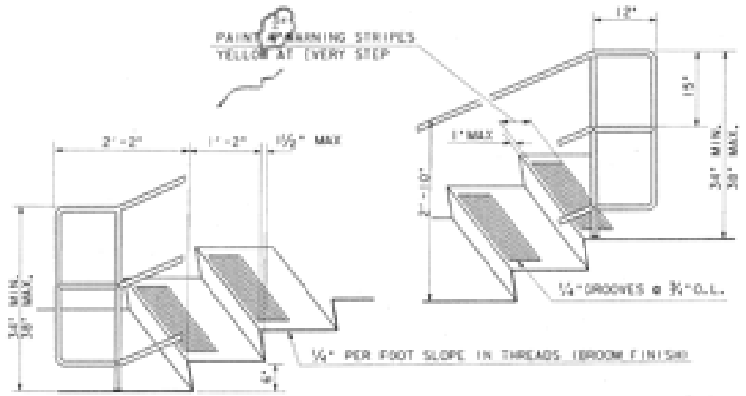
SECTION A-A
HANDRAIL BRACKET



WELDING DETAIL



PIPE HANDRAIL
POST TYPE



WARNING STRIPING AND
HANDRAIL EXTENSIONS

RAILING NOTES

1. ½" EXPANSION JTS AT 16'+/- CTRS.
2. WELD AND GRIND SMOOTH ALL CONNECTIONS
3. ALL RAILINGS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION
4. PIPE TO BE SEAMLESS STEEL ASTM A53 GRADE B
5. MAXIMUM D=3⅝ INCHES AT RAMPS.
   MAXIMUM D=10 INCHES AT STAIRS
6. SUBMIT SHOP DRAWINGS FOR ENGINEER'S APPROVAL.

AS BUILT
Contract No. LRCT-552
Date 12-11-96

NO.	DATE	REVISIONS	BY	CHK	APPR
#1	[illegible]	[illegible]			

DE LEUW CATHER

DESIGNED BY	R.W.W.	DATE 11/25/94
DRAWN BY	R.W.M.	11/25/94
CHECKED BY	H.R.S.	11/28/94
MTDB PROJ. ENG.	D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PEDESTRIAN PASSAGEWAY
HANDRAILS AND STAIR DETAILS

SCALE	
NTS	
MTDB CONTRACT NO.	
LRT 552	
DRAWING NO.	SHEET NO.
ST24	49

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

SAN DIEGO

METROPOLITAN TRANSIT DEVELOPMENT BOARD

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	
	4/28/95	CONFORMED
	5-17-97	AS-BUILT ADDED SHTS. 577 & 578

CONFORMED DRAWINGS

AS-BUILTS VOLUMEII (SHEETS 80-160)

AS BUILT

Contract No. LRT-552

Date 5-7-97

CITY OF SAN DIEGO, CALIFORNIA

AS-BUILT M.K.

1854-4267

NAD 83

214-1707

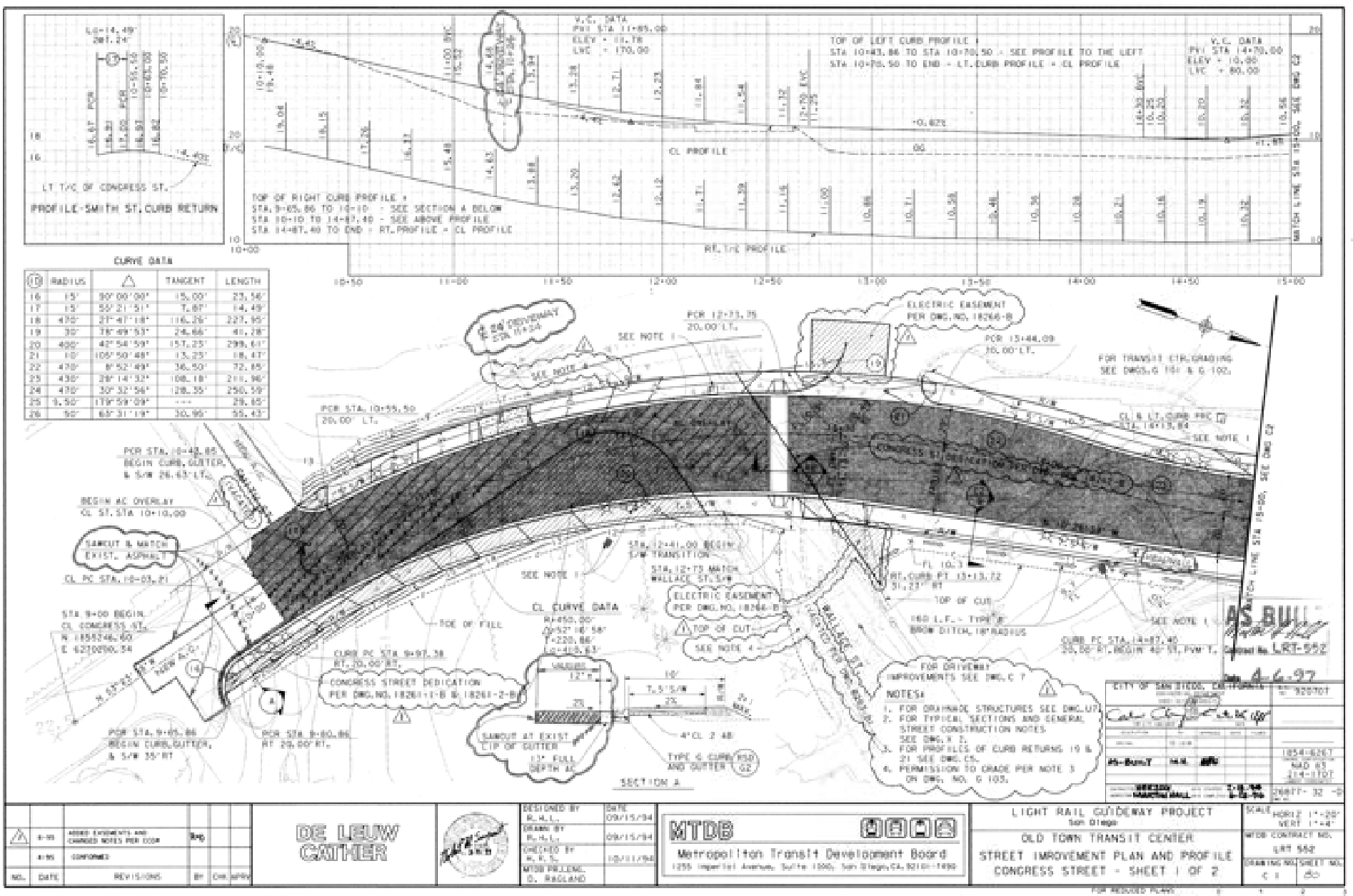
SHTT- / -0

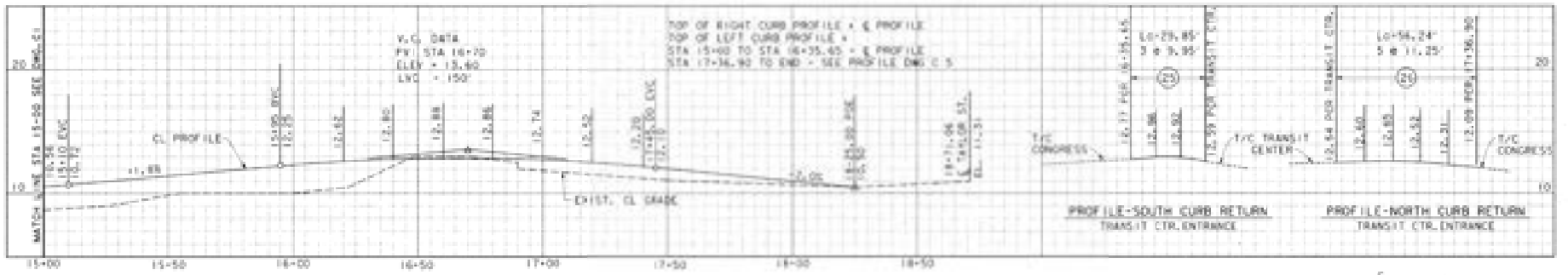
OLD TOWN TRANSIT CENTER
CONTRACT LRT- NO. 552

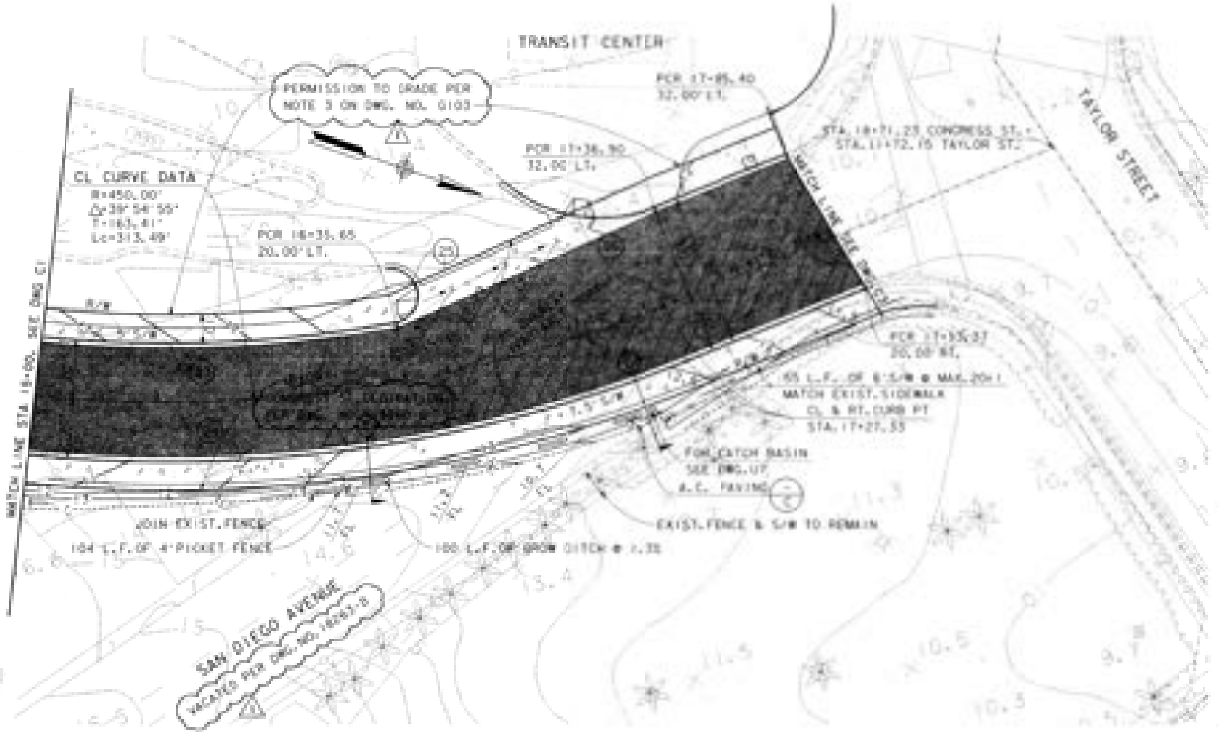
DE LEUW, CATHER & COMPANY

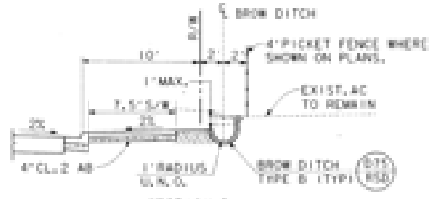
APRIL 1995

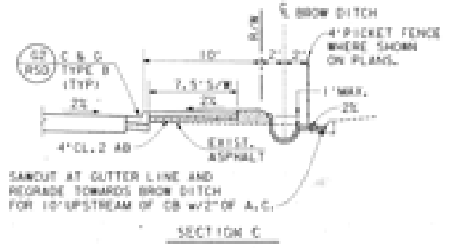
FOR REDUCED PLANS


PROFILE-SMITH ST. CURB RETURN
LT. T/C OF CONGRESS ST.
TOP OF RIGHT CURB PROFILE =
STA. 9+85.86 TO 10+10 - SEE SECTION A BELOW
STA 10+10 TO 14+87.40 - SEE ABOVE PROFILE
STA 14+87.40 TO END - RT. PROFILE = CL PROFILE
CL PROFILE
RT. T/C PROFILE
TOP OF LEFT CURB PROFILE =
STA 10+43.86 TO STA 10+70.50 - SEE PROFILE TO THE LEFT
STA 10+70.50 TO END - LT. CURB PROFILE = CL PROFILE
CURVE DATA
SEE NOTE 1
SEE NOTE 4
ELECTRIC EASEMENT PER DWG. NO. 18266-B
FOR TRANSIT CTR. GRADING SEE DWGS. G 101 & G 102.
CL & LT. CURB PRC
SAWCUT & MATCH EXIST. ASPHALT
BEGIN AC OVERLAY CL ST. STA 10+10.00
CL PC STA. 10+03.21
STA. 9+00 BEGIN CL CONGRESS ST. N 1855246.60 E 6210090.54
BEGIN 4% GRADE
CL CURVE DATA R=450.00' Δ=52° 16' 58" T=220.86' L=410.63'
TOE OF FILL
CONGRESS STREET DEDICATION PER DWG. NO. 18261-1-B & 18261-2-B
SAWCUT AT EXIST. LIP OF GUTTER 12" FULL DEPTH AC
4" CL 2 AB
TYPE G CURB, PSD AND GUTTER, G2
SECTION A
TOP OF CUT
180 L.F. - TYPE 'B' BROW DITCH, 18' RADIUS
FOR DRIVEWAY IMPROVEMENTS SEE DWG. C 7
NOTES:
1. FOR DRAINAGE STRUCTURES SEE DWG. U7
2. FOR TYPICAL SECTIONS AND GENERAL STREET CONSTRUCTION NOTES SEE DWG. R 2.
3. FOR PROFILES OF CURB RETURNS 19 & 21 SEE DWG. C5.
4. PERMISSION TO GRADE PER NOTE 3 ON DWG. NO. G 105.
AS BUILT
Contract No. LRT-552
4-6-97
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-1490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
STREET IMPROVEMENT PLAN AND PROFILE
CONGRESS STREET - SHEET 1 OF 2
MTDB CONTRACT NO. LRT 552
DRAWING NO. C 1
SHEET NO. (6)
DESIGNED BY R.M.L. 09/15/94
DRAWN BY R.M.L. 09/15/94
CHECKED BY R.R.S. 10/11/94
MTDB PROJ. MGR. G. RAGLAND
REVISIONS
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES









NOTES:

FOR GENERAL STREET CONSTRUCTION NOTES SEE DWG. X 2.

AS BUILT

Contract No. CT-552

Date 4-6-92

CITY OF SAN DIEGO, CALIFORNIA

AS-BUILT M.H. JBW

DESIGN PARTNERS HALL 1-15-96

920707

1854-626T

NAD 83

214-1707

29877-33-D

NO.	DATE	REVISIONS	BY	CHK	APPD
2	8-95	ADDED EASEMENTS AND R/W NOTES PER EXH F	BMO		
1	4-95	CONFORMED			

DE LEUW CATHER

DESIGNED BY R.M.L. 9/15/94

DRAWN BY R.M.C. 9/15/94

CHECKED BY MRS 11/23/94

MTDB PROJ. ENG. D. RAGLAND

MTDB

Metropolitan Transit Development Board

1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490

LIGHT RAIL GUIDEWAY PROJECT

San Diego

OLD TOWN TRANSIT CENTER

STREET IMPROVEMENT PLAN AND PROFILE

CONGRESS STREET - SHEET 2 OF 2

SCALE HORIZ 1"=20' VERT 1"=4'

MTDB CONTRACT NO. LRT 552

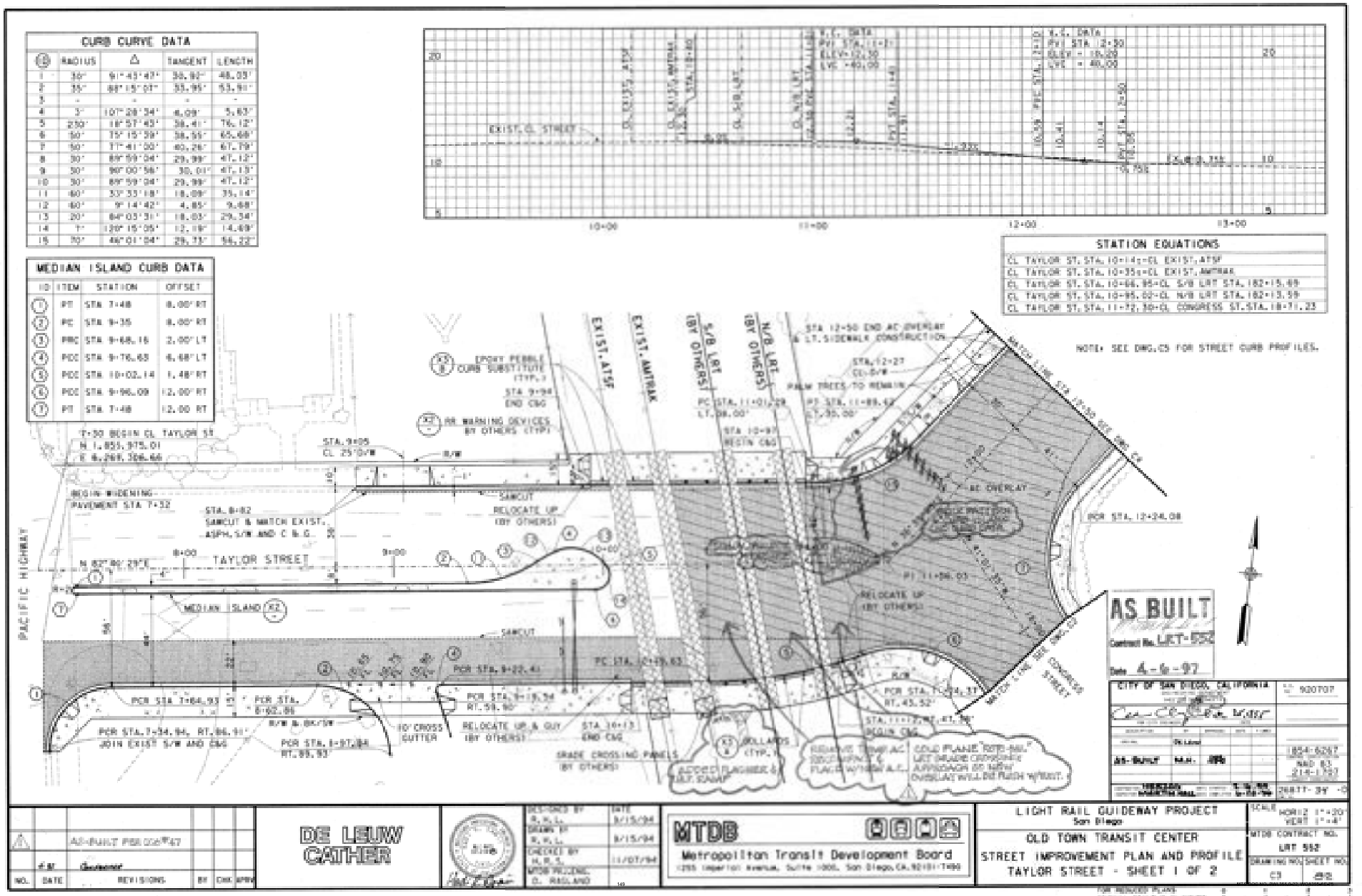
DRAWING NO. C2

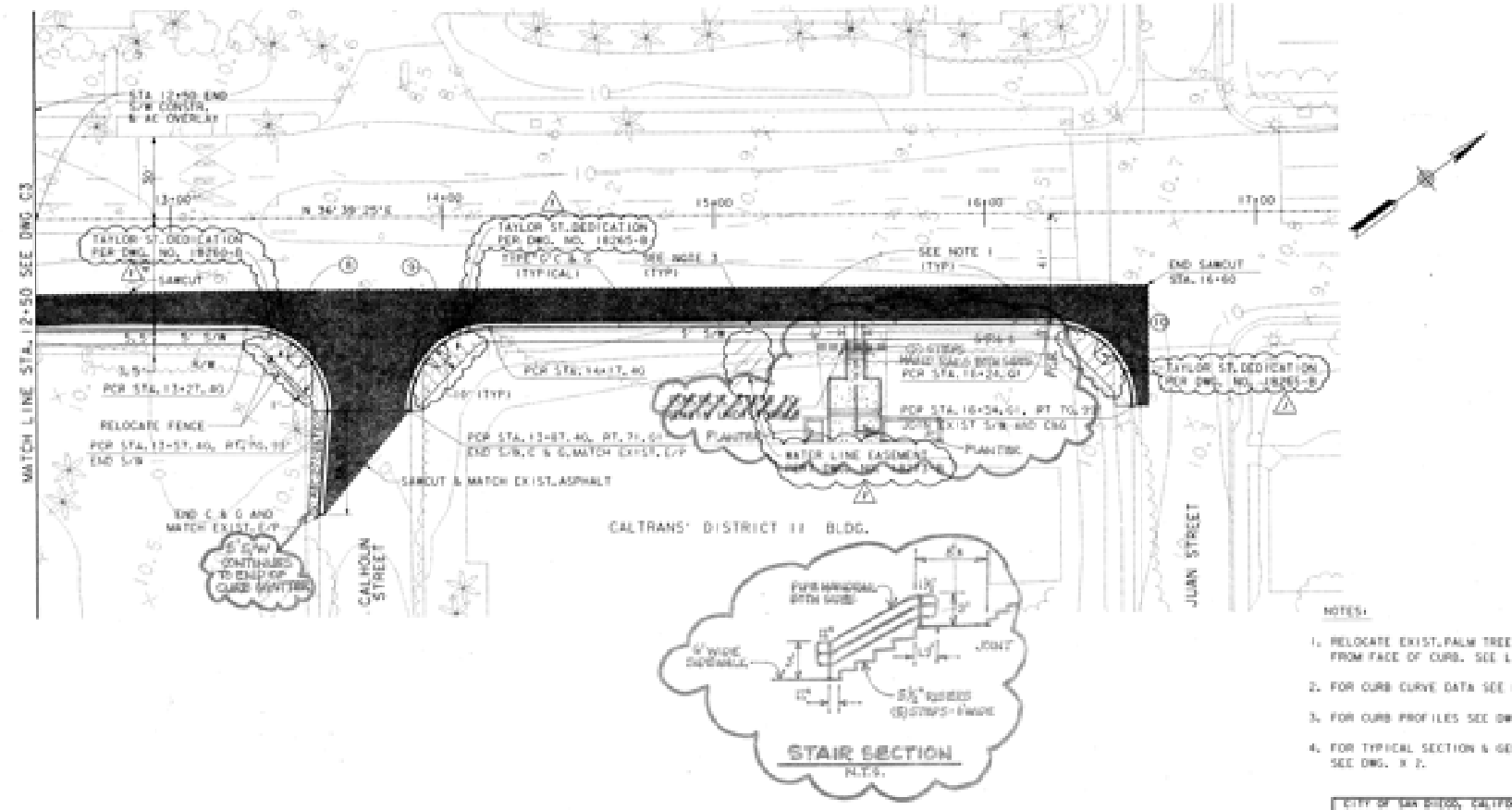
SHEET NO. 27

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

148

MTS DOC NO. PWL355#02, WOA355#AE-76


CURB CURVE DATA
MEDIAN ISLAND CURB DATA
STATION EQUATIONS
EXIST. CL STREET
EXIST. AT&SF
EXIST. AMTRAK
S/B LRT (BY OTHERS)
N/B LRT (BY OTHERS)
PACIFIC HIGHWAY
TAYLOR STREET
MEDIAN ISLAND
AS BUILT
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
STREET IMPROVEMENT PLAN AND PROFILE
TAYLOR STREET - SHEET 1 OF 2
LRT 552



NOTES:

1. RELOCATE EXIST. PALM TREES 7' FROM FACE OF CURB. SEE LANDSCAPE DWGS.
2. FOR CURB CURVE DATA SEE DWG. C 3.
3. FOR CURB PROFILES SEE DWG. C 6.
4. FOR TYPICAL SECTION & GENERAL NOTES SEE DWG. # 2.

AS BUILT
Contract No. LRT-552
Date 4-7-97

CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT M.E.
I.F.B. 920707
1854-4267
NAD 83
514-1707
24877-35-D

NO.	DATE	REVISIONS	BY	CHK	APPR
1	8-95	ADDED EASEMENTS AND NOTES PER COD #			
	4-95	CONFORMED			

DE LEUW CATHER

	DATE
DESIGNED BY RWL	3/13/94
DRAWN BY RWL	9/13/94
CHECKED BY MTS	11/27/94
MTDB PROJ. ENG. D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

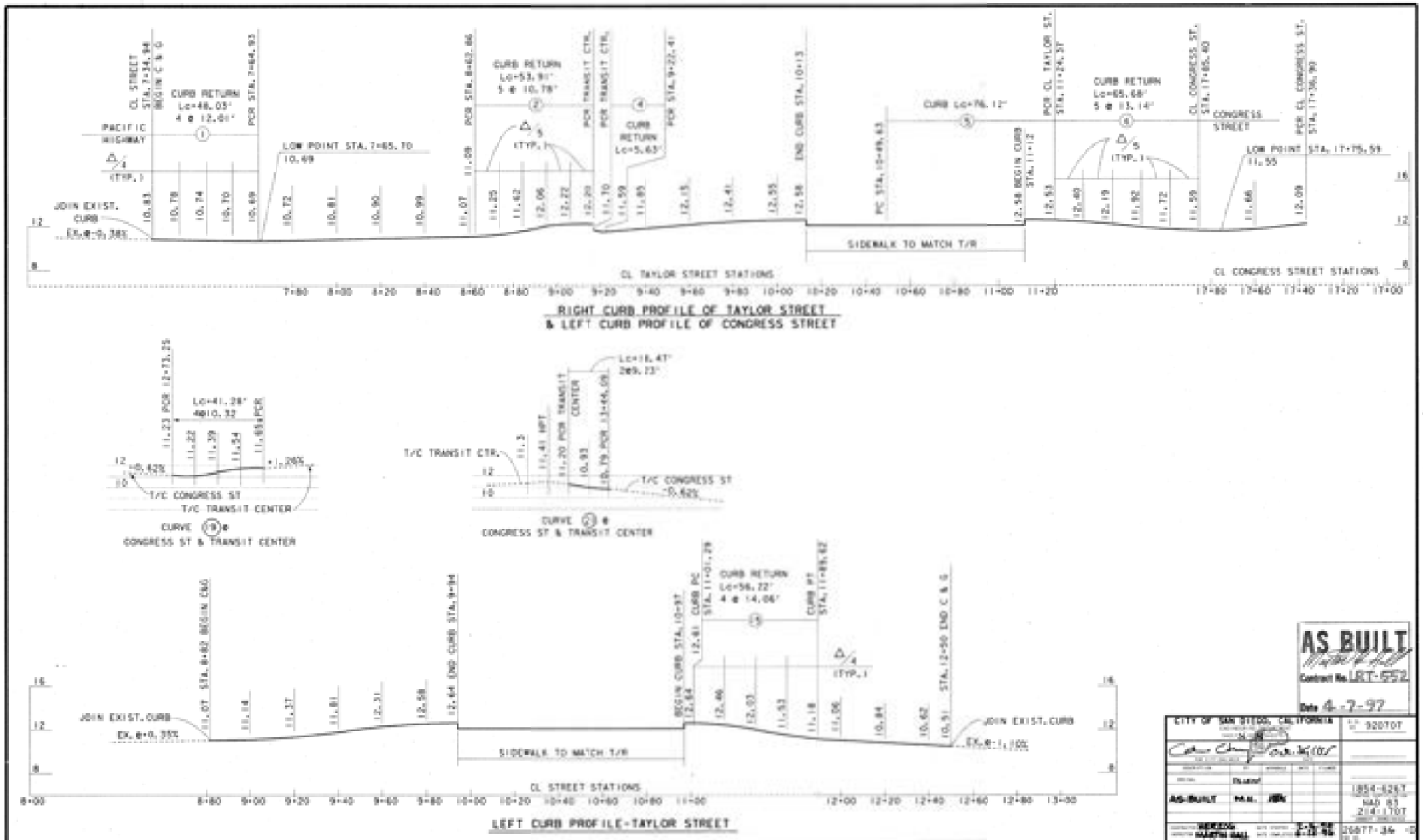
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
STREET IMPROVEMENT-PLAN & PROFILE
TAYLOR STREET - SHEET 2 OF 2

SCALE 1"=20'
MTDB CONTRACT NO. LRT 552
DRAWING NO. C4
SHEET NO. 89

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

150

MTS DOC NO. PWL355/b22, WO435546-E75



RIGHT CURB PROFILE OF TAYLOR STREET
& LEFT CURB PROFILE OF CONGRESS STREET

LEFT CURB PROFILE-TAYLOR STREET

AS BUILT
Contract No. LRT-552
Date 4-7-97

CITY OF SAN DIEGO, CALIFORNIA
D 920TOT
1854-5267
NAD 83
214-170T
20677-36

NO.	DATE	REVISIONS	BY	CHK	APPD
	6-97	Construction			

DE LEUW CATHER

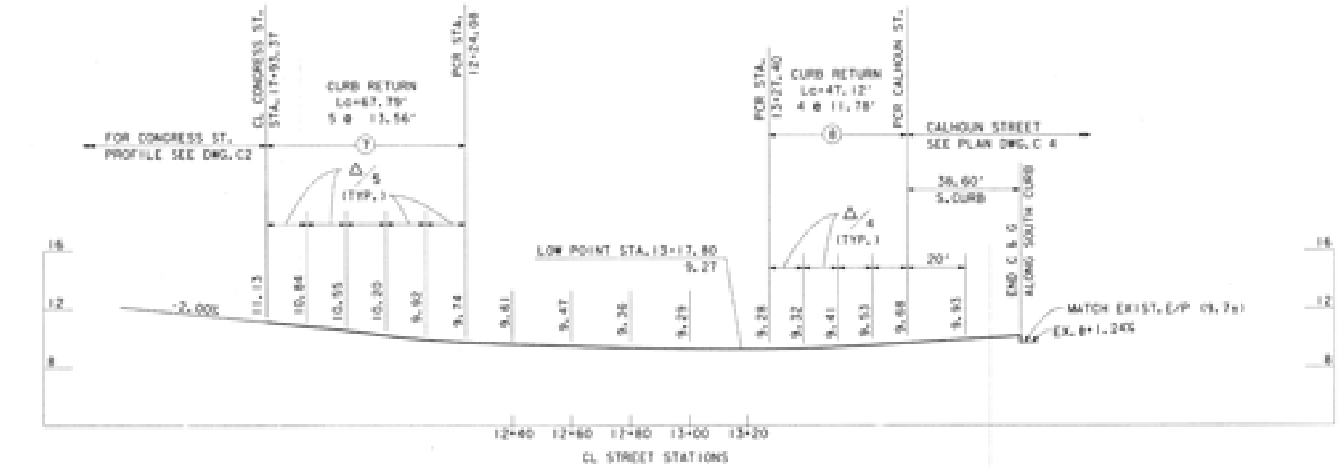
DESIGNED BY H.R.S. 5/09/94
DRAWN BY R.H.L. 5/09/94
CHECKED BY
MTDB PROJECT ENGR. D. RADLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

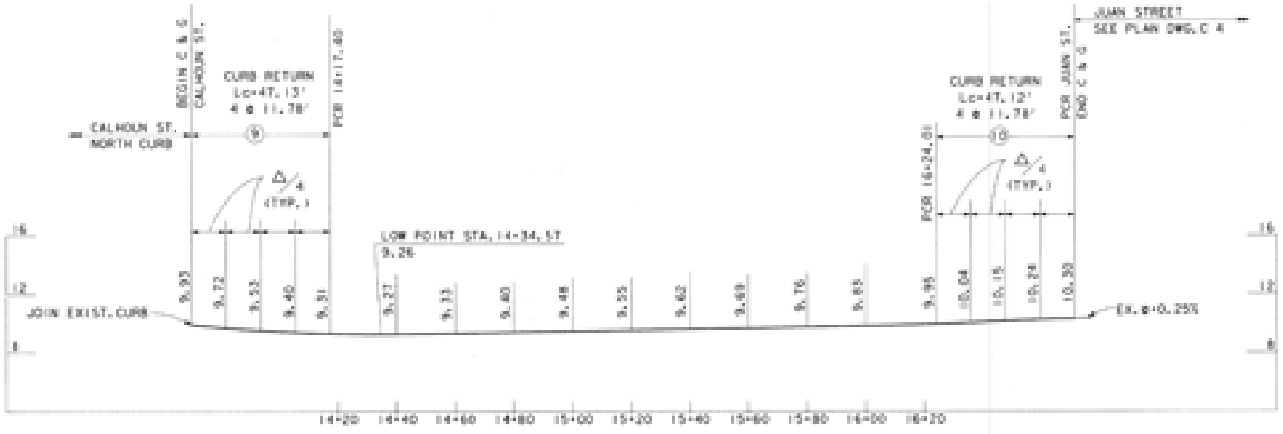
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
STREET IMPROVEMENT PLAN & PROFILE
CURB PROFILES-SHEET 1 OF 2

SCALE HOR. 1"=20' VERT. 1"=4'
MTDB CONTRACT NO. LRT 552
DRAWING NO. C 5 SHEET NO. 64

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3



RIGHT CURB PROFILE-TAYLOR STREET
SOUTH CURB PROFILE - CALHOUN STREET



RIGHT CURB PROFILE-TAYLOR STREET

AS BUILT
Contract No. LRT-552
Date 4-7-97

CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT
1854-1097
NAD 83
214-1707
26877- 8F -D

NO.	DATE	REVISIONS	BY	CHK	APPD
	P.M.				

DE LEUW CATHER

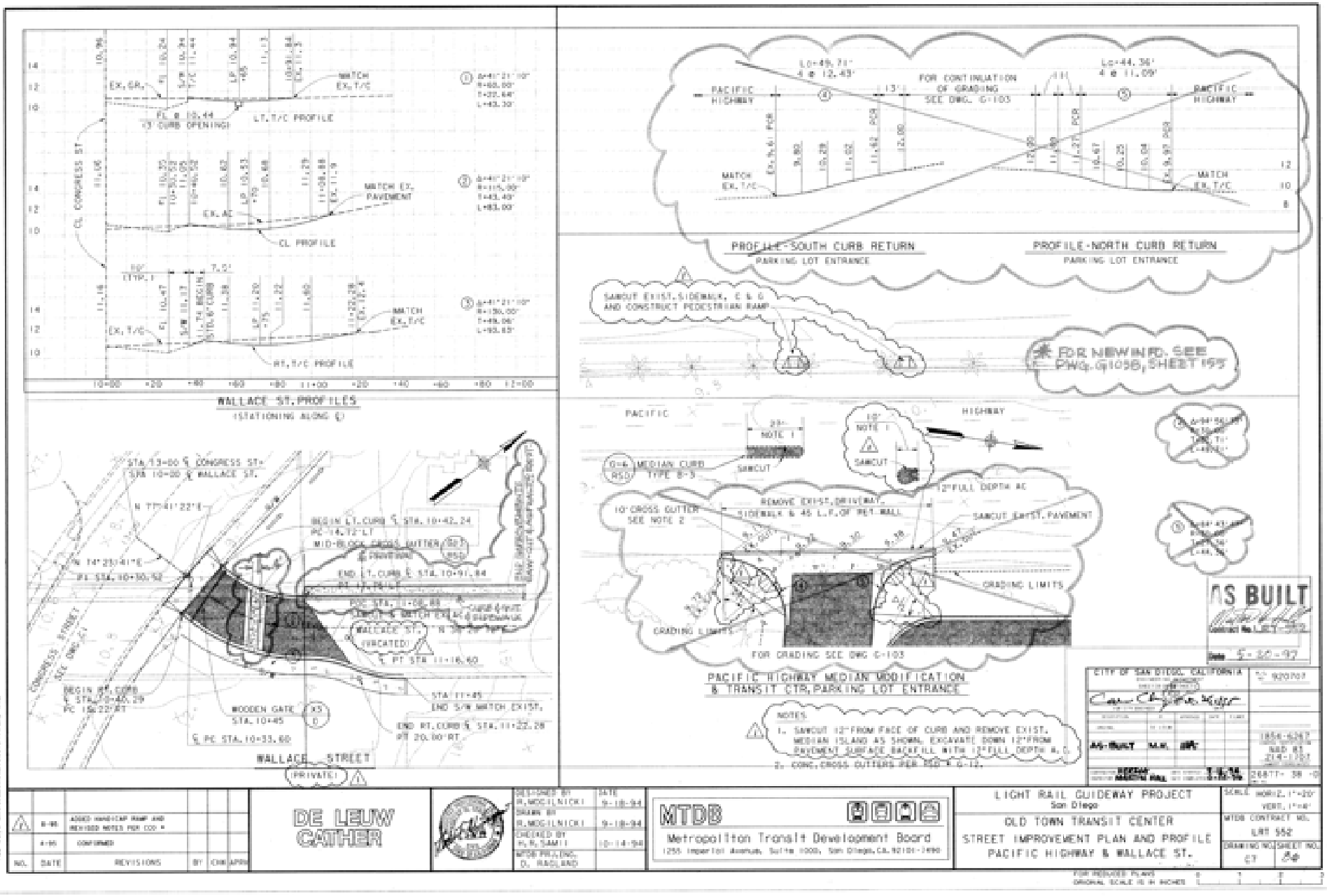
DESIGNED BY H.N.S.	DATE 5/05/94
DRAWN BY R.H.L.	5/05/94
CHECKED BY	
MTDB PROJ.ENG. D. RAGLAND	

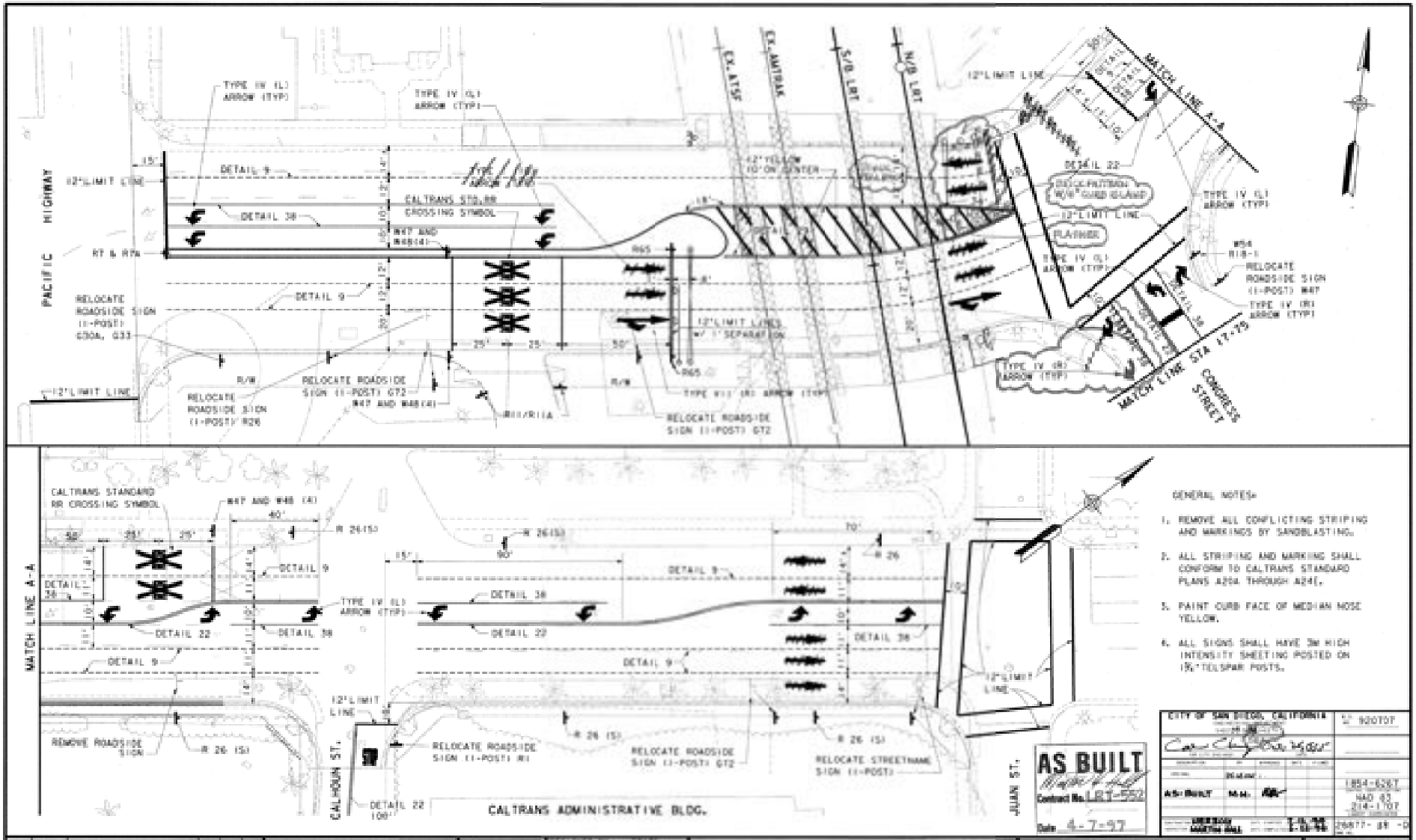
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

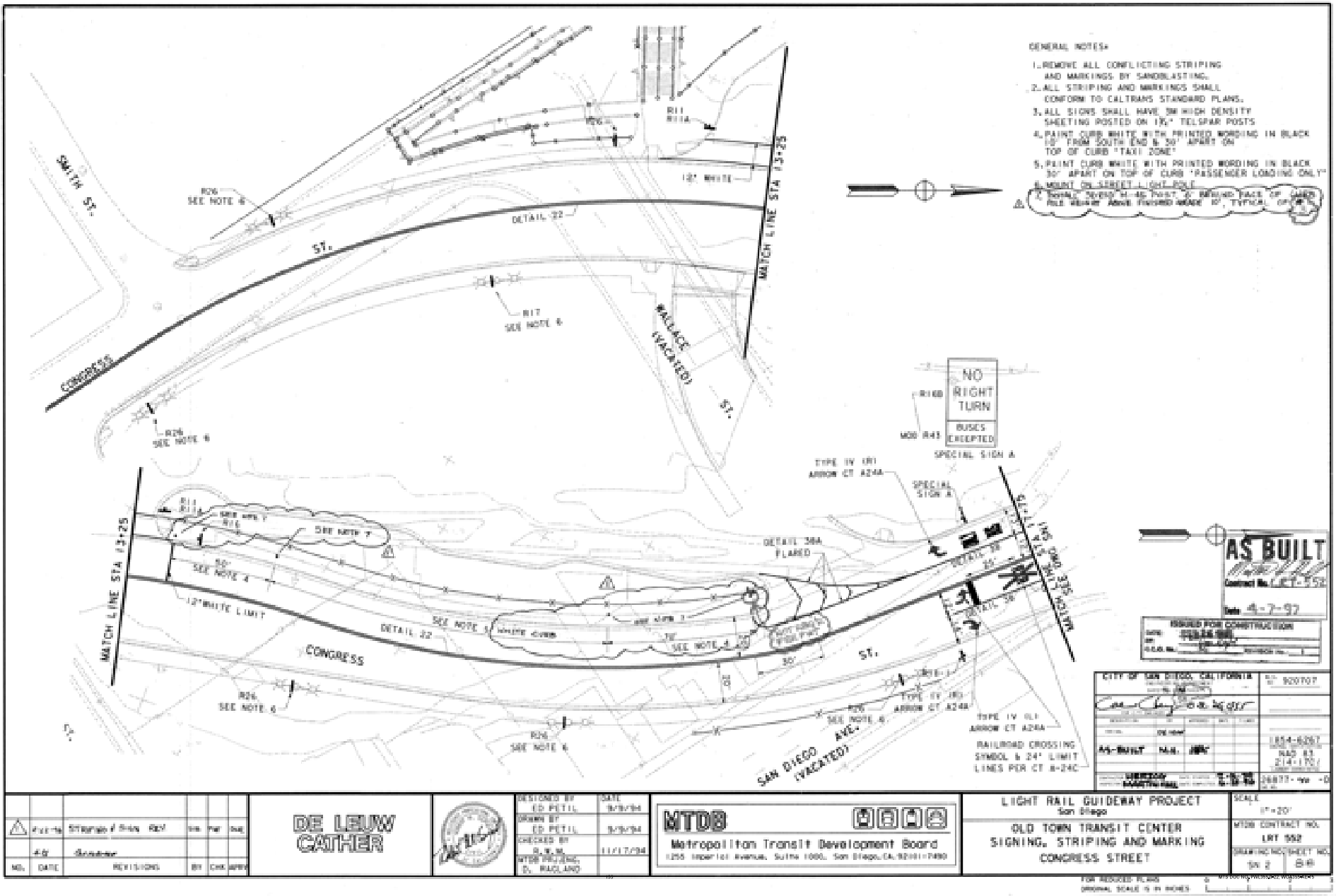
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
STREET IMPROVEMENT PLAN & PROFILE
CURB PROFILES-SHEET 2 OF 2

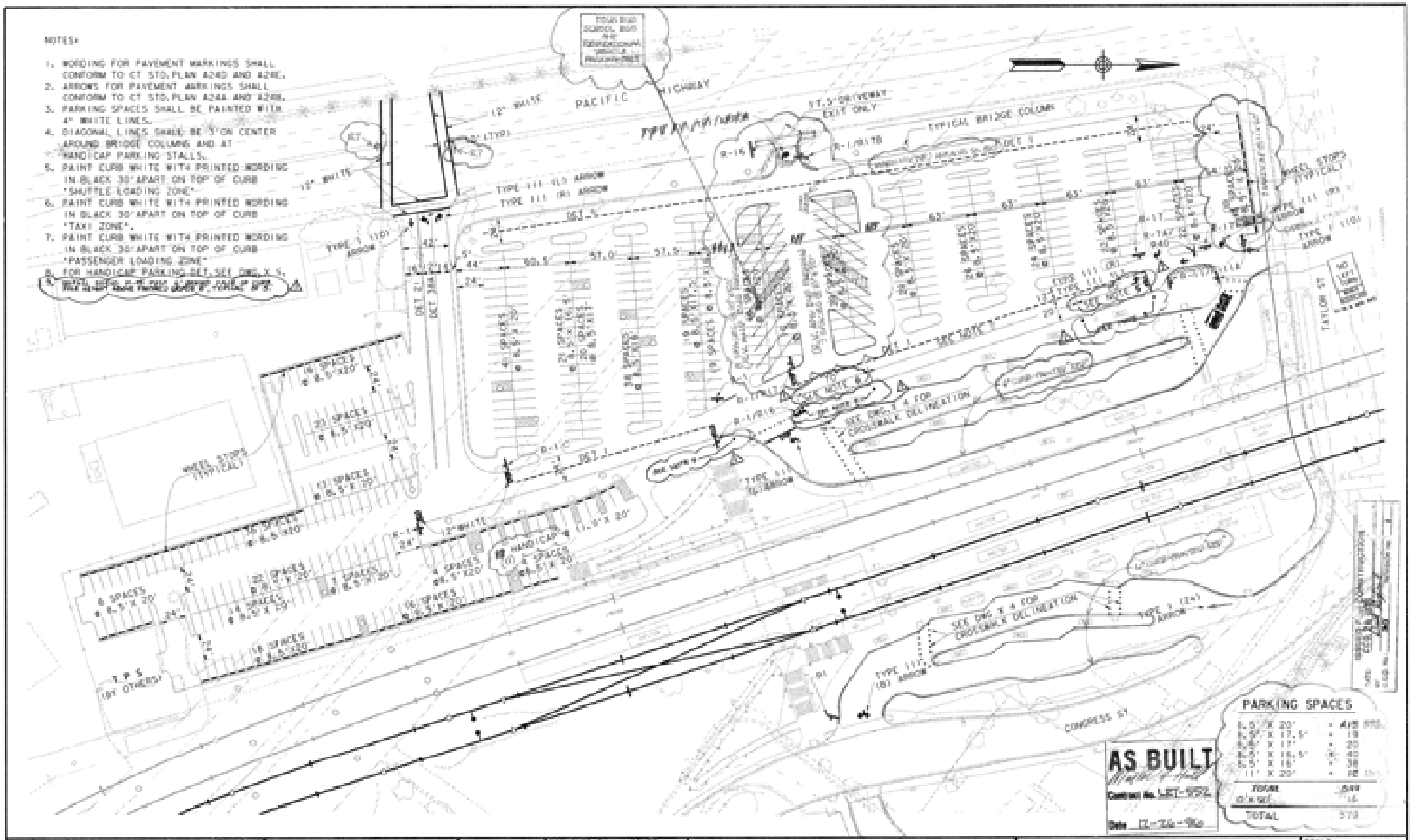
SCALE HORIZ. 1"=20'
VERT. 1"=4'
MTDB CONTRACT NO. LRT 552
DRAWING NO. C 6
SHEET NO. 85

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES


WALLACE ST. PROFILES
(STATIONING ALONG ℄)
CL PROFILE
RT. T/C PROFILE
LT. T/C PROFILE
MATCH EX. T/C
MATCH EX. PAVEMENT
PROFILE-SOUTH CURB RETURN
PARKING LOT ENTRANCE
PROFILE-NORTH CURB RETURN
PARKING LOT ENTRANCE
FOR CONTINUATION OF GRADING SEE DWG. G-103
PACIFIC HIGHWAY
SAWCUT EXIST. SIDEWALK, C & G AND CONSTRUCT PEDESTRIAN RAMP
FOR NEW INFO. SEE PWG. G1058, SHEET 195
REMOVE EXIST. DRIVEWAY, SIDEWALK & 45 L.F. OF RET. WALL
2" FULL DEPTH AC
10' CROSS GUTTER SEE NOTE 2
SAWCUT EXIST. PAVEMENT
GRADING LIMITS
FOR GRADING SEE DWG G-103
MEDIAN CURB TYPE B-5
SAWCUT
WALLACE STREET (PRIVATE)
WALLACE ST. (VACATED)
CONGRESS STREET SEE DWG. G-1
WOODEN GATE
BEGIN RT. CURB STA. 10+40.29
PC 18.22' RT
℄ PC STA. 10+33.60
END RT. CURB ℄ STA. 11+22.28
PT 20.00' RT
STA 11+45
END S/W MATCH EXIST.
BEGIN LT. CURB ℄ STA. 10+42.24
MID-BLOCK CROSS GUTTER
END LT. CURB ℄ STA. 10+91.84
STA 13+00 ℄ CONGRESS ST.
STA 10+00 ℄ WALLACE ST.
N 77°41'22" E
N 14°25'41" E
PI STA. 10+50.52
PACIFIC HIGHWAY MEDIAN MODIFICATION & TRANSIT CTR. PARKING LOT ENTRANCE
NOTES:
1. SAWCUT 12" FROM FACE OF CURB AND REMOVE EXIST. MEDIAN ISLAND AS SHOWN. EXCAVATE DOWN 12" FROM PAVEMENT SURFACE BACKFILL WITH 12" FULL DEPTH A.C.
2. CONC. CROSS GUTTERS PER SDD # G-12.
AS BUILT
Date 5-20-97
CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-1490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
STREET IMPROVEMENT PLAN AND PROFILE
PACIFIC HIGHWAY & WALLACE ST.
MTDB CONTRACT NO. LRT 552
DRAWING NO. G7
SHEET NO. 24
DESIGNED BY R. MOGILNICKI 9-18-94
DRAWN BY R. MOGILNICKI 9-18-94
CHECKED BY H. N. SAMII 10-14-94
MTDB PROJ. ENG. D. RADLAND
NO. DATE REVISIONS BY CHK APPR
A 8-95 ADDED HANDICAP RAMP AND REVISED NOTES PER CCO #
A 4-96 CONFORMED


PACIFIC HIGHWAY
MATCH LINE A-A
MATCH LINE A-A
CONGRESS STREET
CALHOUN ST.
JUAN ST.
CALTRANS ADMINISTRATIVE BLDG.
TAYLOR STREET
TYPE IV (L) ARROW (TYP)
TYPE IV (R) ARROW (TYP)
DETAIL 9
DETAIL 38
DETAIL 22
DETAIL 36
12" LIMIT LINE
12" YELLOW 10' ON CENTER
CALTRANS STD. RR CROSSING SYMBOL
W47 AND W48(4)
RELOCATE ROADSIDE SIGN (1-POST) G33
RELOCATE ROADSIDE SIGN (1-POST) R26
RELOCATE ROADSIDE SIGN (1-POST) GT2
RELOCATE ROADSIDE SIGN (1-POST) R1
RELOCATE STREETNAME SIGN (1-POST)
REMOVE ROADSIDE SIGN
R 26 (S)
R65
R64
R1B-1
PLANTER
EX. ATSF
EX. AMTRAK
S/B LRT
N/B LRT
GENERAL NOTES:
1. REMOVE ALL CONFLICTING STRIPING AND MARKINGS BY SANDBLASTING.
2. ALL STRIPING AND MARKING SHALL CONFORM TO CALTRANS STANDARD PLANS A20A THROUGH A24E.
3. PAINT CURB FACE OF MEDIAN NOSE YELLOW.
4. ALL SIGNS SHALL HAVE 3M HIGH INTENSITY SHEETING POSTED ON 1½" TELSPAR POSTS.
AS BUILT
Contract No. LRT-552
Date 4-7-97
CITY OF SAN DIEGO, CALIFORNIA
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
SIGNING, STRIPING, & MARKING PLAN
TAYLOR STREET
MTDB CONTRACT NO. LRT 552
SCALE 1"=20'


GENERAL NOTES:
1. REMOVE ALL CONFLICTING STRIPING AND MARKINGS BY SANDBLASTING.
2. ALL STRIPING AND MARKINGS SHALL CONFORM TO CALTRANS STANDARD PLANS.
3. ALL SIGNS SHALL HAVE 3M HIGH DENSITY SHEETING POSTED ON 1¾" TELSPAR POSTS
4. PAINT CURB WHITE WITH PRINTED WORDING IN BLACK 15' FROM SOUTH END & 30' APART ON TOP OF CURB "TAXI ZONE"
5. PAINT CURB WHITE WITH PRINTED WORDING IN BLACK 30' APART ON TOP OF CURB "PASSENGER LOADING ONLY"
6. MOUNT ON STREET LIGHT POLE
SMITH ST.
CONGRESS ST.
WALLACE (VACATED) ST.
MATCH LINE STA 13+25
SAN DIEGO AVE. (VACATED)
R26 SEE NOTE 6
R17 SEE NOTE 6
R11 R11A
12" WHITE
DETAIL 22
NO RIGHT TURN
BUSES EXCEPTED
R16B
MOD R41
SPECIAL SIGN A
TYPE IV (R) ARROW CT A24A
DETAIL 38A FLARED
SEE NOTE 7
SEE NOTE 4
12" WHITE LIMIT
WHITE CURB
RAILROAD CROSSING SYMBOL & 24' LIMIT LINES PER CT A-24C
TYPE IV (L) ARROW CT A24A
AS BUILT
Contract No. LRT-552
Date 4-7-97
ISSUED FOR CONSTRUCTION
CITY OF SAN DIEGO, CALIFORNIA
DE LEUW CATHER
DESIGNED BY ED PETIL 9/8/94
DRAWN BY ED PETIL 9/9/94
CHECKED BY 11/17/94
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
SIGNING, STRIPING AND MARKING
CONGRESS STREET
SCALE 1"=20'
MTDB CONTRACT NO. LRT 552
DRAWING NO. SM 2
SHEET NO. 8 of 8
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES



NO.	DATE	REVISIONS	BY	CHK	APP'D
1	2-22-96	STRIPING REVISION	JPB	PMT	DCB

DE LEUW CATHER

DESIGNED BY R.M.S./E.A.P.	DATE 9/8/94
DRAWN BY R.M.M./R.H.L.	9/8/94
CHECKED BY R.M.M.	11/17/94
MTDB PROJ. ENG. D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-1490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
SIGNING, STRIPING AND MARKING PLAN
PARKING LOT AND BUS BAYS

SCALE	1"=40'
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	SN 3
SHEET NO.	

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

MTS DOC NO. PWL355422, WOA355445-75

CONSTRUCTION AREA SIGNS

CODE	PANEL SIZE (INCHES)	MOUNTING S=STATIONARY P=PORTABLE	1-POST 4'X4' (+3.5')	1-POST 4'X6' (+4.5')	2-POST 4'X4' (+4.5')	DRAWING NO. SC1	SC2	SC2A	SC3	SC4	SC5
C2	48X30	ON BARRICADE				4	9			6	
C2A	60X30	ON BARRICADE								1	
C12	48X48	P				4					
C13	60X24	S			X	3	3	3	2	3	3
C18	48X48	S		X		4	3	3	8	7	8
C19	48X48	S		X			1	2		1	
C20 (LT/RT)	48X48	S		X					1	1	2
C21	48X48	P							3	2	4
C30	30X30	P							2	2	7
M4	18X18	ON BARRICADE				4	9			6	
R7	24X30	P									2
R7/R7A	24X30/24X18	P									1
R16	24X24	P					1	1		2	
R17	24X24	P								2	
R49	36X18	S	X							1	
R49M	36X18	S	X			4	2	2		6	
W21(RT)	36X36	S		X				1			
W11	36X36	S		X					1	1	2
W15	36X36	S		X		2					

TRAFFIC CONTROL SYSTEM (LSI)

DWG NO	PORTABLE DELINEATOR (UNIT)	TYPE I BARRICADE (UNIT)
SC1	14	13
SC2	29	18
SC2A	21	18
SC3	18	15
SC4	49	22
SC5	79	16

TEMPORARY PAVEMENT MARKING

DWG NO	TYPE I (I-A) ARROW (14 SF)	TYPE IV ARROW (15 SF)
SC1	4	
SC2	5	
SC2A	5	
SC3	13	3
SC4	10	3
SC5	13	6
TOTAL	824 SF	

TEMPORARY STRIPING

DWG NO	DETAIL 1 (LF)	DETAIL 22 (LF)	DETAIL 3 (LF)
SC1		280	
SC5			150
TOTAL 430 LF			

DWG NO.	TYPE III BARRICADE	FLASHING ARROW BOARD
	UNIT (EA)	UNIT (EA)
SC1	4	-
SC2	9	-
SC3	-	1
SC4	9	1
SC5	-	2

AS BUILT
Contract No. LRT-552
Date 4-7-97

CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT M.M. ARV
DESIGN MARTIN HALL 5-12-96

920707
1854-6267
NAD 83
214-1707
2487?-4U -D

NO.	DATE	REVISIONS	BY	CHK	APPD
4-97		Contractor			

DE LEUW CATHER

DESIGNED BY	EAP	8/15/95
DRAWN BY	MRS	9/15/93
CHECKED BY	RWM	11/17/95
MTDB PROJ. ENG.	D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
QUANTITY SUMMARY
DETOUR AND CONSTRUCTION STAGING
SHEET 1 OF 3

SCALE N.T.S.
MTDB CONTRACT NO. LRT 552
DRAWING NO. 91 SHEET NO. 90

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

ROADSIDE SIGNS

DWG NO.	CODE	PANEL SIZE (INCHES)	POST SIZE AND LENGTH 4"X4"	4"X6"	RELOCATE ROADSIDE SIGN (EA)	ROADSIDE SIGN 1- POST (EA)	TELSPAR POST (EA)	INSTALL SIGN STRAP AND SADDLE METHOD (EA)
SN1	G30A G33				1			
	R26	12"X18"			1			
	CT2				3			
	M4T M4B(4)	STD 36" 30"X24"			1			3
	R1	30"30"			1			
	R11 R11A	36"X36" 36"X21"		X		2		
	R65	24"X30"					2	
	RT RTA	24"X30" 24"X18"					1	
	R26(S)	12"X18"					6	
	W54 R18-1	30"x30" 20"X32"		X				
	ST, NAME SIGN				1			
SN2	R26	12"X18"					1	4
	R12	24"X24"						1
	R17B MOD R43	30"X36" 24"X12"		X		1		
	R16	24"X24"					1	
	R18-1	20"X32"					1	
SN3	R1	30"x30"	X			4		
	R11 R11A	36"X36" 36"X21"		X		2		
	R17B MOD R43	30"X36" 24"X12"		X		1		
	R12	24"X24"	X			2		
	R3a R40	24"X18" 24"X30"	X			1		
	R1 R16	30"X30" 24"X24"		X		2		
	R1 R17	30"X30" 24"X24"		X		1		
	R1 R17B	30"X30" 30"X36"		X		1		
	R16	24"X24"	X			1		
	R99	12"X18"					12	
SUB-TOTAL					6	18	24	8
TOTAL					8	42		8

TRAFFIC STRIPES (DET=DETAILS)

LOCATION	DET 38A	DET 21	DET 1	4" WHITE	DET 9	DET 38	DET 29	DET 22	4" BLUE
N. PARK. LOT	235	235	1185	12,264					664
TAYLOR ST					2334	678	285	530	
CONGRESS ST	201					105		820	
N. PARK. LOT 4° DIAGONAL				1,236					
NET TOTAL	436	235	1185	13,500	2334	783	285	1,350	664
TOTAL= 20,108 LF									

PAVEMENT MARKER

DETAIL TYPE	REFLECTIVE EA	NON REFLECTIVE EA
DETAIL 9	96	
DETAIL 22	112	
DETAIL 29	24	
DETAIL 38	33	
CROSSWALKS (BUS BAYS)		1092
TOTALS	265	1092

PAVEMENT MARKING (SF)

BUS BAYS	700
PACIFIC HWY	641
TAYLOR ST	2364
CONGRESS ST	307
TOTAL	4012 SF

PAINT CURB

N. PARKING LOT	340 LF
CONGRESS ST	285 LF
TOTAL	625 LF

AS BUILT
Contract No. LRT-552
Date 4-7-97

CITY OF SAN DIEGO, CALIFORNIA — R 920703

AS-BUILT — NAD 83 — 1854-5262 — 214-1307

26ATT-92. -0

NO.	DATE	REVISIONS	BY	CHK	APPR
	4-97	As-built			

DE LEUW CATHER

DESIGNED BY CAP — DATE 5/16/93
DRAWN BY MRS — 5/16/93
CHECKED BY — 11/22/94
MTDB PROJ. ENG. D. RAILAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-1490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
QUANTITY SUMMARY
PERMANENT TRAFFIC CONTROL FACILITIES
SHEET 2 OF 3

SCALE N.T.S
MTDB CONTRACT NO. LRT 552
DRAWING NO. 0 2
SHEET NO. 43

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

BASES	
LOCATION	AGGREGATE BASE CLASS 2 (CY)
BUSBAYS	940
SIDEWALK (INCL. PED RAMP)	280
INTEGRAL COLOR CONCRETE PAVING (BK/SALT FINISH)	820
CURB, CURB & GUTTER	110
DRIVEWAY CROSS GUTTER 3' GUTTER	100
W. PARKING LOT	4650
STAMPED CONCRETE	320
TOTAL	7220

ROADWAY EXCAVATION	
LOCATION	CY
TAYLOR ST	1675
CONGRESS ST	550
W. PARKING LOT	2970
E. BUSBAY ONLY	800
TOTAL	5995

WHEEL STOP	
WEST PARKING LOT	116 EA

EROSION CONTROL	
SLOPES ALONG CONGRESS STREET	650 SY

PORTLAND CEMENT CONCRETE PAVEMENT	
LOCATION	CY
WEST BUS BAYS	685
EAST BUS BAYS	530
TOTAL	1215

6' CHAIN LINK FENCE (W/3 STRAND BARB WIRE)	
WEST PARKING LOT	120 LF

4' PICKET FENCE (CONGRESS ST)	104 LF
4' PICKET FENCE (WEST PARKING LOT)	185 LF
4' PICKET FENCE (PASSAGE WAY)	1760 LF
6' PICKET FENCE (PASSAGE WAY)	1135 LF

ASPHALT CONCRETE (TYPE B)	
LOCATION	TON
TAYLOR ST	1450
CONGRESS ST	2660
W. PARKING LOT	3820
WEST BUS BAY ONLY	750
EAST BUS BAY ONLY	580
OVERLAY	370
TOTAL	9630

ASPHALT MEMBRANE WATERPROOFING	
PASSAGEWAY	2500 SF

MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)	
LOCATION	CY
SIDEWALK (INCL. PED RAMP)	300
CURB, CURB/GUTTER	405
DRIVEWAY	25
3 FOOT CROSS GUTTER	25
CROSS GUTTER	45
TOTAL	800

BOLLARD AND WOODEN GATE		
LOCATION	BOLLARD	WOODEN GATE
TAYLOR ST. CROSSING	8 EA	
CONGRESS ST.		1 EA

INTEGRAL COLOR CONCRETE PAVING W. SALT FINISH (FOR PLAN LOCATION SEE URBAN DESIGN PLANS)	
LOCATION	SF
ISLANDS (WEST PARKING LOT)	2,560
SIDEWALKS (WEST PARKING LOT)	13,000
WEST BUS BAY ISLAND	11,820
COMMUTER RAIL PLATFORM	9,860
LRT PLATFORM	6,910
TRANSIT CENTER PLATFORM	15,170
PASSAGE WAY	1,950
TAYLOR STREET SIDEWALK	2,660
MEDIAN (TAYLOR ST)	1,600
TOTAL	65,550

RELOCATE CHAIN LINK FENCE (LUMP SUM)	
CONGRESS/TAYLOR	LS
CALHOUN	LS

DETECTABLE WARNING PAVEMENT	
PLATFORMS	4150 SF

ROLLING/GRILLES (LUMP SUM)	
PASSAGEWAY (1 EACH)	LS

EPOXY PEBBLE STRIP	
TAYLOR STREET CROSSING	210 SF

STAMPED CONCRETE PAVING (FOR PLAN LOCATION SEE URBAN DESIGN PLANS)	
LOCATION	SF
LRT PLATFORM	6,910
COMMUTER RAIL PLATFORM	4,930
TOTAL	11,840

AS BUILT
Contract No. LRT-552
Date 4-7-97

CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT
920/TOT
1854-6267
NAD 83
214-1707
246877-W3-D

NO.	DATE	REVISIONS	BY	CHK. APPR.

DE LEUW CATHER

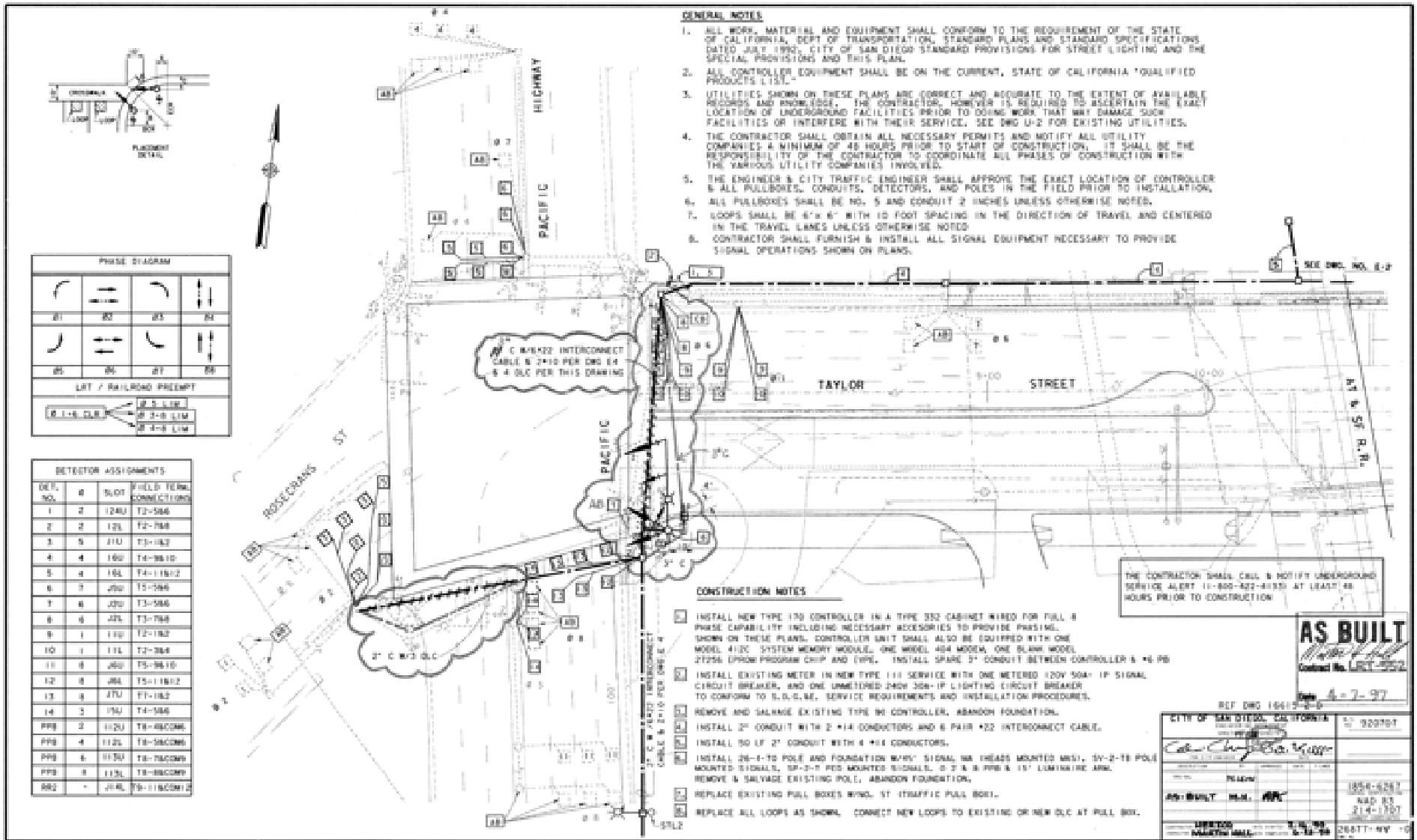
DESIGNED BY	EJP	DATE 8/16/93
DRAWN BY	HKG	9/16/93
CHECKED BY	DWU	11/15/94
MTDB PROJ. ENG.	O. RAGLAND	

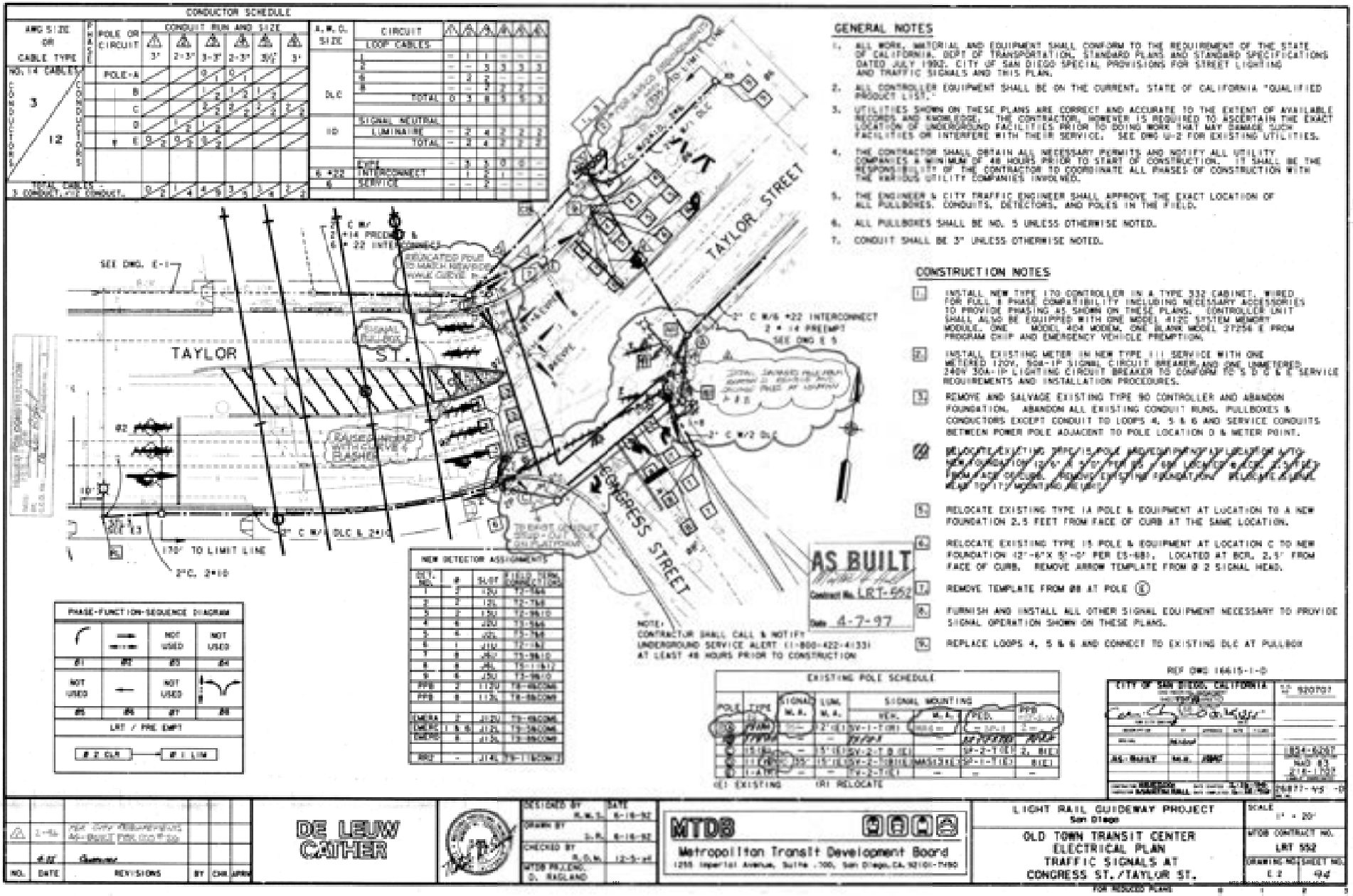
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
QUANTITY SUMMARY
CIVIL
SHEET 3 OF 5

SCALE	
N.T.S.	
MTDB CONTRACT NO.	
LRT 552	
DRAWING NO.	SHEET NO.
03	152

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3


GENERAL NOTES
1. ALL WORK, MATERIAL AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENT OF THE STATE OF CALIFORNIA, DEPT OF TRANSPORTATION, STANDARD PLANS AND STANDARD SPECIFICATIONS DATED JULY 1992, CITY OF SAN DIEGO STANDARD PROVISIONS FOR STREET LIGHTING AND THE SPECIAL PROVISIONS AND THIS PLAN.
2. ALL CONTROLLER EQUIPMENT SHALL BE ON THE CURRENT, STATE OF CALIFORNIA "QUALIFIED PRODUCTS LIST."
3. UTILITIES SHOWN ON THESE PLANS ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE. THE CONTRACTOR, HOWEVER IS REQUIRED TO ASCERTAIN THE EXACT LOCATION OF UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE. SEE DWG U-2 FOR EXISTING UTILITIES.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND NOTIFY ALL UTILITY COMPANIES A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL PHASES OF CONSTRUCTION WITH THE VARIOUS UTILITY COMPANIES INVOLVED.
5. THE ENGINEER & CITY TRAFFIC ENGINEER SHALL APPROVE THE EXACT LOCATION OF CONTROLLER & ALL PULLBOXES, CONDUITS, DETECTORS, AND POLES IN THE FIELD PRIOR TO INSTALLATION.
6. ALL PULLBOXES SHALL BE NO. 5 AND CONDUIT 2 INCHES UNLESS OTHERWISE NOTED.
7. LOOPS SHALL BE 6'x 6' WITH 10 FOOT SPACING IN THE DIRECTION OF TRAVEL AND CENTERED IN THE TRAVEL LANES UNLESS OTHERWISE NOTED
8. CONTRACTOR SHALL FURNISH & INSTALL ALL SIGNAL EQUIPMENT NECESSARY TO PROVIDE SIGNAL OPERATIONS SHOWN ON PLANS.
PLACEMENT DETAIL
PHASE DIAGRAM
Ø1 Ø2 Ø3 Ø4
Ø5 Ø6 Ø7 Ø8
LRT / RAILROAD PREEMPT
Ø 1-6 CLR
Ø 5 LIM
Ø 3-8 LIM
Ø 4-8 LIM
DETECTOR ASSIGNMENTS
DET. NO. Ø SLOT FIELD TERM. CONNECTIONS
1 2 124U T2-5&6
2 2 12L T2-7&8
3 5 21U T3-1&2
4 4 16U T4-9&10
5 4 16L T4-11&12
6 7 20U T5-5&6
7 6 20U T3-5&6
8 6 22L T3-7&8
9 1 11U T2-1&2
10 1 11L T2-3&4
11 8 26U T5-9&10
12 8 26L T5-11&12
13 3 17U T7-1&2
14 3 17U T4-5&6
PPB 2 112U T8-6&COM.
PPB 4 112L T8-5&COMM
PPB 6 113U T8-7&COMM
PPB 8 113L T8-8&COMM
RR2 - 20L T9-11&COM12
HIGHWAY
PACIFIC
ROSECRANS ST
TAYLOR
STREET
SEE DWG. NO. E-2
#6 C W#22 INTERCONNECT CABLE & 2#10 PER DWG E4 & 4 DLC PER THIS DRAWING
2" C W#2 DLC
CONSTRUCTION NOTES
1 INSTALL NEW TYPE 170 CONTROLLER IN A TYPE 332 CABINET WIRED FOR FULL 8 PHASE CAPABILITY INCLUDING NECESSARY ACCESORIES TO PROVIDE PHASING SHOWN ON THESE PLANS. CONTROLLER UNIT SHALL ALSO BE EQUIPPED WITH ONE MODEL 412C SYSTEM MEMORY MODULE, ONE MODEL 404 MODEM, ONE BLANK MODEL 2725G EPROM PROGRAM CHIP AND TYPE. INSTALL SPARE 3" CONDUIT BETWEEN CONTROLLER & #6 PB
2 INSTALL EXISTING METER IN NEW TYPE III SERVICE WITH ONE METERED 120V 50A- 1P SIGNAL CIRCUIT BREAKER, AND ONE UNMETERED 240V 30A- 1P LIGHTING CIRCUIT BREAKER TO CONFORM TO S.D.G.&E. SERVICE REQUIREMENTS AND INSTALLATION PROCEDURES.
3 REMOVE AND SALVAGE EXISTING TYPE 9N CONTROLLER, ABANDON FOUNDATION.
4 INSTALL 2" CONDUIT WITH 2 #14 CONDUCTORS AND 6 PAIR #22 INTERCONNECT CABLE.
5 INSTALL 50 LF 2" CONDUIT WITH 4 #14 CONDUCTORS.
6 INSTALL 26-4-TS POLE AND FOUNDATION W/45' SIGNAL MA (HEADS MOUNTED MAST), 5V-2-TS POLE MOUNTED SIGNALS, 5P-2-T PED MOUNTED SIGNALS, D 2 & 6 PPB & 15' LUMINAIRE ARM. REMOVE & SALVAGE EXISTING POLE, ABANDON FOUNDATION.
7 REPLACE EXISTING PULL BOXES W/NO. 5T (TRAFFIC PULL BOX).
8 REPLACE ALL LOOPS AS SHOWN. CONNECT NEW LOOPS TO EXISTING OR NEW DLC AT PULL BOX.
STLP
THE CONTRACTOR SHALL CALL & NOTIFY UNDERGROUND SERVICE ALERT (1-800-422-4133) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION
AS BUILT
Contract No. LRT-552
Date 4-2-97
CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT
1854-6261
NAD 83
214-1707
NO. DATE REVISIONS BY CHK APVD
4-97 Surveyed
DE LEUW CATHER
DESIGNED BY R.M.S. DATE 4-25-94
DRAWN BY D.R. & R.M.M. 4-25-94
CHECKED BY R.O.M. 2-25-94
MTDB PROJECT ENG. D. RAGLAND
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
TRAFFIC SIGNALS & ELECTRICAL
PACIFIC HWY/ROSECRANS ST/TAYLOR ST
SCALE 1"=20'
MTDB CONTRACT NO. LRT 552
DRAWING NO. E 1
SHEET NO. 98
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES
MTS DOC NO. PWL365622 WOA355-AE-75

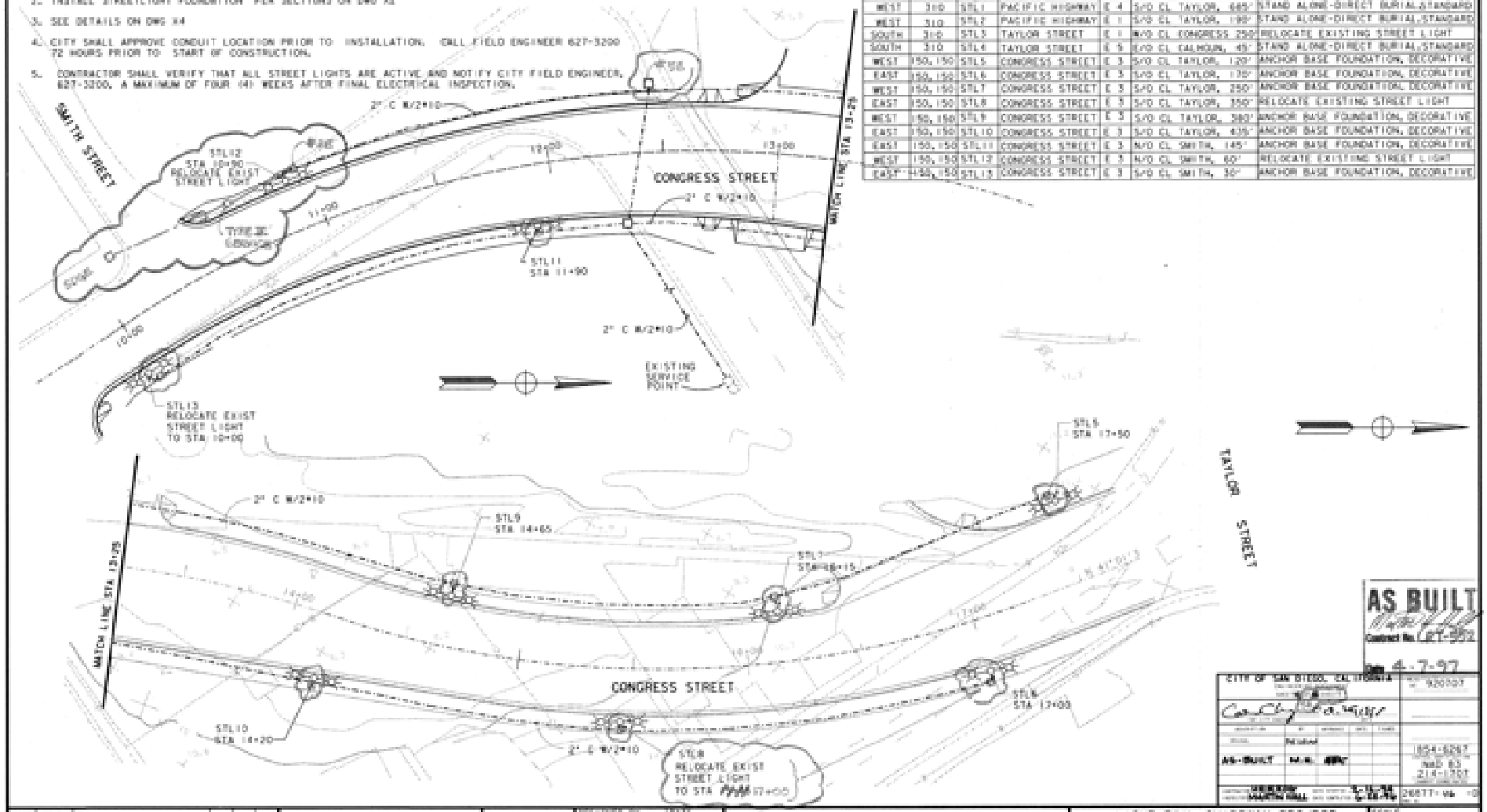

CONDUCTOR SCHEDULE
GENERAL NOTES
1. ALL WORK, MATERIAL AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENT OF THE STATE OF CALIFORNIA, DEPT OF TRANSPORTATION, STANDARD PLANS AND STANDARD SPECIFICATIONS DATED JULY 1992, CITY OF SAN DIEGO SPECIAL PROVISIONS FOR STREET LIGHTING AND TRAFFIC SIGNALS AND THIS PLAN.
2. ALL CONTROLLER EQUIPMENT SHALL BE ON THE CURRENT, STATE OF CALIFORNIA "QUALIFIED PRODUCT LIST."
3. UTILITIES SHOWN ON THESE PLANS ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE. THE CONTRACTOR, HOWEVER IS REQUIRED TO ASCERTAIN THE EXACT LOCATION OF UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE. SEE DWG U-2 FOR EXISTING UTILITIES.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND NOTIFY ALL UTILITY COMPANIES A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL PHASES OF CONSTRUCTION WITH THE VARIOUS UTILITY COMPANIES INVOLVED.
5. THE ENGINEER & CITY TRAFFIC ENGINEER SHALL APPROVE THE EXACT LOCATION OF ALL PULLBOXES, CONDUITS, DETECTORS, AND POLES IN THE FIELD.
6. ALL PULLBOXES SHALL BE NO. 5 UNLESS OTHERWISE NOTED.
7. CONDUIT SHALL BE 3" UNLESS OTHERWISE NOTED.
CONSTRUCTION NOTES
1. INSTALL NEW TYPE 170 CONTROLLER IN A TYPE 332 CABINET, WIRED FOR FULL 8 PHASE COMPATIBILITY INCLUDING NECESSARY ACCESSORIES TO PROVIDE PHASING AS SHOWN ON THESE PLANS. CONTROLLER UNIT SHALL ALSO BE EQUIPPED WITH ONE MODEL 412C SYSTEM MEMORY MODULE, ONE MODEL 404 MODEM, ONE BLANK MODEL 27256 E FROM PROGRAM CHIP AND EMERGENCY VEHICLE PREMPTION.
2. INSTALL EXISTING METER IN NEW TYPE III SERVICE WITH ONE METERED 120V, 30A-1P SIGNAL CIRCUIT BREAKER AND ONE UNMETERED, 240V 30A-1P LIGHTING CIRCUIT BREAKER TO CONFORM TO S.D.G.&E. SERVICE REQUIREMENTS AND INSTALLATION PROCEDURES.
3. REMOVE AND SALVAGE EXISTING TYPE 90 CONTROLLER AND ABANDON FOUNDATION. ABANDON ALL EXISTING CONDUIT RUNS, PULLBOXES & CONDUCTORS EXCEPT CONDUIT TO LOOPS 4, 5 & 6 AND SERVICE CONDUITS BETWEEN POWER POLE ADJACENT TO POLE LOCATION D & METER POINT.
4. RELOCATE EXISTING TYPE 1A POLE & EQUIPMENT AT LOCATION TO A NEW FOUNDATION 2.5 FEET FROM FACE OF CURB AT THE SAME LOCATION.
5. RELOCATE EXISTING TYPE 15 POLE & EQUIPMENT AT LOCATION C TO NEW FOUNDATION 12'-6"X 5'-0" PER ES-6B1. LOCATED AT BCR, 2.5' FROM FACE OF CURB. REMOVE ARROW TEMPLATE FROM Ø 2 SIGNAL HEAD.
6. REMOVE TEMPLATE FROM Ø8 AT POLE (E)
7. FURNISH AND INSTALL ALL OTHER SIGNAL EQUIPMENT NECESSARY TO PROVIDE SIGNAL OPERATION SHOWN ON THESE PLANS.
8. REPLACE LOOPS 4, 5 & 6 AND CONNECT TO EXISTING DLC AT PULLBOX
TAYLOR STREET
CONGRESS STREET
TAYLOR ST.
SEE DWG. E-1
2" C W/6 #22 INTERCONNECT
2 #14 PREEMPT
SEE DWG E 5
2" C W/2 DLC
2"C, 2#10
170' TO LIMIT LINE
AS BUILT
Contract No. LRT-552
Date 4-7-97
NOTE:
CONTRACTOR SHALL CALL & NOTIFY UNDERGROUND SERVICE ALERT (1-800-422-4133) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION
PHASE-FUNCTION-SEQUENCE DIAGRAM
NEW DETECTOR ASSIGNMENTS
EXISTING POLE SCHEDULE
(E) EXISTING (R) RELOCATE
REF DWG 16615-1-D
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 700, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
ELECTRICAL PLAN
TRAFFIC SIGNALS AT
CONGRESS ST./TAYLOR ST.
SCALE 1" = 20'
MTDB CONTRACT NO. LRT 552
DRAWING NO. E-2
SHEET NO. 44

NOTES

1. STL1 THRU STL4 STREET LIGHTS SHALL BE LIGHT STANDARD FIBERGLASS, WITH 12 FOOT ARM LENGTH AND HAVE A 30 FOOT MOUNTING HEIGHT, UNLESS OTHERWISE NOTED. LAMP SIZE SHALL BE 150 WATT HIGH PRESSURE SODIUM.
2. INSTALL STREETLIGHT FOUNDATION PER SECTIONS ON DWG K2
3. SEE DETAILS ON DWG K4
4. CITY SHALL APPROVE CONDUIT LOCATION PRIOR TO INSTALLATION. CALL FIELD ENGINEER 627-3200 72 HOURS PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL VERIFY THAT ALL STREET LIGHTS ARE ACTIVE AND NOTIFY CITY FIELD ENGINEER, 627-3200, A MAXIMUM OF FOUR (4) WEEKS AFTER FINAL ELECTRICAL INSPECTION.

STREET LIGHT SCHEDULE (FOR CONGRESS ST., PACIFIC HIGHWAY & TAYLOR ST.)

STREET SIDE	WATTAGE	STREET LIGHT NO.	STREET NAME	DWG NO.	LOCATION REFERENCE	COMMENT
WEST	310	STL1	PACIFIC HIGHWAY	K 4	S/O CL TAYLOR, 685'	STAND ALONE-DIRECT BURIAL-STANDARD
WEST	310	STL2	PACIFIC HIGHWAY	K 1	S/O CL TAYLOR, 190'	STAND ALONE-DIRECT BURIAL-STANDARD
SOUTH	310	STL3	TAYLOR STREET	K 1	W/O CL CONGRESS 250'	RELOCATE EXISTING STREET LIGHT
SOUTH	310	STL4	TAYLOR STREET	K 5	E/O CL CALHOUN, 45'	STAND ALONE-DIRECT BURIAL-STANDARD
WEST	150, 150	STL5	CONGRESS STREET	K 3	S/O CL TAYLOR, 120'	ANCHOR BASE FOUNDATION, DECORATIVE
EAST	150, 150	STL6	CONGRESS STREET	K 3	S/O CL TAYLOR, 135'	ANCHOR BASE FOUNDATION, DECORATIVE
WEST	150, 150	STL7	CONGRESS STREET	K 3	S/O CL TAYLOR, 250'	ANCHOR BASE FOUNDATION, DECORATIVE
EAST	150, 150	STL8	CONGRESS STREET	K 3	S/O CL TAYLOR, 350'	RELOCATE EXISTING STREET LIGHT
WEST	150, 150	STL9	CONGRESS STREET	K 3	S/O CL TAYLOR, 380'	ANCHOR BASE FOUNDATION, DECORATIVE
EAST	150, 150	STL10	CONGRESS STREET	K 3	S/O CL TAYLOR, 435'	ANCHOR BASE FOUNDATION, DECORATIVE
EAST	150, 150	STL11	CONGRESS STREET	K 3	N/O CL SMITH, 145'	ANCHOR BASE FOUNDATION, DECORATIVE
WEST	150, 150	STL12	CONGRESS STREET	K 3	N/O CL SMITH, 60'	RELOCATE EXISTING STREET LIGHT
EAST	150, 150	STL13	CONGRESS STREET	K 3	S/O CL SMITH, 30'	ANCHOR BASE FOUNDATION, DECORATIVE



AS BUILT
Contract No. LRT-552
Date 4-7-97

CITY OF SAN DIEGO, CALIFORNIA — DEPT. NO. 920107
Approved
AS-BUILT M.H. APP'D
954-5267
NAD 83
214-1707
DRAWN M.H. CHECKED
ENGINEERING MANAGER R. 12-94 R. 12-94
26877-1-M

NO.	DATE	REVISIONS	BY	CHK	APPR
1	4-97	As-Built			

DE LEUW CATHER

DESIGNED BY	DATE
E.A.P.	5-5-94
DRAWN BY	
R.N.W.	5-5-94
CHECKED BY	
MTDB PROJ. ENG. D. RAGLAND	

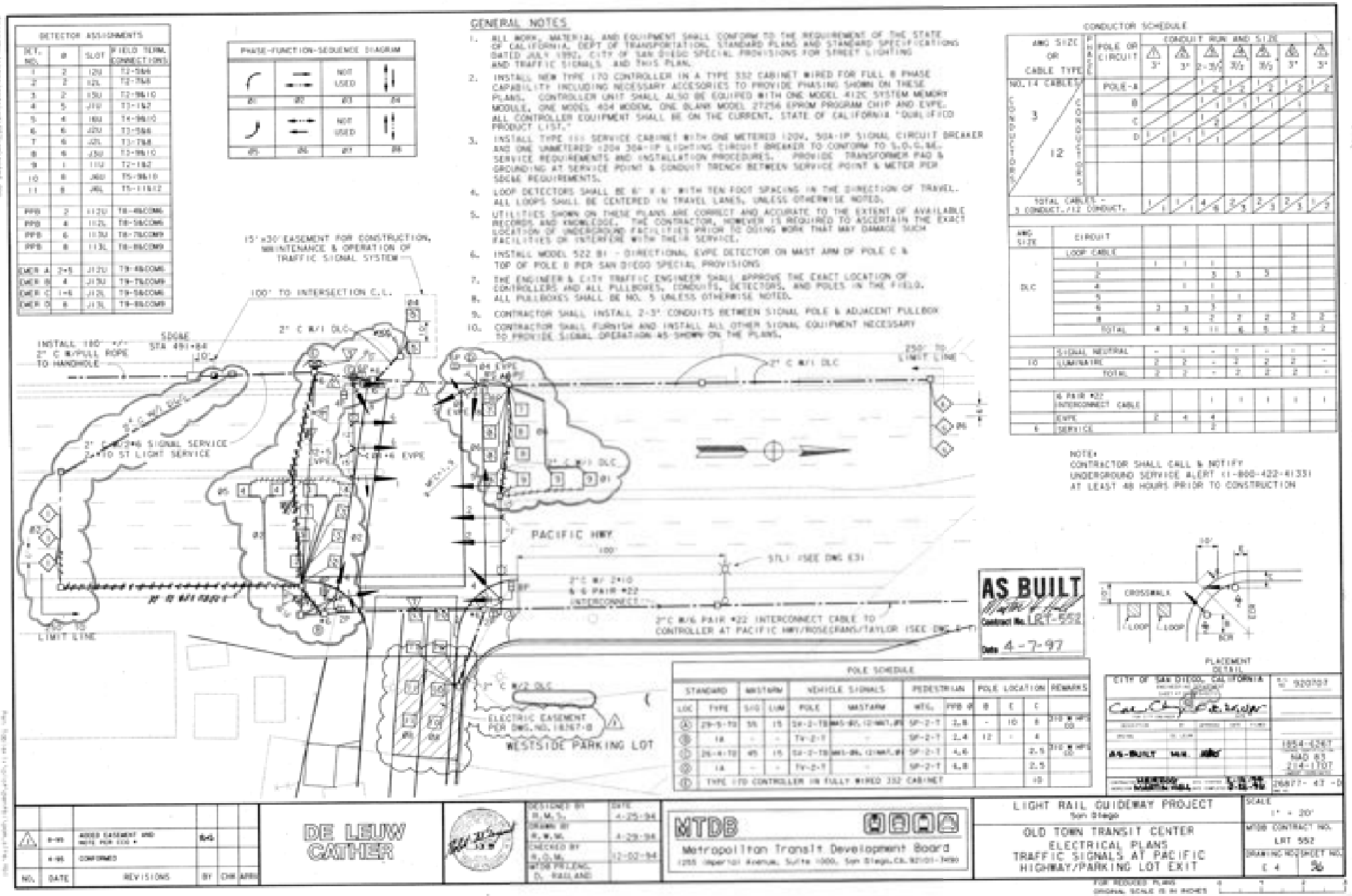
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490

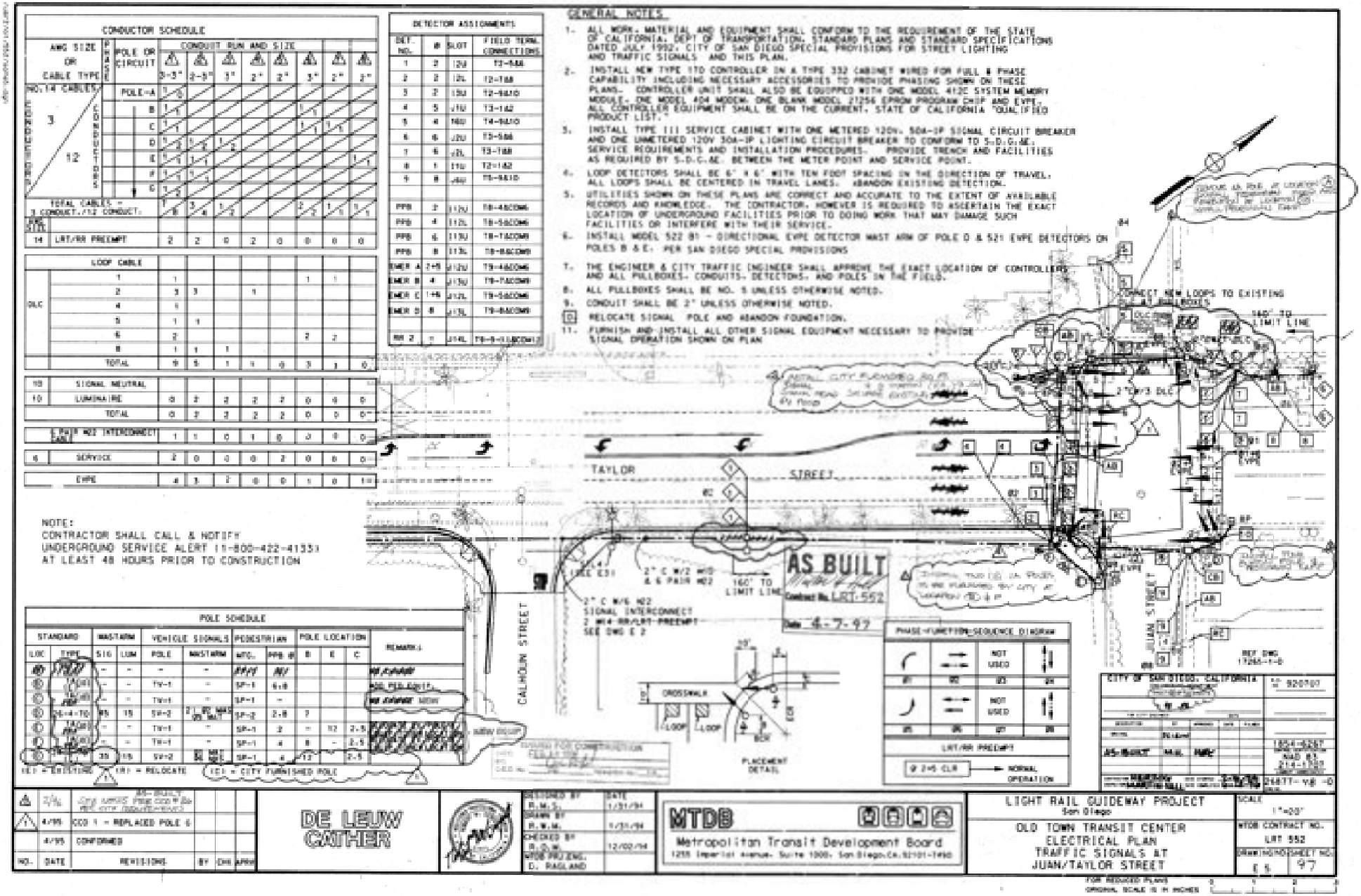
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
STREET LIGHTING PLAN
CONGRESS STREET

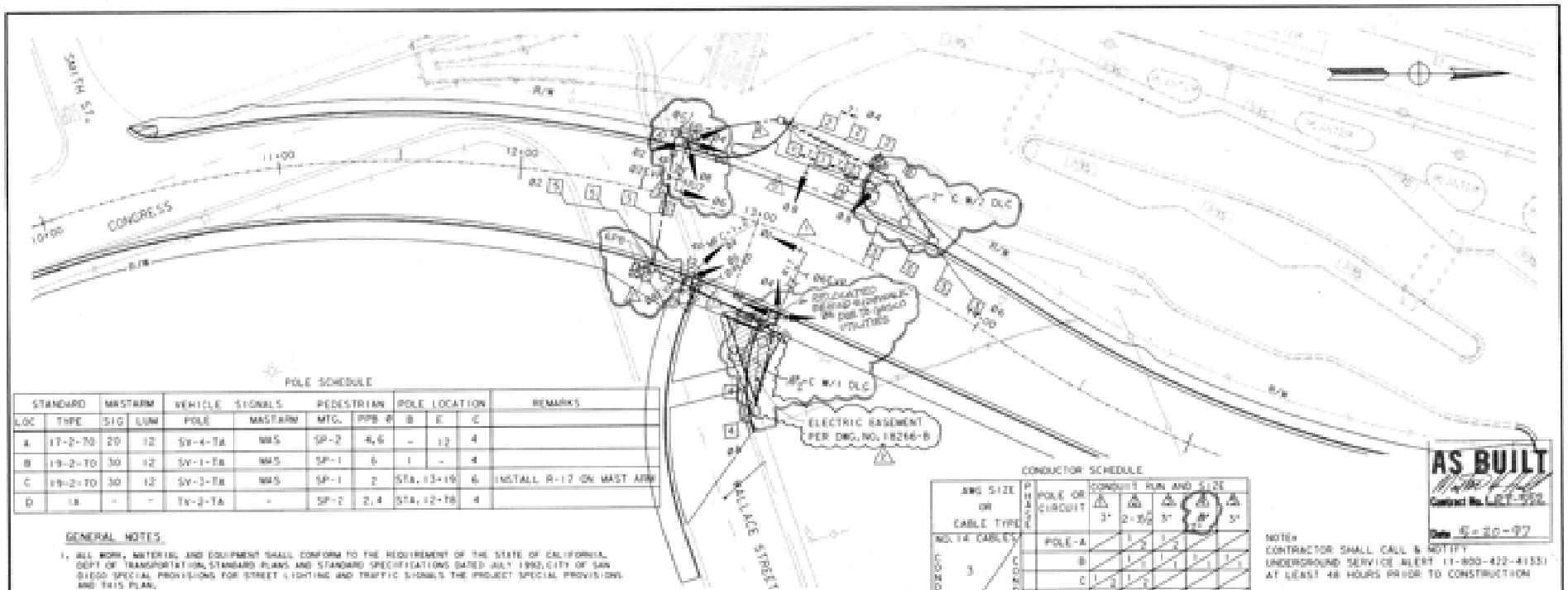
SCALE 1"=20'
MTDB CONTRACT NO. LRT 552
DRAWING NO. E 3
SHEET NO. 95

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES. 0 1 2 3

MTS DOC NO. PWL355262; WOA355464-E95


DETECTOR ASSIGNMENTS
SET NO. | Ø | SLOT | FIELD TERM. CONNECTION(S)
PHASE-FUNCTION-SEQUENCE DIAGRAM
NOT USED
GENERAL NOTES
1. ALL WORK, MATERIAL AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENT OF THE STATE OF CALIFORNIA, DEPT OF TRANSPORTATION, STANDARD PLANS AND STANDARD SPECIFICATIONS DATED JULY 1992, CITY OF SAN DIEGO SPECIAL PROVISIONS FOR STREET LIGHTING AND TRAFFIC SIGNALS AND THIS PLAN.
2. INSTALL NEW TYPE 170 CONTROLLER IN A TYPE 332 CABINET WIRED FOR FULL 8 PHASE CAPABILITY INCLUDING NECESSARY ACCESORIES TO PROVIDE PHASING SHOWN ON THESE PLANS. CONTROLLER UNIT SHALL ALSO BE EQUIPED WITH ONE MODEL 412C SYSTEM MEMORY MODULE, ONE MODEL 404 MODEM, ONE BLANK MODEL 27256 EPROM PROGRAM CHIP AND EVPE. ALL CONTROLLER EQUIPMENT SHALL BE ON THE CURRENT, STATE OF CALIFORNIA "QUALIFIED PRODUCT LIST."
3. INSTALL TYPE III SERVICE CABINET WITH ONE METERED 120V, 50A-1P SIGNAL CIRCUIT BREAKER AND ONE UNMETERED 120V 30A-1P LIGHTING CIRCUIT BREAKER TO CONFORM TO S.D.G.&E. SERVICE REQUIREMENTS AND INSTALLATION PROCEDURES. PROVIDE TRANSFORMER PAD & GROUNDING AT SERVICE POINT & CONDUIT TRENCH BETWEEN SERVICE POINT & METER PER SDG&E REQUIREMENTS.
4. LOOP DETECTORS SHALL BE 6' X 6' WITH TEN FOOT SPACING IN THE DIRECTION OF TRAVEL. ALL LOOPS SHALL BE CENTERED IN TRAVEL LANES, UNLESS OTHERWISE NOTED.
5. UTILITIES SHOWN ON THESE PLANS ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE. THE CONTRACTOR, HOWEVER IS REQUIRED TO ASCERTAIN THE EXACT LOCATION OF UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.
6. INSTALL MODEL 522 BI - DIRECTIONAL EVPE DETECTOR ON MAST ARM OF POLE C & TOP OF POLE B PER SAN DIEGO SPECIAL PROVISIONS
7. THE ENGINEER & CITY TRAFFIC ENGINEER SHALL APPROVE THE EXACT LOCATION OF CONTROLLERS AND ALL PULLBOXES, CONDUITS, DETECTORS, AND POLES IN THE FIELD.
8. ALL PULLBOXES SHALL BE NO. 5 UNLESS OTHERWISE NOTED.
9. CONTRACTOR SHALL INSTALL 2-3" CONDUITS BETWEEN SIGNAL POLE & ADJACENT PULLBOX
10. CONTRACTOR SHALL FURNISH AND INSTALL ALL OTHER SIGNAL EQUIPMENT NECESSARY TO PROVIDE SIGNAL OPERATION AS SHOWN ON THE PLANS.
CONDUCTOR SCHEDULE
15' x30' EASEMENT FOR CONSTRUCTION, MAINTENANCE & OPERATION OF TRAFFIC SIGNAL SYSTEM
100' TO INTERSECTION C.L.
INSTALL 180' +/- 2" C W/PULL ROPE TO HANDHOLE
SDG&E STA 491+84
2" C W/1 DLC
250' TO LIMIT LINE
2" C W/ 2#10 & 6#12 EVPE
2" C W/ 2#10 & 6 PAIR #22 INTERCONNECT
PACIFIC HWY
100'
STL1 (SEE DWG E3)
2"C W/6 PAIR #22 INTERCONNECT CABLE TO CONTROLLER AT PACIFIC HWY/ROSECRANS/TAYLOR (SEE DWG E-1)
2" C W/2 DLC
ELECTRIC EASEMENT PER DWG. NO. 18367-B
WESTSIDE PARKING LOT
AS BUILT
Contract No. LRT-552
Date 4-7-97
NOTE:
CONTRACTOR SHALL CALL & NOTIFY UNDERGROUND SERVICE ALERT 1-800-422-4133 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION
POLE SCHEDULE
PLACEMENT DETAIL
CITY OF SAN DIEGO, CALIFORNIA
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
ELECTRICAL PLANS
TRAFFIC SIGNALS AT PACIFIC HIGHWAY/PARKING LOT EXIT
SCALE 1" = 20'
MTDB CONTRACT NO. LRT 552
DRAWING NO. E 4
SHEET NO. 36


CONDUCTOR SCHEDULE
DETECTOR ASSIGNMENTS
GENERAL NOTES
1. ALL WORK, MATERIAL AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENT OF THE STATE OF CALIFORNIA, DEPT OF TRANSPORTATION, STANDARD PLANS AND STANDARD SPECIFICATIONS DATED JULY 1992; CITY OF SAN DIEGO SPECIAL PROVISIONS FOR STREET LIGHTING AND TRAFFIC SIGNALS AND THIS PLAN.
2. INSTALL NEW TYPE 170 CONTROLLER IN A TYPE 332 CABINET WIRED FOR FULL 8 PHASE CAPABILITY INCLUDING NECESSARY ACCESSORIES TO PROVIDE PHASING SHOWN ON THESE PLANS. CONTROLLER UNIT SHALL ALSO BE EQUIPPED WITH ONE MODEL 412C SYSTEM MEMORY MODULE, ONE MODEL 404 MODEM, ONE BLANK MODEL 21256 EPROM PROGRAM CHIP AND EYPE. ALL CONTROLLER EQUIPMENT SHALL BE ON THE CURRENT, STATE OF CALIFORNIA "QUALIFIED PRODUCT LIST."
3. INSTALL TYPE III SERVICE CABINET WITH ONE METERED 120V, 50A-1P SIGNAL CIRCUIT BREAKER AND ONE UNMETERED 120V 30A-1P LIGHTING CIRCUIT BREAKER TO CONFORM TO S.D.G.&E. SERVICE REQUIREMENTS AND INSTALLATION PROCEDURES. PROVIDE TRENCH AND FACILITIES AS REQUIRED BY S.D.G.&E. BETWEEN THE METER POINT AND SERVICE POINT.
4. LOOP DETECTORS SHALL BE 6' X 6' WITH TEN FOOT SPACING IN THE DIRECTION OF TRAVEL. ALL LOOPS SHALL BE CENTERED IN TRAVEL LANES. ABANDON EXISTING DETECTION.
5. UTILITIES SHOWN ON THESE PLANS ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE. THE CONTRACTOR, HOWEVER IS REQUIRED TO ASCERTAIN THE EXACT LOCATION OF UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.
6. INSTALL MODEL 522 B1 - DIRECTIONAL EYPE DETECTOR MAST ARM OF POLE D & 521 EYPE DETECTORS ON POLES B & E. PER SAN DIEGO SPECIAL PROVISIONS
7. THE ENGINEER & CITY TRAFFIC ENGINEER SHALL APPROVE THE EXACT LOCATION OF CONTROLLERS AND ALL PULLBOXES, CONDUITS, DETECTORS, AND POLES IN THE FIELD.
8. ALL PULLBOXES SHALL BE NO. 5 UNLESS OTHERWISE NOTED.
9. CONDUIT SHALL BE 2" UNLESS OTHERWISE NOTED.
10. RELOCATE SIGNAL POLE AND ABANDON FOUNDATION.
11. FURNISH AND INSTALL ALL OTHER SIGNAL EQUIPMENT NECESSARY TO PROVIDE SIGNAL OPERATION SHOWN ON PLAN
NOTE:
CONTRACTOR SHALL CALL & NOTIFY
UNDERGROUND SERVICE ALERT (1-800-422-4133)
AT LEAST 48 HOURS PRIOR TO CONSTRUCTION
POLE SCHEDULE
TAYLOR STREET
CALHOUN STREET
JUAN STREET
AS BUILT
Contract No. LRT-552
Date 4-7-92
CORRECT NEW LOOPS TO EXISTING PULLBOXES
160' TO LIMIT LINE
2" C W/3 DLC
2" C W/6 #12 SIGNAL INTERCONNECT 2 #14 RR/LRT PREEMPT SEE DWG E 2
2" C W/2 #10 & 6 PAIR #12
PLACEMENT DETAIL
PHASE-TIMETABLE-SEQUENCE DIAGRAM
LRT/RR PREEMPT
NORMAL OPERATION
CITY OF SAN DIEGO, CALIFORNIA
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
ELECTRICAL PLAN
TRAFFIC SIGNALS AT
JUAN/TAYLOR STREET
SCALE 1"=20'
MTDB CONTRACT NO. LRT 552
DRAWING NO. E 5
SHEET NO. 97



POLE SCHEDULE

STANDARD		MAST ARM		VEHICLE SIGNALS		PEDESTRIAN		POLE LOCATION			REMARKS
LOC	TYPE	SIG	LUM	POLE	MAST ARM	MTG.	PPB #	B	E	C	
A	17-2-TO	29	12	SV-4-TA	MAS	SP-2	4,6	-	12	4	
B	19-2-TO	30	12	SV-1-TA	MAS	SP-1	5	1	-	4	
C	19-2-TO	30	12	SV-3-TA	MAS	SP-1	2	STA. 13+19		6	INSTALL R-17 ON MAST ARM
D	18	-	-	TV-2-TA	-	SP-2	2,4	STA. 12+76		4	

GENERAL NOTES

1. ALL WORK, MATERIAL AND EQUIPMENT SHALL CONFORM TO THE REQUIREMENT OF THE STATE OF CALIFORNIA, DEPT OF TRANSPORTATION, STANDARD PLANS AND STANDARD SPECIFICATIONS DATED JULY 1992, CITY OF SAN DIEGO SPECIAL PROVISIONS FOR STREET LIGHTING AND TRAFFIC SIGNALS, THE PROJECT SPECIAL PROVISIONS AND THIS PLAN.
2. INSTALL NEW TYPE 170 CONTROLLER IN A TYPE 332 CABINET WIRED FOR FULL 8 PHASE CAPABILITY AS REQUIRED BY CITY OF SAN DIEGO STANDARD SPECIAL PROVISIONS INCLUDING NECESSARY ACCESSORIES TO PROVIDE PHASING SHOWN ON THESE PLANS. CONTROLLER UNIT SHALL ALSO BE EQUIPPED WITH ONE MODEL 412 SYSTEM MEMORY MODULE, ONE MODEL 404 MODEM, ONE BLANK MODEL 27256 EPROM PROGRAM CARD AND TWELVE ALL CONTROLLER EQUIPMENT SHALL BE ON THE CURRENT, STATE OF CALIFORNIA "QUALIFIED PRODUCT LIST".
3. INSTALL TYPE III SERVICE CABINET WITH ONE METERED 120V, 50A-1P SIGNAL CIRCUIT BREAKER AND ONE UNMETERED 120V 30A-1P LIGHTING CIRCUIT BREAKER TO CONFORM TO S.D.G.& E. SERVICE REQUIREMENTS AND INSTALLATION PROCEDURES. PROVIDE TRENCH AND FACILITIES AS REQUIRED BY S.D.G.&E. BETWEEN THE METER POINT AND SERVICE POINT.
4. LOOP DETECTORS SHALL BE 6' X 6' WITH TEN FOOT SPACING IN THE DIRECTION OF TRAVEL. ALL LOOPS SHALL BE CENTERED IN TRAVEL LANES, UNLESS OTHERWISE SHOWN.
5. EXISTING UTILITIES ARE SHOWN ON U DRAWINGS. THESE ARE CORRECT AND ACCURATE TO THE EXTENT OF AVAILABLE RECORDS AND KNOWLEDGE. THE CONTRACTOR, HOWEVER IS REQUIRED TO ASCERTAIN THE EXACT LOCATION OF UNDERGROUND FACILITIES PRIOR TO DOING WORK THAT MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR SERVICE.
6. INSTALL MODEL 552 BI - DIRECTIONAL TYPE DETECTOR ON POLE D & SINGLE DIRECTIONAL TYPE DETECTOR ON MAST ARM OF POLES A & C PER SAN DIEGO SPECIAL PROVISIONS.
7. THE ENGINEER & CITY TRAFFIC ENGINEER SHALL APPROVE THE EXACT LOCATION OF CONTROLLER, PULLBOXES, CONDUITS, DETECTORS, AND POLES IN THE FIELD PRIOR TO INSTALLATION.
8. ALL PULLBOXES SHALL BE NO. 5 UNLESS OTHERWISE NOTED.
9. CONDUIT SHALL BE 2" UNLESS OTHERWISE NOTED.
10. STREET LIGHTS SHALL HAVE 150 W HPS, TYPE III, CUTOFF FIXTURES.
11. ALL TRAFFIC SIGNAL POLE FOUNDATIONS SHALL HAVE A 3" CONDUIT INSTALLED TO THE ADJACENT PULL BOX AND THE CONTROLLER FOUNDATION SHALL HAVE A SPARE 3" CONDUIT INSTALLED TO THE ADJACENT #6 PULL BOX FOR FUTURE USE.
12. CONTRACTOR SHALL NOT ERECT ANY SIGNAL STANDARDS MORE THAN 5 WEEKS PRIOR TO SCHEDULED TRAFFIC SIGNAL TURN ON.
13. CONTRACTOR SHALL FURNISH INSTALL ALL OTHER SIGNAL EQUIPMENT NECESSARY TO PROVIDE SIGNAL OPERATION AS SHOWN ON PLANS.

DETECTOR ASSIGNMENTS

DET NO.	Ø	SLOT	FIELD TERM. CONNECTIONS
1	4	1(6)	T4-9 & 10
2	4	1(4)	T4-11 & 12
3	6	2(5)	T3-5 & 6
4	8	2(6)	T5-9 & 10
5	2	1(2)	T4-1 & 2
PPB	2	11(2)	T8-4 & COM 6
PPB	4	11(3)	T8-5 & COM 6
PPB	6	11(3)	T8-7 & COM 3
EMER A	2	2(2)	T9-4 & COM 6
EMER B	4	2(3)	T9-7 & COM 9
EMER C	6	2(2)	T9-5 & COM 6
EMER D	8	2(3)	T9-8 & COM 9

CONDUCTOR SCHEDULE

AWG SIZE OR CABLE TYPE		POLE OR CIRCUIT	CONDUIT RUN AND SIZE				
			3"	2-3½"	3"	3"	3"
NO. 14 CABLES	3	POLE A	1	2	2		
		B	1	2	2	1	1
		C	1	1			
		D	1	1			
		E					
	2	F					
TOTAL CABLES - 3" CONDUIT /12" CONDUIT			3 / 2	4 / 1	3 / 3	1 / 1	1 / 0

AWG SIZE TYPE "B" SLC	CIRCUIT					
	LOOP CABLE					
	2		1			
	4		2	2	2	
	6		1	1	1	1
	8	1	1			
	TOTAL	1	5	3	3	1
10	SIGNAL NEUTRAL	0	0	0	0	0
	LUMINAIRE	2	4	2	2	0
	TOTAL	2	4	2	2	0
EMERGENCY VEHICLE DETECTOR (EV-DLC)		1	4	1	0	0

NOTE:
CONTRACTOR SHALL CALL & NOTIFY UNDERGROUND SERVICE ALERT (1-800-422-4133) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION

PHASE-FUNCTION - SEQUENCE DIAGRAM

NOT USED		NOT USED	
Ø1	Ø2	Ø3	Ø4
NOT USED		NOT USED	
Ø5	Ø6	Ø7	Ø8

CITY OF SAN DIEGO, CALIFORNIA
APPROVED: Carl Chapin 4/25/97
AS-BUILT M.E. RPC
154-6267
NAD 83
216-1701
APPROVED: MARTIN HALL 4/25/97
26877-49-10

NO.	DATE	REVISIONS	BY	CHK	APPV
3	8/95	HORED EASEMENT AND NOTE PER CCO 8			
2	4/95	REVISED GRAPHICAL LENGTH OF MAST ARM	RMS		
	4/95	CONFORMED	RMS		

DE LEUW CATHER

DESIGNED BY	DATE
R.M.S.	1/31/94
Drawn By	
R.M.L.	1/31/94
CHECKED BY	
R.M.	12/02/94
MTDB PROJ. ENG.	
D. RAGLAND	

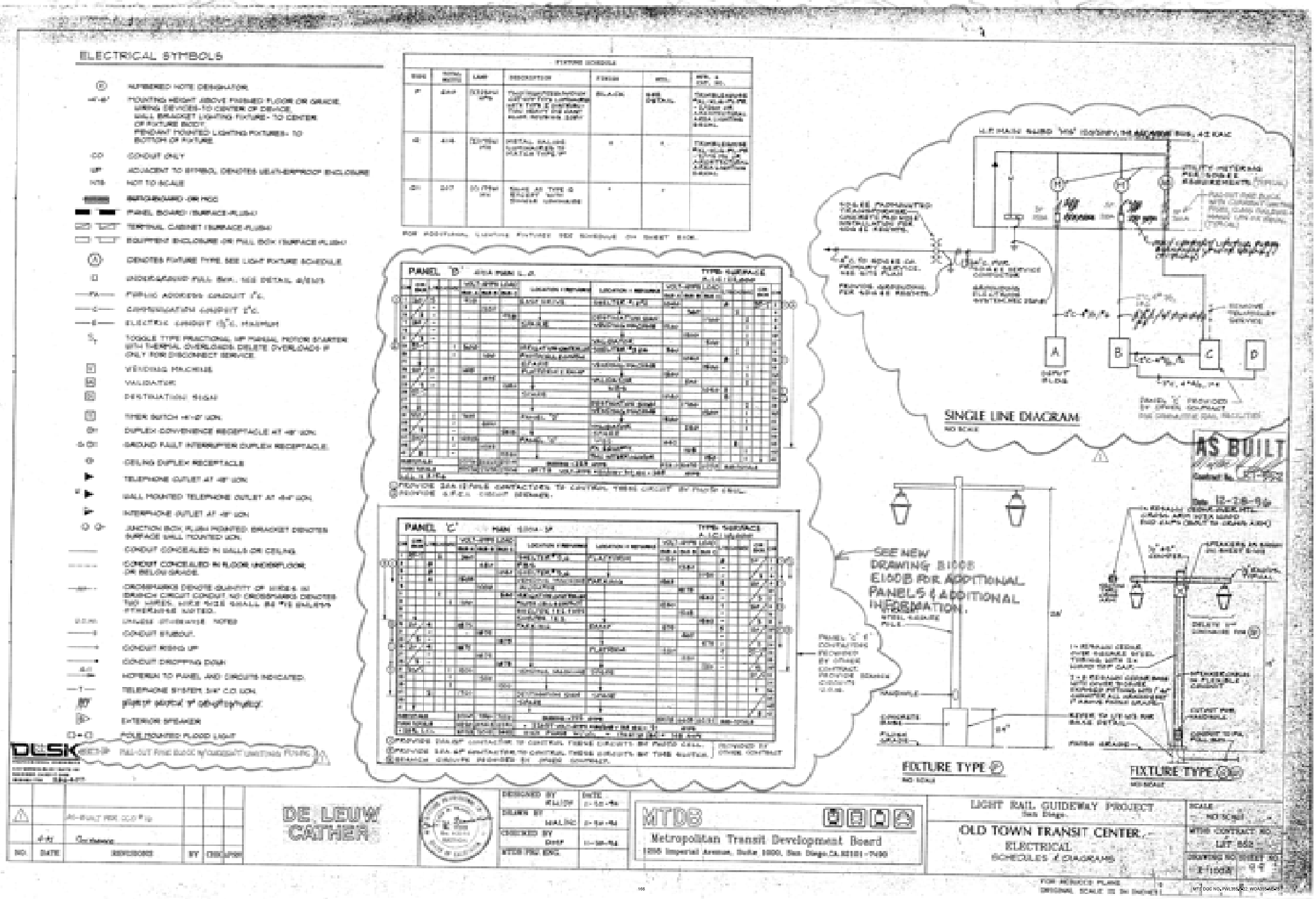
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

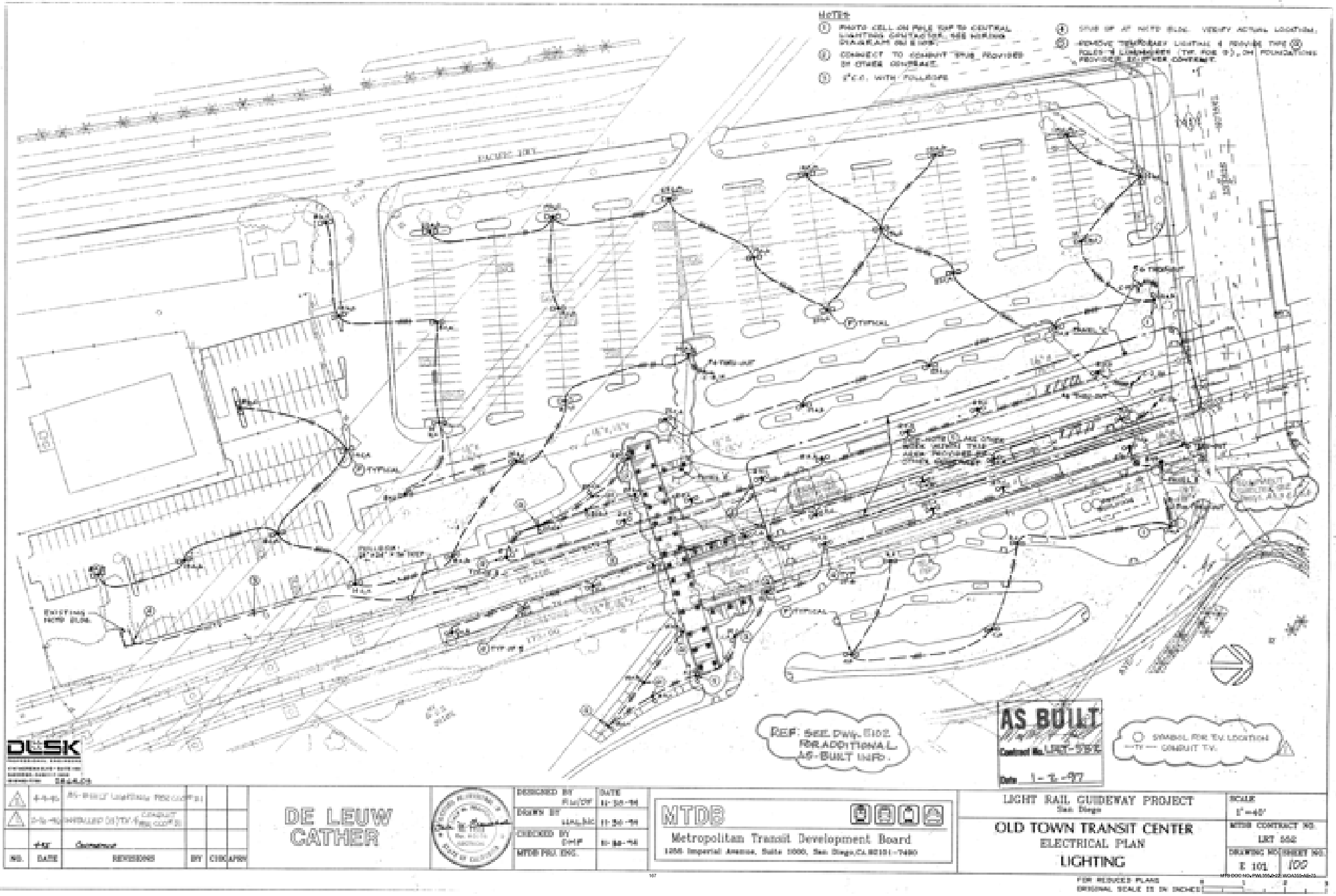
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
ELECTRICAL PLAN
TRAFFIC SIGNAL AT
CONGRESS STREET

SCALE: 1"=20'
MTDB CONTRACT NO.: LRT 552
DRAWING NO.: E 6
SHEET NO.: 38

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

MTS DOC NO. PWL355/A42, WOA355-AE-75


ELECTRICAL SYMBOLS
SINGLE LINE DIAGRAM
PANEL 'B'
PANEL 'C'
SEE NEW DRAWING E100B FOR ADDITIONAL PANELS & ADDITIONAL INFORMATION.
FIXTURE TYPE
FIXTURE TYPE
AS BUILT
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
ELECTRICAL
SCHEDULES & DIAGRAMS



DESK

NO.	DATE	REVISIONS	BY	CHECKED
1	4-4-96	RE-ROUTE LIGHTING PER CCP#1		
2	7-15-96	INSTALLED CONDUIT PER CCP#3		
		Conformed		

DE LEUW CATHER

DESIGNED BY	DATE
DRAWN BY	11-30-95
CHECKED BY	11-30-95
MTDB PROJ. ENG.	11-30-95

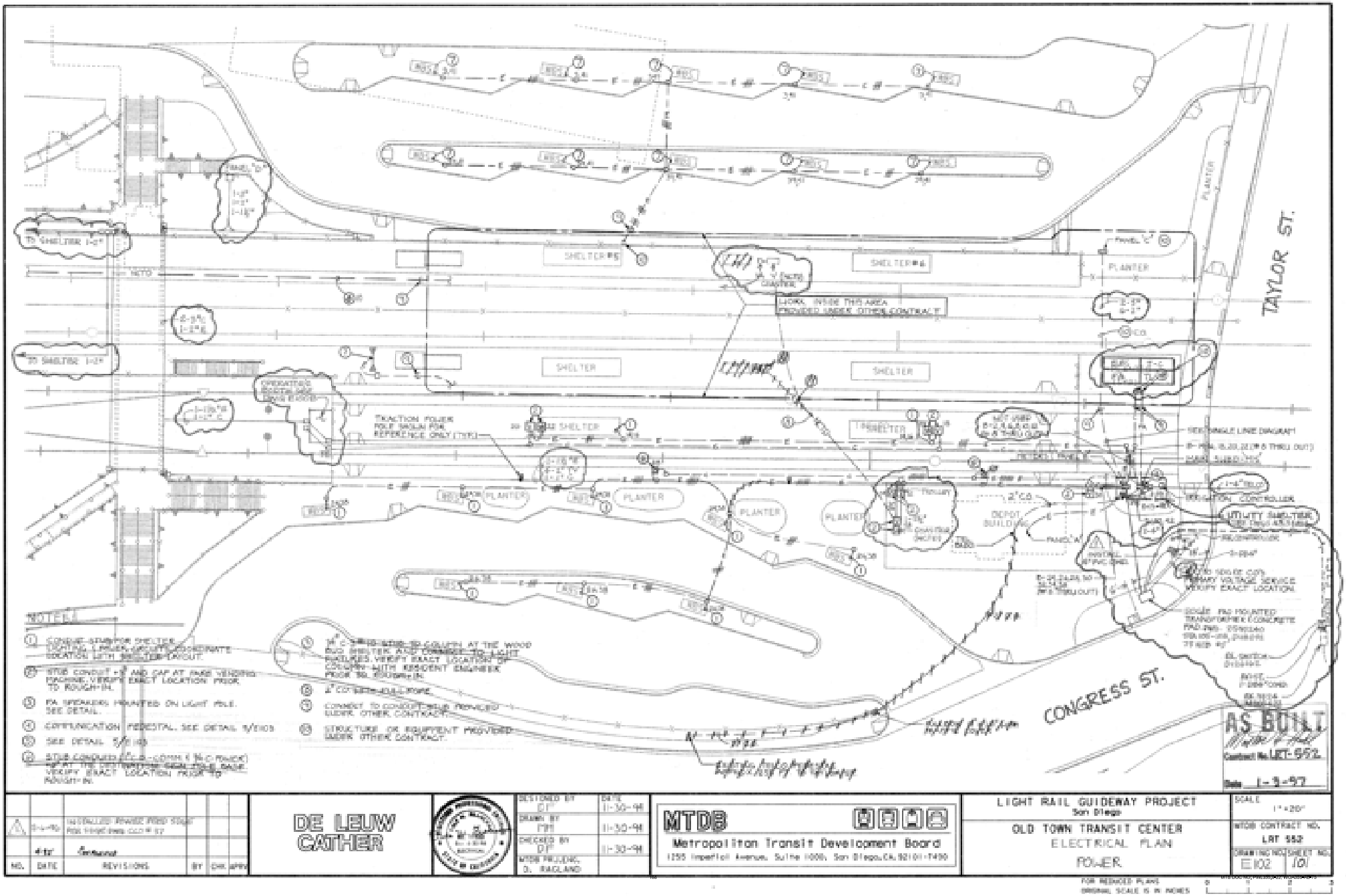
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
ELECTRICAL PLAN
LIGHTING

SCALE	1"=40'
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	E 101
SHEET NO.	102

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES



NOTES:

1. CONDUIT STUB FOR SHELTER LIGHTING. LIGHTING CIRCUITS COORDINATE LOCATION WITH SHELTER LAYOUT.
2. STUB CONDUIT 1" Ø AND CAP AT PARK VENDING MACHINE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
3. PA SPEAKERS MOUNTED ON LIGHT POLE. SEE DETAIL.
4. COMMUNICATION PEDESTAL. SEE DETAIL 5/E103.
5. SEE DETAIL 5/E103.
6. STUB CONDUIT 4"C.O.-CONN.(3-3"C.-PVC/4"C.) W/ 2-1" INTERCONNECTION CONDUITS. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
7. 4" C. CONDUIT STUB-UP CLOSE TO THE WOOD BUS SHELTER AND CONNECT TO LIGHT FIXTURES. VERIFY EXACT LOCATION OF CONCRETE WITH RESIDENT ENGINEER PRIOR TO ROUGH-IN.
8. 2" C.O. SERVICE CONDUIT.
9. CONNECT TO CONDUIT STUB PROVIDED UNDER OTHER CONTRACT.
10. STRUCTURE OR EQUIPMENT PROVIDED UNDER OTHER CONTRACT.

NO.	DATE	REVISIONS	BY	CHK'D
1	5-1-96	INSTALLED RIVERS WIRE TIGHT ROD MAST PANEL CCO # 57		
2	4-97	As Built		

DE LEUW CATHER

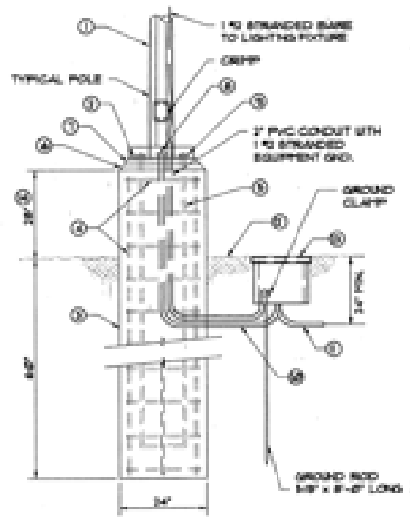
DESIGNED BY	DF	11-30-94
DRAWN BY	TBS	11-30-94
CHECKED BY	DF	11-30-94
MTDB PROJ. ENG.	D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
ELECTRICAL PLAN
POWER

SCALE 1" = 20'
MTDB CONTRACT NO. LRT 552
DRAWING NO. E102
SHEET NO. 101

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES



① STEEL POLE, POLE BASE AND ANCHOR BOLTS SHALL BE CAPABLE OF SUPPORTING THE SPECIFIED LUMINAIRE ASSEMBLY IN A 100 MPH STEADY WIND, AND IN WIND GUST OF UP TO 120 MPH.

② PLATE STEEL, MOUNTING PLATE AND ANCHOR BOLTS PROTECTED BY A 3-PIECE BOLTED ALUMINUM CANOPY COVER. CANOPY COVER SHALL BE SECURED IN PLACE WITH TAMPER PROOF SS PHOENIX SCREWS. EXPOSED PARTS OF COVER SHALL BE PROVIDED WITH A DARK BRONZE ANODIZED FINISH.

③ POURED IN PLACE ROUND CONCRETE SUPPORT BASE.

④ REINFORCED BASKET, #5 VERTICAL REBAR WITH 9 TIES AT 3" O.C. (TYP.) 3" COVER.

⑤ ANCHOR BOLTS, QUANTITY, SIZE AND TENSILE STRENGTH DETERMINED BY POLE/LUMINAIRE MFGR. TO CONFORM TO SPECIFIED WIND LOAD CRITERIA.

⑥ 3/4" 45 DEGREE CHAMFER ALL AROUND.

⑦ FOLLOWING INSTALLATION AND LEVELING OF POLE/LUMINAIRE ASSEMBLY, GROUT IN ALL AROUND BETWEEN BOTTOM OF POLE BASE AND TOP OF CONCRETE BASE.

⑧ STUB SERVICE CONDUIT UP INTO POLE BASE WIRING CAVITY AND BURY.

⑨ PROVIDE SUPPORT AND LEVELING NUTS AT TOP AND BOTTOM OF POLE BASE PLATE. TWO NUTS PER ANCHOR BOLT.

⑩ TYPICAL 3" PVC 2 #8 + 1 #8 GND.

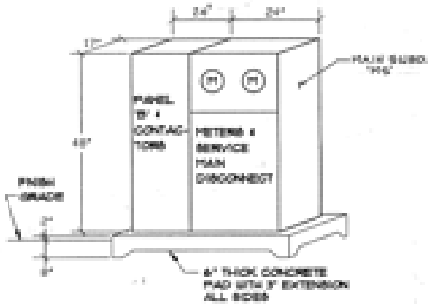
⑪ TYPICAL ROOFING EXTERIOR BRANCH CIRCUIT CONDUIT AND WIRING.

⑫ TOP OF FINISH GRADE.

⑬ GRADE MOUNTED CONCRETE PULL BOX WITH BOLT-DOWN TRAFFIC COVER.

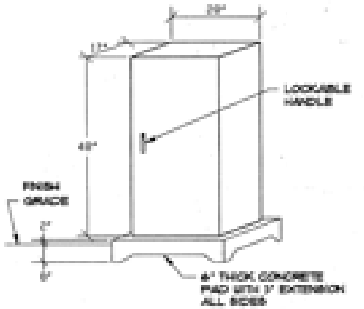
⑭ CHANGE TO 3" AT FIXTURE TYPE P1, Q, Q1.

P, P1, Q & Q1 FIXTURES BASE DETAIL (1)
NO SCALE

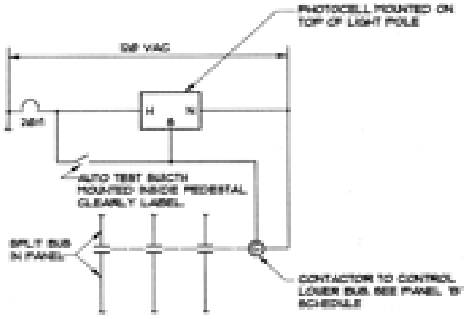


W.P. METERS & PANEL 'B' PEDESTAL (4)
NO SCALE

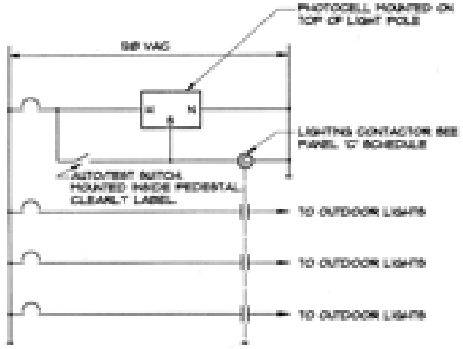
NOTE: FOR LOCATION OF EQUIP. SEE DWGS: A5.3 & A5.4



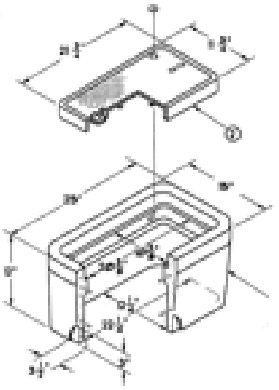
W.P. PANEL 'D' PEDESTAL (5)
NO SCALE (COMMUNICATIONS PANEL SIMILAR)



PANEL 'B' OUTDOOR LIGHTING CONTROL SCHEMATIC (2)
NO SCALE



PANEL 'C' OUTDOOR LIGHTING CONTROL SCHEMATIC (3)
NO SCALE



① REINFORCED PRECAST GRADE MOUNTED JUNCTION BOX. PROVIDE WITH OPEN BOTTOM.

② CAST IRON TRAFFIC COVER SHALL INSTALL FLUSH IN TOP OF GRADE JUNCTION BOX. FURNISH TOP OF COVER WITH CHECKERED SURFACE, LIFTING SLOTS AND RECESSED HOLD DOWN NUTS. BOTTOM OF COVER SHALL BE FURNISHED WITH INTEGRAL CAST REINFORCING RIBS.

TYPICAL GRADE MOUNTED JUNCTION BOX (6)
NO SCALE

AS BUILT
Contract No. LRT-552
Date 1-3-97

DE LEUW CATHER

NO.	DATE	REVISIONS	BY	CHECKED
		4-97 Surveyor		

DESIGNED BY R.W.D.F.	DATE 11-30-94
DRAWN BY R.A.L./N.C.	11-30-94
CHECKED BY D.M.F.	11-30-94
MTDB PROJ. ENG.	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

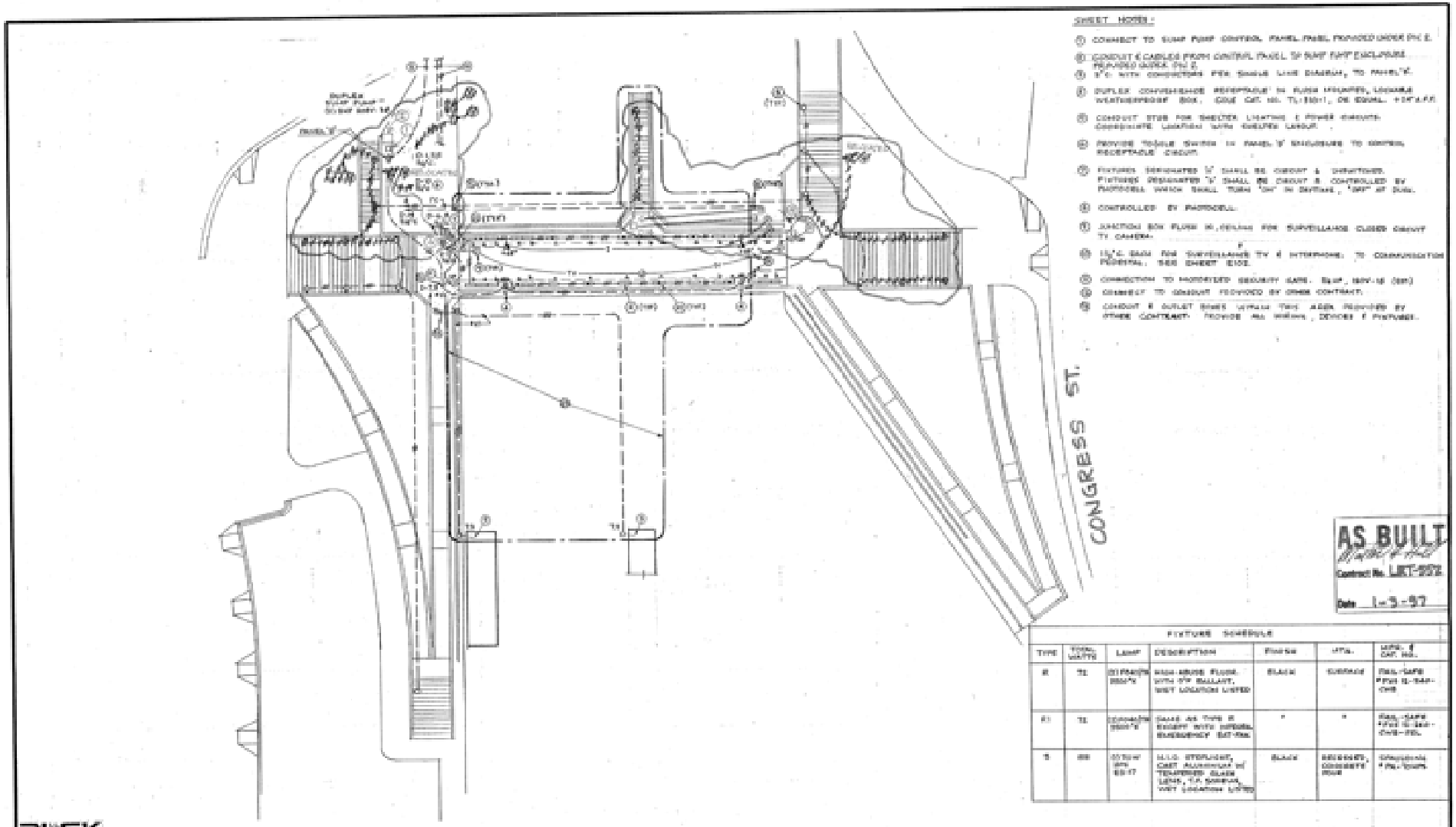
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
ELECTRICAL
DETAILS & SCHEMATICS

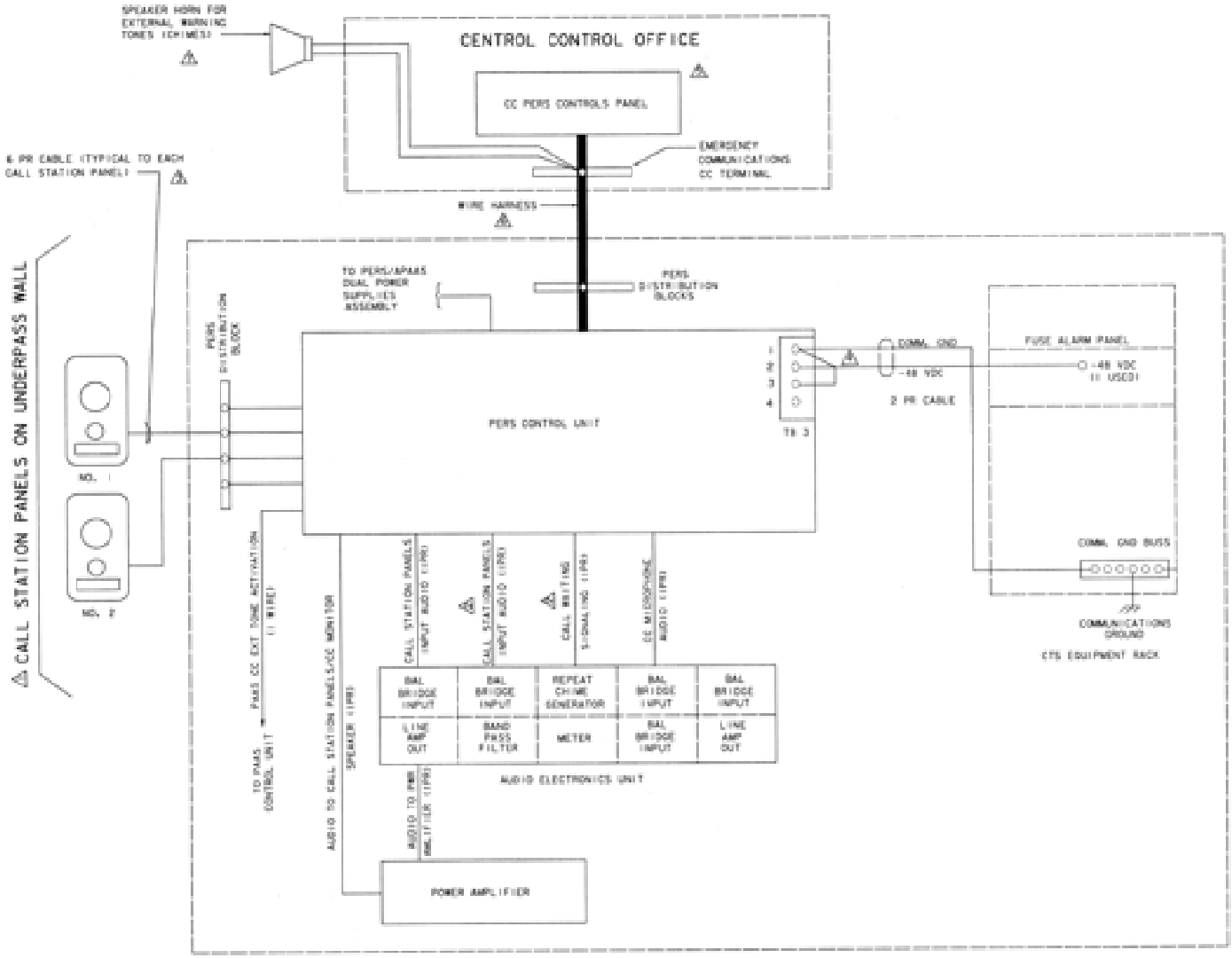
SCALE	NO SCALE
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	E 103
SHEET NO.	102

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

169

MTS DOC NO. PWL355A42, WOA355-AE-75


SHEET NOTES:
CONGRESS ST.
AS BUILT
Contract No. LRT-552
Date 1-3-97
FIXTURE SCHEDULE
TYPE
DESCRIPTION
FINISH
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
ELECTRICAL
RAMPS & STAIRS PLAN
DE LEUW CATHER
DESIGNED BY DMP
DRAWN BY MBA
CHECKED BY DMP
MTDB PROJ. ENG. R. RAGLAND
DRAWING NO. E 104
SHEET NO. 103
MTDB CONTRACT NO. LRT 552



NOTES:

1. TWO CALL STATION PANELS SHALL BE PROVIDED ON THE UNDERPASS WALL.
2. ALL CALL STATION PANELS HAVE INPUT AUDIO PARALLELED TO AUDIO ELECTRONICS UNIT.
3. CABLE CONTAINS REQUIRED AUDIO CONTROL, AND POWER CONDUCTORS TO EACH CALL STATION PANEL.
4. TB 3 TERMINAL #1 SHALL BE WIRED TO COMMUNICATIONS GROUND. TB 3 TERMINAL #2 SHALL BE WIRED TO A FUSED, -48 VDC SPARE CIRCUIT ON A FUSE ALARM PANEL. THE REQUIRED VOLTAGE AND GROUND MAY BE OBTAINED FROM THE CTS EQUIPMENT RACK.
5. A PASS/PERS MUTING CIRCUIT SHALL BE PROVIDED WITHIN THE CENTRAL CONTROL.
6. CABLE CONTAINS REQUIRED AUDIO, CONTROL, DISPLAY INDICATIONS, AND POWER CONDUCTORS TO THE CENTRAL CONTROL PERS CONTROL PANEL (INCLUDING CONDUCTORS FOR SPEAKER HORN).
7. SPEAKER HORN SHALL BE UTILIZED FOR THE PEDESTRIAN EMERGENCY REPORTING SYSTEM (PERS).
8. THE CONTRACTOR SHOULD VERIFY THAT THERE IS ADEQUATE SPACE IN THE ELECTRIC SERVICE PEDESTAL TO HOUSE HIS PERS EQUIPMENT. THIS INFORMATION SHALL BE REPORTED TO THE ENGINEER IN WRITING.

AS BUILT
Contract No. LRT-552
Date 1-3-97

NO.	DATE	REVISIONS	BY	CHK	APPR
	6/18	Corrected			

De LEUW, CATHER

		DATE
DESIGNED BY	S. I. RASHAD	12/13/94
DRAWN BY	D. MILNER	12/13/94
CHECKED BY	K. YIM	12/13/94
MTDB PROJECT MGR.	D. RADLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER PEDESTRIAN EMERGENCY REPORTING SYSTEM BLOCK DIAGRAM

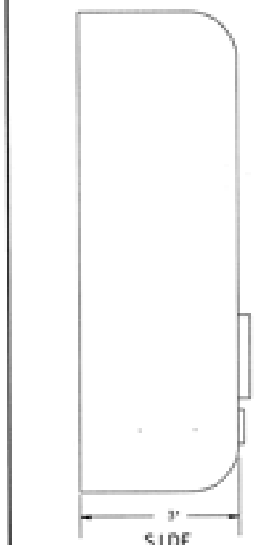
SCALE

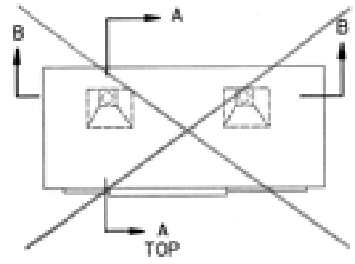
MTDB CONTRACT NO. LRT 552

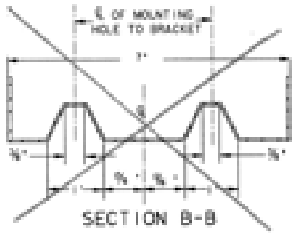
DRAWING NO. S-115 | SHEET NO. 104

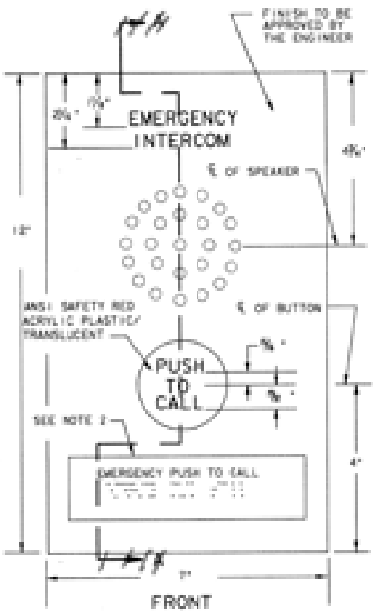
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2

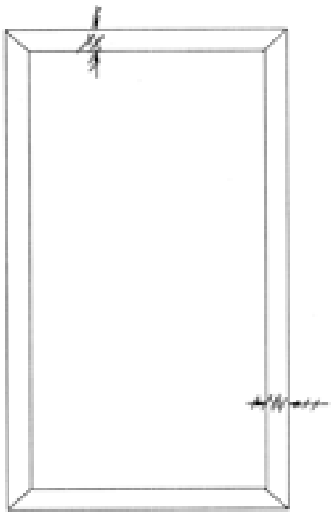
MTS DOC NO. PW355202.WOA355440-75

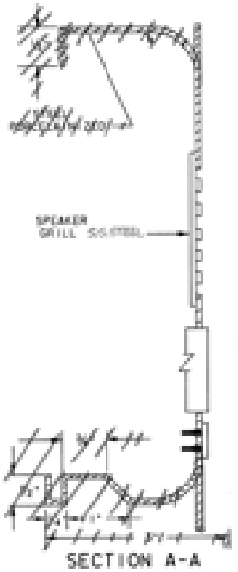


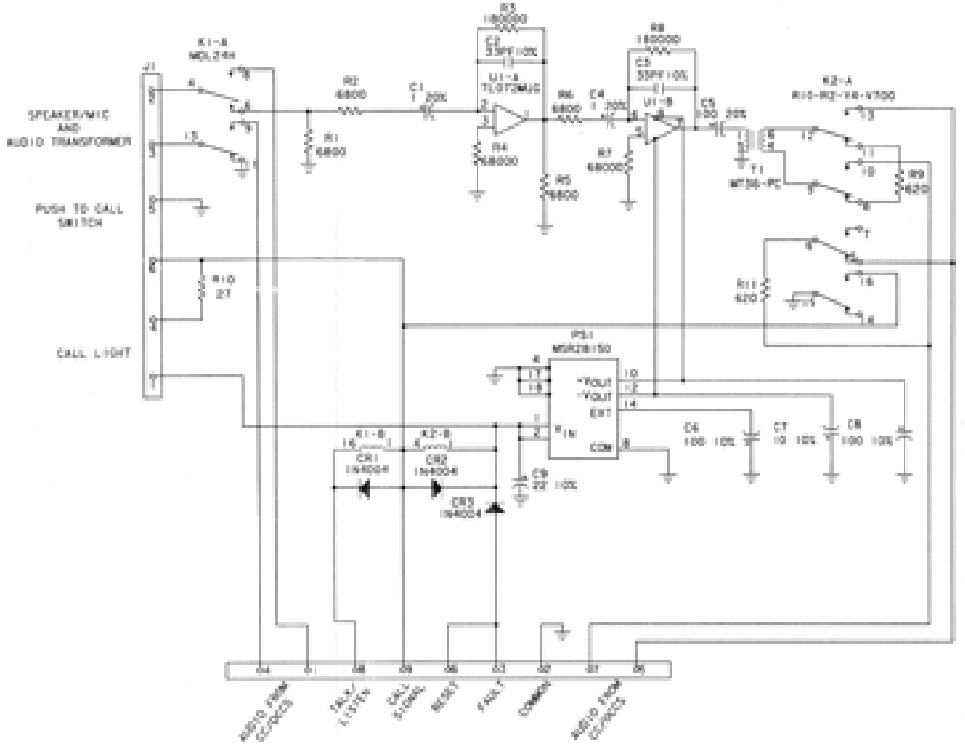












NOTES:

1. A GASKET MATCHING THE DIMENSIONS OF THE CALL STATION SHALL BE USED TO PROVIDE A WATERTIGHT SEAL BETWEEN THE CALL STATION AND THE WALL.
2. A SEPARATE PLATE ATTACHED TO THE CALL STATION CONSISTS OF RAISED LETTERS AND BRAILLE SYMBOLS PLATE DIMENSION SHALL BE 1" x 6".
3. THIS DRAWING ILLUSTRATES THE APPROXIMATE CONFIGURATION OF THE CALL STATION PANEL. THE ACTUAL CONFIGURATION OF THE CALL PANEL MAY VARY.
4. THIS IS A CONCEPTUAL DRAWING ILLUSTRATING REQUIRED AUDIO AND FUNCTIONS OF THE CALL STATION PANEL. THE ACTUAL CIRCUITRY MAY VARY.
5. FAULT CIRCUIT IN CALL STATION PANEL DETECTS LOSS OF +24 VDC TO CALL STATION PANEL.
6. ALL RELAYS ARE SHOWN DE-ENERGIZED.
7. (C)= CENTRAL CONTROL

RELAY FUNCTION LEGEND

K1 CALL INITIATION
K2 TALK/LISTEN CONTROL

AS BUILT

Contract No. LRT-552.1

Date 1-5-97

NO.	DATE	REVISIONS	BY	CHK	APPV
	4/97	Revised			

De LEUW, CATHER

DESIGNED BY S. L. Reinhold 12/13/94
DRAWN BY G. WILMER 12/13/94
CHECKED BY D. VINH 12/13/94
MTDB PROJ.ENG. D. RADLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego

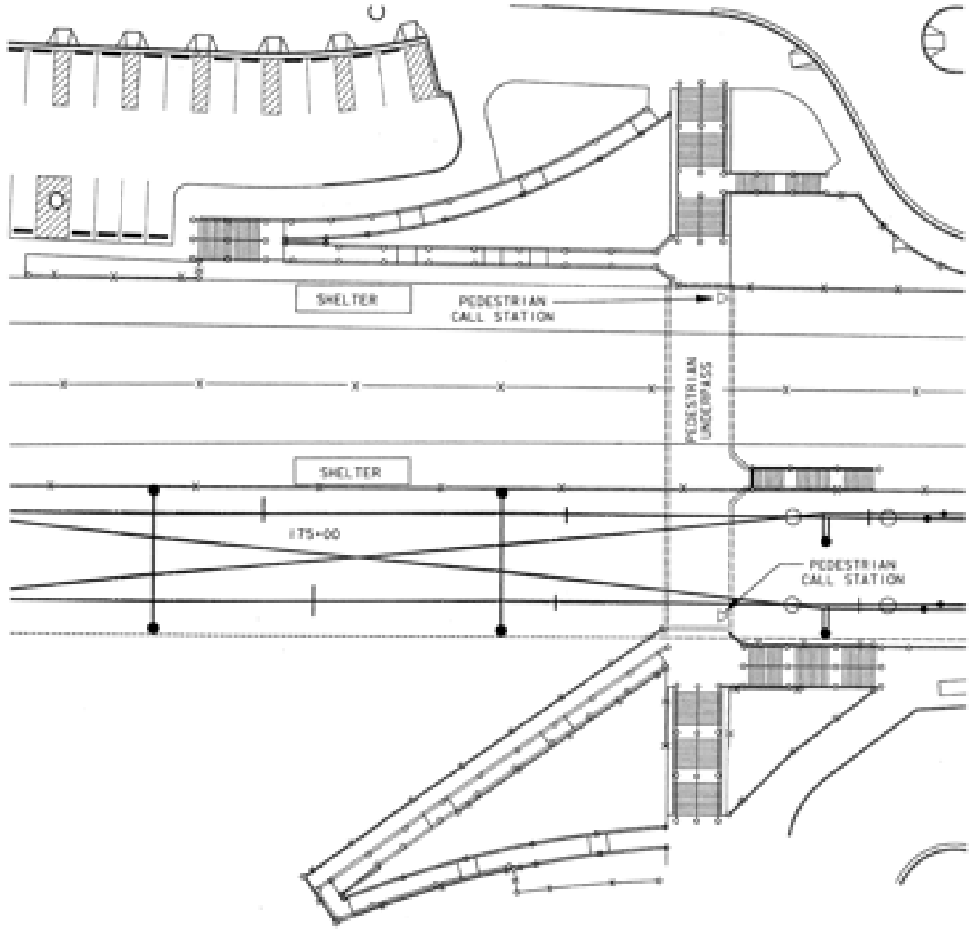
OLD TOWN TRANSIT CENTER
EMERGENCY REPORTING SYSTEM
TYPICAL CALL STATION PANEL

SCALE

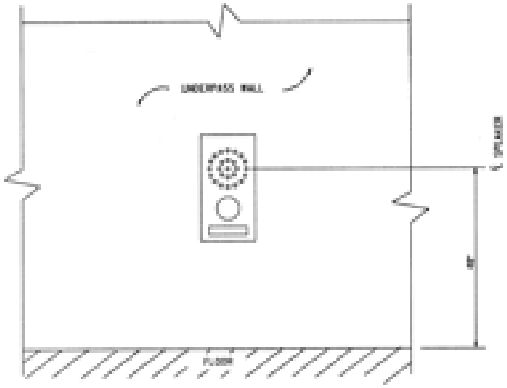
MTDB CONTRACT NO. LRT 552

DRAWING NO. S-111 SHEET NO. 105

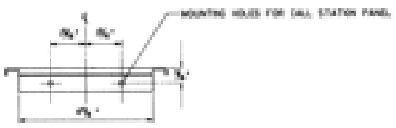
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3



PLAN
N. T. S.

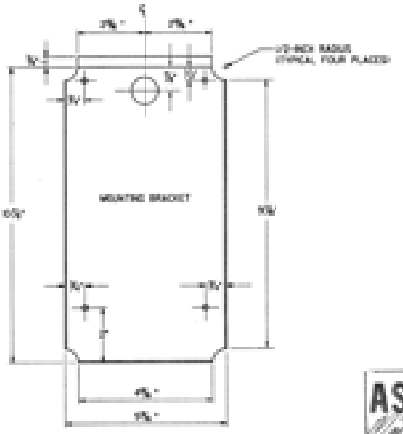


PEDESTRIAN CALL STATION
N. T. S.



TOP

SIDE



FRONT
N. T. S.

AS BUILT
Contract No. LRT-552
Date 1-3-97

NO.	DATE	REVISIONS	BY	CHK	APPR
	4/97	Conformed			

De LEUW, CATHER

DESIGNED BY	S. RASHAD	DATE 12/13/94
DRAWN BY	J. BISHOP	12/13/94
CHECKED BY	H. WAH	12/13/94
MTDB PROJ.ENG.		

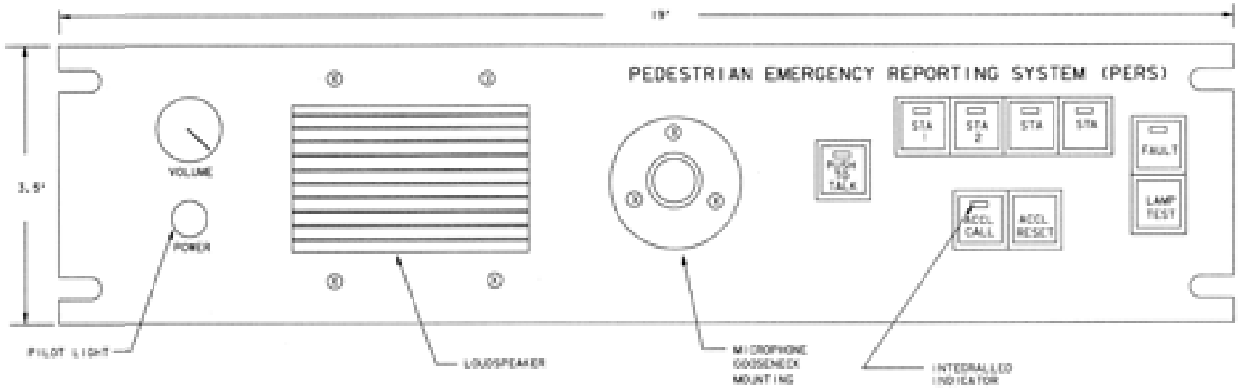
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
CALL STATION PANEL LOCATION
AND MOUNTING BRACKET

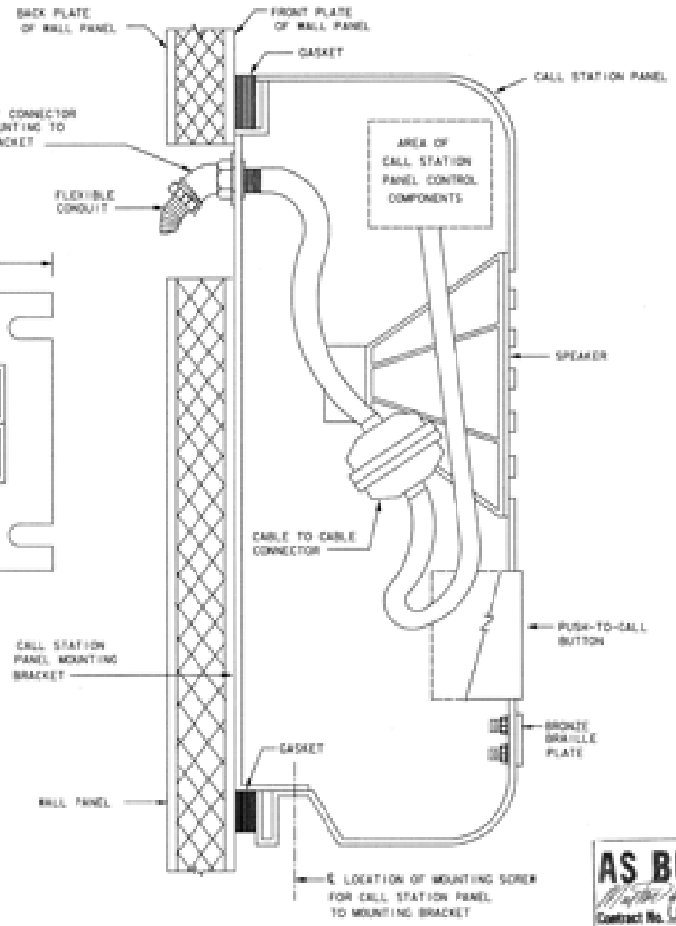
SCALE	NTS
MTDB CONTRACT NO.	LRT 552
DRAWING NO.	SHEET NO.
S-112	156

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3



NOTES:

1. THE 'POWER' INDICATOR SHALL ILLUMINATE GREEN.
2. THE 'FAULT' INDICATOR SHALL ILLUMINATE FLASHING AMBER WHEN ACTIVATED.
3. THE 'LAMP TEST' AND 'ACCL RESET' PUSHBUTTONS SHALL BE WHITE (NON-ILLUMINATING).
4. THE 'ACCL CALL' PUSHBUTTON AND EACH CALL STATION PUSHBUTTON SHALL BE WHITE WITH RED LED.
   THE 'LAMP TEST' PUSHBUTTON SHALL TEST ALL INDICATORS EXCEPT 'POWER'
   EACH CALL STATION PUSHBUTTON SHALL BE PUSH LOCK/PUSH RELEASE OPERATION.
5. PANEL MOUNTING CUTOUTS SHALL BE IN ACCORDANCE WITH EIA STD. RS-310 C FOR RAIL MOUNTING.
6. THIS DRAWING ILLUSTRATES THE APPROXIMATE LAYOUT OF THE CENTRAL CONTROL PERS CONTROL PANEL. THE ACTUAL CONFIGURATION OF THE PANEL MAY VARY.



CALL STATION INSTALLED ON WALL

NOTES:

1. MOUNTING HOLES IN THE WALL PANEL SHALL BE DRILLED AND TAPPED. MOUNTING APPARATUS SHALL PENETRATE BOTH THE FRONT PLATE AND BACK PLATE OF THE WALL PANEL.
2. DRAWING SHOWS POSSIBLE AREA OF CONTROL COMPONENTS WITHIN THE CALL STATION PANEL. ACTUAL CONFIGURATION AND LAYOUT MAY VARY.
3. THE CALL STATION PANEL SHALL BE SECURED TO THE WALL VIA THE MOUNTING BRACKET.

AS BUILT
Contract No. LRT-552
Date 1-5-97

NO.	DATE	REVISIONS	BY	CHK	APRD
4	4/97	Comments			

De LEUW, CATHER

DESIGNED BY	S. HASHAD	DATE 12/13/94
DRAWN BY	D. MILNER	12/13/94
CHECKED BY	R. KING	12/13/94
MTDB PROJ. ENG.	D. RAGLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

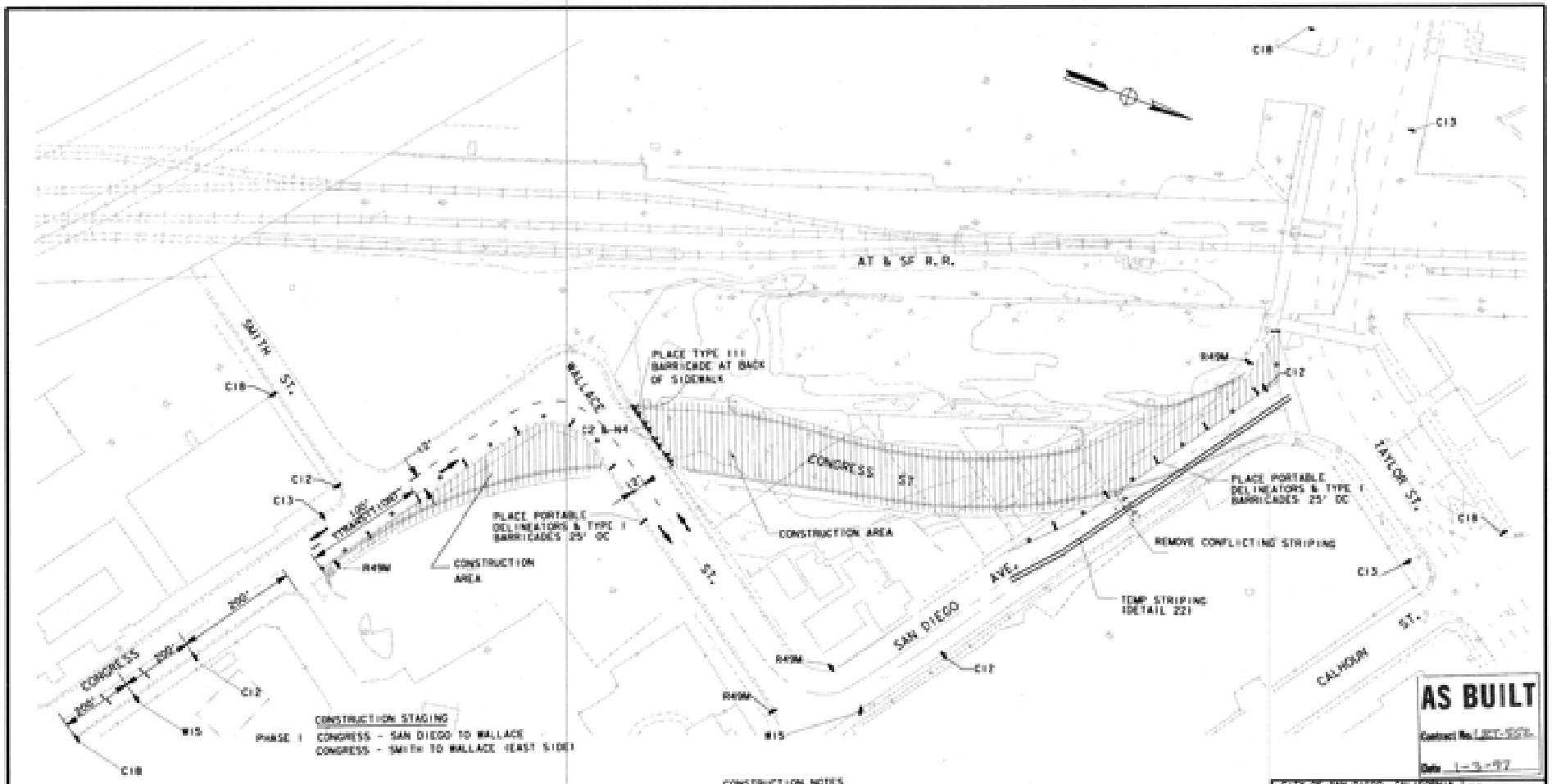
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
PEDESTRIAN
EMERGENCY REPORTING SYSTEM
CC PERS CONTROL PANEL LAYOUT

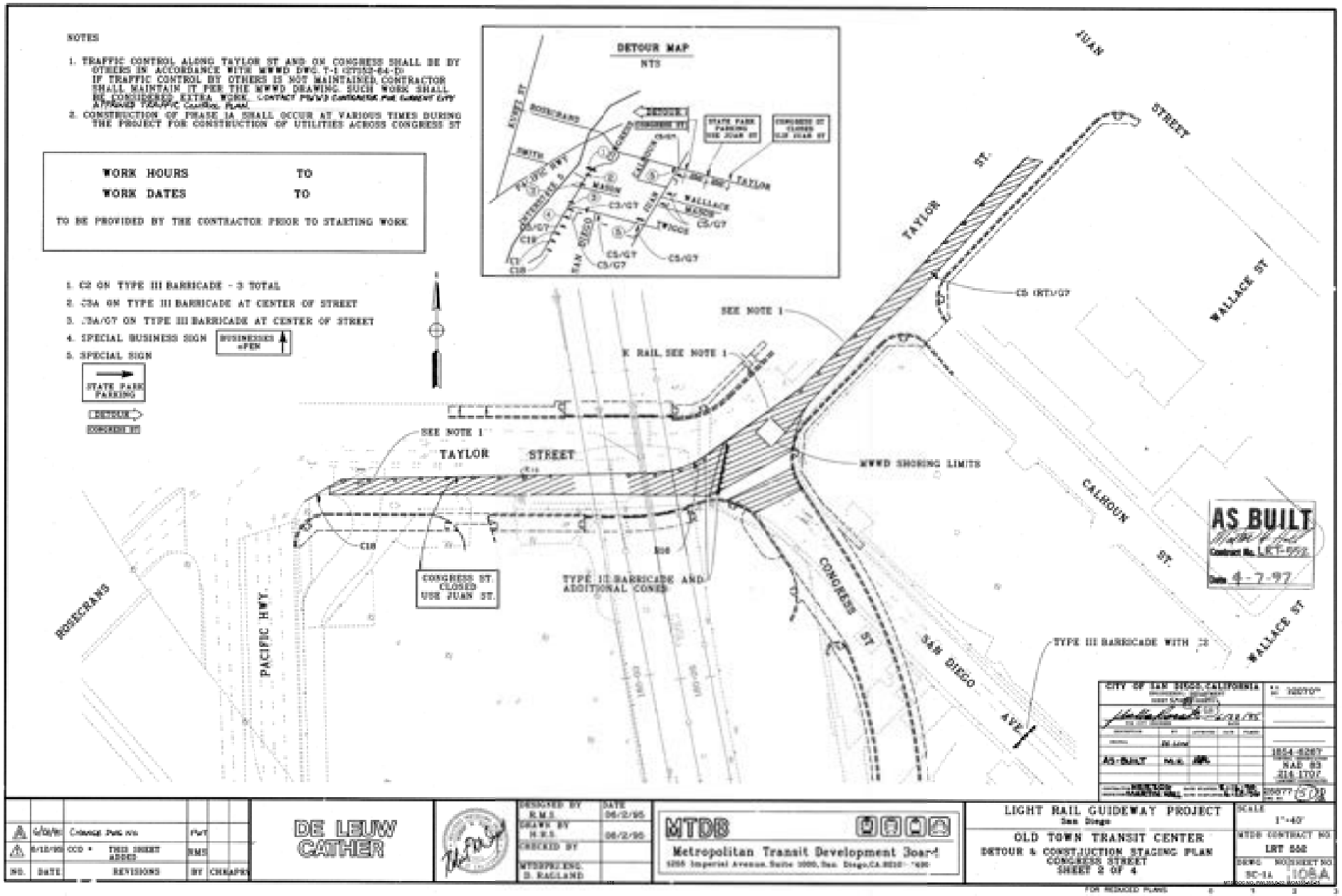
SCALE
MTDB CONTRACT NO. LRT 552
DRAWING NO. S-113
SHEET NO. 107

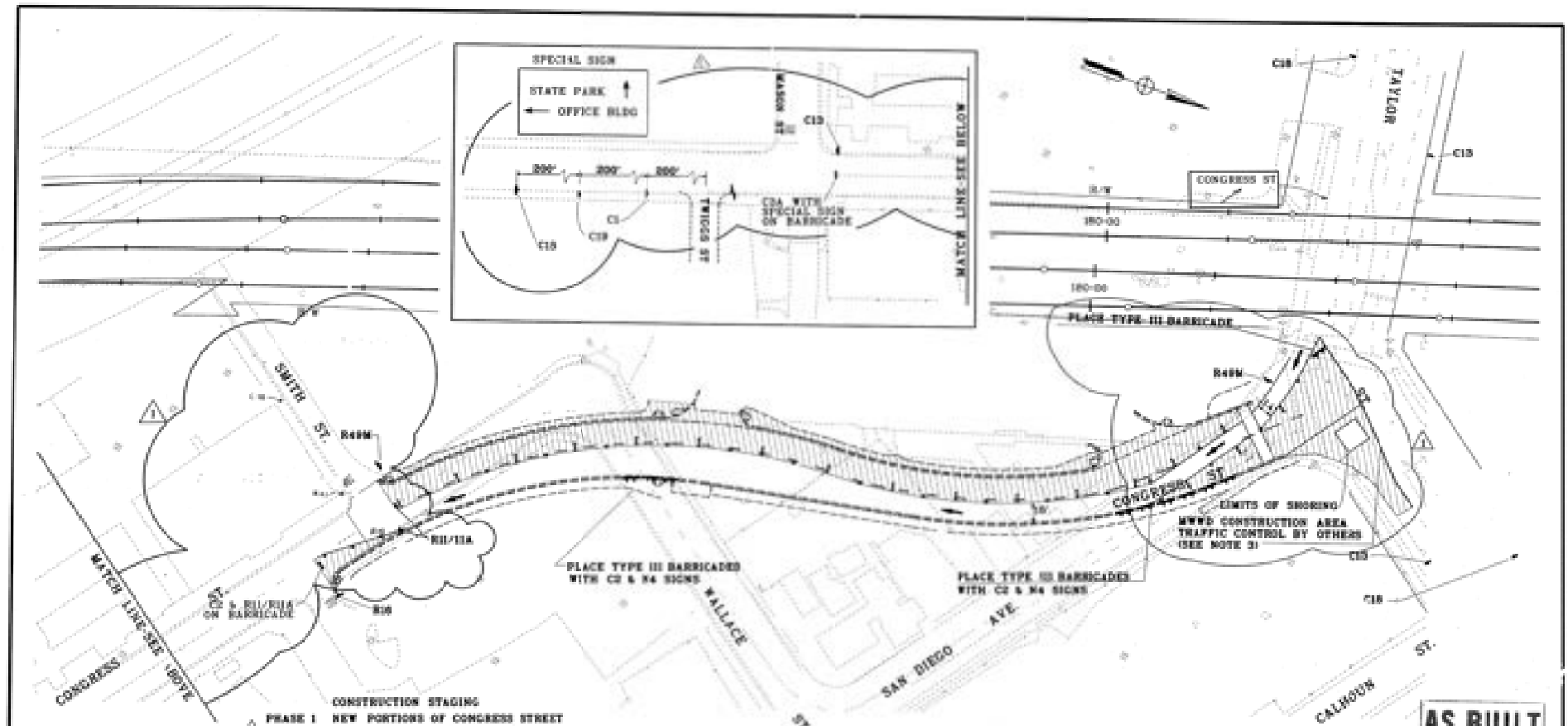
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

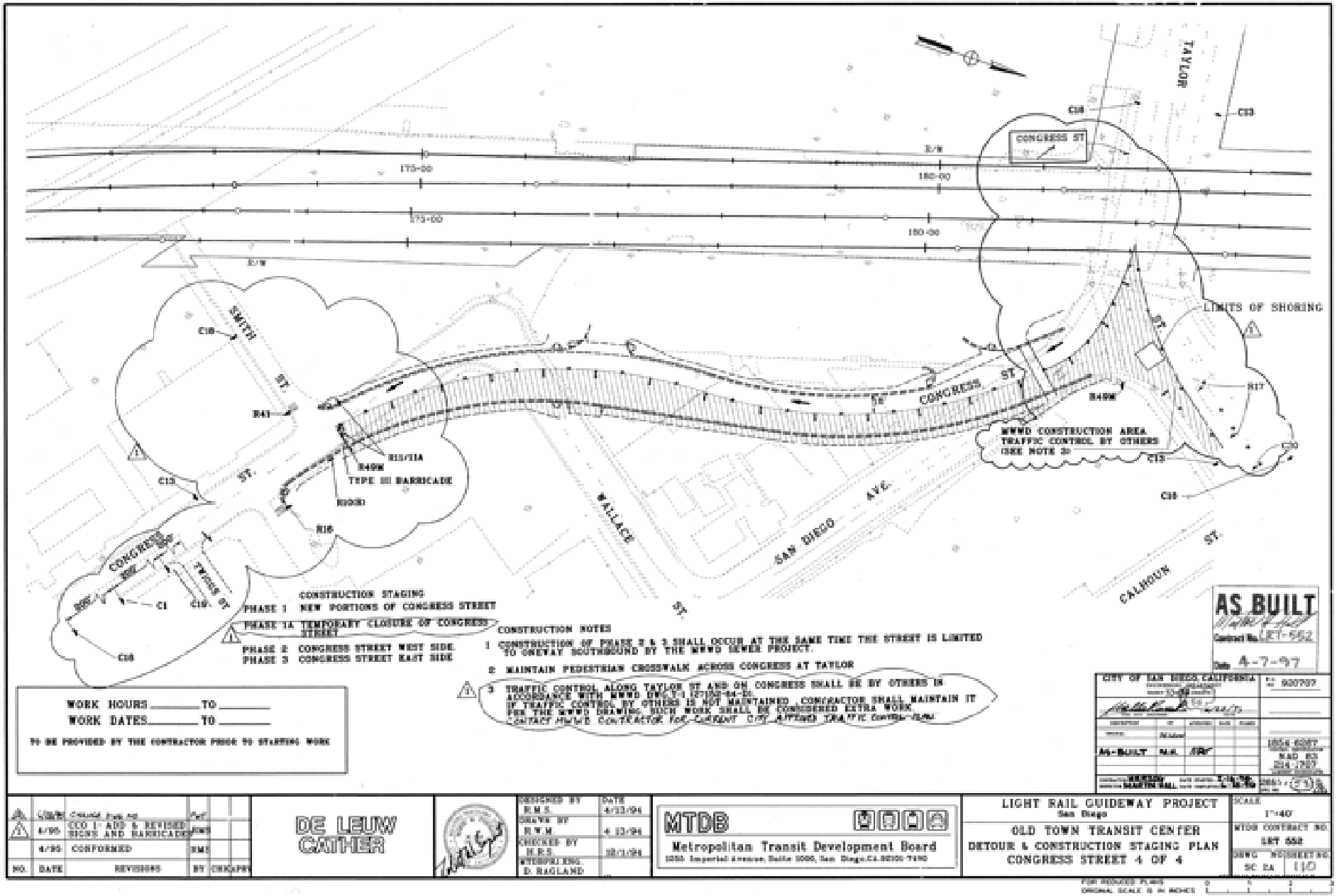
MTS DOC NO. PWL355.102, WDA355-46/73

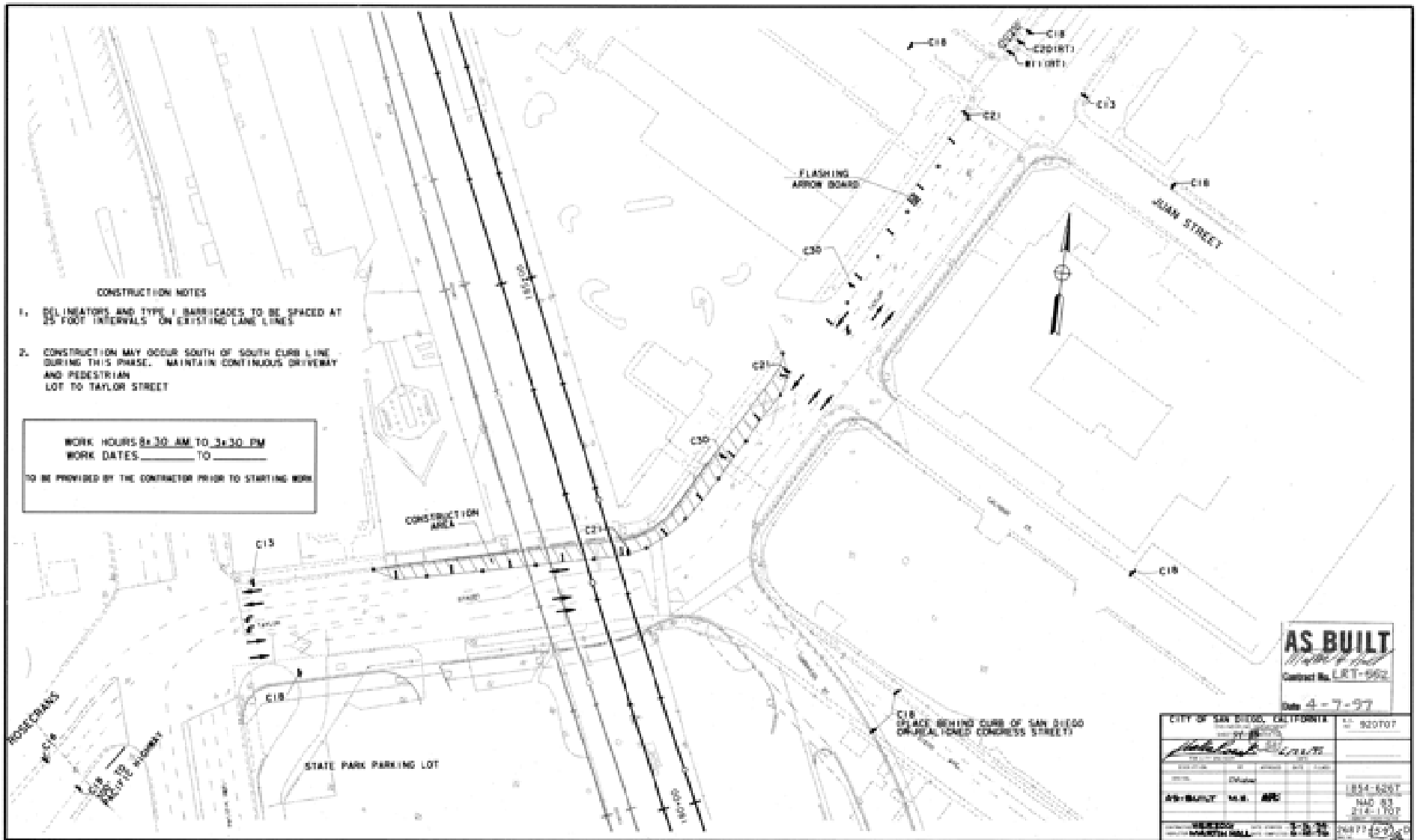
174

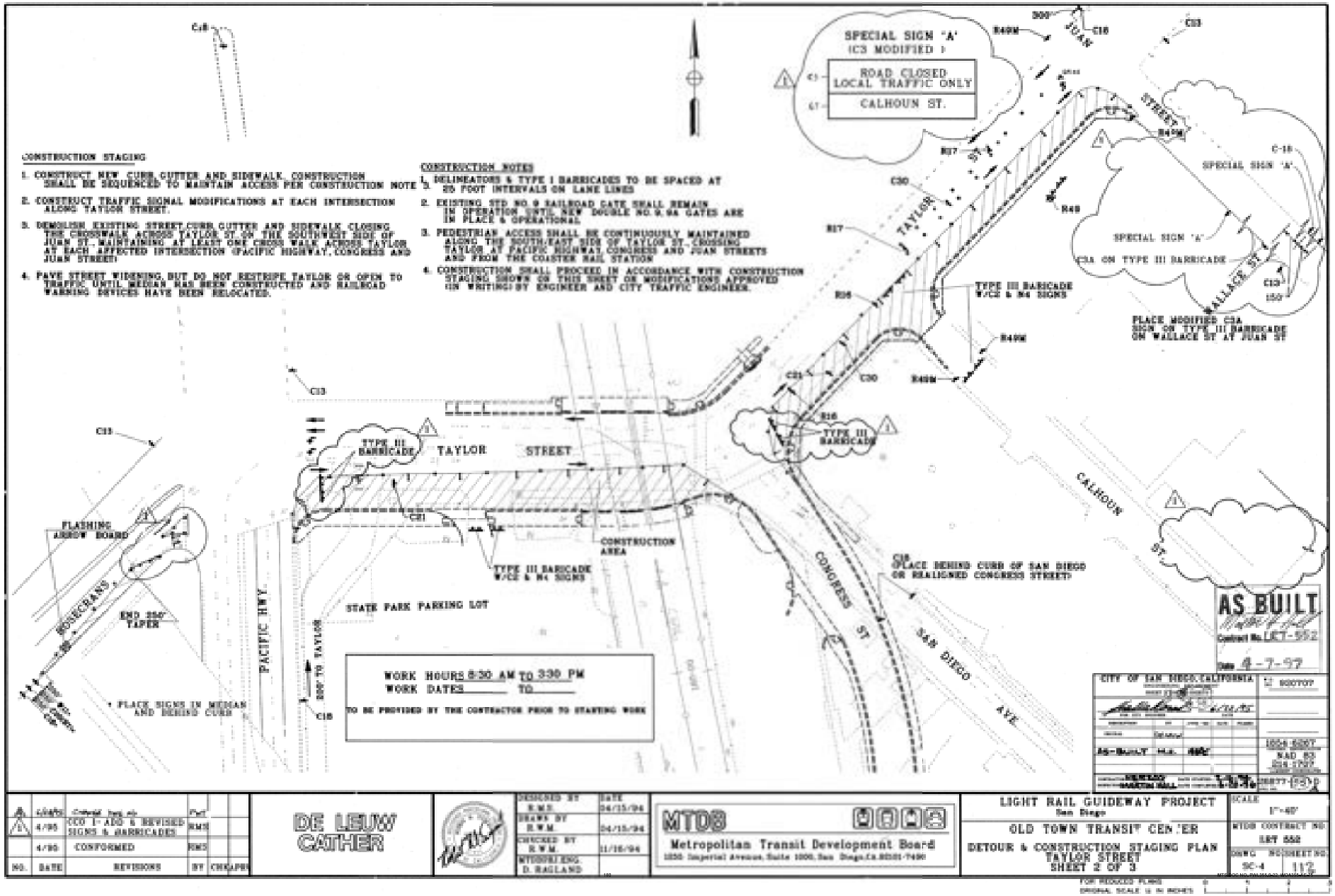

AT & SF R.R.
SMITH ST.
WALLACE ST.
CONGRESS ST.
TAYLOR ST.
SAN DIEGO AVE.
CALHOUN ST.
PLACE TYPE III BARRICADE AT BACK OF SIDEWALK
PLACE PORTABLE DELINEATORS & TYPE I BARRICADES 25' OC
CONSTRUCTION AREA
REMOVE CONFLICTING STRIPING
TEMP STRIPING (DETAIL 22)
CONSTRUCTION STAGING
PHASE I CONGRESS - SAN DIEGO TO WALLACE
CONGRESS - SMITH TO WALLACE (EAST SIDE)
CONSTRUCTION NOTES
1 MAINTAIN PEDESTRIAN TRAFFIC ON THE NORTH SIDE OF SAN DIEGO AVE., THE WEST SIDE OF WALLACE ST. AND THE SOUTH SIDE OF CONGRESS AVE.
AS BUILT
Contract No. LRT-552
Date 1-3-97
WORK HOURS 8:30 AM TO 3:30 PM
WORK DATES _____ TO _____
TO BE PROVIDED BY THE CONTRACTOR PRIOR TO STARTING WORK
CITY OF SAN DIEGO, CALIFORNIA
AS-Built
DE LEUW CATHER
DESIGNED BY
DRAWN BY
CHECKED BY
MTDB PROJECT ENG. D. RAGLAND
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
DETOUR & CONSTRUCTION STAGING PLAN
CONGRESS STREET 1 OF 3
SCALE 1"=40'
MTDB CONTRACT NO. LRT 552
DRAWING NO. SHEET NO. SC-1 108

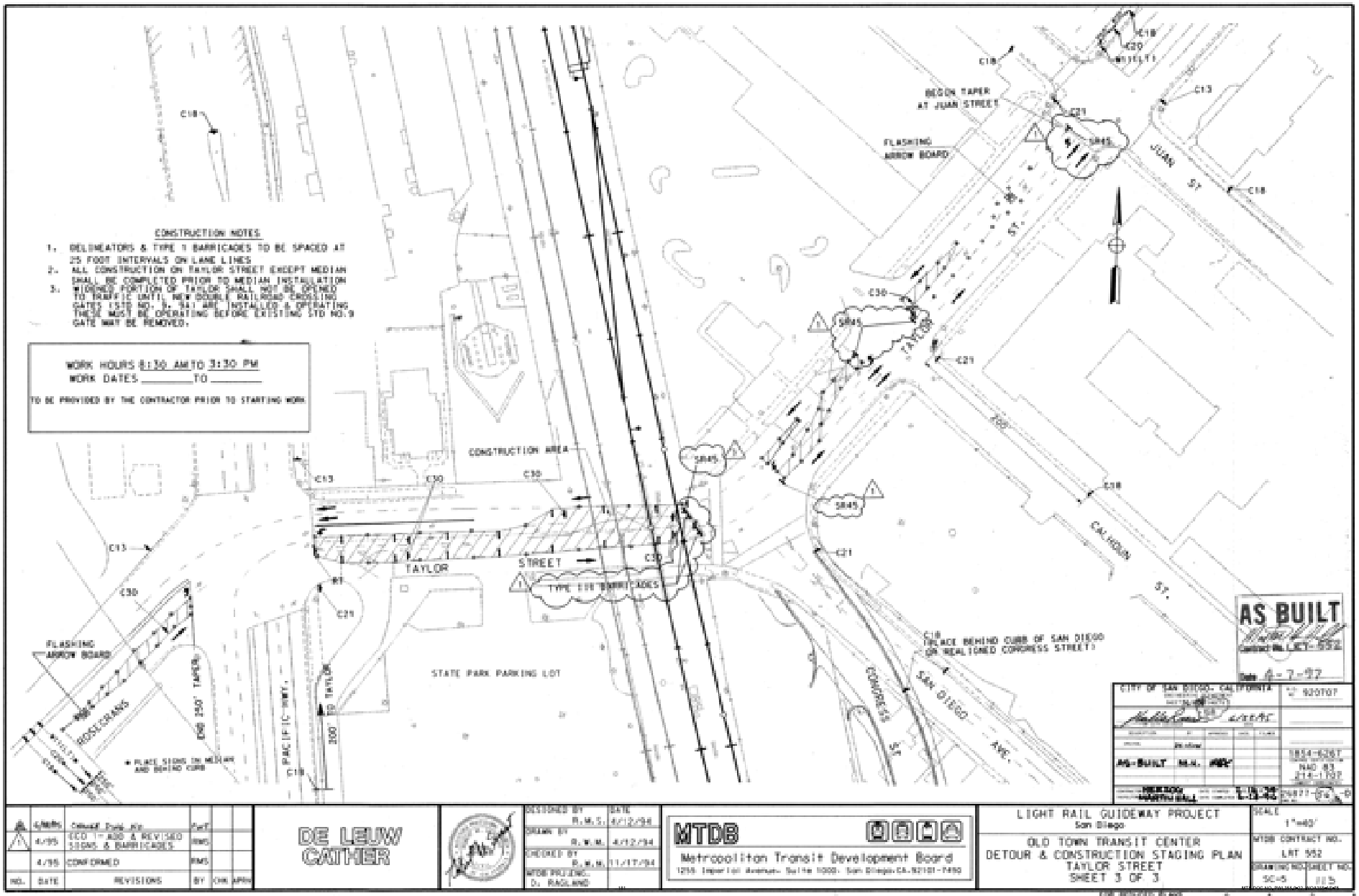

NOTES
1. TRAFFIC CONTROL ALONG TAYLOR ST AND ON CONGRESS SHALL BE BY OTHERS IN ACCORDANCE WITH MWWD DWG. T-1 (07150-04-D) IF TRAFFIC CONTROL BY OTHERS IS NOT MAINTAINED CONTRACTOR SHALL MAINTAIN IT PER THE MWWD DRAWING. SUCH WORK SHALL BE CONSIDERED EXTRA WORK. CONTACT MWWD CONTRACTOR FOR CURRENT CITY APPROVED TRAFFIC CONTROL PLAN.
2. CONSTRUCTION OF PHASE 1A SHALL OCCUR AT VARIOUS TIMES DURING THE PROJECT FOR CONSTRUCTION OF UTILITIES ACROSS CONGRESS ST
WORK HOURS TO
WORK DATES TO
TO BE PROVIDED BY THE CONTRACTOR PRIOR TO STARTING WORK
1. C2 ON TYPE III BARRICADE - 3 TOTAL
2. C3A ON TYPE III BARRICADE AT CENTER OF STREET
3. C3A/G7 ON TYPE III BARRICADE AT CENTER OF STREET
4. SPECIAL BUSINESS SIGN
5. SPECIAL SIGN
DETOUR MAP
NTS
JUAN STREET
TAYLOR ST.
WALLACE ST
CALHOUN ST.
SEE NOTE 1
K RAIL SEE NOTE 1
MWWD SHORING LIMITS
CONGRESS ST. CLOSED USE JUAN ST.
TYPE III BARRICADE AND ADDITIONAL CONES
TYPE III BARRICADE WITH C2
ROSECRANS
PACIFIC HWY.
SAN DIEGO AVE
AS BUILT
Contract No. LRT-552
Date 4-7-97
CITY OF SAN DIEGO CALIFORNIA
AS-BUILT
1824-6287
NAD 83
216 1707
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
DETOUR & CONSTRUCTION STAGING PLAN
CONGRESS STREET
SHEET 2 OF 4
SCALE 1"=40'
MTDB CONTRACT NO. LRT 552
DRWG. NO. SC-16 108A
DESIGNED BY R.M.S. DATE 06/2/95
DRAWN BY H.R.S. 06/2/95
CHECKED BY
W.T.SPRECHER D. RAGLAND
REVISIONS
FOR REDUCED PLANS
"ORIGINAL SCALE IS IN INCHES"


SPECIAL SIGN
STATE PARK
OFFICE BLDG
MASON ST
TAYLOR ST
MATCH LINE SEE BELOW
C2A WITH SPECIAL SIGN ON BARRICADE
TAYLOR
CONGRESS ST
R/W
PLACE TYPE III BARRICADE
SMITH ST.
R49M
CONGRESS ST.
LIMITS OF SHORING
MWWD CONSTRUCTION AREA
TRAFFIC CONTROL BY OTHERS
(SEE NOTE 3)
C2 & R11/R11A BARRICADE
R10
MATCH LINE-SEE ABOVE
CONGRESS
PLACE TYPE III BARRICADES WITH C2 & R4 SIGNS
WALLACE
SAN DIEGO AVE
ST.
CALHOUN ST.
CONSTRUCTION STAGING
PHASE 1 NEW PORTIONS OF CONGRESS STREET
PHASE 1A TEMPORARY CLOSURE OF CONGRESS STREET
PHASE 2 CONGRESS STREET WEST SIDE
PHASE 3 CONGRESS STREET EAST SIDE
CONSTRUCTION NOTES
1 CONSTRUCTION OF PHASE 2 & 3 SHALL OCCUR AT THE SAME TIME THE STREET IS LIMITED TO ONEWAY SOUTHBOUND BY THE MWWD SEWER PROJECT.
2 MAINTAIN PEDESTRIAN CROSSWALK ACROSS CONGRESS AT TAYLOR AND ALONG THE SOUTH SIDE OF TAYLOR ST.
3 TRAFFIC CONTROL ALONG TAYLOR ST AND ON CONGRESS SHALL BE BY OTHERS IN ACCORDANCE WITH MWWD DWG T-1 (27192-84-D). SEE NOTE 2. IF TRAFFIC CONTROL BY OTHERS IS NOT MAINTAINED CONTRACTOR SHALL MAINTAIN IT PER THE MWWD DRAWING. SUCH WORK SHALL BE CONSIDERED EXTRA WORK.
4 OBLITERATE CONFLICTING STRIPING ON CONGRESS ST., WALLACE ST. AND SAN DIEGO AVE. BY SANDBLASTING.
5 PLACE TEMPORARY AC TRANSITION FROM EXISTING PAVEMENT WHERE IT JOINS NEW PORTION OF CONGRESS ST. IN AREA TO BE USED FOR DETOUR.
6 CONTACT MWWD CONTRACTOR FOR CURRENT CITY APPROVED TRAFFIC CONTROL PLANS.
WORK HOURS_____ TO _____
WORK DATES:_____ TO _____
TO BE PROVIDED BY THE CONTRACTOR PRIOR TO STARTING W.RK
AS BUILT
Contract No. 87-552
Date 4-7-97
CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT
NO. DATE REVISIONS BY CHK APP'D
4/95 CCO 2 - ADD & REVISED SIGNS & BARRICADES RMS
4/95 CONFORMED RMS
DE LEUW CATHER
DESIGNED BY R.M.T. DATE 4/13/94
DRAWN BY J.V.M. 4/13/94
CHECKED BY R.M.T. 12/1/94
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
DETOUR & CONSTRUCTION STAGING
CONGRESS STREET 3 OF 4
SCALE 1"=40'
MTDB CONTRACT NO. LRT 552
DRWG NO. SC 2 109
SHEET NO.


CONGRESS ST
TAYLOR
SMITH ST
WALLACE
SAN DIEGO AVE
CALHOUN ST
LIMITS OF SHORING
WWWD CONSTRUCTION AREA
TRAFFIC CONTROL BY OTHERS
(SEE NOTE 3)
TYPE III BARRICADE
CONGRESS SIDE
TAYLOR ST
E/W
175-00
180-00
CONSTRUCTION STAGING
PHASE 1 NEW PORTIONS OF CONGRESS STREET
PHASE 1A TEMPORARY CLOSURE OF CONGRESS STREET
PHASE 2 CONGRESS STREET WEST SIDE
PHASE 3 CONGRESS STREET EAST SIDE
CONSTRUCTION NOTES
1 CONSTRUCTION OF PHASE 2 & 3 SHALL OCCUR AT THE SAME TIME THE STREET IS LIMITED TO ONEWAY SOUTHBOUND BY THE WWWD SEWER PROJECT.
2 MAINTAIN PEDESTRIAN CROSSWALK ACROSS CONGRESS AT TAYLOR
3 TRAFFIC CONTROL ALONG TAYLOR ST AND ON CONGRESS SHALL BE BY OTHERS IN ACCORDANCE WITH WWWD DWG. T-1 (21352-84-D). IF TRAFFIC CONTROL BY OTHERS IS NOT MAINTAINED, CONTRACTOR SHALL MAINTAIN IT PER THE WWWD DRAWING. SUCH WORK SHALL BE CONSIDERED EXTRA WORK. CONTACT HOWE CONTRACTOR FOR CURRENT CITY APPROVED TRAFFIC CONTROL PLAN
WORK HOURS _____ TO _____
WORK DATES _____ TO _____
TO BE PROVIDED BY THE CONTRACTOR PRIOR TO STARTING WORK
AS BUILT
Contract No. RT-552
Date 4-7-97
CITY OF SAN DIEGO CALIFORNIA
AS-BUILT
DE LEUW CATHER
DESIGNED BY R.M.S. 4/22/94
DRAWN BY R.W.M. 4/22/94
CHECKED BY H.R.S. 5/2/94
INTERPOLATING D. RAGLAND
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
DETOUR & CONSTRUCTION STAGING PLAN
CONGRESS STREET 4 OF 4
SCALE 1"=40'
MTDB CONTRACT NO. LRT 552
DRWG NO. SHEET NO. SC 2A 110


CONSTRUCTION NOTES
1. DELINEATORS AND TYPE I BARRICADES TO BE SPACED AT 25 FOOT INTERVALS ON EXISTING LANE LINES
2. CONSTRUCTION MAY OCCUR SOUTH OF SOUTH CURB LINE DURING THIS PHASE. MAINTAIN CONTINUOUS DRIVEWAY AND PEDESTRIAN LOT TO TAYLOR STREET
WORK HOURS 8:30 AM TO 3:30 PM
WORK DATES _____ TO _____
TO BE PROVIDED BY THE CONTRACTOR PRIOR TO STARTING WORK
FLASHING ARROW BOARD
JUAN STREET
CONSTRUCTION AREA
STATE PARK PARKING LOT
ROSECRANS
C18 PLACE BEHIND CURB OF SAN DIEGO OR REALIGNED CONGRESS STREET)
AS BUILT
Contract No. LRT-552
Date 4-7-97
CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
DETOUR & CONSTRUCTION STAGING PLAN
TAYLOR STREET
SHEET 1 OF 5
DESIGNED BY R. M. S. 4/13/94
DRAWN BY R. M. M. 4/13/94
CHECKED BY R. M. M. 11/18/94
MTDB PROJ. ENG. D. RAGLAND
SCALE 1"=40'
MTDB CONTRACT NO. LRT 552
DRAWING NO. SC-3
SHEET NO. 11


CONSTRUCTION STAGING
1. CONSTRUCT NEW CURB, GUTTER AND SIDEWALK. CONSTRUCTION SHALL BE SEQUENCED TO MAINTAIN ACCESS PER CONSTRUCTION NOTE 3.
2. CONSTRUCT TRAFFIC SIGNAL MODIFICATIONS AT EACH INTERSECTION ALONG TAYLOR STREET.
3. DEMOLISH EXISTING STREET CURB, GUTTER AND SIDEWALK CLOSING THE CROSSWALK ACROSS TAYLOR ST. ON THE SOUTHWEST SIDE OF JUAN ST. MAINTAINING AT LEAST ONE CROSS WALK ACROSS TAYLOR AT EACH AFFECTED INTERSECTION (PACIFIC HIGHWAY, CONGRESS AND JUAN STREET)
4. PAVE STREET WIDENING, BUT DO NOT RESTRIPE TAYLOR OR OPEN TO TRAFFIC UNTIL MEDIAN HAS BEEN CONSTRUCTED AND RAILROAD WARNING DEVICES HAVE BEEN RELOCATED.
CONSTRUCTION NOTES
1. DELINEATORS & TYPE I BARRICADES TO BE SPACED AT 20 FOOT INTERVALS ON LANE LINES
2. EXISTING STD NO. 9 RAILROAD GATE SHALL REMAIN IN OPERATION UNTIL NEW DOUBLE NO. 9, 9A GATES ARE IN PLACE & OPERATIONAL
3. PEDESTRIAN ACCESS SHALL BE CONTINUOUSLY MAINTAINED ALONG THE SOUTH/EAST SIDE OF TAYLOR ST., CROSSING TAYLOR AT PACIFIC HIGHWAY, CONGRESS AND JUAN STREETS AND FROM THE COASTER RAIL STATION
4. CONSTRUCTION SHALL PROCEED IN ACCORDANCE WITH CONSTRUCTION STAGING SHOWN ON THIS SHEET OR MODIFICATIONS APPROVED (IN WRITING) BY ENGINEER AND CITY TRAFFIC ENGINEER.
SPECIAL SIGN 'A'
(C3 MODIFIED)
ROAD CLOSED
LOCAL TRAFFIC ONLY
CALHOUN ST.
JUAN STREET
TAYLOR STREET
WALLACE ST
SPECIAL SIGN 'A'
C3A ON TYPE III BARRICADE
PLACE MODIFIED C3A SIGN ON TYPE III BARRICADE ON WALLACE ST AT JUAN ST
TYPE III BARRICADE W/C2 & R4 SIGNS
TYPE III BARRICADE
TAYLOR STREET
CONSTRUCTION AREA
CALHOUN ST
CONGRESS ST
SAN DIEGO AVE
C18 (PLACE BEHIND CURB OF SAN DIEGO OR REALIGNED CONGRESS STREET)
FLASHING ARROW BOARD
ROSECRANS
END 250' TAPER
PACIFIC HWY.
STATE PARK PARKING LOT
200' TO TAYLOR
* PLACE SIGNS IN MEDIAN AND BEHIND CURB
WORK HOURS 8:30 AM TO 3:30 PM
WORK DATES _____ TO _____
TO BE PROVIDED BY THE CONTRACTOR PRIOR TO STARTING WORK
AS BUILT
Contract No. LRT-552
Date 4-7-97
CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
DETOUR & CONSTRUCTION STAGING PLAN
TAYLOR STREET
SHEET 2 OF 3
SCALE 1"=40'
MTDB CONTRACT NO. LRT 552
DWG NO. SC-4
SHEET NO. 112
4/95 CCO 1- ADD & REVISED SIGNS & BARRICADES RMS
4/95 CONFORMED RMS
NO. DATE REVISIONS BY CHK'D/PE
DESIGNED BY R.M.S. DATE 04/15/94
DRAWN BY R.W.M. 04/15/94
CHECKED BY R.W.M. 11/16/94
MTDB/PRT ENG. D. RAGLAND
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES


CONSTRUCTION NOTES
1. DELINEATORS & TYPE I BARRICADES TO BE SPACED AT 25 FOOT INTERVALS ON LANE LINES
2. ALL CONSTRUCTION ON Taylor STREET EXCEPT MEDIAN SHALL BE COMPLETED PRIOR TO MEDIAN INSTALLATION
3. WIDENED PORTION OF TAYLOR SHALL NOT BE OPENED TO TRAFFIC UNTIL NEW DOUBLE RAILROAD CROSSING GATES (STD NO: S 941) ARE INSTALLED & OPERATING. THESE MUST BE OPERATING BEFORE EXISTING STD NO:9 GATE MAY BE REMOVED.
WORK HOURS 8:30 AM TO 3:30 PM
WORK DATES _____ TO _____
TO BE PROVIDED BY THE CONTRACTOR PRIOR TO STARTING WORK
CONSTRUCTION AREA
TAYLOR STREET
TYPE I/II BARRICADES
STATE PARK PARKING LOT
FLASHING ARROW BOARD
BEGIN TAPER AT JUAN STREET
JUAN ST.
CALHOUN ST.
COMPRESS ST.
SAN DIEGO AVE.
PACIFIC HWY.
ROSECRANS
DIE 250' TAPER
300' TO TAYLOR
PLACE SIGNS ON MEDIAN AND BEHIND CURB
PLACE BEHIND CURB OF SAN DIEGO OR REALIGNED CORDRESS STREET)
AS BUILT
Contract No. LRT-552
Date 6-7-92
CITY OF SAN DIEGO, CALIFORNIA
AS-BUILT
1854-6261
NAD 83
214-1707
DE LEUW CATHER
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
DETOUR & CONSTRUCTION STAGING PLAN
TAYLOR STREET
SHEET 3 OF 3
SCALE 1"=40'
MTDB CONTRACT NO. LRT 552
DRAWING NO. SC-5
SHEET NO. 115
DESIGNED BY R.M.S. 4/12/94
DRAWN BY R.M.M. 4/12/94
CHECKED BY R.M.M. 11/17/94
MTDB PROJ. ENG. D. RAGLAND
4/95 Caltrans Encroachment Permit
4/95 ECO 1 ADD & REVISED SIGNS & BARRICADES RMS
4/95 CONFORMED RMS
NO. DATE REVISIONS BY CHK APPD

PROJECT DATA

BUILDING ADDRESS: 4600 TAYLOR STREET, SAN DIEGO, CA 92101

CONSTRUCTION TYPE: TYPE V, 4R

BUILDING HEIGHT: 20'-0"

OCCUPANCY CLASS: B-2 INTERIOR; A-3 EXTERIOR WAITING

ALLOWABLE FLOOR AREA: 6,000 SQ. FT. (SY UBC TABLE 5-D)

TOTAL FLOOR AREA: 3,760 SQ. FT.

BUILDING FLOOR AREA: 1,410 SQ. FT.

PLANNING DISTRICT: OLD TOWN SAN DIEGO PLANNED DISTRICT

ABBREVIATIONS

A.F.F.	ABOVE FINISH FLOOR
ACOUS.	ACOUSTICAL
A.C.T.	ACOUSTICAL CEILING TILE
ADD.	ADDENDUM
ADJ.	ADJUSTABLE
ALT.	ALTERNATE
ALUM.	ALUMINUM
ARCH.	ARCHITECT(URAL)
B.D.	BOARD
B.I.D.	BUILDING INSPECTION DEPARTMENT
BLK(G).	BLOCK(ING)
BOT.	BOTTOM
CAB.	CABINET
C.A.C.	CALIFORNIA ADMINISTRATIVE CODE
C.J.	CONTROL JOINT
CLG.	CEILING
CLR.	CLEAR(ANCE)
C.M.U.	CONCRETE MASONRY UNIT
C.O.	CLEANOUT(CASED) OPENING
COL.	COLUMN
COMP.	COMPARTMENT
CONC.	CONCRETE
CONT.	CONTINUOUS
CPT.	CARPET
C.T.	CERAMIC TILE
D.A.	DRAWING AREA (TOILET/SINK)
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DWG.	DRAWING
E.	EAST
EA.	EACH
E.J.	EXPANSION JOINT
EL.	ELEVATION (VERTICAL)
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
ENCL.	ENCLOSURE
EQ.	EQUAL
EXP.	EXPANSION
EXT.	EXTERIOR
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
F.E.(C)	FIRE EXTINGUISHER (CABINET)
F.F.	FINISH FLOOR
FIN.(F)	FINISH(ED)
FLR(G).	FLOOR(ING)
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
FT.	FOOT/FEET
FTG.	FOOTING
FUR.	FURR(ING) (DOWN)
GA.	GAUGE
GEN.	GENERAL
GYP.	GYPSUM
H.B.	HOSE BIBB
HDWE.	HARDWARE
HR.	HOUR
H.V.A.C.	HEATING, VENTILATING, AND AIR CONDITIONING
I.C.B.O.	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS
INS.	INSULATION
INSUL.	INSULATION
INT.	INTERIOR
JT.	JOINT
LAV.	LAVATORY
LT.	LIGHT
MACH.	MACHINE
MAN.	ARCHITECT MILFORD WAYNE DONALDSON, INC.
MECH.	MECHANICAL
MEMB.	MEMBRANE
MFR'S.	MANUFACTURER'S
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MTD.	MOUNTED
MTL.	METAL
N.	NORTH
N.F.P.A.	NATIONAL FIRE PROTECTION ASSOCIATION
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
N.S.F.	NET SQUARE FOOT
N.T.S.	NOT TO SCALE
O/C	ON CENTER
O.S.H.A.	OREGON OF OCCUPATIONAL SAFETY AND HEALTH
OZ.	OUNCE
P.C.	POINT AND CEMENT
PL.	PLATE
PLYWD.	PLYWOOD
PNT.	PAINT
PR.	PAIR
PREFAB.	PREFABRICATED
Q.T.	QUARRY TILE
RAD.	RADIUS
R.B.	RESILIENT BASE
REINF.	REINFORCING
REQD.	REQUIRED
RESIL.	RESILIENT
R.O.	ROUGH OPENING
S.	SOUTH
SCHED.	SCHEDULE
S.F.M.	STATE FIRE MARSHAL
SHT.	SHEET
SHTG.	SHEATHING
SIM.	SIMILAR
SLNT.	SEALANT
S.O.G.	SLAB ON GRADE
SPEC.	SPECIFICATION
SQ.	SQUARE
STAGD.	STAGGERED
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED
TEL.	TELEPHONE
T.O.	TOP OF
TYP.	TYPICAL
U.B.C.	UNIFORM BUILDING CODE
U.F.C.	UNIFORM FIRE CODE
U.L.	UNDERWRITER'S LABORATORY
U.O.N.	UNLESS OTHERWISE NOTED
VAR.	VARIES
V.T.H.	VENT THROUGH ROOF
W.	WEST/WIDTH
W/	WITH
W.C.	WATER CLOSET
WD.	WOOD
WDW.	WINDOW
W.H.	WATER HEATER
WP.	WATERPROOFING
W.R.	WATER RESISTANT
WSCT.	WAINSCOT
WT.	WEIGHT

PROJECT DESCRIPTION

THE OLD TOWN TRANSIT CENTER IS LOCATED WITHIN THE OLD TOWN SAN DIEGO PLANNED DISTRICT. THE PURPOSE OF THE OLD TOWN SAN DIEGO PLANNED DISTRICT ORDINANCE IS TO REPLACE, RETAIN AND ENHANCE THE DISTINCTIVE CHARACTER OF OLD TOWN AS IT EXISTED PRIOR TO 1871. IN COMPLIANCE WITH THE PLANNED DISTRICT ORDINANCE, THE METROPOLITAN TRANSIT DEVELOPMENT BOARD (MTDB) HAS CHOSEN AN "AMERICANA" THEME, UTILIZING PRIMARILY WOOD BUILDING MATERIALS FOR THE STRUCTURES.

THE OLD TOWN TRANSIT CENTER CONSISTS OF A DEPOT BUILDING, SIXTY PORTALS, BUS SHELTER AND TROLLEY SHELTER.

THE DEPOT BUILDING CONTAINS A TRANSIT STORE THAT SELLS BUS AND TROLLEY PASSES, DISPENSES TRANSIT INFORMATION, SELLS MTDB MERCHANDISE AND POTENTIALLY OTHER CONCESSIONS. IT ALSO CONTAINS PUBLIC RESTROOMS THAT ARE ACCESSED THROUGH THE STORE.

PROJECT DIRECTORY

ARCHITECT

MILFORD WAYNE DONALDSON, FAIA, INC.
2660 FIFTH AVENUE, SUITE 200
SAN DIEGO, CA 92101
CONTACT: BRIAN ROELING
PHONE: (619) 239-7088
FAX: (619) 234-4288

STRUCTURAL ENGINEER

STEPHEN A. EYSEN
4988 RIO GRAN DE SAN DIEGO DRIVE
SAN DIEGO, CA 92105-1157
CONTACT: SCOTT STEPHEN
PHONE: (619) 287-2003
FAX: (619) 287-4910

MECHANICAL/PLUMBING/ELECTRICAL

DUNN LEE SMITH KLEIN
4747 MORENA BLVD., SUITE 103
SAN DIEGO, CA 92117-3466
CONTACT: JOHN AVERY
PHONE: (619) 483-7700
FAX: (619) 483-7999

GENERAL NOTES

1. EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. NO DEAD BOLTS OR SLIDING BOLTS ALLOWED.

2. WORK SHALL CONFORM TO UBC 1991 EDITION.

3. WORK SHALL CONFORM TO CALIFORNIA BUILDING CODE (CCR, TITLE 24, PARTS 1 THROUGH 7.

4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS BEFORE STARTING WORK, AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH ANY WORK.

5. IN CASE OF CONFLICT, THE CONTRACTOR SHALL VERIFY WITH THE ARCHITECT WHETHER THESE NOTES OR SPECIFIC NOTES ON DRAWINGS SHALL TAKE PRECEDENCE.

6. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE THE SAME AS FOR SIMILAR WORK SHOWN ON THE DRAWINGS. VERIFY WITH THE ARCHITECT.

7. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SCHEDULING AND COORDINATION OF THE WORK.

8. ALL FLOORS IN TOILETS, SHOWERS AND KITCHENS SHALL HAVE POSITIVE SLOPE TO DRAINS. (NO SLOPE IS REQUIRED WHERE DRAINS ARE NOT PROVIDED.)

9. VERIFY LOCATION, AREAS, AND DEPTH OF DEPRESSED STRUCTURAL CONCRETE SLABS FOR FLOOR FINISH MATERIALS. SEE ROOM FINISH SCHEDULE FOR FINISHES.

10. PAINTING: CONTRACTOR SHALL PROVIDE WORK-UP OF ALL PAINTS, COATINGS, AND STAINS FOR EACH SITUATION PRESENT ON THE PROJECT, AND SUBMIT TO ARCHITECT FOR REVIEW AND APPROVAL.

11. PAINTING CONTRACTOR SHALL VERIFY PAINT LOCATIONS AND COLORS OF PAINTS, SPECIAL COATINGS, AND STAINS WITH ARCHITECT BEFORE APPLICATION.

12. ICBO REPORT NUMBERS WHERE SHOWN ON DRAWINGS AND IN THE SPECIFICATIONS ARE ONLY TO INDICATE THE REQUIREMENTS BY THE BUILDING INSPECTION DEPARTMENT. OTHER PRODUCTS WITH AN APPROVED ICBO REPORT NUMBER MAY BE USED IF SUBMITTED TO THE ARCHITECT AND THE BUILDING INSPECTION DEPARTMENT PRIOR TO INSTALLATION.

13. PROVIDE DRAFT STOPS ABOVE CEILING LEVEL, EVERY 1000 SQ.FT. IN ATTIC SPACE OF COMBUSTIBLE CONSTRUCTION; EVERY 3000 SQ.FT. ELSEWHERE. (1988 UBC, SECTION 2312 (H))

14. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL GOVERN. DO NOT SCALE DRAWINGS.

15. INTERIOR SLABS SHALL BE SMOOTH TROWELED. VERIFY LOCATIONS OF FLOORING MATERIALS ON CONCRETE WHICH REQUIRE SPECIAL SURFACE TREATMENT AND CURING.

16. ALL WOOD CONDUIT, DUCTS, PLUMBING PIPES AND OTHER PIPING LOCATED IN ACOUSTICALLY RATED PARTITION ASSEMBLIES SHALL BE ISOLATED FROM THE BUILDING BY MEANS OF RESILIENT SLEEVES, MOUNTS, OR MINIMUM 1/4" THICK APPROVED RESILIENT MATERIAL.

17. FURRED CEILINGS SHALL COMPLY WITH UBC SECTION 4709.

18. DIMENSIONS ARE TO FACE OF STUD, FACE OF MASONRY, OR CENTERLINE OF GRID, UNLESS OTHERWISE NOTED.

20. LEVER TYPE HARDWARE AND PANIC HARDWARE SHALL CONFORM TO CITY OF SAN DIEGO FIRE MARSHAL STANDARDS.

21. PLANS FOR ALL FIXED FIRE PROTECTION EQUIPMENT SHALL BE SUBMITTED TO THE FIRE MARSHALL FOR REVIEW PRIOR TO INSTALLATION.

22. PROVIDE FIBERGLASS BLANKETS FACED ON ONE SIDE WITH FOIL-REINFORCED KRAFT (ASBESTOS-FREE) VAPOR BARRIER AT EXTERIOR WALLS, SOFFITS, AND INTERIOR CEILING INSTALLATIONS PER PLAN.

23. ALL WOOD USED WITHIN 6" OF THE EARTH OR IN CONTACT WITH CONCRETE SHALL BE TREATED WITH A PRESERVATIVE.

25. DIFFERENT FINISHES AT THE FLOOR SHALL MEET UNDER THE DOOR UNLESS OTHERWISE NOTED.

27. ALL GLAZING PANELS ADJACENT TO DOORS AND WITHIN 18" OF WALKING SURFACE SHALL BE TEMPERED.

28. ALL EXIT SIGNS ARE SHOWN ON THE FLOOR PLANS AND ARE TO BE INTERNALLY ILLUMINATED PER U.B.C. SECTION 3310.

29. ALL EXIT DOORS SHALL CONFORM WITH U.F.C. SECTION 10.115(a)(1), SECTION 10.116(b)(1) AND U.B.C. SECTION 3310(b) AND SECTION 3310(d) AND SHALL HAVE EITHER TWO SEPARATE CIRCUITS OR HAVE A SEPARATE BATTERY BACK-UP SYSTEM.

30. FIRE ALARM SYSTEM TO BE INSTALLED IN COMPLIANCE WITH SECTION 2740, PART 3, T-24 CALIFORNIA ADMINISTRATIVE CODE.

32. FIRE ALARM TO BE AUDIBLE THROUGHOUT THE BUILDING DURING MAXIMUM NORMAL NOISE LEVEL. COMPLIANCE SAME AS ABOVE.

34. ALL MECHANICAL AND ELECTRICAL EQUIPMENT AND OTHER REQUIRED LIFE SAFETY SYSTEMS SHALL BE APPROVED AND INSTALLED IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS PURSUANT TO THIS SECTION AND SHALL BE TESTED AND WITNESSED TO BE IN PROPER WORKING CONDITION TO THE SATISFACTION OF THE BUILDING OFFICIAL, BEFORE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.

35. BUILDING OCCUPANT SHALL SECURE PERMITS REQUIRED BY THE FIRE DEPARTMENT FROM THE FIRE PREVENTION BUREAU PRIOR TO OCCUPYING THIS BUILDING.

36. FIRE EXTINGUISHERS SHALL BE 4A40 BC TYPE AND SHALL COMPLY WITH U.F.C. ARTICLE 11, STANDARD 10-1 AND C.A.C. T-19, SECTION 3-29.

37. ALL EXPOSED BOLT ENDS SHALL BE SAW CUT TO MIN. LENGTH AND GROUND SMOOTH (PRIME AND PAINT).

38. PROVIDE FIRE BLOCKING IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND AT THE CEILING LEVEL AT 10'-0" INTERVALS BOTH VERTICALLY AND HORIZONTALLY PER UBC SECTION 2310(D) AND 4205(1).

CERTIFICATE OF COMPLIANCE

NRCC-ENV-E

SYMBOLS

INTERIOR ELEVATION (WHERE SHOWN)
DETAIL NO.
ELEVATION NO.
SHEET NO.

WALL TYPE (WHERE SHOWN)
WALL TYPE NO.

DOOR TYPE (WHERE SHOWN)
DOOR NO.

BUILDING SECTION (WHERE SHOWN)
SECTION NO.
SHEET NO.

ROOM NO. (WHERE SHOWN)
ROOM NO.

ELEVATION MARKER
ELEVATION
SHEET

GENERAL NOTE (WHERE SHOWN)
NOTE NO.

WINDOW TYPE (WHERE SHOWN)
WINDOW LETTER

SHEET INDEX

A0.1 GENERAL NOTES
A1.0 FLOOR PLAN
A1.2 ROOF PLAN
A1.4 ELEVATIONS (NORTH/SOUTH)
A1.5 ELEVATIONS (WEST/EAST)
A1.6 BUILDING SECTIONS
A1.7 CEILING PLAN
A2.1 ROOM FINISH SCHEDULE
DOOR SCHEDULE
DOOR DETAILS
A2.2 DOOR DETAILS
WINDOW DETAILS
A2.3 WALL TYPES
EXTERIOR TRIM DETAILS
A2.4 EXTERIOR TRIM DETAILS
ROOF DETAILS
A2.5 INTERIOR ELEVATIONS
A2.6 INTERIOR DETAILS
TILE PATTERNS
A3.1 TROLLEY SHELTER 1 DETAILS
A3.2 BUS SHELTER A DETAILS
S1.1 GENERAL NOTES
S1.1A GENERAL NOTES
S1.2 TYPICAL DETAILS
S2.1 FOUNDATION PLAN
S2.2 ROOF FRAMING PLAN
S2.3 UPPER ROOF FRAMING PLAN
S2.4 CEILING FRAMING PLAN
S3.1 WALL ELEVATIONS
S4.1 FOUNDATION DETAILS
S5.1 FRAMING DETAILS
S5.2 FRAMING DETAILS
S5.3 FRAMING DETAILS
S6.1 PLANS @ SHELTER
M0.1 NOTES, SYMBOLS, SCHEDULES, DETAILS & TITLE 24
M0.2 MECHANICAL FLOOR PLAN
P1.1 NOTES, SYMBOLS, SCHEDULES, DETAILS & CALCS
P2.1 PLUMBING FLOOR PLAN
P3.1 PIPING DIAGRAMS
E1.1 LEGENDS AND FIXTURE SCHEDULE
E2.1 ELECTRICAL FLOOR PLAN
E3.1 PANEL SCHEDULE, DETAILS, SHELTER
FS0.0 FLOOR PLAN
FS0.0 EQUIPMENT SCHEDULE
FS0.0 PLUMBING LOCATIONS
FS0.0 ELECTRIC LOCATIONS
FS0.0 EXHAUST HOOD DETAILS

AS BUILT
Contract No. LRT-932
Date 1-6-97

REVISED FOR CONSTRUCTION
DATE: 12-20-96

NO.	DATE	REVISIONS	BY	CHK	APPD
	12-21-95	ADDENDUM FOR AUCTION			
	4-97	Contract			

PARSONS DE LEUW

DESIGNED BY: K. LAIRD
DRAWN BY:
CHECKED BY: 12-20-96
APPR. PROJ. ENG.: 8-6-96
DATE: 7-24-95

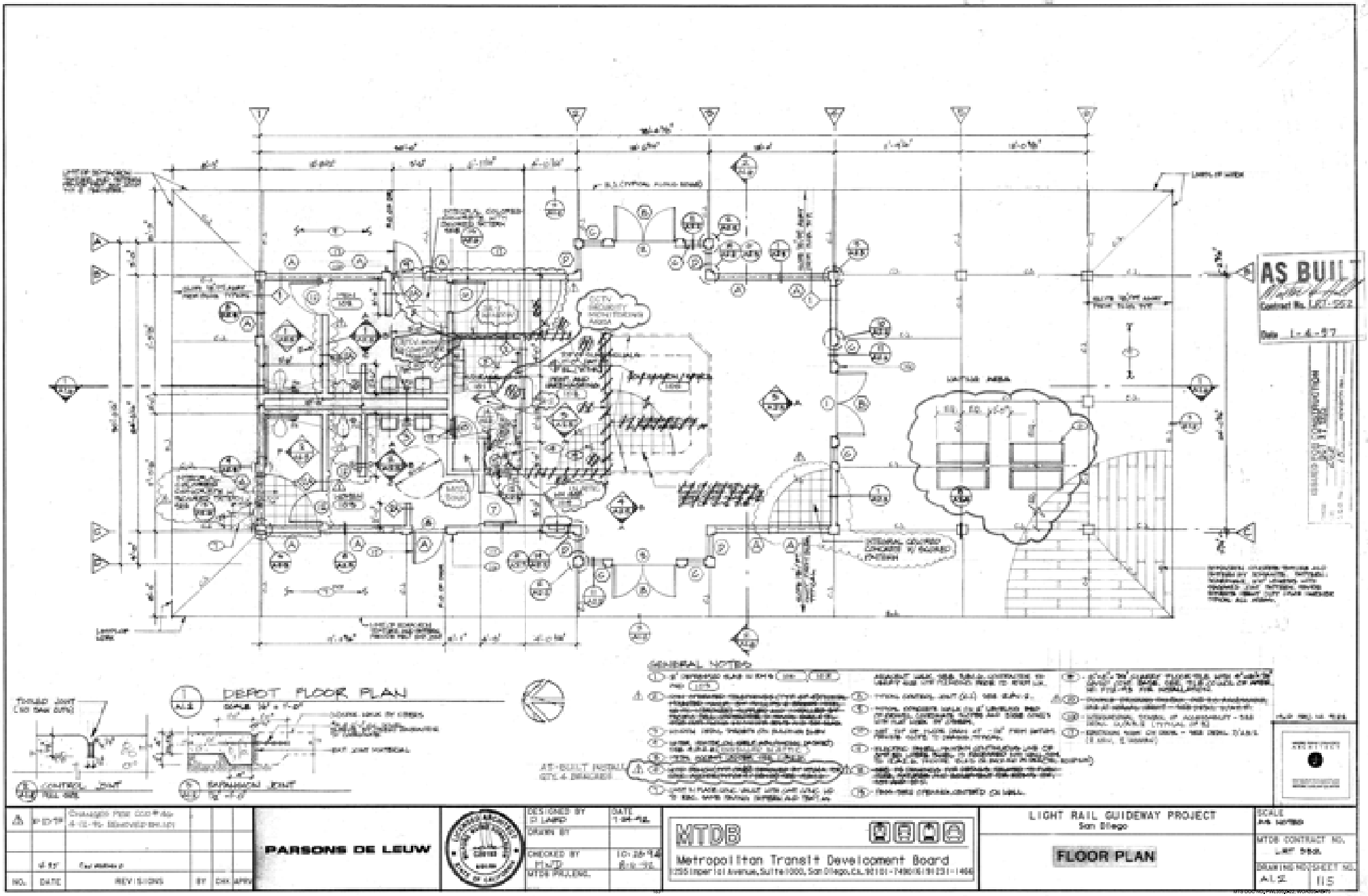
MTDB
Metropolitan Transit Development Board
255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

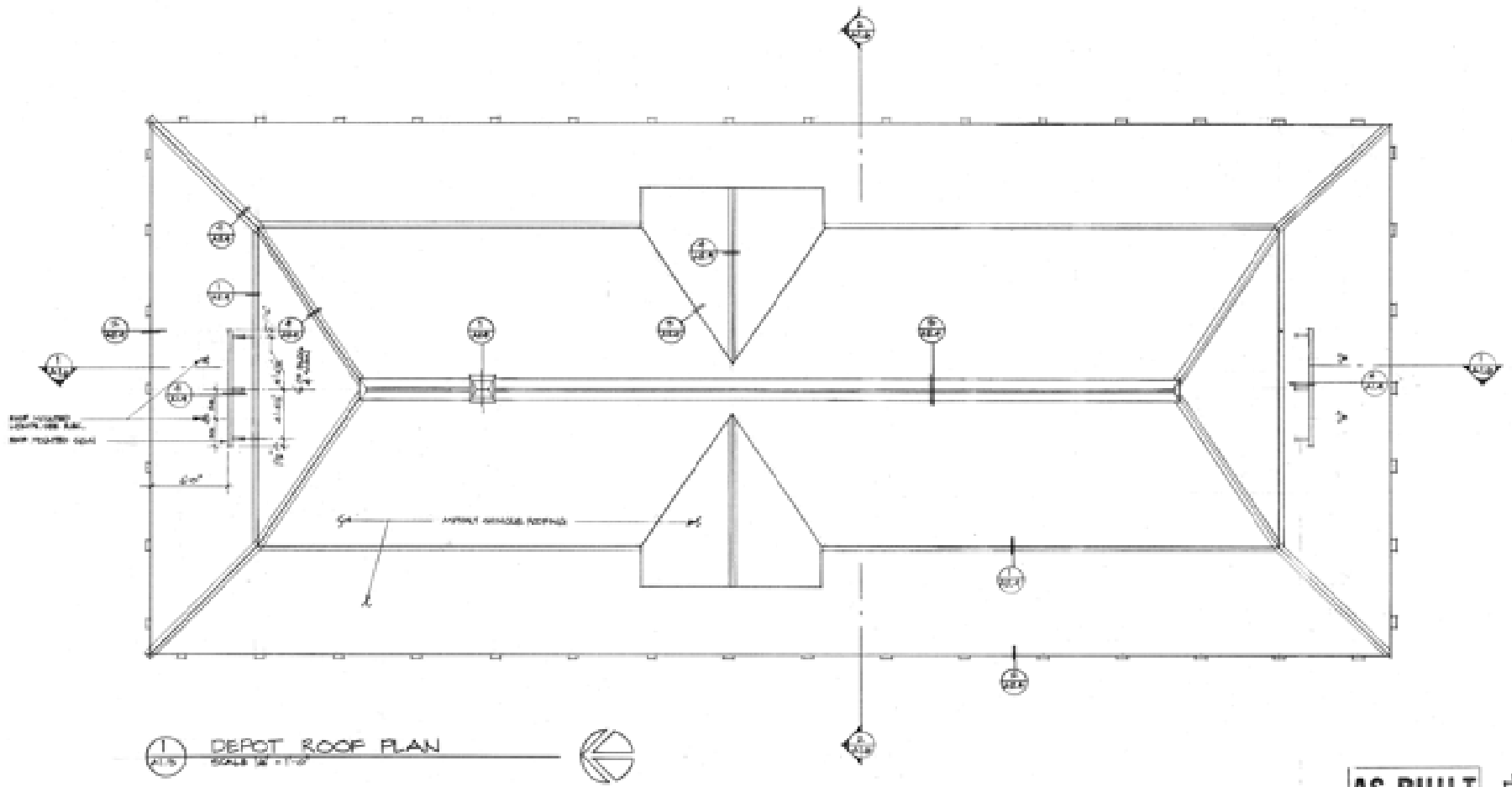
LIGHT RAIL GUIDEWAY PROJECT
San Diego

GENERAL NOTES

SCALE: NO SCALE
MTDB CONTRACT NO.: LRT 932
DRAWING NO.: A-0.1
SHEET NO.: 114

MTS DOC NO. PWL355(22, WO#3554675


AS BUILT
Contract No. LRT-552
Date 1-6-97
DEPOT FLOOR PLAN
SCALE 1/8" = 1'-0"
GENERAL NOTES
PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
FLOOR PLAN
SCALE
MTDB CONTRACT NO.
DRAWING NO/SHEET NO.
A-2 115
DESIGNED BY
DRAWN BY
CHECKED BY
DATE



1 DEPOT ROOF PLAN

AS BUILT
Contract No. LRT-952
Date 1-6-97

NO.	DATE	REVISIONS	BY	CHK	APPD
4	6/	Civil revisions			

PARSONS DE LEUW

DESIGNED BY C. LAIRD — DATE 7-28-96
DRAWN BY
CHECKED BY MTDB PROJ. ENG. — DATE 10-28-96, 8-6-97

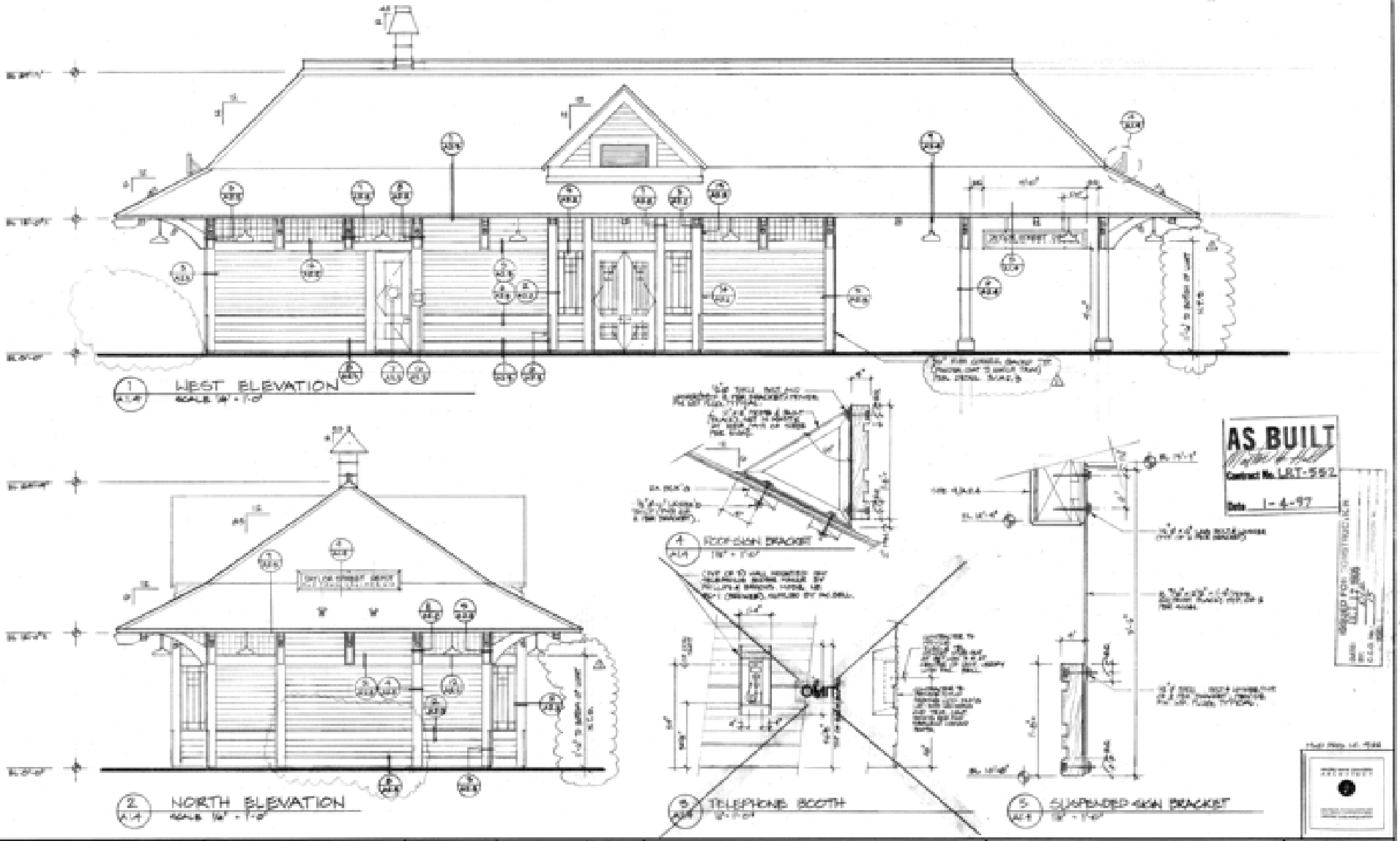
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego

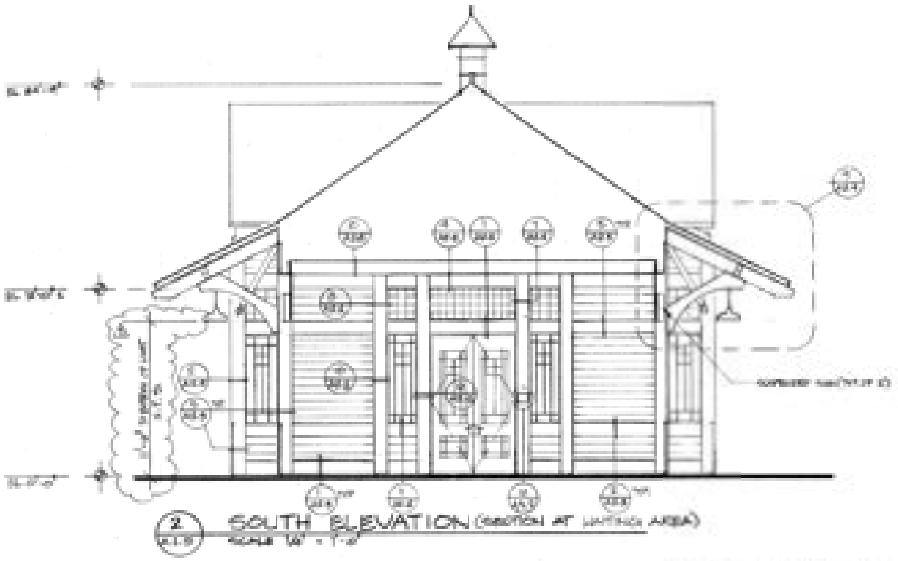
ROOF PLAN

SCALE
MTDB CONTRACT NO. LRT 952
DRAWING NO. A1.5 — SHEET NO. 116

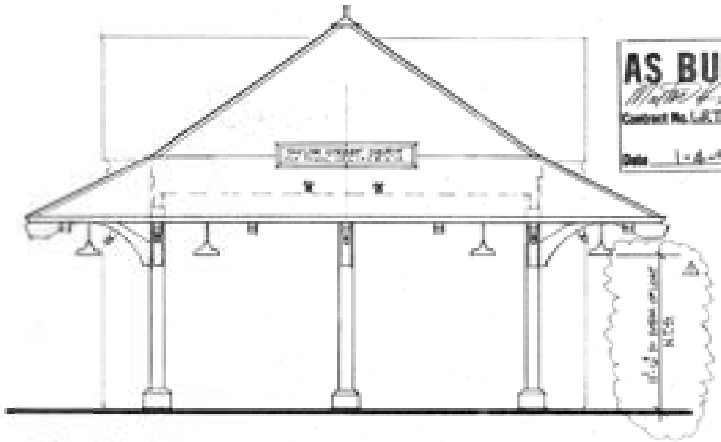
MTS DOC NO. PWL355/A22, WOA355-AR/75


1 WEST ELEVATION
SCALE 1/8" = 1'-0"
2 NORTH ELEVATION
SCALE 1/8" = 1'-0"
4 ROOF-SIGN BRACKET
1 1/2" = 1'-0"
5 TELEPHONE BOOTH
3/4" = 1'-0"
6 SUSPENDED-SIGN BRACKET
3/4" = 1'-0"
AS BUILT
Contract No. LRT-592
Date 1-4-97
PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
ELEVATIONS WEST/NORTH
MTDB CONTRACT NO. LRT 592
DRAWING NO. A1.4
SHEET NO. 117
DESIGNED BY
DRAWN BY
CHECKED BY
MTDB PROJ. ENG.
DATE 1-24-96
10-28-96
11-5-96
REVISIONS

1 EAST ELEVATION



2 SOUTH ELEVATION (OMITTED AT WAITING AREA)



3 SOUTH ELEVATION

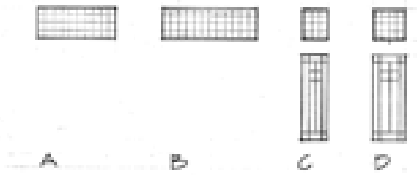
NOTE: FOR CUSTOM WOOD WINDOWS "C" AND "D" SEE DWG. S-A3.2 FOR THERMO-BRIDGE INFO.

WINDOW SCHEDULE

WINDOW SYMBOL	WIDTH	HEIGHT	TYPE	GLASS	HEAD	JAMB	SILL	REMARKS
A	2'-0"	2'-0"	FIXED	TEMP	6/A11.1	6/A11.1	12/A11.1	"LOWER" GLASS
B	2'-0"	2'-0"	FIXED	TEMP	4/A11.1	7/A11.1	11/A11.1	"LOWER" GLASS
C	1'-0" / 1'-0"	5'-0" / 2'-0"	FIXED / BOARD	TEMP / TEMP	5/A11.1 / 4/A11.1	10/A11.1 / 7/A11.1	11/A11.1 / 8/A11.1	"LOWER" GLASS
D	2'-0" / 2'-0"	5'-0" / 2'-0"	FIXED / BOARD	TEMP / TEMP	5/A11.1 / 4/A11.1	9/A11.1 / 7/A11.1	11/A11.1 / 8/A11.1	"LOWER" GLASS

NOTES:
1. CONTRACTOR TO COORDINATE ALL ROUGH OPENINGS WITH WINDOW MANUFACTURER AND FRAMING CONTRACTOR PRIOR TO CONSTRUCTION.
2. SEE EXTERIOR ELEVATIONS FOR DETAILS AT SPECIFIC LOCATIONS.
3. ALL WINDOWS TO BE ALUMINUM CLAD, WOOD FRAME PER SPECIFICATIONS.

WINDOW TYPES



AS BUILT

Contract No. LRT-552

Date 1-6-97

NO.	DATE	REVISIONS	BY	CHK	APPR
3	5-5-98				
2					
1	4-15	Summer			

PARSONS DE LEUW

DESIGNED BY D. LANDRY
DRAWN BY
CHECKED BY M.W.D.
MTDB PROJ. ENG.
DATE 7-24-96
10-28-96
8-6-98

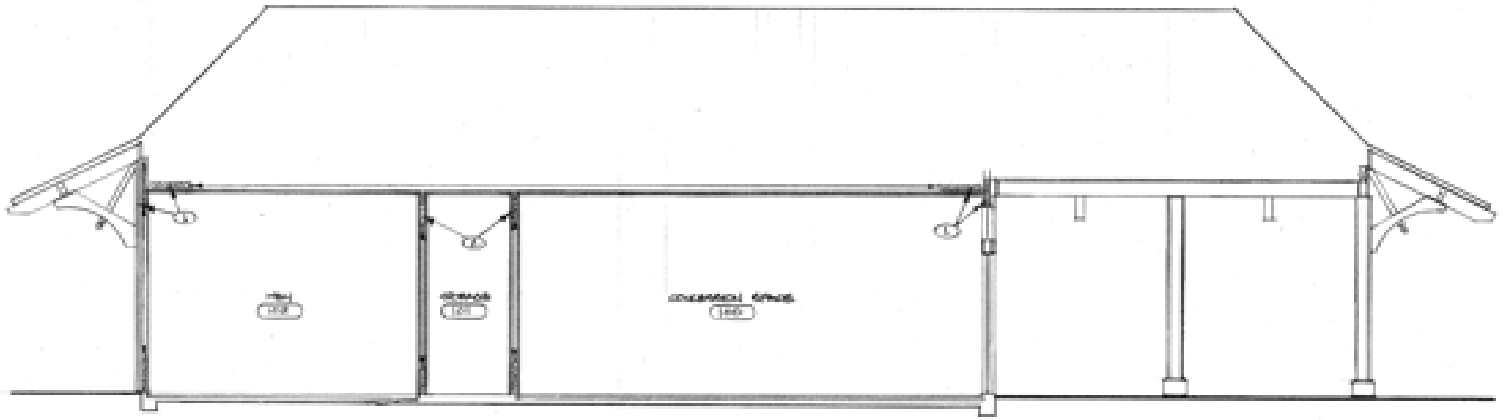
MTDB
Metropolitan Transit Development Board
(255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490 (619) 231-1466)

LIGHT RAIL GUIDEWAY PROJECT
San Diego

ELEVATIONS EAST/SOUTH

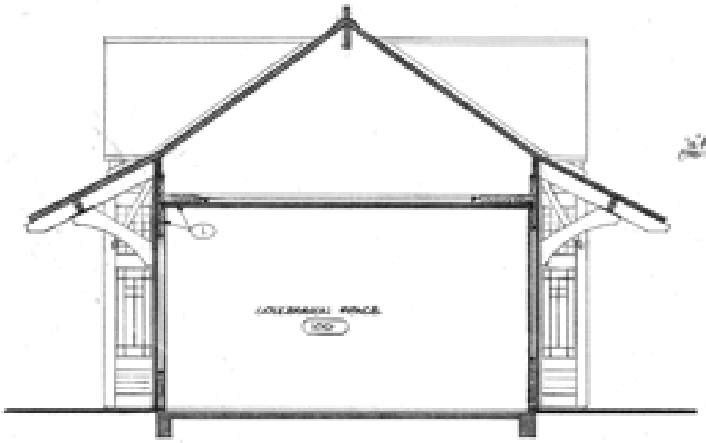
SCALE
AS NOTED
MTDB CONTRACT NO.
LRT 552
DRAWING NO.
A1.5
SHEET NO.
118

MTS DOCNO. PW355202. WOA58AD15

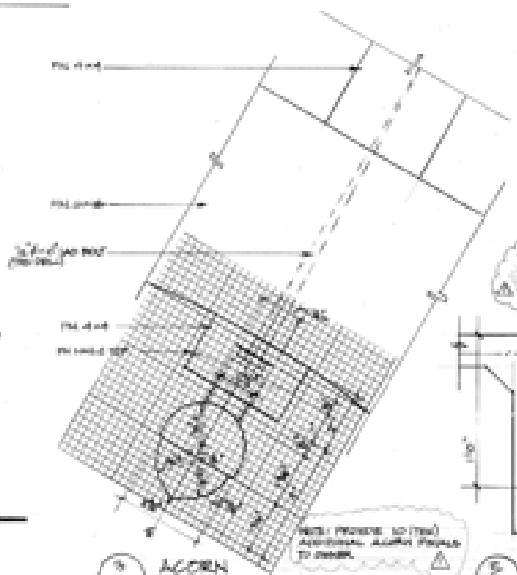


1 BUILDING SECTION (NORTH/SOUTH)
SCALE: 1/8" = 1'-0"

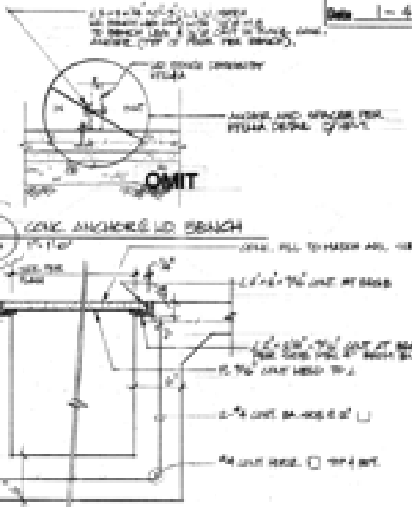
AS BUILT
Contract No. LRT-552
Date 1-4-97



2 BUILDING SECTION (NORTH/SOUTH)
SCALE: 1/8" = 1'-0"



3 ACCESS



OMIT

4 CONC. ANCHORED LID BEAM

5 CONC. VAULT

NO.	DATE	REVISIONS	BY	CHK	APPD
1	9-25-98				
2	4-97	Changes			

PARSONS DE LEUW

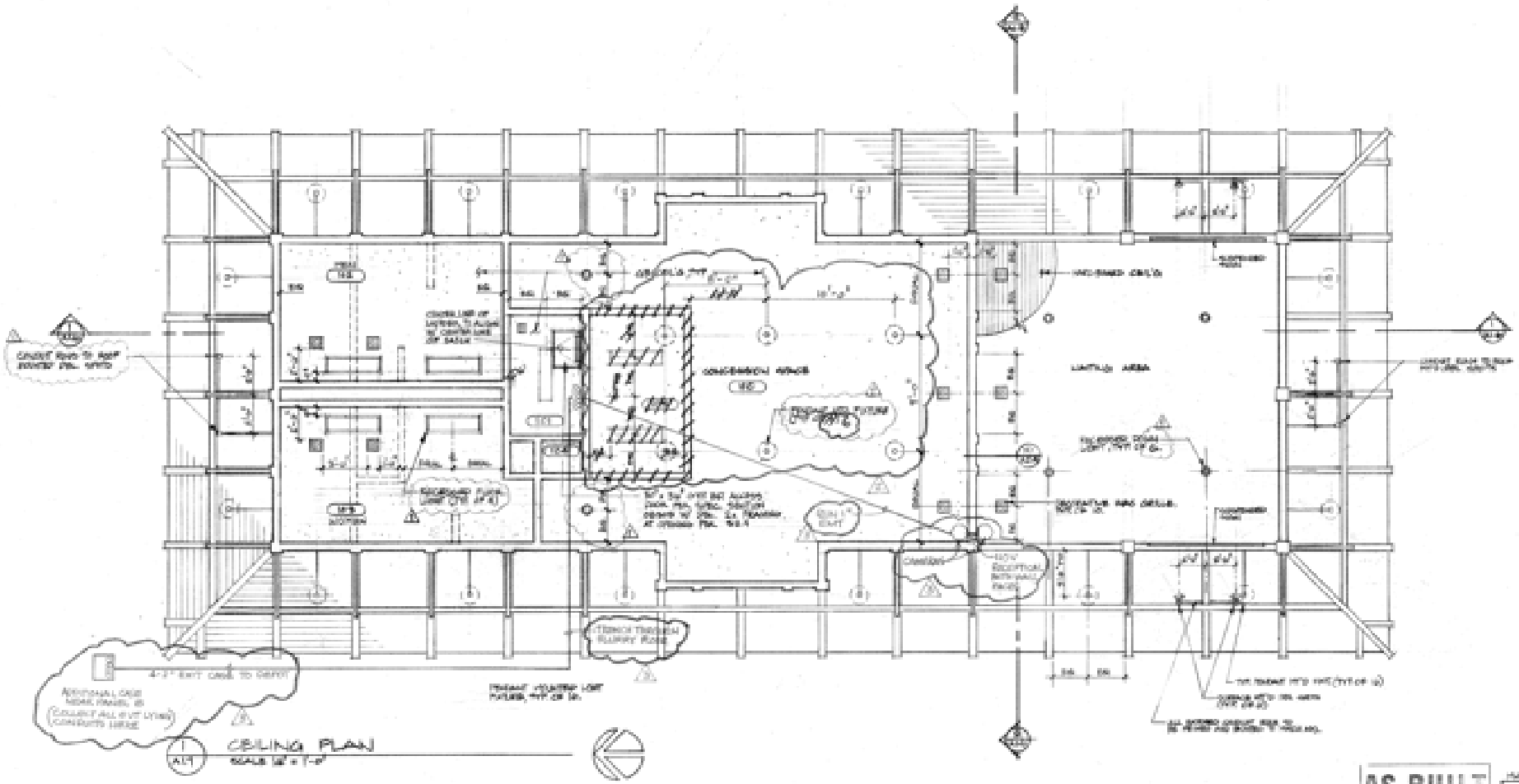
DESIGNED BY: D. LARSEN — DATE: 7-24-96
DRAWN BY:
CHECKED BY: [illegible] — 12-26-14, 8-6-96
MTDB PROJ. ENG.

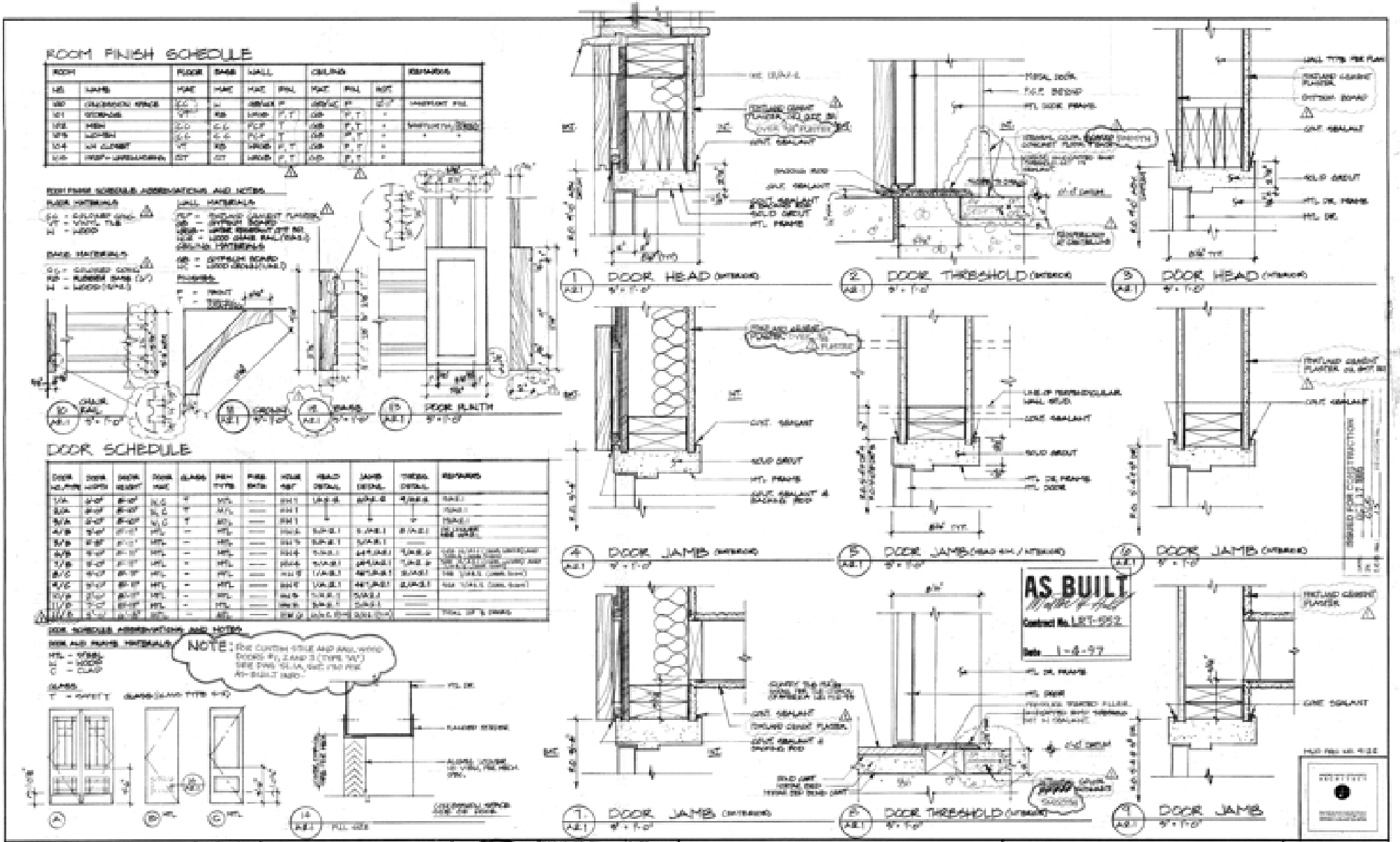
MTDB
Metropolitan Transit Development Board
[illegible]

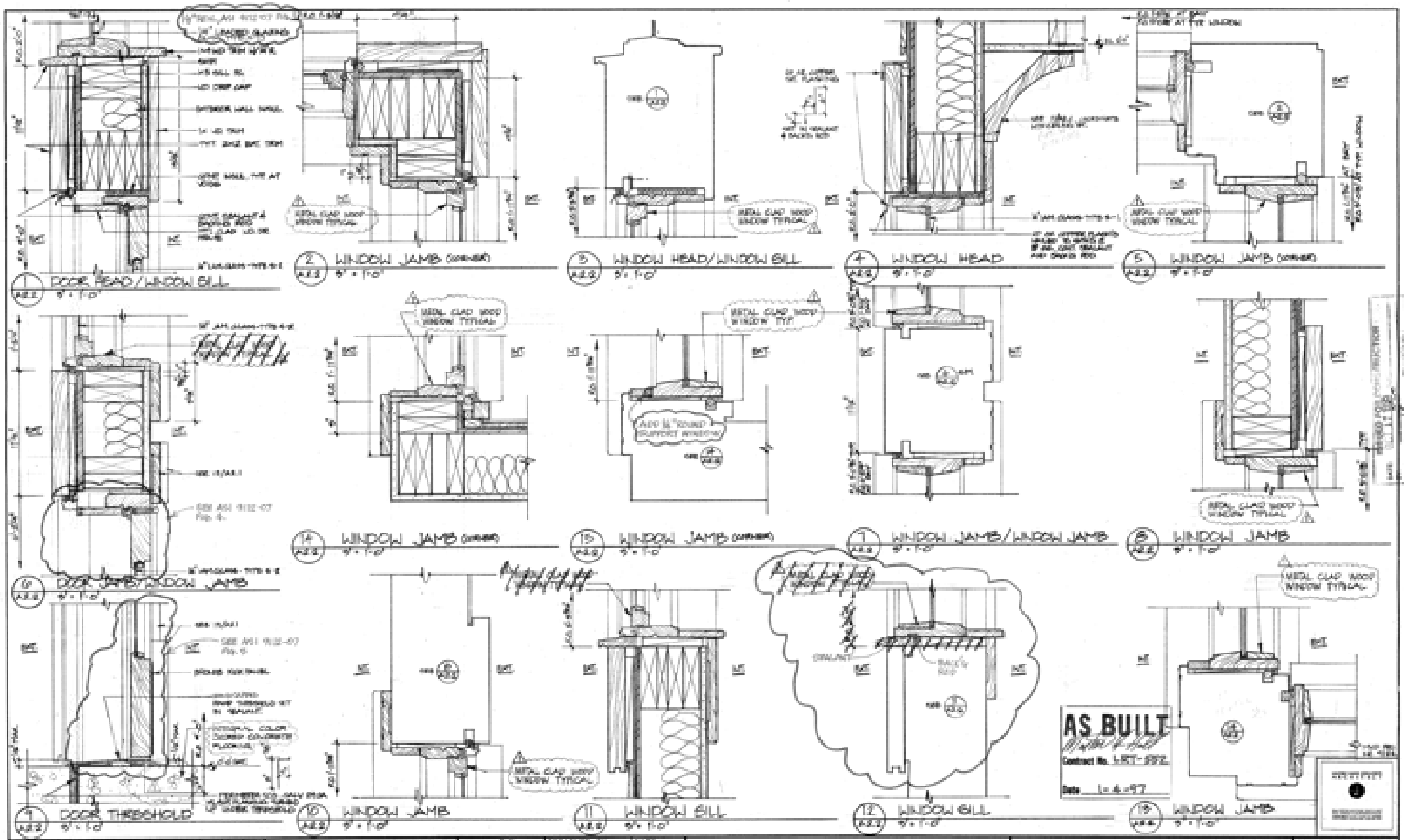
LIGHT RAIL GUIDEWAY PROJECT
San Diego

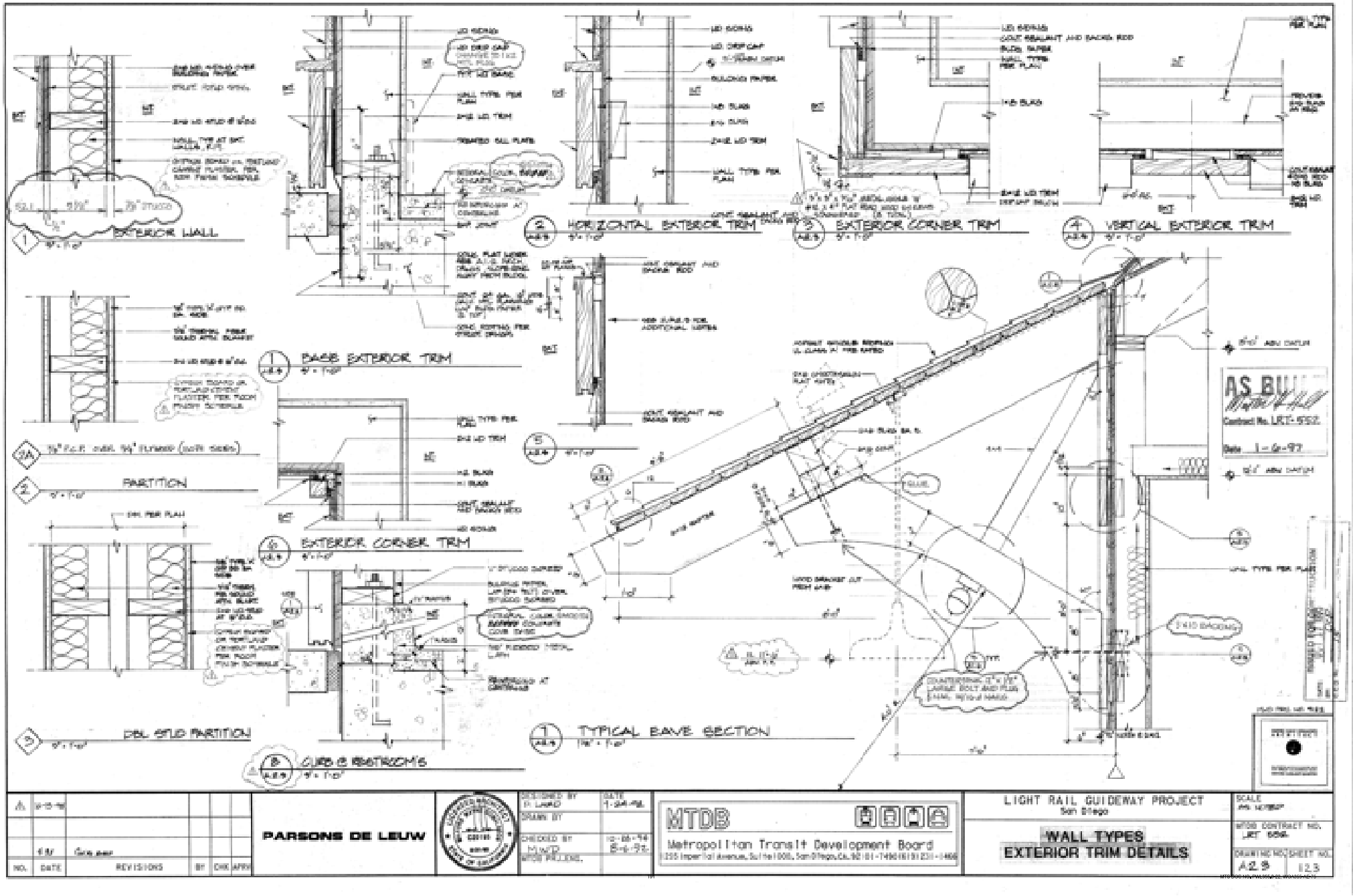
BUILDING SECTIONS

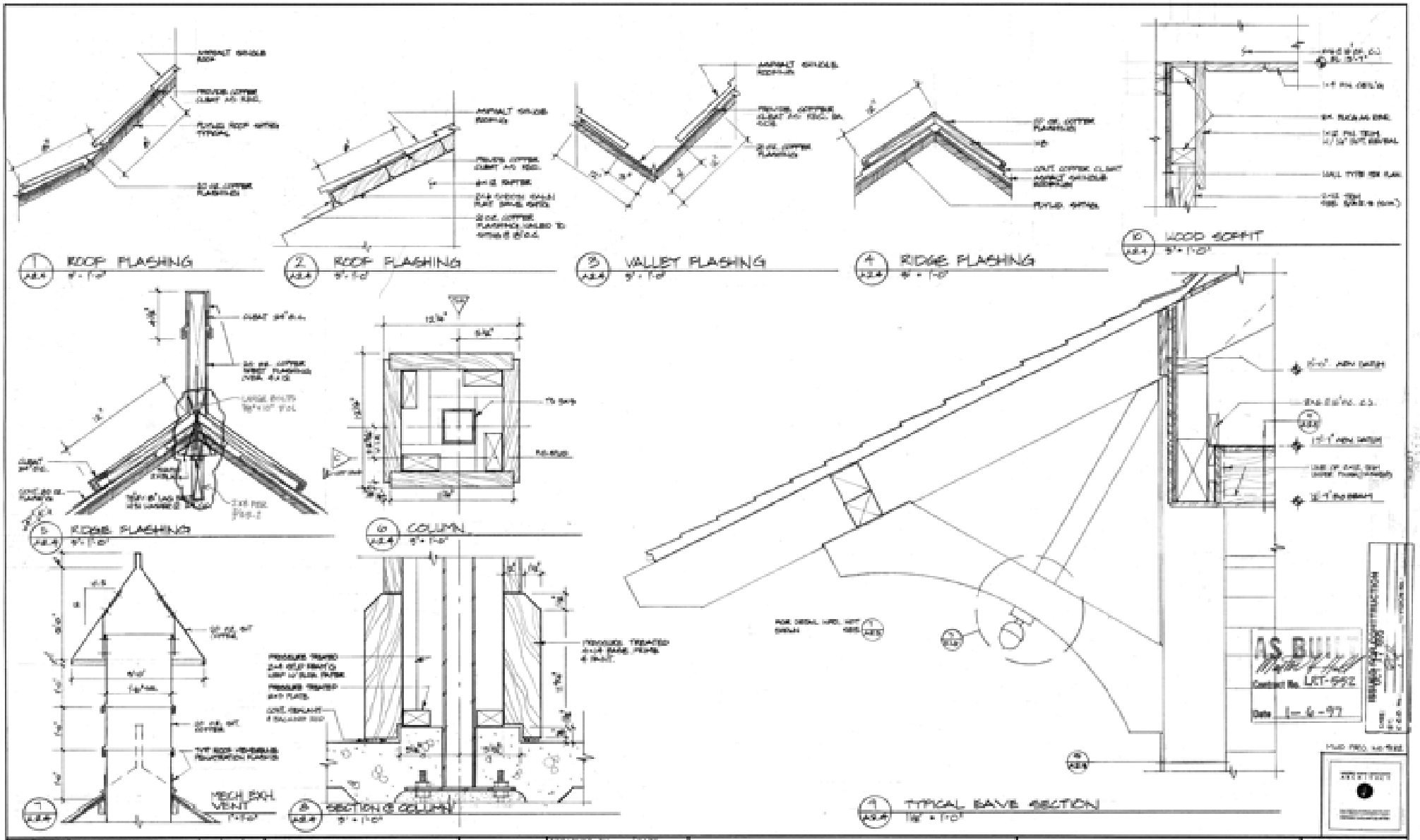
SCALE: AS NOTED
MTDB CONTRACT NO. LRT 552
DRAWING NO. A1.6
SHEET NO. 119

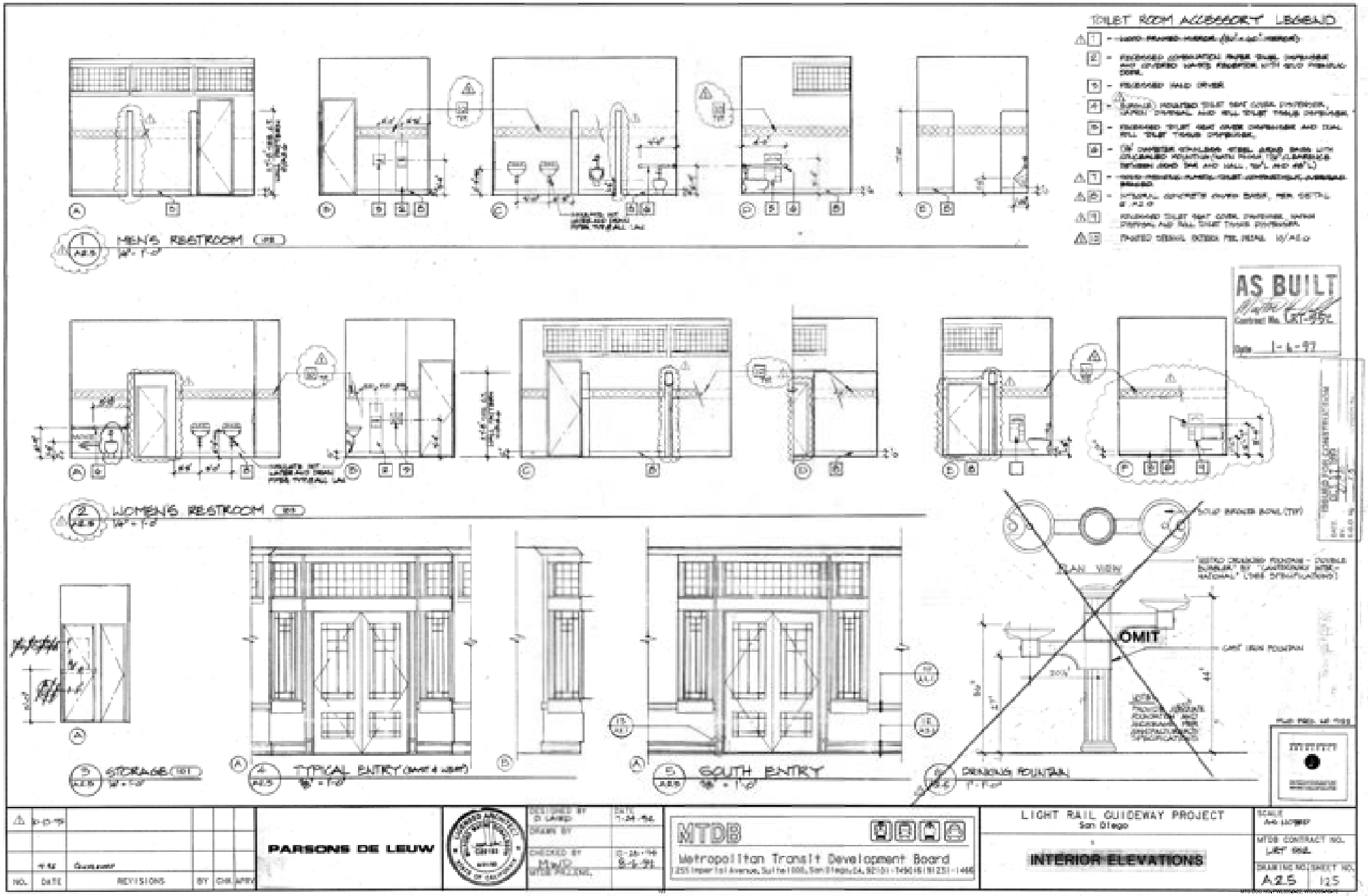

CEILING PLAN
SCALE 1/8" = 1'-0"
A1.7
AS BUILT
Contract No. LRT-562
Date 1-2-97
PARSONS DE LEUW
DESIGNED BY D. LAIRD
DRAWN BY
CHECKED BY
MTDB PROJ. ENG.
DATE 1-24-95
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
CEILING PLAN
SCALE AS NOTED
MTDB CONTRACT NO. LRT 562
DRAWING NO. A1.7
SHEET NO. 120

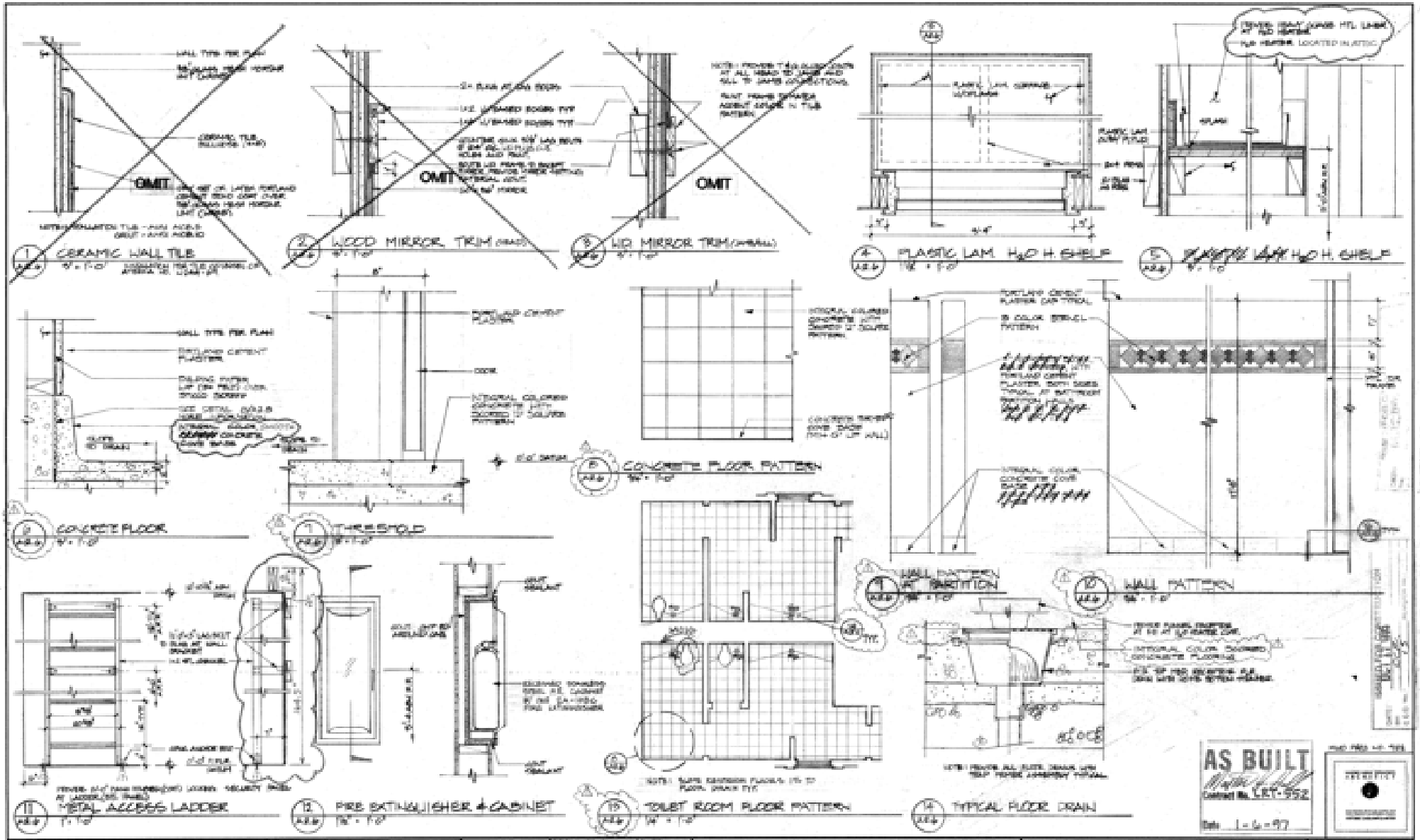

ROOM FINISH SCHEDULE
DOOR SCHEDULE
DOOR HEAD
DOOR THRESHOLD
DOOR HEAD
DOOR JAMB
DOOR JAMB
DOOR JAMB
DOOR JAMB
DOOR THRESHOLD
DOOR JAMB
DOOR PLINTH
AS BUILT
NOTE:
PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
ROOM FINISH SCHEDULE
DOOR SCHEDULE
DOOR DETAILS


1 DOOR HEAD/WINDOW SILL
2 WINDOW JAMB
3 WINDOW HEAD/WINDOW SILL
4 WINDOW HEAD
5 WINDOW JAMB
6 DOOR JAMB/WINDOW JAMB
7 WINDOW JAMB/WINDOW JAMB
8 WINDOW JAMB
9 DOOR THRESHOLD
10 WINDOW JAMB
11 WINDOW SILL
12 WINDOW SILL
13 WINDOW JAMB
METAL CLAD WOOD WINDOW TYPICAL
AS BUILT
Contract No. LRT-952
Date 1-6-97
PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
DOOR DETAILS
WINDOW DETAILS
MTDB CONTRACT NO. LRT 952
STARTING NO. SHEET NO. A2.2 122


EXTERIOR WALL
HORIZONTAL EXTERIOR TRIM
EXTERIOR CORNER TRIM
VERTICAL EXTERIOR TRIM
BASE EXTERIOR TRIM
PARTITION
EXTERIOR CORNER TRIM
DBL STUD PARTITION
CURB @ RESTROOMS
TYPICAL EAVE SECTION
AS BUILT
Contract No. LRT-552
Date 1-6-97
PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
WALL TYPES
EXTERIOR TRIM DETAILS
A2.5


1 A2.4 ROOF FLASHING 3" = 1'-0"
2 A2.4 ROOF FLASHING 3" = 1'-0"
3 A2.4 VALLEY FLASHING 3" = 1'-0"
4 A2.4 RIDGE FLASHING 3" = 1'-0"
10 A2.4 WOOD SOFFIT 3" = 1'-0"
5 A2.4 RIDGE FLASHING 3" = 1'-0"
6 A2.4 COLUMN 3" = 1'-0"
7 A2.4 MECH EXH VENT 1" = 1'-0"
8 A2.4 SECTION @ COLUMN 3" = 1'-0"
9 A2.4 TYPICAL EAVE SECTION 1 1/2" = 1'-0"
AS BUILT
Contract No. LET-692
Date 1-6-97
PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
EXTERIOR TRIM DETAILS
ROOF DETAILS
A2.4
124


TOILET ROOM ACCESSORY LEGEND
MEN'S RESTROOM
WOMEN'S RESTROOM
AS BUILT
STORAGE
TYPICAL ENTRY
SOUTH ENTRY
DRINKING FOUNTAIN
OMIT
PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
INTERIOR ELEVATIONS
A2.5



NO.	DATE	REVISIONS	BY	CHK APPV
4	4-97			

PARSONS DE LEUW

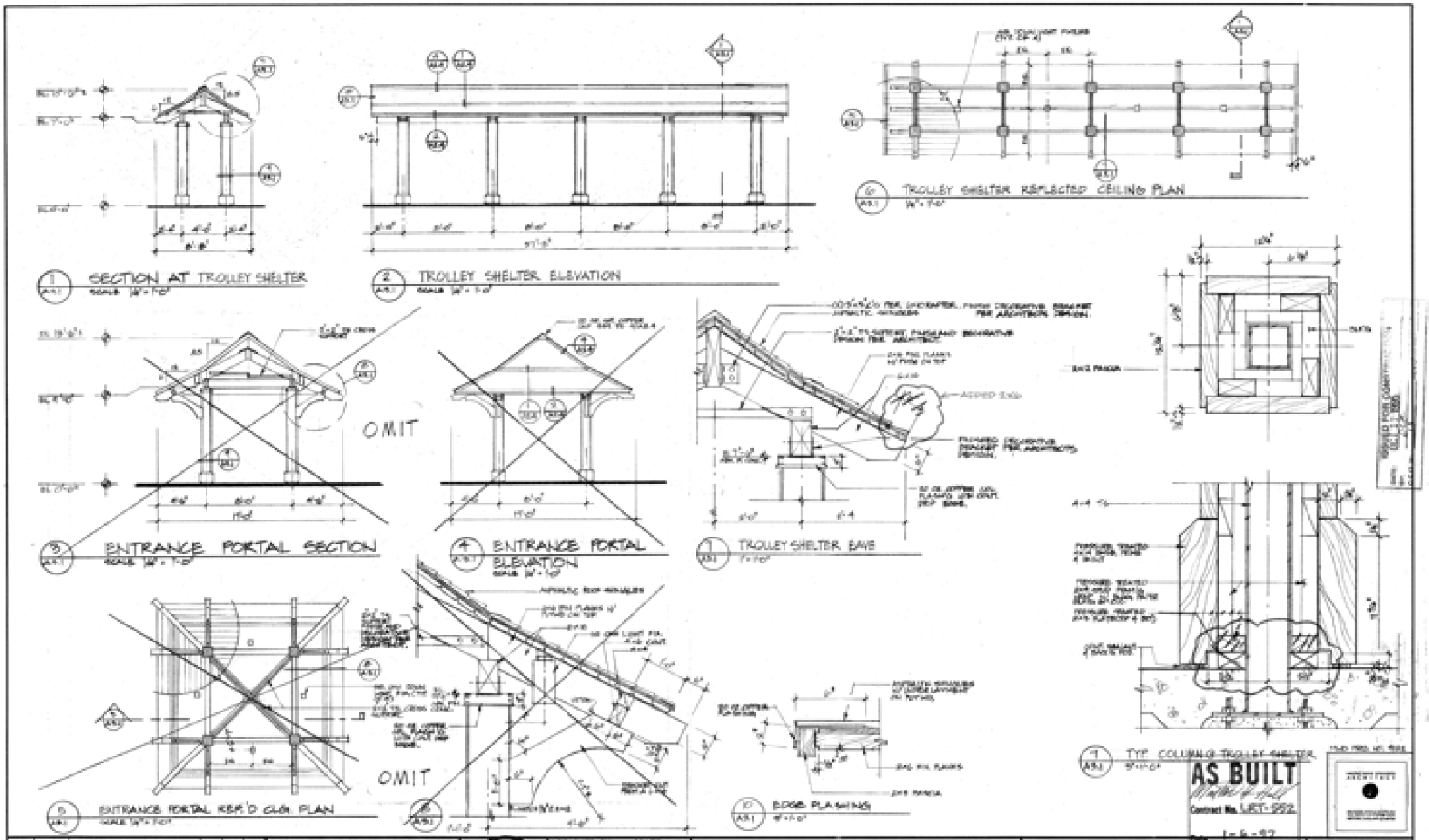
DESIGNED BY D. LARSEN — DATE 7-24-96
DRAWN BY
CHECKED BY M.WARD — 10-18-94, 8-6-97

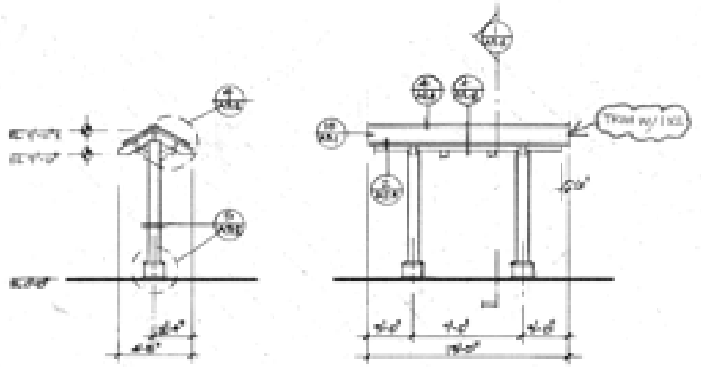
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-3480 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego

INTERIOR DETAILS
TILE PATTERNS

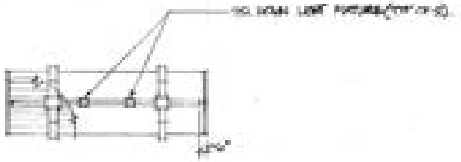
SCALE AS NOTED
MTDB CONTRACT NO. LRT 552
DRAWING NO. A2.6 SHEET NO. 126


SECTION AT TROLLEY SHELTER
TROLLEY SHELTER ELEVATION
TROLLEY SHELTER REFLECTED CEILING PLAN
OMIT
ENTRANCE PORTAL SECTION
ENTRANCE PORTAL ELEVATION
TROLLEY SHELTER EAVE
OMIT
ENTRANCE PORTAL REF'D CLG. PLAN
EDGE PLANKING
TYP. COLUMN @ TROLLEY SHELTER
AS BUILT
Contract No. LRT-952
PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
TROLLEY SHELTER
AS NOTED
MTDB CONTRACT NO. LRT 952
DRAWING NO. A9.1
SHEET NO. 127

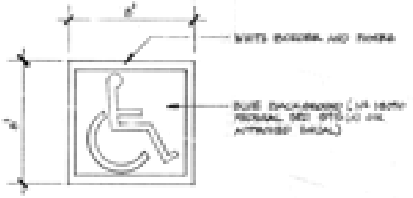


1 A5.2 BUS SHELTER SCALE: 3/4"=1'-0"

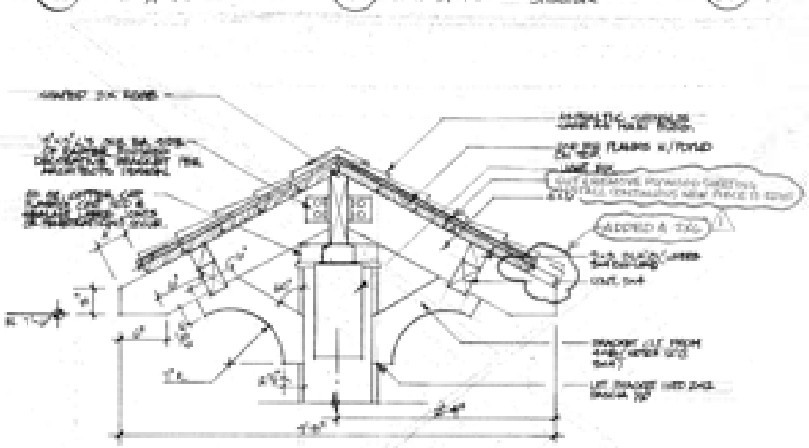
2 A5.2 ELEVATION OF BUS SHELTER SCALE: 3/4"=1'-0"



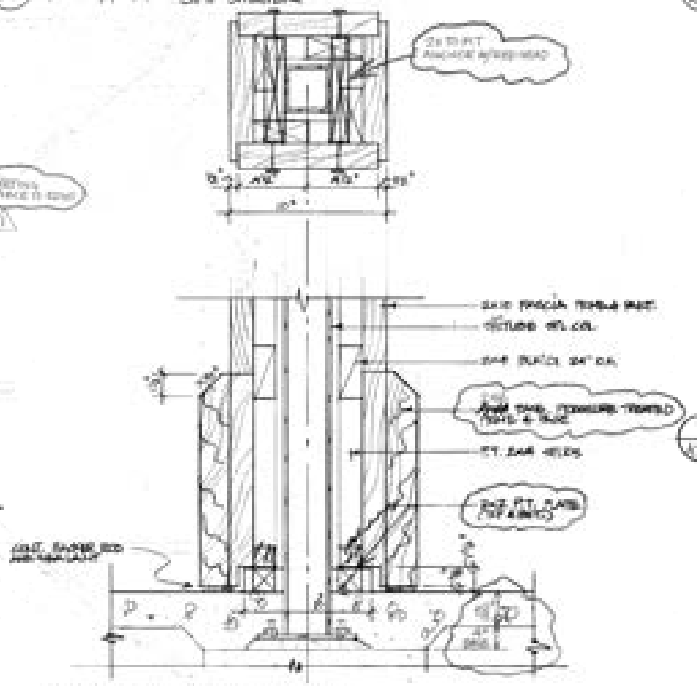
3 A5.2 REFLECTED CLG PLAN OF BUS SHELTER SCALE: 3/4"=1'-0"



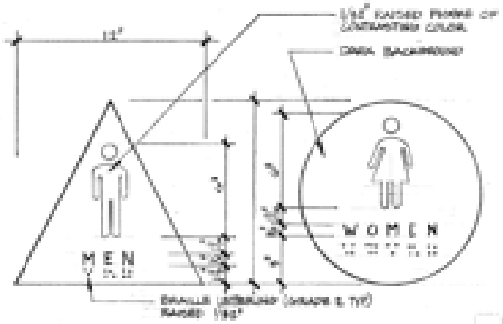
4 A5.2 INTERNATIONAL SYMBOL OF ACCESSIBILITY 3"=1'-0"



5 A5.2 SCALE: 3/4"=1'-0"



6 A5.2 SCALE: 3/4"=1'-0" BUS SHELTER



7 A5.2 RESTROOM SIGNS 3"=1'-0"

AS BUILT

NO.	DATE	REVISIONS	BY	CHK	APPR
1	4-15	Clarification			

DESIGNED BY D. LANGER 5/2/95
DRAWN BY
CHECKED BY MANAGER 6-16-94
MTDB PROJECT ENGR.

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego

BUS SHELTER

SCALE: AS NOTED
MTDB CONTRACT NO. LRT 562
DRAWING NO. A5.2 SHEET NO. 128

GENERAL NOTES

GENERAL REQUIREMENTS

1. VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. NOTIFY M.T.D.B. IMMEDIATELY OF ANY DISCREPANCIES.
2. NOTES AND DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS ON THIS SHEET IN CASE OF CONFLICT.
3. ALL MATERIALS AND WORK SHALL CONFORM TO THE REQUIREMENTS OF THE UNIFORM BUILDING CODE, 1991 EDITION (UBC), AS ADOPTED BY THE CITY OF SAN DIEGO INCLUDING AMENDMENTS.
4. WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE THE SAME AS FOR SIMILAR WORK SHOWN ON THE DRAWINGS.
5. PIPES, DUCTS, SLEEVES, CHASES, ETC., SHALL NOT BE PLACED IN SLABS, BEAMS, OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC., UNLESS SPECIFICALLY SHOWN. OBTAIN PRIOR WRITTEN APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.
6. TAKE ALL NECESSARY PRECAUTIONS TO LOCATE AND PROTECT ANY UNDERGROUND OR CONCEALED CONDUIT, PLUMBING OR OTHER UTILITIES WHERE NEW WORK IS BEING PERFORMED.
7. CONSTRUCTION MATERIALS SHALL BE EVENLY DISTRIBUTED IF PLACED ON FRAMED ROOFS. LOADS SHALL NOT EXCEED THE ALLOWABLE LOADING FOR THE SUPPORTING MEMBERS AND THEIR CONNECTIONS.
8. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE METHODS, PROCEDURES OR SEQUENCE OF CONSTRUCTION. TAKE NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION. NEITHER THE OWNER, ARCHITECT OR ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.

DESIGN CRITERIA

1. DEAD LOADS:
   - PITCHED ROOF AT INTERIOR . . . . . 15 PSF
   - PITCHED ROOF AT EXTERIOR . . . . . 24 PSF
2. LIVE LOADS:
   - ROOF (BASIC LIVE LOAD) . . . . . 16 PSF
3. LATERAL LOADS:
   - SEISMIC: $V = ZICW/R_W$; $V = 0.14\,W$
   - ZONE 4: $Z = 0.4$, $I = 1.0$
   - $C = 2.75$, $R_W = 8$
   - WIND: $P = C_e C_q (\frac{1}{4}p_s)$; $P = 13\ PSF\ (C_e = 1.0, C_q = 1.3)$
   - EXPOSURE B: $q_s = 13\ PSF$; $I = 1.0$

FOUNDATION

1. GEOTECHNICAL INVESTIGATION: BY - WOODWARD-CLYDE CONSULTANTS, DATED - 6/7/91, NUMBER - 94510901-0200.
2. FOUNDATION MATERIAL: SILTY TO CLAYEY SAND.
3. FOOTINGS SHALL BE FOUNDED A MINIMUM OF 18 INCHES BELOW ROUGH PAD GRADE OR 18 INCHES BELOW LOWEST ADJACENT FINISHED GRADE, WHICHEVER IS DEEPER, AND HAVE A MINIMUM WIDTH OF 12 INCHES. FOOTINGS AND SLABS SHALL BE FOUNDED ON FIRM UNDISTURBED NATURAL SOILS OR APPROVED COMPACTED FILL.
4. SOIL PRESSURES:
   - SOIL BEARING 1,500 PSF
   - COEFFICIENT OF FRICTION 0.40
5. SOIL REMOVAL AND RECOMPACTION: PER SOILS REPORT AND THE DRAWINGS. SOILS WORK SHALL BE OBSERVED AND TESTED BY THE GEOTECHNICAL ENGINEER.
6. GEOTECHNICAL ENGINEER: SHALL OBSERVE FOOTINGS BEFORE PLACEMENT OF REINFORCING OR CONCRETE. FOOTING OBSERVATION AND COMPACTION REPORTS SHALL BE SENT TO THE ARCHITECT.
7. ROOF AND AREA DRAINAGE DIRECTED AWAY FROM THE BUILDING FOUNDATION.
8. EXCAVATIONS SHALL BE PROPERLY BACKFILLED. BACKFILL FOR ALL RETAINING AND RESTRAINED WALLS SHALL BE POROUS MATERIAL ACCEPTABLE TO THE GEOTECHNICAL ENGINEER. DO NOT PLACE BACKFILL BEHIND WALLS BEFORE THEY HAVE ATTAINED THEIR DESIGN STRENGTH. SHORE AND PROTECT WALLS FROM LATERAL LOADS UNTIL THE SUPPORTING MEMBERS ARE IN PLACE AND HAVE DEVELOPED SPECIFIED STRENGTHS.

REINFORCED CONCRETE

1. MATERIALS:
   - CEMENT — ASTM C 150 — TYPE II
   - AGGREGATE — ASTM C 33 — STANDARD WEIGHT
   - REINFORCEMENT — ASTM A 615 — GRADE 60
   - ASTM A 706 — WELDED REINFORCEMENT
   - ASTM A 185 — WELDED WIRE FABRIC FLAT SHEETS
2. CONCRETE STRENGTHS: THE CONCRETE STRENGTHS SHOWN IN THE FOLLOWING TABLE ARE THE MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS, THE AGGREGATE SHOWN IS THE MAXIMUM SIZE, AND THE WATER/CEMENT RATIO IS THE MAXIMUM. CONCRETE SHALL BE STANDARD WEIGHT CONCRETE (145 PCF).

ITEM OF CONSTRUCTION	STRENGTH (PSI)	AGGREGATE (INCHES)	SLUMP (INCHES)	WATER/CEMENT (GAL/SACK)
FOUNDATIONS	3,000	1-1/2	4 TO 6	7.75
SLAB ON GRADE	* 3,000	1	3 TO 5	6.75

* CONTINUOUS SPECIAL INSPECTION NOT REQUIRED.

3. REINFORCEMENT:
   - A. DETAILING, FABRICATION AND PLACING: SHALL CONFORM TO CRSI "MANUAL OF STANDARD PRACTICE" LATEST EDITION AND ACI 315.
   - B. MINIMUM CONCRETE COVER FOR REINFORCEMENT:
     - CAST AGAINST & EXPOSED TO EARTH . . . . . 3"
     - EXPOSED TO EARTH OR WEATHER . . . . . 2"
     - NOT EXPOSED TO WEATHER OR EARTH
       - SLAB, WALLS, JOISTS . . . . . 3/4"
       - BEAMS . . . . . #11 BARS OR SMALLER, 1-1/2"
       - LARGER . . . . . 2"
   - C. PROVIDE BAR CHAIRS, SPACERS AND SAND PLATES AS REQUIRED TO MAINTAIN CONCRETE COVER.
   - D. VERTICAL REINFORCEMENT: SHALL BE DOWELED TO SUPPORTING MEMBERS WITH THE SAME SIZE AND SPACING OF REINFORCEMENT AS SHOWN IN THE DRAWINGS AND GENERAL NOTES.
   - E. CLEAR DISTANCE BETWEEN PARALLEL BARS IN A LAYER SHALL NOT BE LESS THAN 1-1/2 TIMES THE NOMINAL DIAMETER OF THE BARS, OR 1-1/2 TIMES MAXIMUM SIZE AGGREGATE, NOR LESS THAN 1-1/2".
   - F. TACK WELDING, WELDING, HEATING OR CUTTING IS NOT PERMITTED UNLESS INDICATED ON THE DRAWINGS.
   - G. 2-#4 X 4'-0" AT RE-ENTRANT CORNERS AND EACH CORNER OF RECTANGULAR HOLES IN SLABS. PLACE BARS DIAGONALLY.
   - H. SPLICES IN REINFORCING: SHALL BE LAP #8 BAR EQUIVALENTS OR 24 INCHES MINIMUM OR GREATER. STAGGER SPLICES UNLESS OTHERWISE NOTED. LAP SPLICES OF BOTTOM BARS STAGGERED AT LEAST 5'-0" FROM LAPS IN OTHER BOTTOM BARS. STAGGER LAP SPLICES FOR TOP BARS SIMILARLY.
   - I. REINFORCING STEEL SHOP DRAWINGS: REVIEWED BY THE ARCHITECT BEFORE FABRICATION.
   - J. SPACER TILES: FORMICA #3 TILES AT 32 INCHES ON CENTER IN ALL BEAMS AND FOOTINGS, UNLESS OTHERWISE NOTED.
4. CONSTRUCTION JOINTS: MINIMUM PREPARATION - SANDBLAST.
5. ANCHOR BOLTS, BOWLTS AND HOLD-DOWN ANCHORS: SECURELY HELD IN PLACE PRIOR TO FOUNDATION INSPECTION.
6. PIPES, SLEEVES AND DUCTS: NOT TO BE PLACED IN WALLS, BEAMS, SLABS, FOOTINGS OR COLUMNS UNLESS SPECIFICALLY DETAILED.
7. CONDUITS IN SLABS: OUTSIDE DIAMETER LESS THAN 1/3 THE SLAB THICKNESS. PROVIDE A MINIMUM OF 6" CLEAR BETWEEN CONDUITS EXCEPT AT LOCAL OFFSETS.
8. OPENINGS: SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS OF PIPES, DUCTS, VENTS AND SIMILAR OPENINGS.
9. CHAMFER: 3/4 INCH ON EXPOSED CORNERS.
10. ADMIXTURES: REVIEWED BY ARCHITECT, NO CALCIUM CHLORIDE.
11. SLAB-ON-GRADE JOINTS: LOCATION OF ALL CONSTRUCTION, CONTROL AND WEAKENED PLANE JOINTS NOT SPECIFICALLY INDICATED ON THE DRAWINGS SHALL BE REVIEWED BY THE ARCHITECT PRIOR TO THE PLACING OF REINFORCEMENT.
12. CONCRETE CURING: SEE SPECIAL PROVISIONS.
13. SLAB, WALL, BEAM AND COLUMN DIMENSIONS SHOWN ARE ACTUAL DIMENSIONS NOT NOMINAL DIMENSIONS (i.e. A 4 INCH SLAB IS 4 INCHES THICK NOT 3-1/2 INCHES.)
14. CONSTRUCTION JOINTS: WAIT 48 HOURS MINIMUM BETWEEN ADJACENT POURS. SEE SPECIFICATIONS FOR COMMON SURFACE PREPARATION.

STRUCTURAL STEEL

1. CODES: AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION FOR STRUCTURAL STEEL FOR BUILDINGS; STRUCTURAL WELDING CODE AWS D1.1 AND AWS D1.4.
2. MATERIALS:
   - STRUCTURAL SHAPES & PLATES . . . ASTM A36 — TYPICAL
   - TS SHAPES (TUBE COLUMNS) . . . ASTM A500 — GRADE B
   - MACHINE BOLTS . . . ASTM A307
   - NUTS . . . ASTM A563 — HDG, GRADE A
3. HOLES AND THREADED ANCHORS: NELSON STUD FUSED ANCHORS.
4. WELDING:
   - A. ELECTRODES: CLASS E-70 XX SERIES, LOW HYDROGEN, AWS D1.1.
   - B. WELDERS: CERTIFIED.
   - C. WELDS: SIZES INDICATED ON DRAWINGS ARE MINIMUM STRUCTURAL WELDS. WELDS SHALL BE INCREASED TO MEET MINIMUMS REQUIRED BY AISC TABLES 1-23 AND 1-27-28. FIELD WELDING MAY BE REQUIRED TO FACILITATE CONSTRUCTION.
5. NON-SHRINK GROUT: 7,000 PSI NON-SHRINK PER ASTM C1107.
6. SHOP DRAWINGS: REVIEWED BY THE ARCHITECT BEFORE FABRICATION.
7. BOLT HOLES:
   - TYPICAL BOLTS - 1/16 INCH OVERSIZED
   - ANCHOR BOLTS - 3/16 INCH OVERSIZED
8. EXPOSED STEEL: HOT DIP GALVANIZED.

TIMBER

1. GRADE STAMPED DOUGLAS FIR/LARCH (SEE LUMBER GRADES).
2. TOP PLATES: TWO PIECES, SAME SIZE AS STUDS, STAGGER SPLICES 4'-0" MINIMUM.
3. SOLID BLOCKING (WALLS): TWO INCH FULL WIDTH BLOCKING (FIRE STOPS) IN ALL STUD WALLS AND FURRED SPACES SO THAT MAXIMUM DIMENSION OF ANY CONCEALED SPACE IS NOT OVER 10 FEET.
4. FULL-DEPTH SOLID BLOCKING OR CROSS BRACING SHALL BE INSTALLED AT INTERVALS NOT EXCEEDING 8 FEET FOR ALL JOISTS AND RAFTERS 2x12 AND DEEPER.
5. NAILS: COMMON WIRE UNLESS OTHERWISE NOTED. PENETRATION PER TABLE NO. 25-Q OF THE UBC. DISTANCES TO THE EDGE OR END OF THE WOOD AND CENTER TO CENTER SPACING OF NAILS SHALL NOT BE LESS THAN ONE-HALF THE PENETRATION. HOLES FOR NAILS, WHERE NECESSARY TO PREVENT SPLITTING, SHALL BE SUB-DRILLED TO A DIAMETER NOT MORE THAN 3/4 OF THE NAIL DIAMETER.
6. WASHERS: BOLTS, LAGS AND NUTS SHALL BE FITTED WITH CUT STEEL WASHERS.
7. BOLTS: SHALL BE NOT LESS THEN 7 BOLT DIAMETERS FROM THE END AND 4 DIAMETERS FROM THE EDGE. BOLT HOLES SHALL BE 1/32 INCH LARGER THAN THE BOLT DIAMETER. ALL NUTS SHALL BE TIGHTENED WHEN INSTALLED AND RE-TIGHTENED AT THE COMPLETION OF WORK OR BEFORE CLOSING IN. THREAD PENETRATION SHALL BE 1/16 INCH MINIMUM. BOLTS SHALL BE CENTERED IN SLOTTED HOLES.
8. LAG SCREWS: PRE-DRILL WITH A 3/4 SIZE BIT TO 2/3D OF THE SHANK DIAMETER FOR THE THREADED PORTION. LEAD HOLE TO BE THE SAME LENGTH AS THE UN-THREADED SHANK AND THE SAME DIAMETER AS THE SHANK. SCREW ALL LAGS INTO PLACE.
9. SILL BOLTS: PROVIDE 5/8 INCH DIAMETER ANCHOR BOLTS WITH A MINIMUM OF 7 INCHES EMBEDMENT INTO THE CONCRETE AND WITHIN 9 INCHES OF EACH END OF EACH SILL PLATE. SPACE ANCHORS AT 48 INCHES ON CENTER U.O.N. WITH A MINIMUM OF 2 ANCHORS EACH SILL PLATE.
10. PRESSURE TREATED WOOD (UBC STANDARD 25-12): FOUNDATION PLATES AND SILLS ON CONCRETE SLABS AND FOUNDATIONS, WHICH ARE IN DIRECT CONTACT WITH EARTH, SHALL BE TREATED WOOD. NEWLY EXPOSED SURFACES RESULTING FROM FIELD CUTTING, BORING, OR HANDLING ABUSE SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA M-4.
11. FRAMING CONNECTORS: SIMPSON STRONG-TIE, CATALOG (-99R), ICBO APPROVED AND INSTALLED ACCORDINGLY. EQUIVALENT CONNECTORS MANUFACTURED BY TECO, MITEK INDUSTRIES, U.S. METALS CO., OR MARLEN METAL PRODUCTS, IF USED, SUBMITTED WITH CATALOG AND ICBO REPORTS TO THE ARCHITECT FOR REVIEW.
12. CUTTING AND NOTCHING: DO NOT CUT, BORE, COUNTERSINK OR NOTCH WOOD MEMBERS EXCEPT WHERE SHOWN ON THE DETAILS. HOLES THROUGH STUDS, PLATES, SILLS AND DOUBLE PLATES IN WALLS SHALL NOT EXCEED 1/3 THE MEMBER WIDTH AND SHALL BE LOCATED IN THE CENTER OF THE MEMBER.
13. PARTITIONS: DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS AND 2X SOLID BLOCKING UNDER PERPENDICULAR PARTITIONS.
14. END SUPPORT: ROOF AND FLOOR JOISTS OVER 4 INCHES DEEP SHALL HAVE THEIR ENDS HELD IN POSITION WITH:
    - FULL DEPTH SOLID BLOCKING.
    - NAILED BRIDGING.
    - NAILING OR BOLTING TO OTHER FRAMING MEMBERS.
    - APPROVED JOIST HANGERS.
15. ALL EXPOSED STEEL TIMBER CONNECTORS, BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.

LUMBER GRADED DOUGLAS FIR/LARCH
COMPLY WITH PS 20, AMERICAN SOFTWOOD LUMBER STANDARD AND STANDARD GRADING RULES NO. 16A OF THE WEST COAST LUMBER INSPECTION BUREAU. 15% MAXIMUM MOISTURE CONTENT AT TIME OF PLACEMENT.

1.	LIGHT FRAMING, BLOCKING STUDS (10'-0" MAXIMUM)	2" TO 4" THICK, 2" TO 4" WIDE, CONSTRUCTION LIGHT FRAMING.
2.	STUDS (10'-0" MAXIMUM)	2" TO 4" THICK, 2" TO 4" WIDE, NO. 1 STRUCTURAL LIGHT FRAMING.
3.	STUDS, BLOCKING, CEILING, ROOF AND FLOOR JOISTS	2" TO 4" THICK, 2" AND WIDER, NO. 2 STRUCTURAL JOISTS AND PLANKS
4.	BEAMS AND STRINGERS	5" AND THICKER, WIDTH MORE THAN 2" GREATER THAN THICKNESS, NO. 1 STRUCTURAL BEAMS AND STRINGERS.
5.	POSTS AND TIMBERS	5" BY 5" AND LARGER, WIDTH NOT MORE THAN 2" GREATER THAN THICKNESS, NO. 1 STRUCTURAL POSTS AND TIMBERS.

PLYWOOD - PS 1-83 (EXPOSURE 1), APA RATED, FABRICATION & INSTALLATION IN ACCORDANCE WITH THE APA SPECIFICATIONS

1.	1/2 INCH SHEAR PANELS	STRUCTURAL 1, SPAN RATING 24/0 (4 PLY)
2.	1/2 OR 15/32 INCH ROOF DECK	STRUCTURAL 1, SPAN RATING 32/16 (5PLY)

3. BLOCKING: ALL UNSUPPORTED JOINTS SHALL BE BLOCKED SOLID WITH 2" BLOCKING UNLESS OTHERWISE NOTED ON THE DRAWINGS.
4. NAILING: COMMON WIRE NAILS. NAIL HEADS SHALL BE DRIVEN FLUSH BUT SHALL NOT FRACTURE THE SURFACE OF THE SHEATHING. FIELD NAILING SHALL BE AT 12 INCHES ON CENTER FOR SHEAR PANELS AND ROOF DECK AND 12 INCHES ON CENTER FOR FLOOR DECK. STAGGER NAILING ON 3x AND LARGER MEMBERS.
5. MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION FOR THIS PROJECT AND REVIEW BY THE PROJECT ARCHITECT. THE USE OF MACHINE NAILING IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. IF NAIL HEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMERING OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY.
6. WHERE ADJACENT WALLS ARE SHEATHED, PLYWOOD SHALL BE INSTALLED OVER AND UNDER OPENINGS.

AS BUILT
Contract No. LRT-652
Date 1-6-97

STREETER & DIXON

NO.	DATE	REVISIONS	BY	CHK	APP'D
		48 Consultant			

PARSONS DE LEUW

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
MTDB PRJ. ENG.	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619)231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego

GENERAL NOTES
SHEET 1 OF 2

SCALE	
NO SCALE	
MTDB CONTRACT NO.	
LRT 652	
DRAWING NO.	SHEET NO.
411	12.9

MTS DOC NO. PW 355422 WO A355422-10

NAILING SCHEDULE - TABLE 25-Q, UBC

THE CONNECTIONS LISTED ARE THE MINIMUM PERMISSIBLE. USE COMMON WIRE NAILS FOR ALL CONNECTIONS UNLESS OTHERWISE NOTED. WHERE PERMISSIBLE, NAILS DRIVEN PERPENDICULAR TO THE GRAIN SHALL BE USED INSTEAD OF TOE NAILS.

JOIST TO SILL OR GIRDER, TOENAIL		3-8d
BRIDGING TO JOIST, TOENAIL EACH END		2-8d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL		16d AT 24"
TOP PLATE TO STUD, END NAIL		2-16d
STUD TO SOLE PLATE, TOENAIL		4-8d
	OR END NAIL	2-16d
DOUBLE STUDS, FACE NAIL		10d AT 24"
DOUBLED TOP PLATES, FACE NAIL		10d AT 24"
TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL		2-16d
CONTINUOUS HEADER, TWO PIECES CALKING EACH EDGE		16d AT 16"
CEILING JOISTS TO PLATE, TOENAIL		3-8d
CONTINUOUS HEADER TO STUD, TOENAIL		4-8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL		3-16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL		3-16d
RAFTER TO PLATE, TOENAIL		3-8d
1" BRACE TO EACH STUD AND PLATE, FACE NAIL		2-8d
BUILT-UP CORNER STUDS		10d AT 24"
BUILT-UP GIRDERS AND BEAMS		20d AT 32"
	AT TOP AND BOTTOM STAGGERED	
		2-20d AT ENDS AND
		AT EACH SPLICE
2" PLANKS, EACH END AND EACH BEARING		2-16d

STRUCTURAL GLUED LAMINATED MEMBERS - ANSI A190.1 AITC & APA-EWS

1. LUMBER: DOUGLAS FIR/LARCH.
   COMBINATION 24F-V4 FOR SIMPLE SPANS.
   COMBINATION 24F-V8 FOR CONTINUOUS AND CANTILEVER SPANS.
   CONDITION OF USE: DRY.
2. ADHESIVE: ASTM D2559 WET USE (WATERPROOF).
3. APPEARANCE GRADE: AITC 110 - INDUSTRIAL.
4. CAMBER: SEE STRUCTURAL DRAWINGS.
5. CERTIFICATE: GOLD SEAL CERTIFICATE TIMBER PRODUCTS INSPECTION, INC., APA-EWS OR A.I.T.C. CERTIFICATE. SUBMIT CERTIFICATE TO THE BUILDING INSPECTOR PRIOR TO INSTALLATION.
6. SHOP DRAWINGS: REVIEWED BY THE ARCHITECT BEFORE FABRICATION.
7. LAMINATIONS: 2 INCH NOMINAL.
8. PROTECTION: CHLORLITE END SEALER SHALL BE APPLIED IMMEDIATELY TO THE ENDS OF ALL MEMBERS AFTER FABRICATION FIELD TRIMMING. MEMBERS SHALL BE INDIVIDUALLY WRAPPED.

SPECIAL INSPECTIONS (U.B.C. SECTION 306)

1. REQUIREMENTS OF SECTION 306 FOR SPECIAL CONTINUOUS INSPECTION:
   A. THE CERTIFIED SPECIAL INSPECTOR SHALL BE UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER.
   B. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND THE ARCHITECT. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION THEN, IF UNCORRECTED, TO THE ARCHITECT AND A.T.S.S.
   C. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT SIGNED BY A CIVIL ENGINEER STATING WHETHER OR NOT THE WORK REQUIRING SPECIAL INSPECTION WAS IN CONFORMANCE WITH THE DRAWINGS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE UBC.

OLD TOWN DEPOT : INTERIOR & EXTERIOR PAINTING SCHEDULE
B. B. PEDERSON PAINTING P.O. BOX 691, LA MESA, CA., (619) 466-2350

WALLS INTERIOR & KONTRAL WHITE # SW 1094
TRIM & DOORS : SAND STORM # SW 1074
WINDOWS : RUSTIC RED # SW 2319
STENCIL : MIDNIGHT BLUE # SW 1193
CABINET # SW 1254

EXTERIOR COLORS:
OVERHANGS - SOFFITS : BAREBRICK BEIGE #SW 1094
RAILINGS - WINDOW TRIM : " " # SW 2075
BUILDING - DOORS : RUSTIC RED # SW 2319
ACCENT " " # SW 2319

SUMMARY OF SPECIAL INSPECTIONS

1 CONCRETE	13B VERIFY THAT FOUNDATION EXCAVATIONS EXTEND TO PROPER DEPTH & BEARING STRATA
2 BOLTS INSTALLED IN CONCRETE	13C PROVIDE SOIL COMPACTION TEST RESULTS, DEPTH OF FILL, RELATIVE DENSITY, BEARING VALUES
3 CONCRETE MOMENT RESISTING SPACE FRAME	13D PROVIDE SOIL EXPANSION TEST RESULTS, EXPANSION TEST RESULTS, EXPANSION INDEX, RECOMMENDATIONS FOR FOUNDATION, IN GRADE FLOOR SLAB DESIGN FOR EACH BUILDING SITE
4 REINFORCING STEEL	14 SPECIAL CASES (DESCRIBE)
5A WELD TESTING DUCTILE MOMENT RESISTING FRAMES	15 OFF-SITE FABRICATIONS OF BUILDING COMPONENTS
5B ALL STRUCTURAL WELDING INCLUDING REINFORCING STEEL	16 OTHER STRUCTURAL INSPECTIONS AS REQUIRED BY DESIGNER
6 HIGH-STRENGTH BOLTING	
7 STRUCTURAL MASONRY	
8 REINFORCED GYPSUM CONCRETE	
9 INSULATING CONCRETE FILL	
10 SPRAY-APPLIED FIREPROOFING	
11 DEEP FOUNDATIONS (PILING, DRILLED PIERS & CAISSONS)	
12 SHOTCRETE	
13A VERIFY SOIL CONDITIONS ARE SUBSTANTIALLY IN CONFORMANCE WITH THE SOIL INVESTIGATION REPORT	

NO.	LOCATION	ADDITIONAL SPECIAL INSPECTIONS	DESIGN STRENGTH
1	CONCRETE FOOTINGS - LINES A, B, C, 1, 1.8, 4 & 6		3,000 PSI

THE CONSTRUCTION INSPECTIONS LISTED ARE IN ADDITION TO THE INSPECTIONS REQUIRED BY UBC SECTION 305. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY A CITY INSPECTOR. SPECIALLY INSPECTED WORK WHICH IS INSTALLED OR CONCEALED WITHOUT THE APPROVAL OF A.T.S.S. AND THE SPECIAL INSPECTOR IS SUBJECT TO REOPENING OR EXPOSURE.

THE SPECIAL INSPECTION IS TO BE CONTINUOUS DURING THE PERFORMANCE OF THE WORK UNLESS OTHERWISE SPECIFIED.

THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE CITY OF SAN DIEGO TO PERFORM THE TYPES OF SPECIAL INSPECTIONS SPECIFIED.

IT IS THE RESPONSIBILITY OF THE OWNER TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION. ALL WORK PERFORMED WITHOUT THE REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL AND RECONSTRUCTION.

SPECIAL STRUCTURAL OBSERVATIONS (UBC SECTION 307)

1. REQUIREMENTS FOR SPECIAL STRUCTURAL OBSERVATIONS BY STEDMAN & DYSON STRUCTURAL ENGINEERS.
   A. NOTIFICATION 48 HOURS BEFORE OBSERVATION.
   B. DELINQUENT NOTIFICATION MAY REQUIRE DEMOLITION OF COVERING MATERIALS TO FACILITATE OBSERVATION.
   C. STEDMAN & DYSON IS EMPLOYED BY THE OWNER/ARCHITECT TO MAKE VISITS AND SUBMIT A STATEMENT TO THE BUILDING DEPARTMENT (SECTION 307) STATING THAT THE SITE OBSERVATIONS HAVE BEEN MADE AND (IMO) ANY DEFICIENCIES NOTED HAVE BEEN CORRECTED.
2. SPECIAL OBSERVATIONS BY STEDMAN & DYSON ARE REQUIRED AT THE FOLLOWING STAGES OF CONSTRUCTION:
   A. REINFORCEMENT BEFORE CONCRETE PLACEMENT.
   B. COMPLETION OF ROUGH FRAMING.

ABBREVIATIONS

AB	ANCHOR BOLT	FOS	FACE OF STUD
ABV	ABOVE	FP	FULL PENETRATION
ADD'L	ADDITIONAL	FTG	FOOTING
ADJ	ADJACENT	FTGS	FOOTINGS
ALT	ALTERNATE	GA	GAUGE
ARCH'L	ARCHITECTURAL	GLB	GLUED LAMINATED BEAM
BOT	BOTTOM		
BLK	BLOCK	HOR	HORIZONTAL
BLKG	BLOCKING	HS	HOLD DOWN
BM	BEAM	HORIZ	HORIZONTAL
BOT	BOTTOM OF FOOTING	JT	JOINT
BW	BEAM	JST	JOIST
BV	BOUNDARY NAIL	MB	MACHINE BOLT
BRG	BEARING	MFR	MANUFACTURER
BTWN	BETWEEN	MTL	METAL
C	CHANNEL OR CAMBER	OC	ON CENTER
CB	CARRIAGE BOLT	OH	OPPOSITE HAND
CIP	CAST-IN-PLACE	PC	PRECAST
CJ	CONSTRUCTION JOINT OR CEILING JOIST	PL	PLATE
		PLYWD	PLYWOOD
CL	CENTER LINE	PT	PRESSURE TREATED
CLR	CLEAR	REINF	REINFORCEMENT
COL	COLUMN	REF	REFERENCE
CONC	CONCRETE	SCHED	SCHEDULE
CONN	CONNECTION	SEP	SEPARATION
CONST	CONSTRUCTION	SIM	SIMILAR
CONT	CONTINUOUS	SQ	SQUARE
CJ	CONNECTOR JOINT	STD	STANDARD
CTR'D	CENTERED	STGR	STAGGER
DBL	DOUBLE	T	TOP
D.F.	DOUGLAS FIR/LARCH	T & B	TOP & BOTTOM
DIA.	DIAMETER	TW	TERMITE WASHER
DIM.	DIMENSION	TOS	TOP OF STEEL
DN	DOWN	TOW	TOP OF PARAPET
EA	EACH	TOC	TOP OF WALL
EQUIP	EQUIPMENT	T&G	TONGUE & GROOVE STRUCTURAL
EXP	EXPANSION	TYP	TYPICAL
EW	EACH WAY	UON	UNLESS OTHERWISE NOTED
FRMG	FRAMING	V	VERTICAL
FDN	FOUNDATION	VERT	VERTICAL
FF	FINISH FLOOR	VSL	VERTICAL SLOTTED HOLES
FFE	FINISH FLOOR ELEVATION	W	WIDE OR WIDTH
FL	FLOOR JOIST	WP	WATERPROOF OR WORK POINT
FT	FOOTING	WPJ	WATERPROOF JOINT
FW	FIELD WELD	WT	WEIGHT
FOC	FACE OF CONCRETE	W/	WITH

- CUSTOM STILE AND RAIL WOOD DOORS # 1, 2 AND #3 (TYPE 'A')
  A. STILE AND RAIL WOOD DOORS | CONFORM "FRENCH" DOORS ("PRAIRIE STYLE" LITE PATTERN) | PELLA ARCHITECTURAL PRODUCTS, VISTA, CA.
  1. EXTERIOR GLAZED ("FRENCH") DOOR, 2 1/4" THICK.
  2. GRADE: WIC CUSTOM/PREMIUM GRADE.
  3. EXTERIOR FACE: TRANSPARENT FINISH.
  4. INTERIOR FACE: TRANSPARENT FINISH.
  5. LUMBER SPECIES: MAHOGANY, PAINT GRADE.
  6. STILES AND RAILS: SOLID WOOD.
  7. MANUFACTURERS STANDARD PROFILES.
  8. 7'-0" STILES, 8-1/2" TOP RAIL, 11-3/4" INTERMEDIATE RAIL, 9-1/2" BOTTOM RAIL, DIVIDED LITE WOOD MUNTIN BARS PER PATTERN DESIGNED ON DRAWINGS AND QUARTER CORE MOLDINGS TYPICAL.
  9. FACTORY PRIMED PER PAINT SPECIFICATIONS.
  10. GLAZING: 1/8" THICK LAMINATED GLASS.
  11. METAL DOOR FRAMES, 14 GA.
- CUSTOM WOOD WINDOW, WINDOWS "C" AND "D"
  A. FIXED WOOD WINDOW | CUSTOM WOOD WINDOW ("PRAIRIE STYLE" LITE PATTERN) | PELLA ARCHITECTURAL PRODUCTS, VISTA, CA.
  1. GRADE: WIC CUSTOM/PREMIUM GRADE.
  2. EXTERIOR FACE: TRANSPARENT FINISH.
  3. INTERIOR FACE: TRANSPARENT FINISH.
  4. LUMBER SPECIES: MAHOGANY, PAINT GRADE.
  5. MANUFACTURERS STANDARD PROFILES.
  6. FACTORY PRIMED PER PAINT SPECIFICATIONS.
  7. GLAZING: 1/8" THICK LAMINATED GLASS.
  8. CASEMENT WINDOWS "A", "B", "C" AND "D" ARE SIMILAR TO "B" GROOVED GLASS IN 1/4" FACE BEVEL LEAD CAMES.

AS BUILT
Contract No. UPT-652
Date 3-15-97

NO.	DATE	REVISIONS	BY	CHK	APP'D
	4-96	Conformed			

PARSONS DE LEUW

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
MTDB PROJ.ENG.	

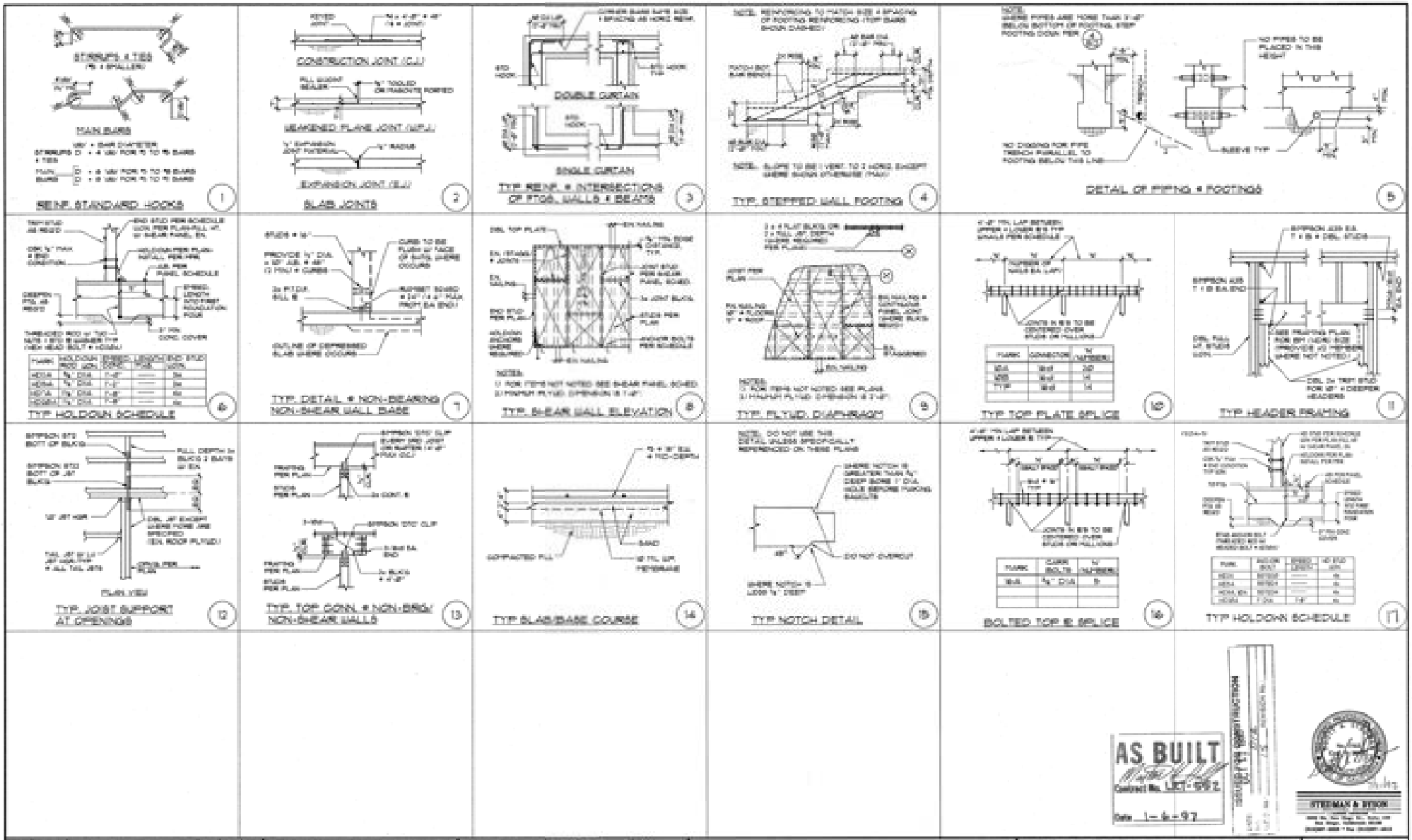
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-7490 (619)231-1466

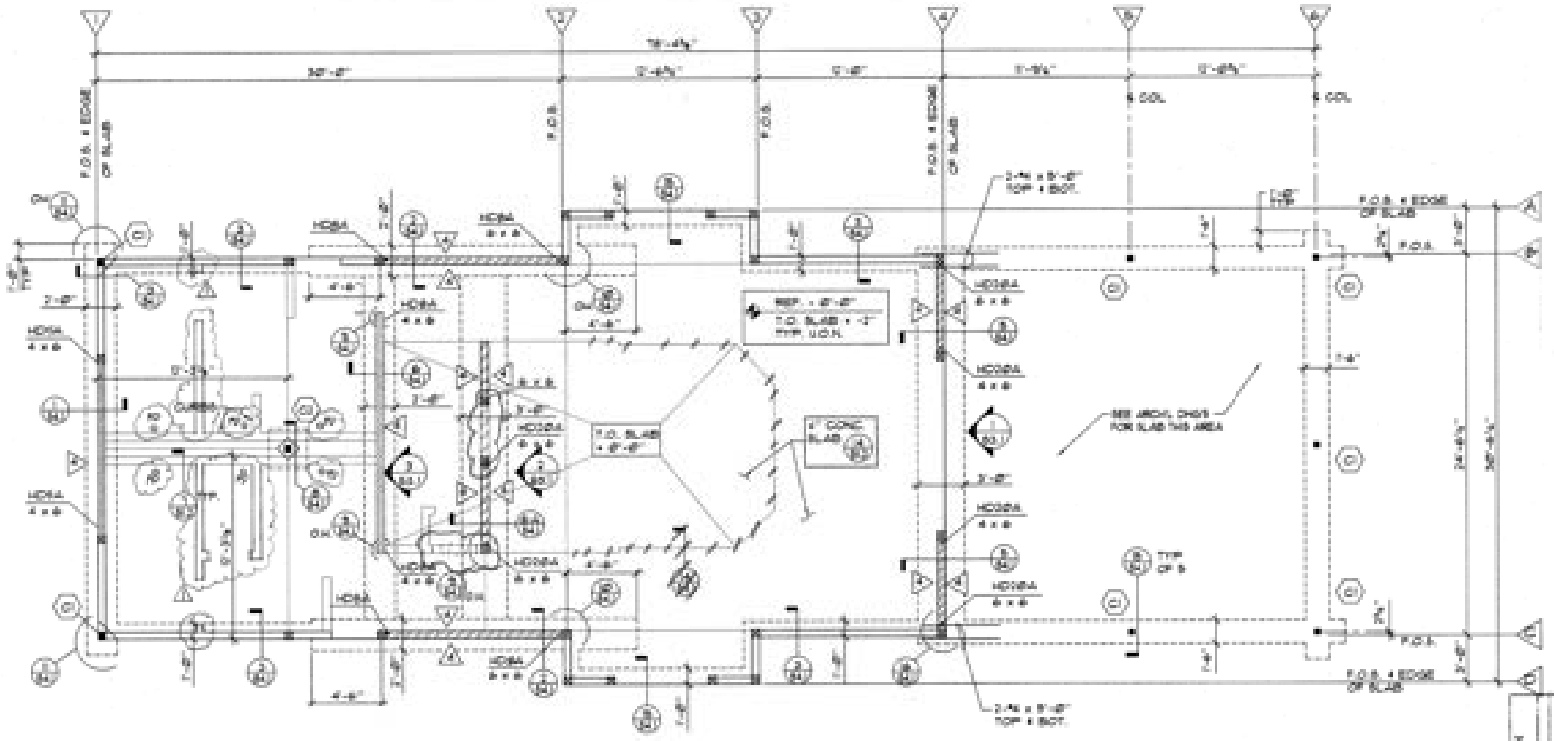
LIGHT RAIL GUIDEWAY PROJECT
San Diego

GENERAL NOTES
SHEET 2 OF 2

SCALE	NO SCALE
MTDB CONTRACT NO.	UPT 652
DRAWING NO.	SHEET NO.
9.1A	130

MTS DOC NO. PWL355422.WOA355440.75


REINF. STANDARD HOOKS
SLAB JOINTS
TYP. REINF. @ INTERSECTIONS OF FTGS., WALLS & BEAMS
TYP. STEPPED WALL FOOTING
DETAIL OF PIPING @ FOOTINGS
TYP. HOLDOWN SCHEDULE
TYP. DETAIL @ NON-BEARING NON-SHEAR WALL BASE
TYP. SHEAR WALL ELEVATION
TYP. PLYWD. DIAPHRAGM
TYP. TOP PLATE SPLICE
TYP. HEADER FRAMING
TYP. JOIST SUPPORT AT OPENINGS
TYP. TOP CONN. @ NON-BRG/ NON-SHEAR WALLS
TYP. SLAB/BASE COURSE
TYP. NOTCH DETAIL
BOLTED TOP & SPLICE
TYP. HOLDOWN SCHEDULE
AS BUILT
Contract No. LICT-992
Date 1-6-97
STEINMAN & BYRON
PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
TYPICAL DETAILS
NO SCALE
LICT 992
61.2
131



NOTES

1. 6 x 6 POSTS TYP U.O.N. ON PLAN OR HOLDOWN SCHEDULE ON S2.
2. ALL EXTERIOR WALLS NOT INDICATED AS SHEAR WALLS SHALL BE SHEARED WITH ½" PLYWOOD W/ 8d @ 6" E.N. AND 8d @ 12" F.N.

SHEAR WALL SCHEDULE

ELEVATION PER (S2)

- ½" PLYWD 8d @ 4" E.N. 8d @ 12" F.N. SILL @: 3 x 6 P.T.D.F. W/ ⅝" DIA. A.B. @ 32"
- ½" PLYWD 8d @ 4" E.N. 8d @ 12" F.N. SILL @: 3 x 6 P.T.D.F. W/ ⅝" DIA. A.B. @ 16" 3 x 6 STUDS @ 16"

WALLS WITH PLYWOOD EA SIDE

1. BOTH VERTICAL AND HORIZONTAL INTERIOR JOINTS ON OPPOSITE SIDES OF THE WALL SHALL BE STAGGERED.
2. NO PENETRATIONS ARE ALLOWED IN SHEAR PANELS.
3. THE PLYWOOD ON ONE SIDE OF THE SHEAR WALL MUST BE NAILED COMPLETELY BEFORE THE FRAME INSPECTION. THE PLYWOOD ON THE OTHER SIDE MUST BE INSTALLED AND INSPECTED PRIOR TO INSTALLATION OF WALL SURFACE COVERING.
4. FOR ITEMS NOT NOTED SEE SHEAR WALL SCHEDULE.
5. MINIMUM PLYWOOD DIMENSION IS 1'-0".

LEGEND

- 2x6 STUDS W/ ⅝" DIA A.B. @ 48"
- 2x6 STUDS @ 16" TYP U.O.N.
- 3x6 STUDS @ 16" TYP U.O.N.
- HDU4 — HOLDOWN PER SCHEDULE (S1)
- SHEAR WALL MARK - SEE SCHEDULE THIS SHEET
- COL MARK - SEE SCHEDULE THIS SHEET
- WALL ELEVATION MARK SEE SHEET S5.1
- TOS — APPROX. LOCATION OF FLR DRAWING COORD. W/ ARCH'L

FOUNDATION PLAN

½" = 1'-0"

COLUMN SCHEDULE

MARK	COLUMN SIZE	BASE @ (U.O.N. ON DETAILS)	ANCHOR BOLTS
C1	TS6½ x 3½ x ⅜	8'-6 x 1'-6 x 8'-1"	
C2	TS4 x 4 x ½	8'-6 x 10" x 8'-10"	4 - ¾" DIA.

AS BUILT Marked Prints Contract No. LRT-592 Date 1-6-97

STEELMAN & SYDNEY

NO.	DATE	REVISIONS	BY	CHK	APPR
1	9-19-95				
2	4-96	Guideway			

PARSONS DE LEUW

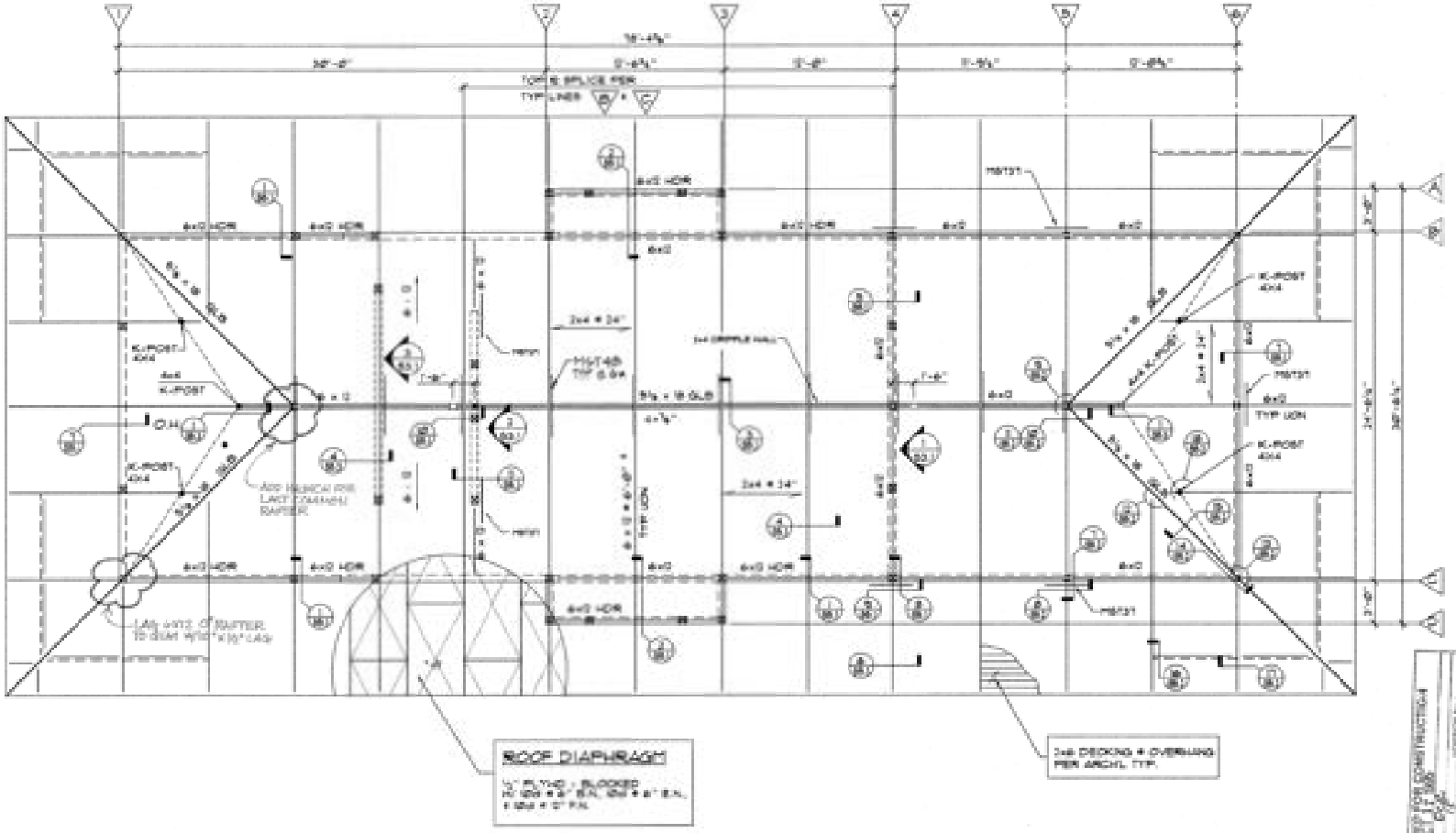
DESIGNED BY | DATE
DRAWN BY
CHECKED BY
MTDB PRJ. ENG.

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619)231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego

FOUNDATION PLAN

SCALE ¼" = 1'-0"
MTDB CONTRACT NO. LRT592
DRAWING NO. S2.1 | SHEET NO. 152



ROOF FRAMING PLAN

AS BUILT

Contract No. LRT-552

Date 1-6-97

PARSONS DE LEUW

NO.	DATE	REVISIONS	BY	CHK	APPV

DESIGNED BY | DATE
DRAWN BY
CHECKED BY
MTDB PRJ. ENG.

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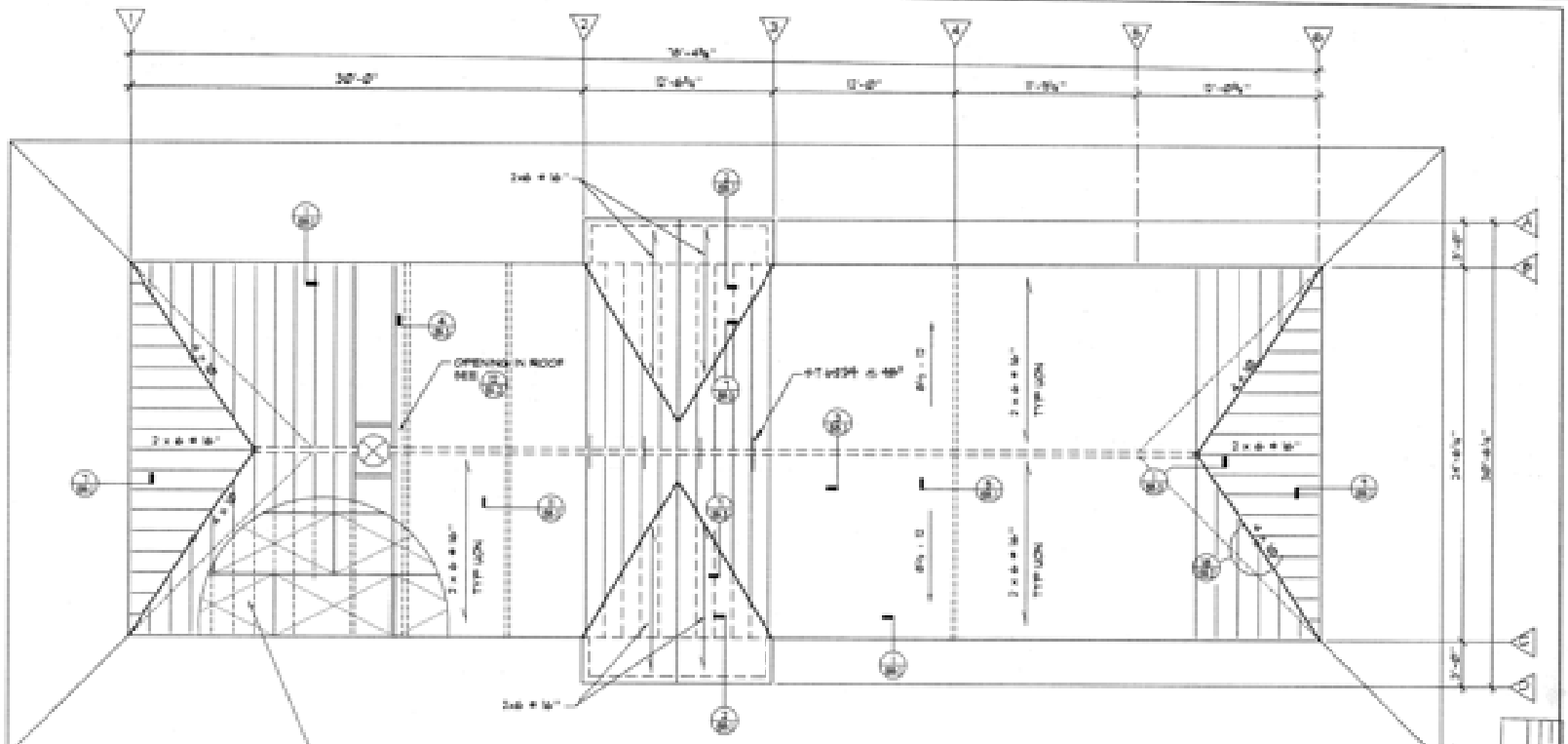
Metropolitan Transit Development Board

LIGHT RAIL GUIDEWAY PROJECT
San Diego

ROOF FRAMING PLAN

SCALE 1/4" = 1'-0"
MTDB CONTRACT NO. LRT552
DRAWING NO. S2.2
SHEET NO. 139



UPPER ROOF FRAMING PLAN

AS BUILT

NO.	DATE	REVISIONS	BY	CHK	APPD
	4-97				

PARSONS DE LEUW

DESIGNED BY | DATE
DRAWN BY
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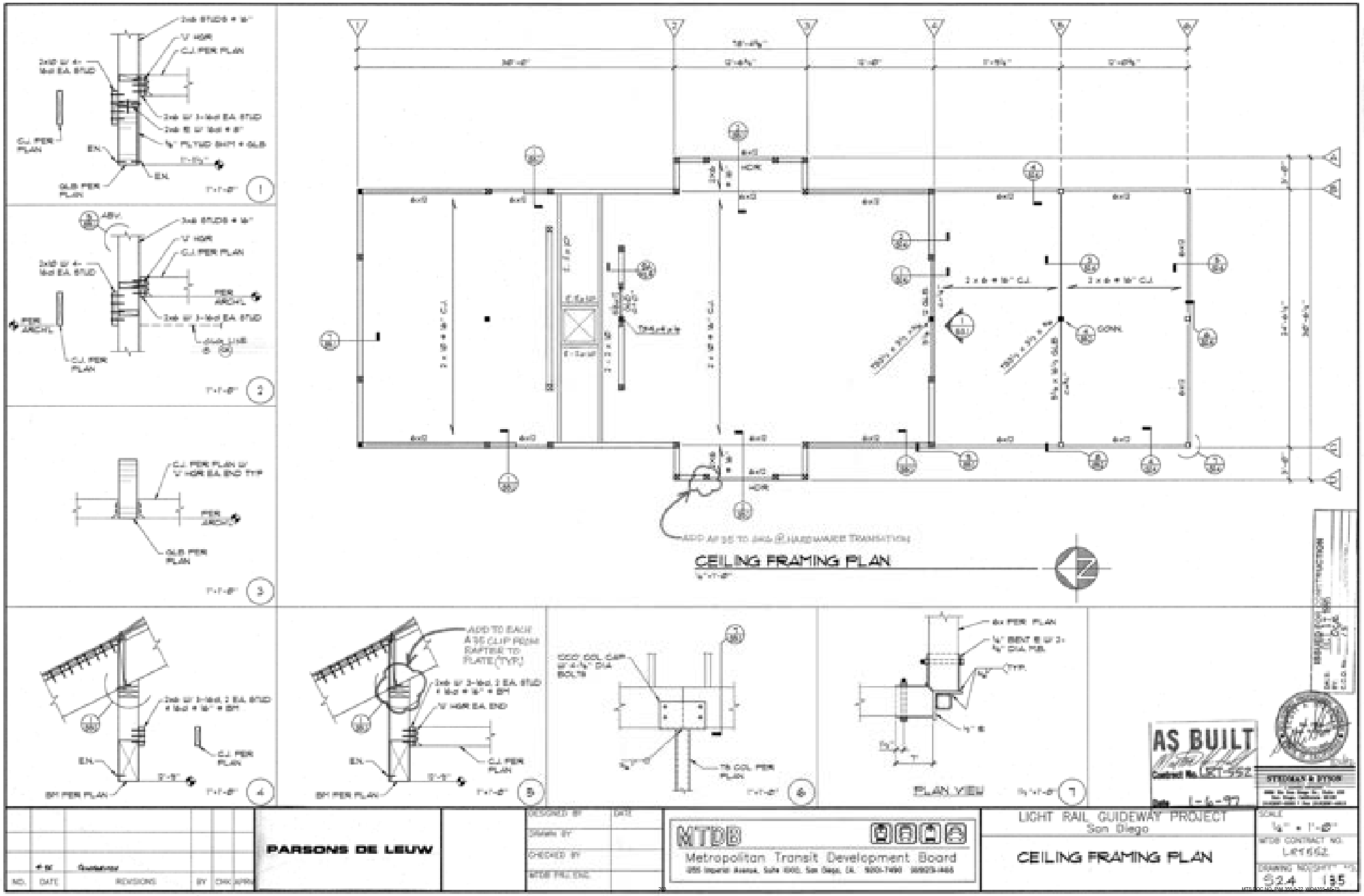
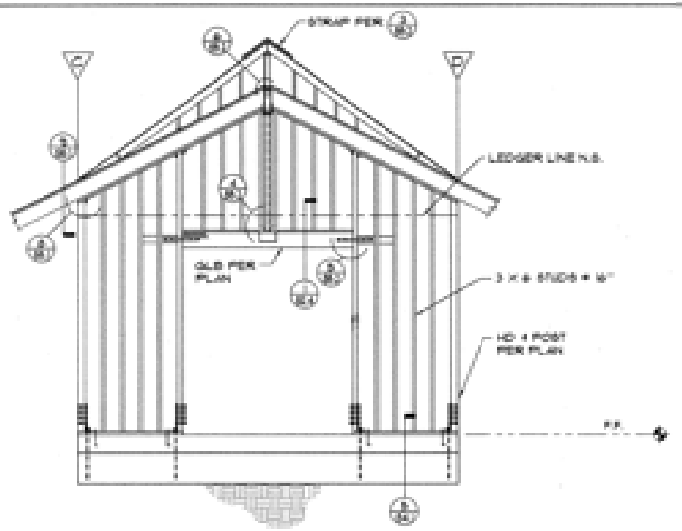
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619)231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego

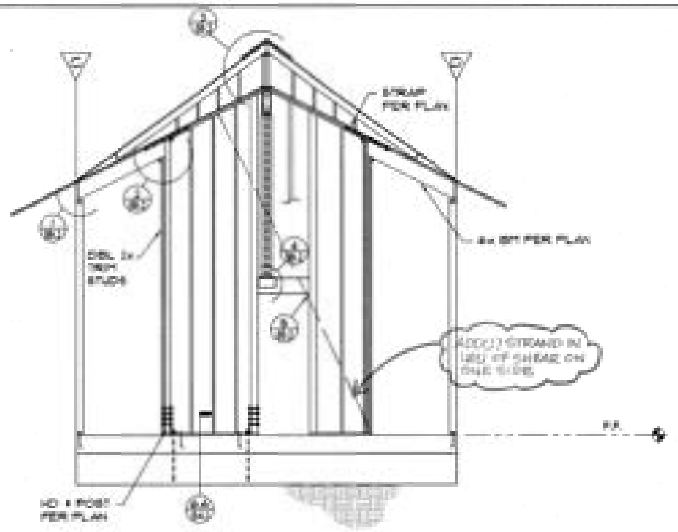
UPPER ROOF FRAMING PLAN

SCALE: ¼" = 1'-0"
MTDB CONTRACT NO. LRT552
DRAWING NO/SHEET NO. 62.3

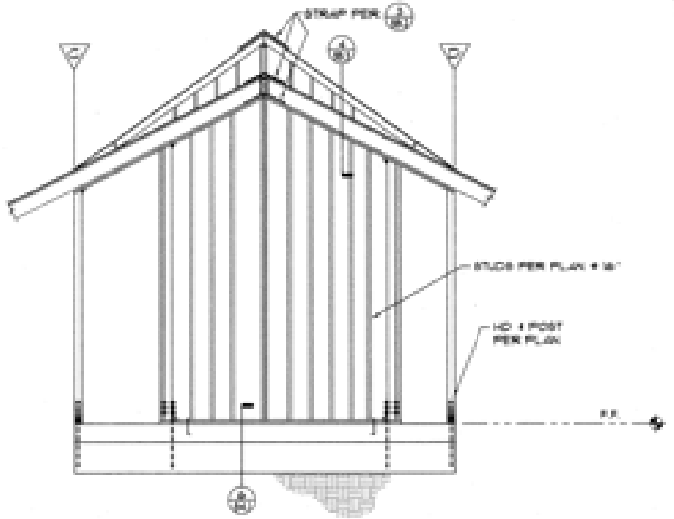

CEILING FRAMING PLAN
PLAN VIEW
AS BUILT
PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
CEILING FRAMING PLAN



WALL ELEVATION @ LINE (4)



WALL ELEVATION @ INTERIOR SHEAR WALL



WALL ELEVATION @ INTERIOR SHEAR WALL

AS BUILT

Contract No. LRT-9952

Date 1-6-97

PARSONS DE LEUW

MTDB

Metropolitan Transit Development Board

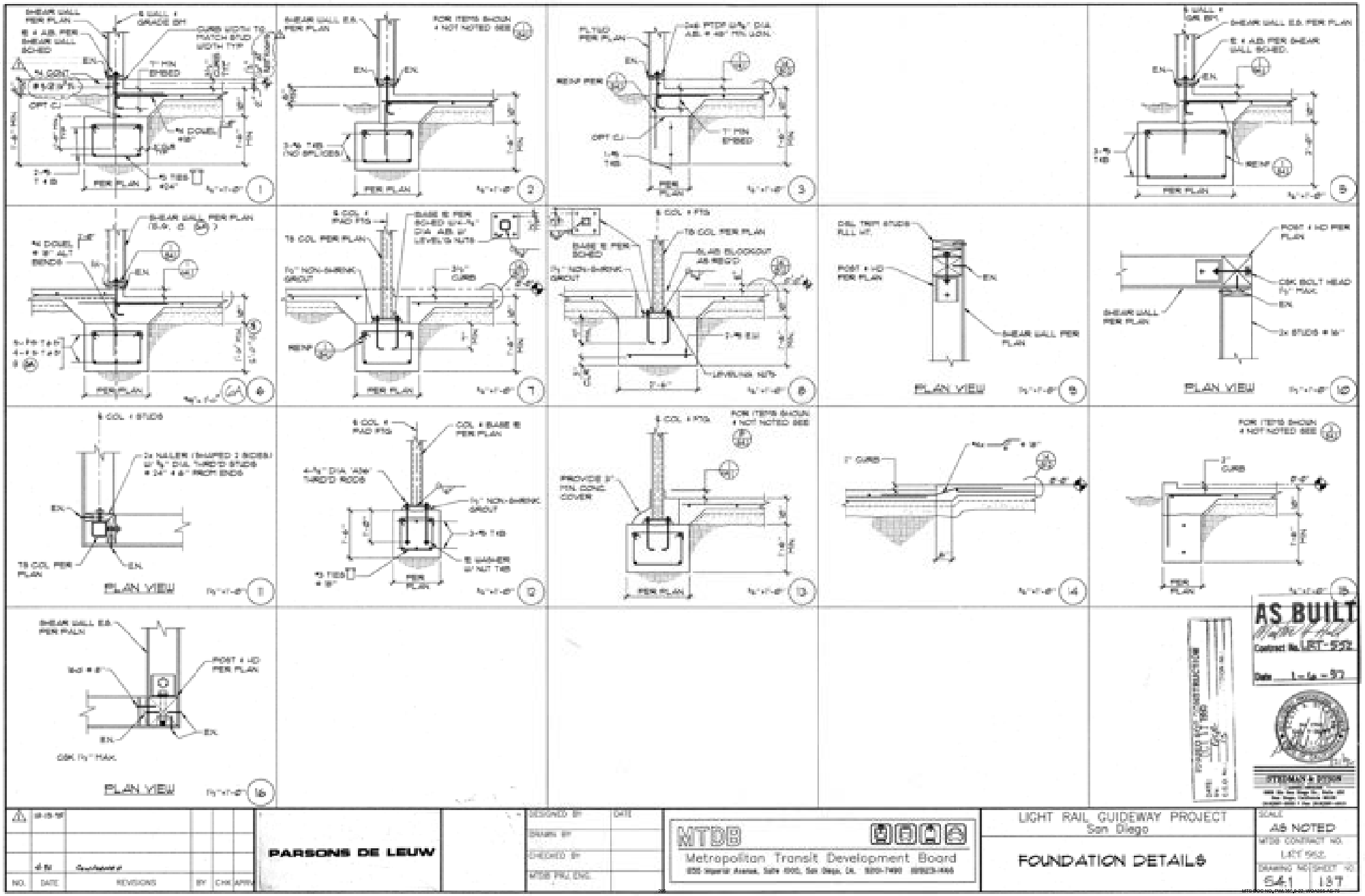
LIGHT RAIL GUIDEWAY PROJECT
San Diego

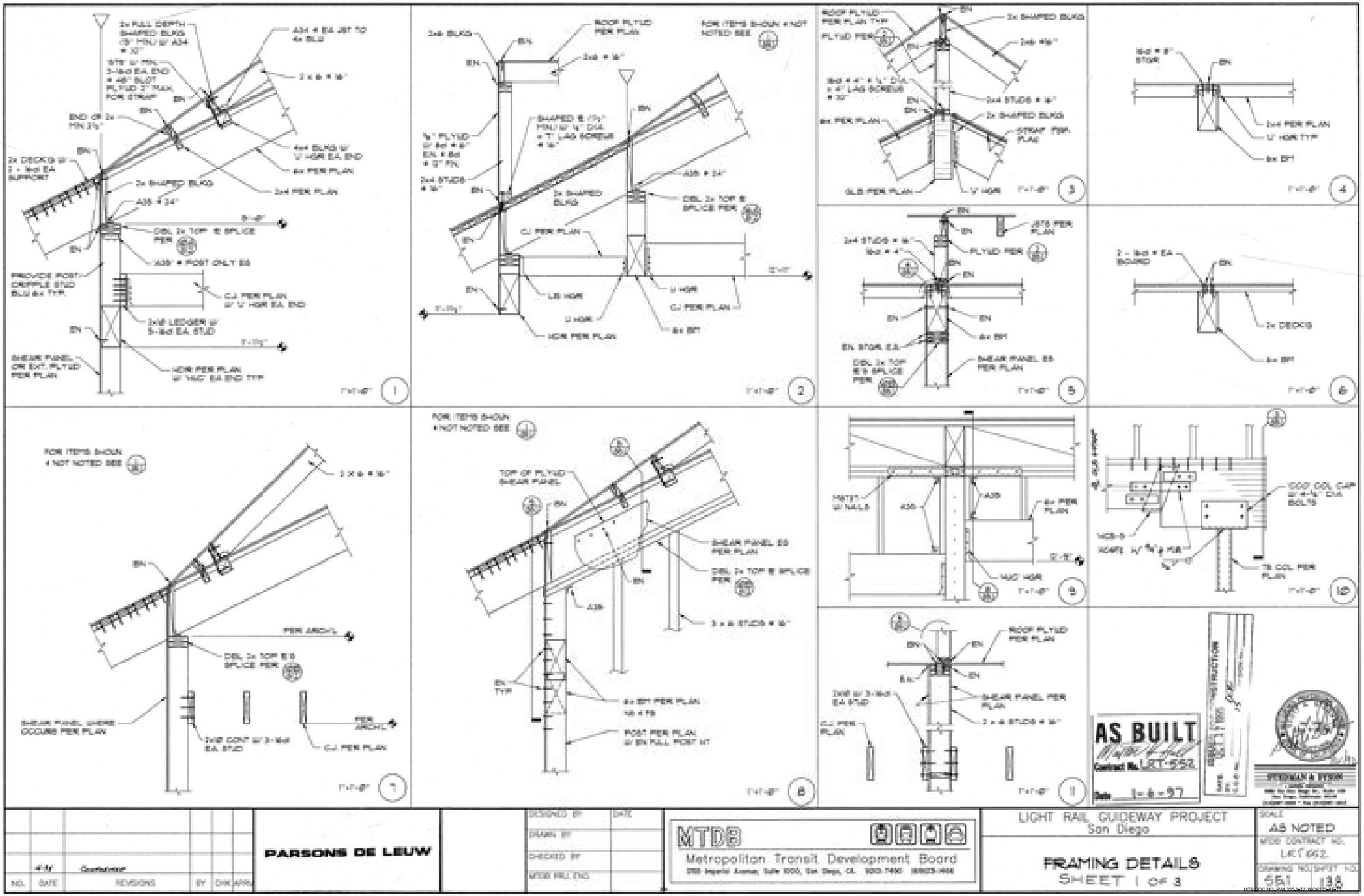
WALL ELEVATIONS

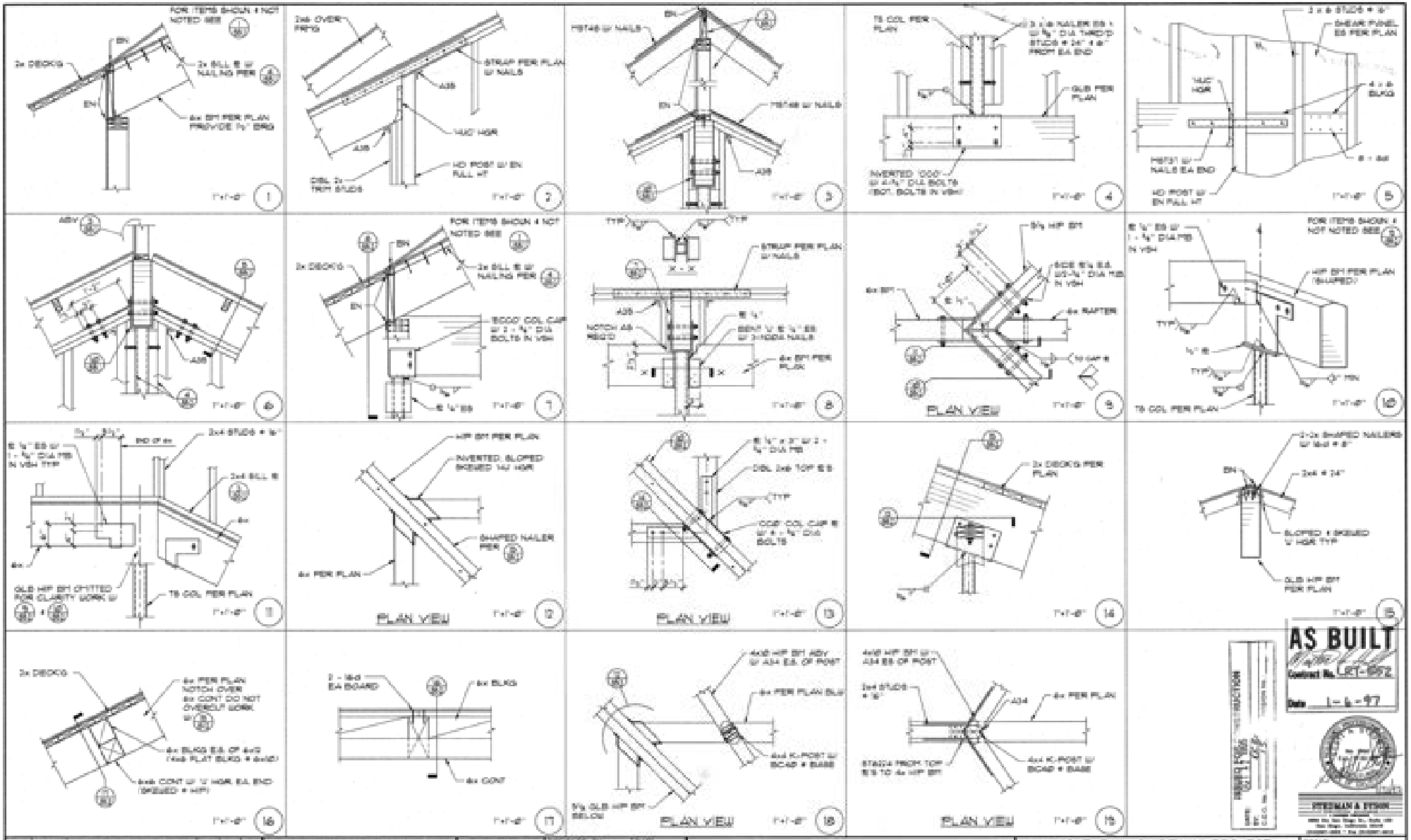
SCALE 1/8" = 1'-0"

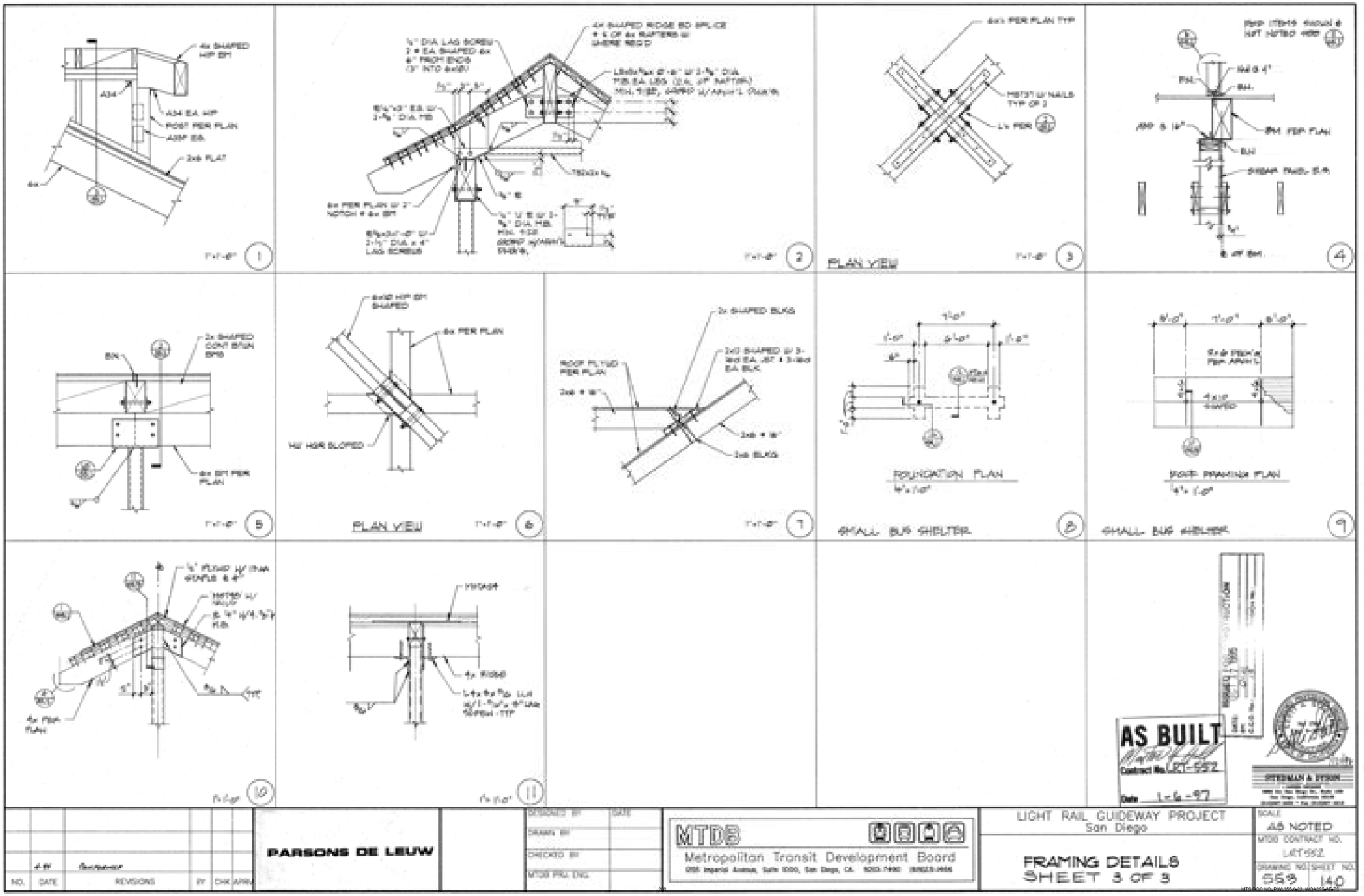
MTDB CONTRACT NO. LRTB52

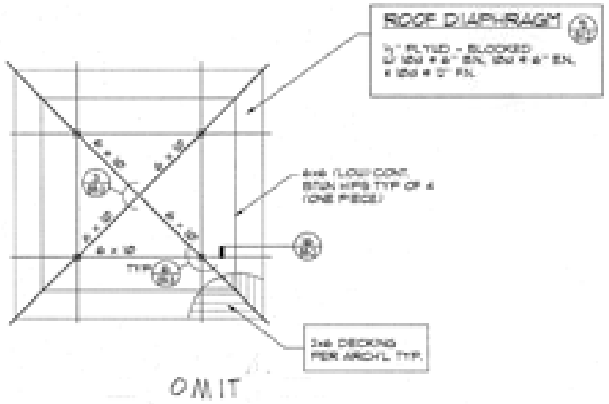
DRAWING NO. 53.1 SHEET NO. 136


PLAN VIEW
PLAN VIEW
PLAN VIEW
AS BUILT
Contract No. LRT-552
Date 1-14-97
PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
FOUNDATION DETAILS
AS NOTED
LRT 552
541
187

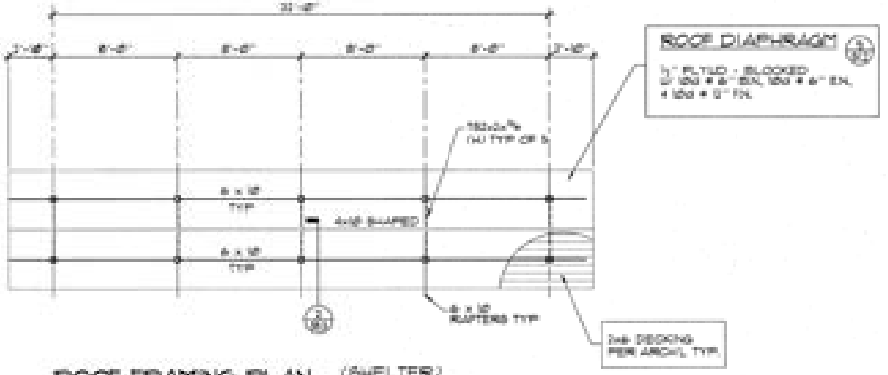

PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
FRAMING DETAILS
SHEET 1 OF 3
AS NOTED
LRT 552
561
138
AS BUILT
Contract No. LRT-552
Date 1-6-97


AS BUILT
Contract No. LRT-652
Date 1-6-97
PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
FRAMING DETAILS
SHEET 2 OF 3
AS NOTED
MTDB CONTRACT NO. LRT 652
DRAWING NO. 652
SHEET NO. 139

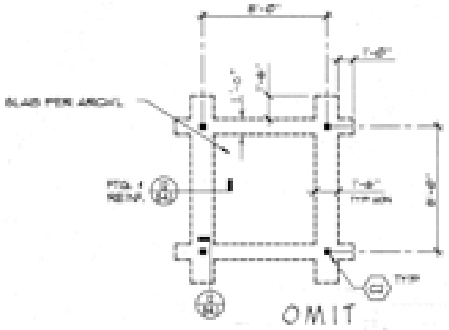

PLAN VIEW
PLAN VIEW
FOUNDATION PLAN
SHALL BUS SHELTER
SHALL BUS SHELTER
AS BUILT
PARSONS DE LEUW
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
FRAMING DETAILS
SHEET 3 OF 3
AS NOTED
LRT-552
559
140



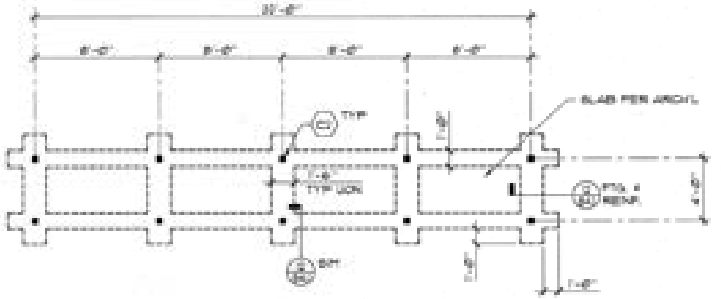
ROOF FRAMING PLAN (PORTAL)



ROOF FRAMING PLAN (SHELTER)



FOUNDATION PLAN (PORTAL)



FOUNDATION PLAN (SHELTER)

COL MARK SEE SCHED. ON SHEET S0.1

AS BUILT
Contract No. RT-952
Date 1-6-97

PARSONS DE LEUW

MTDB
Metropolitan Transit Development Board

LIGHT RAIL GUIDEWAY PROJECT
San Diego

PLANS @ SHELTER

SCALE 1/4" = 1'-0"
MTDB CONTRACT NO. RT 952
DRAWING NO. S6.1 SHEET NO. 141

EXHAUST FAN SCHEDULE

MARK	SERVICE / LOCATION	CFM	SOUND (SONES)	ELECTRICAL HP	ELECTRICAL RPM	ELECTRICAL V	ELECTRICAL Ø	ELECTRICAL KW	WEIGHT (LBS.)	CONTROL DESCRIPTION
EF-1	[illegible]	1500	[illegible]	1/4	1140	120	1	1	110#	[illegible]

1. [illegible]
2. [illegible]

GRILLES AND LOUVERS SCHEDULE

MARK	DESCRIPTION	TYPE	SIZE	REMARKS	MAT.	FINISH	MANUF. / CATALOG NO.
(A)	EXHAUST GRILLE	[illegible]	1'-0" x 1'-0"	1	BRASS	DK. BRZ.	ARCHITECTURAL GRILLE # 22
(B)	EXHAUST GRILLE	[illegible]	[illegible]	1	BRASS	DK. BRZ.	ARCHITECTURAL GRILLE # 22
(C)	OUTSIDE AIR GRILLE	[illegible]	[illegible]	1	BRASS	SATIN	ARCHITECTURAL GRILLE # 24
(D)	DOOR LOUVER	[illegible]	24"x 18"	1	ALUM.	1	[illegible]

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]

MECHANICAL SYMBOL SCHEDULE

SYMBOL	DESCRIPTION
	SECTION - SUPPLY AIR DUCT
	SECTION - RETURN OR OUTSIDE AIR DUCT
	SECTION - EXHAUST AIR DUCT
	LINED DUCT
	TURNING VANES
	MANUAL VOLUME DAMPER
	FLEXIBLE CONNECTION (F.C.)
	DIRECTION OF AIR FLOW
	EXTRACTOR
	FLEXIBLE DUCT
T	THERMOSTAT
SA	SUPPLY AIR
RA	RETURN AIR
EA	EXHAUST AIR
OSA	OUTSIDE AIR
# CFM	CUBIC FEET PER MINUTE
FD	FIRE DAMPER
OBD	OPPOSED BLADE DAMPER
UC	UNDERCUT
DL	DOOR LOUVER
	POINT OF CONNECTION (P.O.C.)
#	SIZED
TYP.	TYPICAL
[illegible]	[illegible]
W	WIRE
PL.	PLATES

MECHANICAL GENERAL NOTES

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]
9. [illegible]
10. [illegible]

CERTIFICATE OF COMPLIANCE

MECH-1

[illegible]

EXHAUST FAN CONTROL DIAGRAM

NO SCALE

FAN MOUNTING DETAIL

NO SCALE

SEISMIC RESTRAINT DETAIL

NO SCALE

AS BUILT

Contract No. [illegible]

Date 1-6-97

NO.	DATE	REVISIONS	BY	CHK	APVD
	4-97	[illegible]			

PARSONS DE LEUW

DESIGNED BY	JHM
DRAWN BY	JHM
CHECKED BY	JE
MTDB PROJECT MGR.	
DATE	12-28-94

MTDB

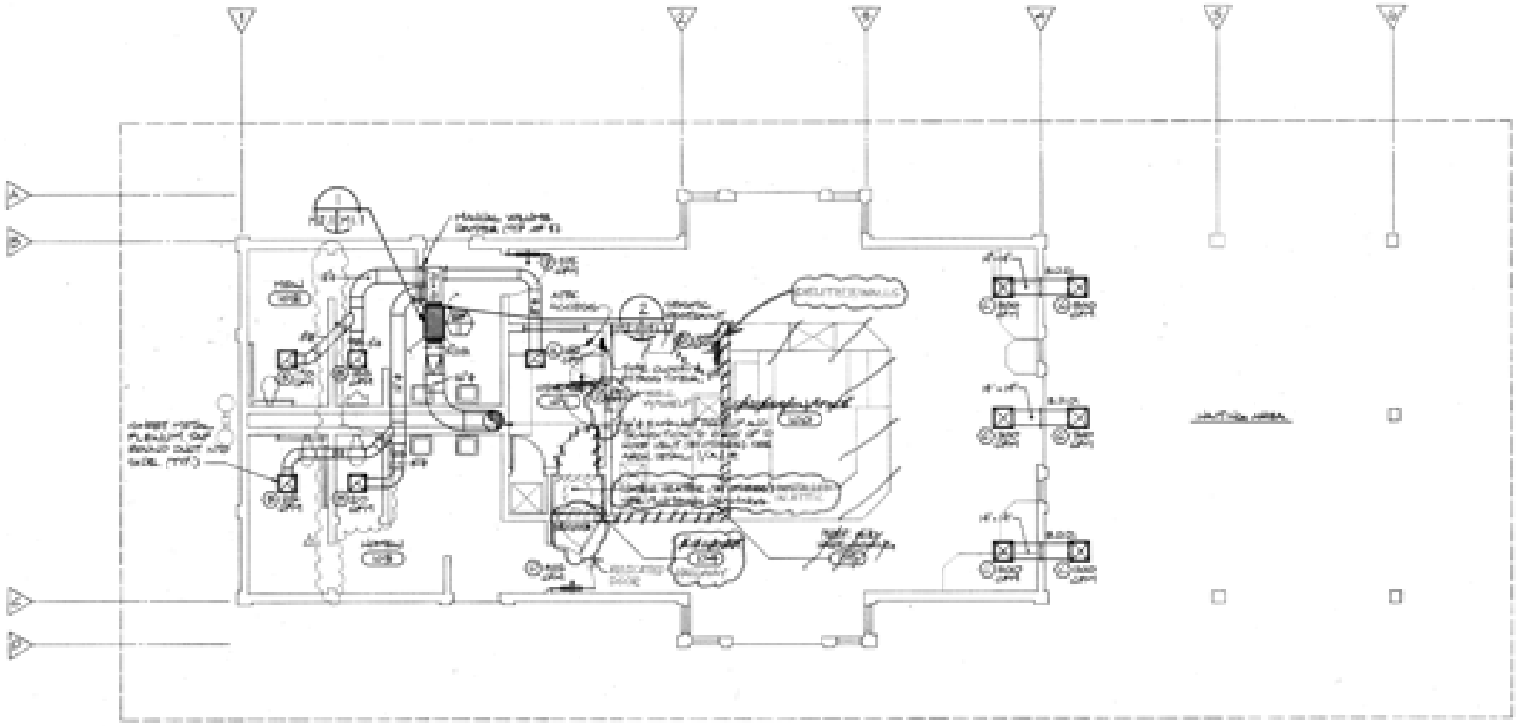
Metropolitan Transit Development Board

1255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-1490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego

NOTES, SYMBOLS, SCHEDULES, DETAILS & TITLE 24

SCALE	AS NOTED
MTDB CONTRACT NO.	[illegible]
DRAWING NO.	M1.1
SHEET NO.	142



DEPOT FLOOR PLAN - MECHANICAL

AS BUILT

DUSK

PARSONS DE LEUW

MTDB
Metropolitan Transit Development Board

LIGHT RAIL GUIDEWAY PROJECT
San Diego

MECHANICAL FLOOR PLAN

DRAWING NO. M2.1 SHEET NO. 14.3

FIXTURE CONNECTIONS

SYMBOL	FIXTURE	CW	HW	W	V
WC-1	WATER CLOSET, FLUSH VALVE, HANDICAP	1"	—	4"	2"
WC-2	WATER CLOSET WALL HTD.	1"	—	4"	2"
LAV-1	LAVATORY, WALL HTD., HANDICAP	½"	½"	2"	1½"
SK-1	SINK, WALL HTD., HANDICAP	½"	½"	2"	1½"
FD-1	FLOOR DRAIN	½" ●	—	2"	1½"
FD-2	FLOOR DRAIN	—	—	3"	2"
HB-1	HOSE BIB	¾"	—	—	—
HB-2	HOSE BIB, RECESSED	¾"	—	—	—
	DRINKING FOUNTAIN	½"	—	2"	1½"
	FLOOR SINK	—	—	3"	2"
SH-1	JANITOR SINK ●●●	½"	½"	3"	2"
	HAND SINK ●●	½"	½"	2"	1½"
	PET AND PAD SINK H/C & I. ●●	½"	½"	2"	1½"
	VEGETABLE PREP SINK ●●	½"	½"	1½	—
	HAND SINK ●●	½"	½"	2"	1½"
	ICE AND BEVERAGE DISPENSER ●●	—	—	1½	—
	ICE MACHINE ●●	¾"	—	—	—

● ½" (or more) shut off valve. (see detail)
●● see fixture details for fixture and valve location
●●● Provide p/basepan pre-rinse as per ● (s)
●●●● 3" inlet & outlet at grease interceptor (2" v. brass and after)

FIXTURE UNIT CALCULATIONS

SYMBOL	DESCRIPTION	QUANTITY	UNIT VALUE	TOTAL	PEAK DEMAND
WC-1	WATER CLOSET, FLUSH VALVE	10	5	2	20	18
WC-2	WATER CLOSET FLUSH VALVE	10	5	1	10	9
LAV-1	LAVATORY, WALL HTD.	9	2	1	5	5
LAV-2	LAVATORY, WALL HTD.	2	1	2	2	2
FD-1	FLOOR DRAIN	—	2	1	—	1
FD-2	FLOOR DRAIN	—	4	2	—	8
HB-1	HOSE BIB	3	—	2	6	—
HB-2	HOSE BIB, RECESSED	3	—	1	3	—
	DRINKING FOUNTAIN	4	2	1	8	2
FD-2	FLOOR SINK	—	2	5	—	10
SH-1	JANITOR SINK	2	3	1	2	3
	HAND SINK	2	2	1	2	2
	PET AND PAD SINK	2	3	1	2	3
	VEGETABLE PREP SINK	2	14	1	2	—
	HAND SINK	2	2	1	2	2
	ICE AND BEVERAGE DISPENSER	—	14	1	—	—
	ICE MACHINE	1	—	1	1	—
			GRAND TOTAL	27	71	96

FIRE DEPARTMENT NOTES:
1. FIRE SPRINKLER SYSTEM: PROTECTION EQUIPMENT SHALL BE SUBMITTED TO THE FIRE MARSHAL FOR APPROVAL PRIOR TO INSTALLATION.
2. PROVIDE A TRACER WIRE ALONG UNDERGROUND FIRE WATER LINE (SIZE AS REQUIRED) WITH 20 FT. TRACER WIRE AT THE END. LOCATE ON TOP OF MATERIAL FOR EASY ACCESS. TYPE: SOLID COPPER, 12 GA. INSULATION COLOR: GREEN. (REF. 7.29).

WATER CALCULATIONS

STATIC PRESSURE = (80 PSI. (CITY OF SAN DIEGO))
HORIZONTAL PIPE LENGTH, TAP TO METER
HORIZONTAL PIPE LENGTH, METER TO BUILDING (POINT OF ENTRY)
TOTAL SITE SERVICE DEVELOPED LENGTH (SUM)
LOSS: ___ x ___ (SEE pg INDEX) = ___ (SEE PRESSURE LOSS CHART)
● PROVIDE PRV SET @ 60 PSI.
HORIZONTAL PIPE LENGTH
BUILDING (POINT OF ENTRY) TO LAST FIXTURE — 60'
VERTICAL PIPE TAP TO HIGHEST FIXTURE — 30'
TOTAL BUILDING DEVELOPED LENGTH — 75'
EQUIVALENT LENGTH FOR FITTINGS (30% ADDED FOR FITTINGS) — 23'
TOTAL EQUIVALENT LENGTH — 98'
HEIGHT OF ● ABOVE 4.5 FEET (MIN. STATIC)

METER SIZE	FIXTURE	TOTAL FIXTURE UNITS
1½"	WATER 5.0	(AT MAXIMUM) 96 FU.
	STATIC +5	TOTAL 101
	SERVICE —	27 GPM
	FIXTURE 15.0	
	EQUIPMENT —	
	TOTAL LOSS 20.0	

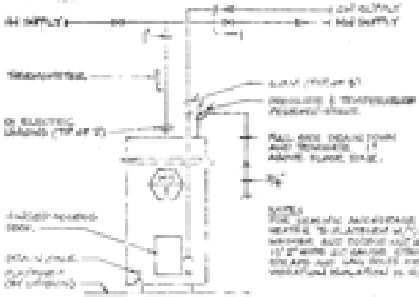
● STREET PRESSURE 80.0
TOTAL LOSS 40.2
DIFFERENCE 41
(AVAILABLE FOR FRICTION)
DIFFERENCE 41 ÷ 100=.4100 x (TOTAL EQUIVALENT LENGTH 98') =
RESULT 15.8 ALLOWABLE PRESSURE DROP, psi PER 100'

NOTE: PIPE VELOCITY BASED ON "D" Sch. 40 W/ 1.02 AND VELOCITY SHALL NOT EXCEED 8 FPS / 4 SEC.

WATER HEATER SCHEDULE

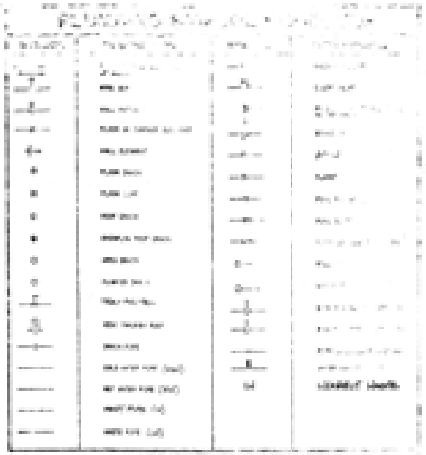
SYMBOL	LOCATION	STORAGE CAPACITY	INPUT RATING	FUEL TYPE	INSULATION R-VALUE	SYSTEM OPERATION	OTHER
WH-1	SEE CONCEPT "F" SYM	50	30,000	NG	24	AUT. CONTROL (SEE "SEQUENCE") ①	ELEC.

① PROVIDE TEMPERATURE AT MINIMUM 120°F. PROVIDE MIXING VALVE AT HOT WATER SUPPLY TO LAVATORIES.
② SEE WATER HEATER INSTALLATION DETAIL (SHEET P-2.1 SEE CONCEPT) FOR "S" TAG TYPICAL EXPANSION PIPING.



WATER HEATER DETAIL ①

AS BUILT
Contract No. LRT-692
Date 1-6-97



PLUMBING ENERGY CONSERVATION NOTES:

1. Lavatory faucets shall be self-closing. The valve will remain open for a minimum of 10 seconds and the outlet temperature will not exceed 110 degrees Fahrenheit. (2.5 GPM Max).
2. All storage type water heaters shall be listed for use by the California Energy Commission. In addition, all water heaters shall have an automatic electronic ignition and shall have an automatic temperature control system.
3. All piping shall be insulated consistent with the requirements of sections 124 and 125 (U.B.C.) and Table 51-D, U.B.C. 1991. All insulation material shall meet the California Quality Standard per section 110 (U.B.C.) - 1991.

NO.	DATE	REVISIONS	BY	CHECKED
2-97	Surveyor			

PAPSONS DE LEUW

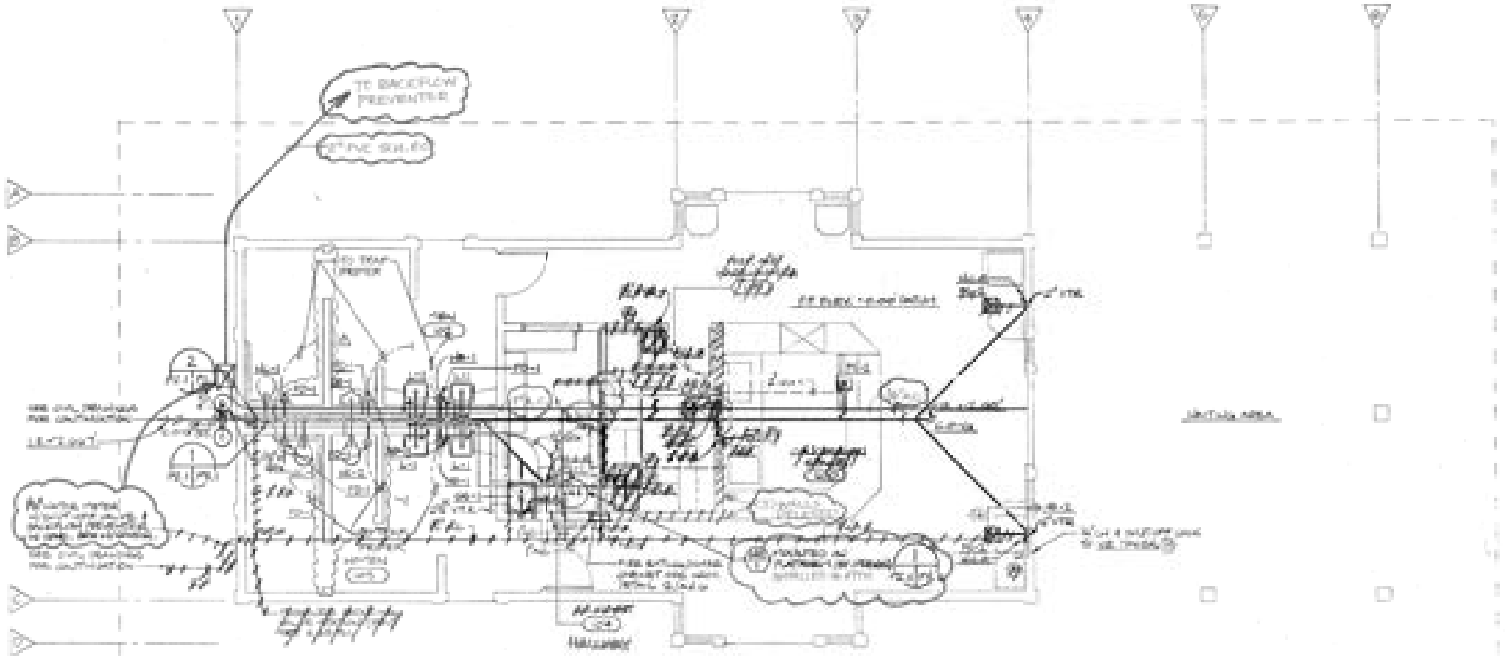
DESIGNED BY JRM — DATE 2-28-96
DRAWN BY JWH
CHECKED BY JE
MTDB PROJ. ENG.

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
San Diego

NOTES, SYMBOLS, SCHEDULES
DETAILS & CALCULATIONS

DESIGN CONTRACT NO. LRT-692
DRAWING NO. / SHEET NO. P-1.1 144



DEPOT FLOOR PLAN - PLUMBING

AS BUILT

Contract No. LACT-9952

Date 1-12-97

NO.	DATE	REVISIONS	BY	CHK'D/APVD
△	11-12-96			
	4-11	Construction		

PARSONS Engineering Science, Inc.

DESIGNED BY JWM
DRAWN BY JWM
CHECKED BY JC
MTDB PROJ. ENG.
DATE 11-26-96

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

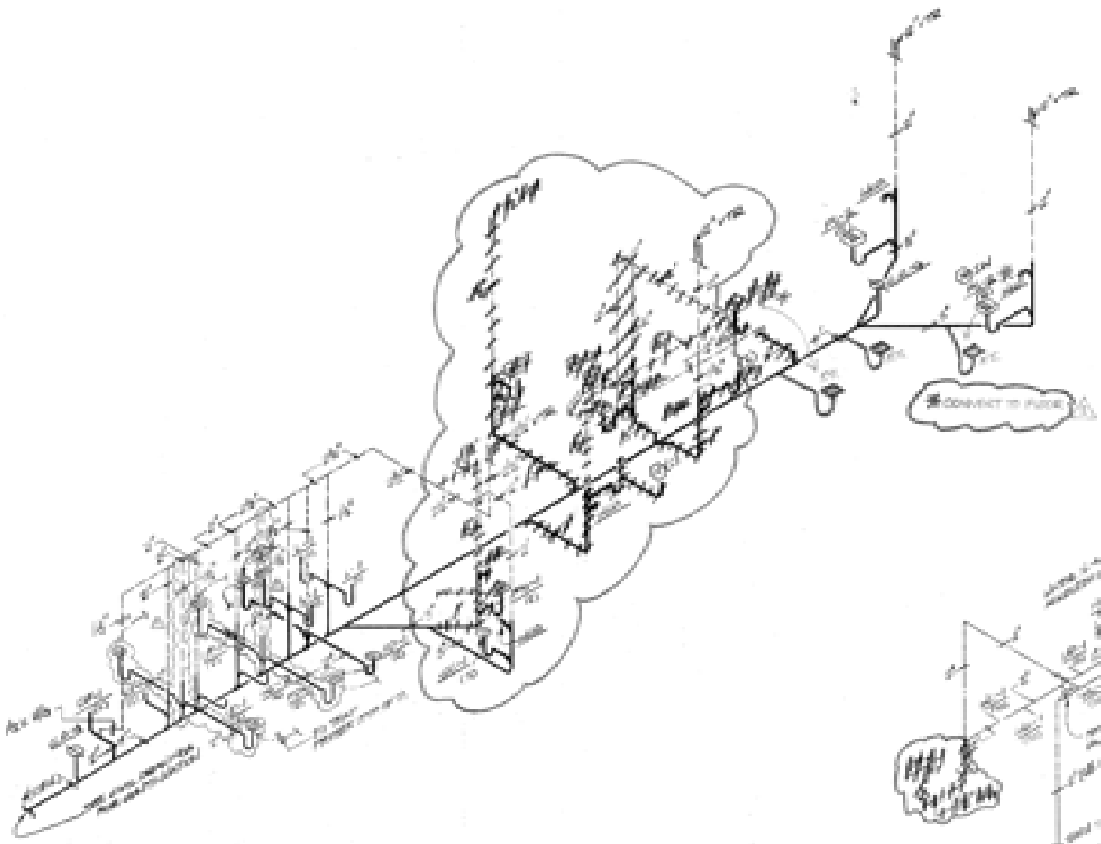
LIGHT RAIL GUIDEWAY PROJECT
San Diego

PLUMBING FLOOR PLAN

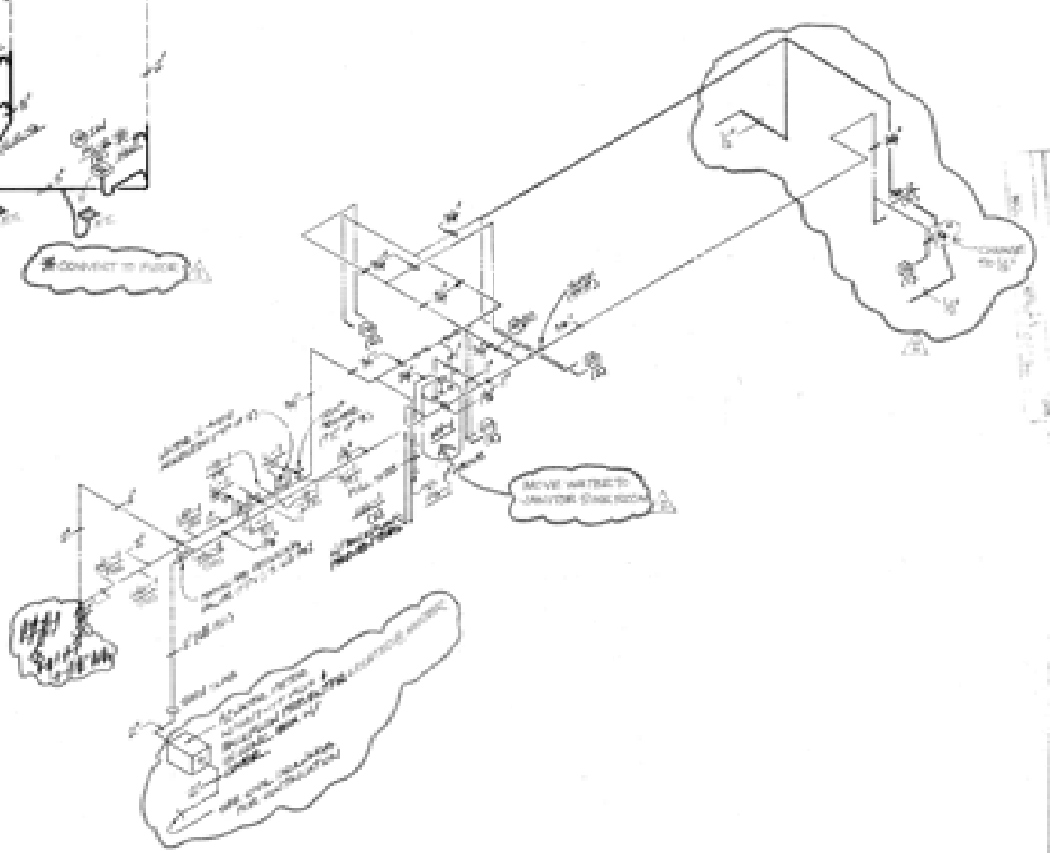
SCALE 1/4"=1'-0"

DRAWING NO. 21.1 SHEET NO. 14.5

MTS DOC NO. PW1355/W21 WO#3354-25



WASTE & VENT PIPING DIAGRAM



HOT & COLD WATER PIPING DIAGRAM

AS BUILT

NO.	DATE	REVISIONS	BY	CHK'D
	1-10-97			
		TENANT CHANGES		
	4-98	Corrections		

PADRONE DE LEUW

DESIGNED BY JRM DATE 10-08-96
DRAWN BY JRM
CHECKED BY JE
MTDB FILE ENG.

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL STARTER PROJECT
SAN DIEGO

PIPING DIAGRAMS

SCALE AS NOTED
MTDB CONTRACT NO. UPT 660
DRAWING NO. P3.1
SHEET NO. 146

MTS DOC NO. PWL355,422, WOA356-AE75

DETAIL DESIGNATOR; UPPER HALF DENOTES DETAIL, LOWER HALF DENOTES SHEET NUMBER ON WHICH DETAIL APPEARS. (-) DENOTES SAME SHEET.

NUMBERED NOTE DESIGNATOR.

+7'-6" MOUNTING HEIGHT ABOVE FINISHED FLOOR OR GRADE. WIRING DEVICES- TO CENTER OF DEVICE. WALL BRACKET LIGHTING FIXTURE- TO CENTER OF FIXTURE BODY. PENDANT MOUNTED LIGHTING FIXTURES- TO BOTTOM OF FIXTURE.

CO CONDUIT ONLY

WP ADJACENT TO SYMBOL DENOTES WEATHERPROOF ENCLOSURE

SWBD SWITCH-BOARD OR MCC

PANEL BOARD (SURFACE-FLUSH)

TERMINAL CABINET (SURFACE-FLUSH)

EQUIPMENT ENCLOSURE OR PULL BOX (SURFACE-FLUSH)

FLUORESCENT LIGHTING FIXTURE

FLUORESCENT LIGHTING FIXTURE - WALL MOUNTED

INCANDESCENT OR HID LIGHTING FIXTURE, BRACKET DENOTES WALL MOUNTED, LOWER CASE LETTER DENOTES SWITCH CONTROL

FLOODLIGHT, SPOTLIGHT OR WALL WASHING FIXTURE.

POSTOP FIXTURE OR LIGHTING STANDARD

(A) DENOTES FIXTURE TYPE.

S SINGLE POLE WALL SWITCH AT +4'-0" U.O.N. LOWER CASE LETTER DENOTES OUTLETS CONTROLLED

S_3 3-POLE WALL SWITCH AT +4'-0" U.O.N.

S_3 3-WAY WALL SWITCH AT +4'-0" U.O.N.

S_4 4-WAY WALL SWITCH AT +4'-0"

S_T TOGGLE TYPE FRACTIONAL HP MANUAL MOTOR STARTER WITH THERMAL OVERLOADS DELETE OVERLOADS IF ONLY FOR DISCONNECT SERVICE.

S_M MOMENTARY CONTACT SWITCH AT +4'-0" U.O.N.

S_P SWITCH WITH PILOT LIGHT AT +4'-0" U.O.N.

S_K KEY OPERATED SWITCH AT +4'-0" U.O.N.

T TIMER SWITCH +4'-0" U.O.N.

DUPLEX CONVENIENCE RECEPTACLE AT +8" U.O.N.

DUPLEX CONVENIENCE RECEPTACLE WITH UPPER HALF SWITCHED AT +8" U.O.N. LOWER CASE LETTER DENOTES SWITCH CONTROL

JUNCTION BOX, FLUSH MOUNTED; BRACKET DENOTES FLUSH WALL MOUNTED U.O.N.

COMBINATION FUSED SWITCH AND MOTOR STARTER W/ CIRCUIT BREAKER AND MOTOR STARTER

M_n MAGNETIC MOTOR STARTER; NUMBER DENOTES NEMA SIZE.

MANUAL MOTOR STARTER.

SAFETY SWITCH; "F" DENOTES FUSED.

CIRCUIT BREAKER, INDIVIDUALLY MOUNTED.

MOTOR CONNECTION

C CLOCK HANGER OUTLET AT +7'-6" U.O.N.

CONDUIT CONCEALED IN WALLS OR CEILING.

CONDUIT CONCEALED IN FLOOR, UNDERFLOOR, OR BELOW GRADE.

CONDUIT RUN EXPOSED.

FLEXIBLE CONDUIT

CROSSHATCHES DENOTE QUANTITY OF #12 WIRES IN BRANCH CIRCUIT CONDUIT. NO CROSSHATCHES DENOTES TWO #12 WIRES. NUMBER ADJACENT TO CROSSHATCHES DENOTES WIRE SIZE OTHER THAN #12 IN BRANCH CIRCUIT CONDUIT.

CONDUIT STUBOUT.

CONDUIT RISING UP

CONDUIT DROPPING DOWN

A-1 HOMERUN TO PANEL AND CIRCUITS INDICATED.

TELEPHONE SYSTEM 3/4" CO SCH.

G GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE

I DUPLEX RECEPTACLE WITH ISOLATED GROUND.

DOUBLE DUPLEX CONVENIENCE RECEPTACLE AT +8" U.O.N.

TELEPHONE OUTLET AT +18" U.O.N.

WALL MOUNTED TELEPHONE OUTLET AT +66" U.O.N.

COMPUTER OUTLET

TELEVISION OUTLET

PHOTO SWITCH

N/A NOT APPLICABLE

FIXTURE SCHEDULE

TYPE	TOTAL WATTS	LAMP	DESCRIPTION	FINISH	MTG.	REMARKS
A	96	128 QTZ	RAIL VEHICLE EXTERIOR DOOR UNIT WITH RLM	BLACK	PENDANT	ARCHITECTURAL AREA LIGHTING #LHF-96SF-T4WPA -PMD OR EQUAL
B	140	100W HPS	RAIL VEHICLE INTERIOR DOOR ENTRY, PRISMATIC GLASS LENS, INTERNAL REFLECTORS, EMERGENCY BATTERY PACK	WHITE	SURFACE	CORP. #ELL-S14-120 -ZD-DL OR EQUAL
C	72	2#40	FLUORESCENT 2'x 4' TROFFER, WITH ACRYLIC PRISMATIC LENS	BAKED WHITE ENAMEL	RECESSED	COLUMBIA #MVP42-U-A-GZ OR EQUAL
D	120	100 W LIMITED METAL HALIDE RECESS	PENDANT METAL HALIDE LUMINAIRE WITH OPAQUE ACRYLIC HOUSING WITH TOP LIGHT OPENINGS, OPAL GLOBAL DIFFUSING GLOBE, ACRYLIC BALLAST HOUSING, SWIVEL AT OUTLET BOX, FIBER OPTIC PANTRY LIGHT	WHITE	CONDUIT OR STEM	DESIGN #REFER TO SPECIFICATION
E	240	4#T8 F32 SM RS/120 HF	LUMINAIRE WITH T5000 LIGHT LAMP/BALLAST WITH CLR CAST ACRYLIC HOUSING, WIRE GUARD WITH 4#T8 F32 SM RS/120 HF LAMP FOR BUSINESS AREA LIGHT	SILVER	SURFACE	CORP. #PCL-SR2S11 4-32 OR EQUAL
F	154	100W HPS	HIGH PRESSURE SODIUM SHOE BOX, CAST WITH UV STABILIZED POLYESTER POWDER COAT FINISH, MOUNTING ARM, DIE CAST ALUMINUM REFLECTOR, FLAT GLASS LENS	BRONZE	SURFACE	#SHOE-HPS-100 OR EQUAL
G	68	2#40	FLUORESCENT "UP" DECORATIVE, FIBERGLASS ENCLOSURE	SATIN FINISH ENCLOSURE STEEL	PENDANT	CORTRONIC LIGHT #PLA-2-32-120-T5-GZ OR EQUAL
H	150	100W HPS CENTER	ENCLOSED GLASS FLUORESCENT SURFACE LUMINAIRE WITH DIE CAST ALUMINUM HOUSING, ACRYLIC LENS, ELECTRONIC BALLAST, 4 LAMP	WHITE TRIM, GRAY DIFFUSER	RECESSED	PRESCOLITE #EB277-4P-277-UNV-T5 OR EQUAL

AS BUILT
Contract No. LRT-052
Date 1-6-97

LIGHTING MANDATORY MEASURES

CERTIFICATE OF COMPLIANCE - Lighting

DESIGNED BY	RJJ	DATE	12-28-94	
DRAWN BY	CAD			
CHECKED BY	RJJ			
MTDB PROJ. ENG.				

PARSONS DE LEUW

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego

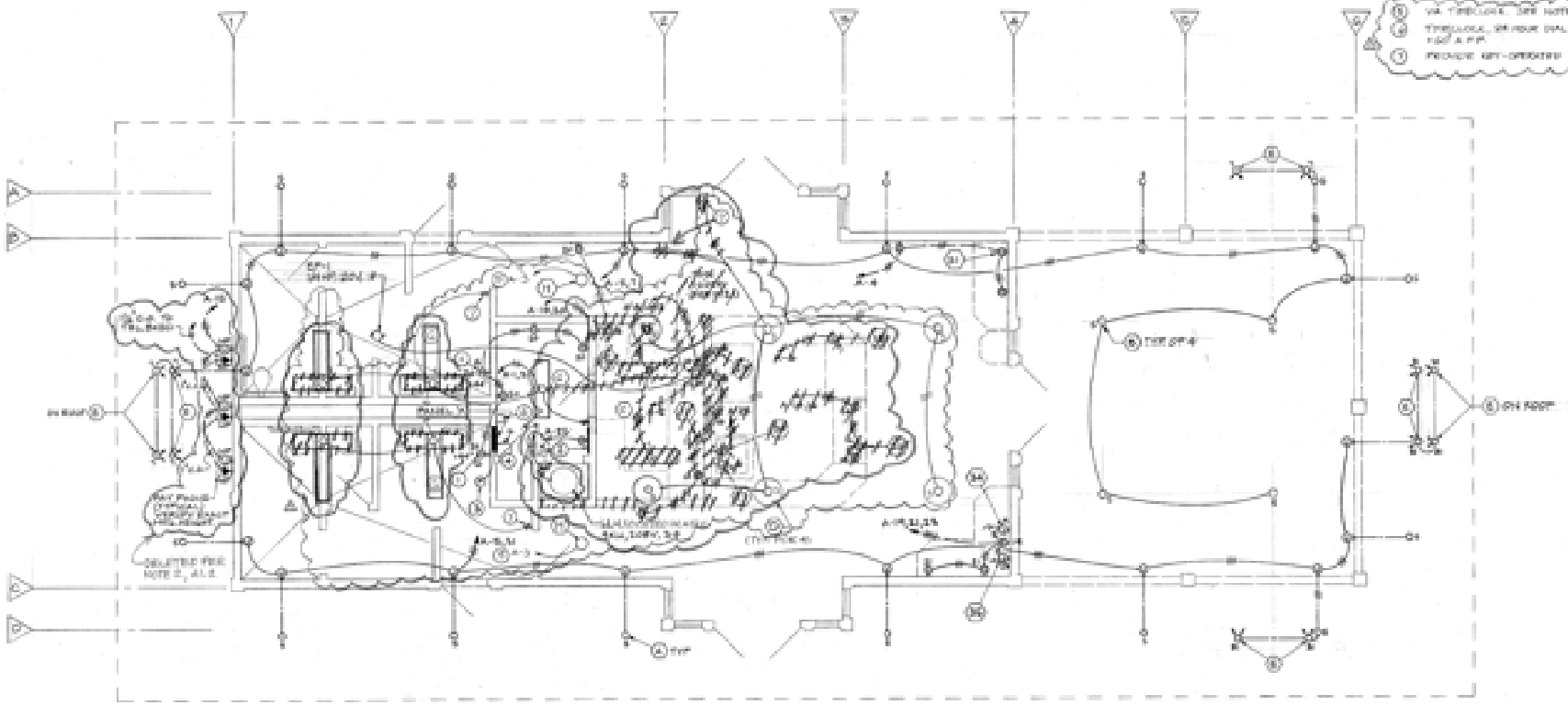
LEGENDS & FIXTURE SCHEDULES

SCALE NO SCALE
MTDB CONTRACT NO. LRT-052
DRAWING NO. E1.1 SHEET NO. 147

NO.	DATE	REVISIONS	BY	CHK	APPV
4	97	Conformed			

215

MTS DOC NO. PWL355/422, WOA355-AE-75



1 DEPOT ELECTRICAL FLOOR PLAN

AS BUILT
Contract No. LRT-552
Date 1-6-97

DESIGNED BY Paul
DRAWN BY HPG
CHECKED BY Paul
MTDB PROJ. ENG.
DATE 10-08-94

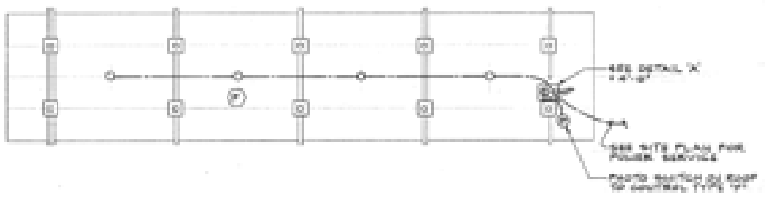
PARSONS DE LEUW

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 Tel (619) 231-1466

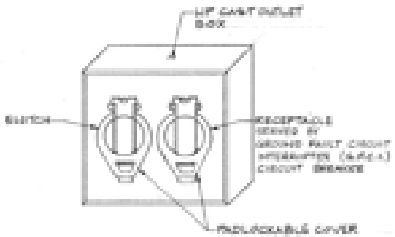
LIGHT RAIL GUIDEWAY PROJECT
San Diego

ELECTRICAL FLOOR PLAN

SCALE 1/4"=1'-0"
MTDB CONTRACT NO. LRT-552
DRAWING NO. E2.1
SHEET NO. 146



1 / E3.1 ELECTRICAL PLAN - SHELTER
1/4" = 1'-0"



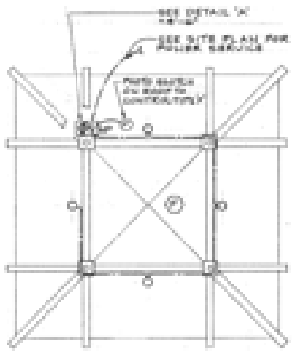
A COMBINATION SWITCH & RECEPTACLE ENCLOSURE
NO SCALE

PANEL 'A' MAIN 150 A. 3P TYPE: FLUSH

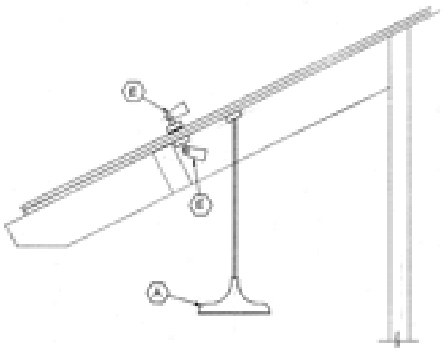
CKT	POLES	VOLTS	AMPS	LOAD	LOCATION & REMARKS	LOCATION & REMARKS	VOLTS	AMPS	LOAD	POLES	CKT
1	1	120		1000	LIGHTING	SEE PLAN	120			1	2
3	1		20	1000		ELEVATOR		1750		1	4
5	1				EXTERIOR LTG.	LAMP			880	1	6
7	1	120		1000	HIGH LIGHT	SHOWER TABLE	1000			1	8
9	1	120		1000	H.H.	RECEPTACLE		1000		1	10
11	1			1000		REFRIG. BANK			450	1	12
13	1	120		1000		RECEPTACLE	1000			1	14
15	1		20	1000	PAY PHONE	CASH REGISTER		180		1	16
17	1			60	PHOTO CELL	REFRIG. CASE			880	1	18
19	1	120		1000	DISPENSER	RECEPTACLE	1000			1	20
21	1		20	1000	RECEPTACLE	TEL. BOOTH		1000		1	22
23	1			240	UV PANELS	SPARE					24
25	1	120			SPARE						26
27	1		20	1000							28
29	1	120			SPARE						30
31	1										32
33	1	120		1000	H.H. LIGHT						34
					SPARE						
						SPACE					
SUBTOTALS							3000	1930	2210		
TOTAL CONN. LOAD											

A PROVIDE 30A 4P ELECTRICALLY HELD CONTACTOR IN A SEPARATE BARRIERED COMPARTMENT.

AS-BUILT NOTE: FOR DIAGRAMS, CIRCUIT DIRECTORY'S ETC. SEE DWG. E100 B, SHT. ___ .



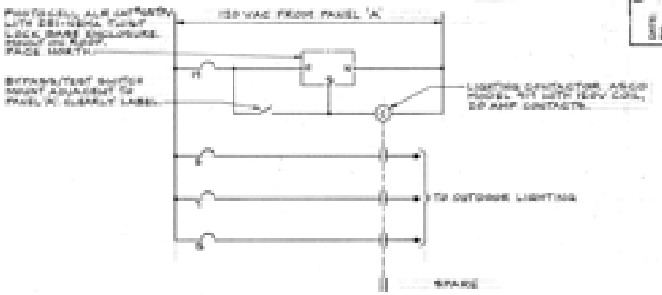
2 / E3.1 ELECTRICAL PLAN - ENTRANCE PORTAL
1/4" = 1'-0"



B TYPICAL MOUNTING DETAIL FIXTURES 'A' & 'E'
NO SCALE

AS BUILT
Contract No. LRT-662
Date 1-6-97

3 / E3.1 ELECTRICAL PLAN - SMALL BUS SHELTER
1/4" = 1'-0"



C OUTDOOR LIGHTING CONTROL SCHEMATIC
NO SCALE

DESK

NO.	DATE	REVISIONS	BY	CHK. APPV.
4	4-97	As Noted		

PARSONS DE LEUW

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
MTDB PROJ. ENG.	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-7490 (619) 231-1466

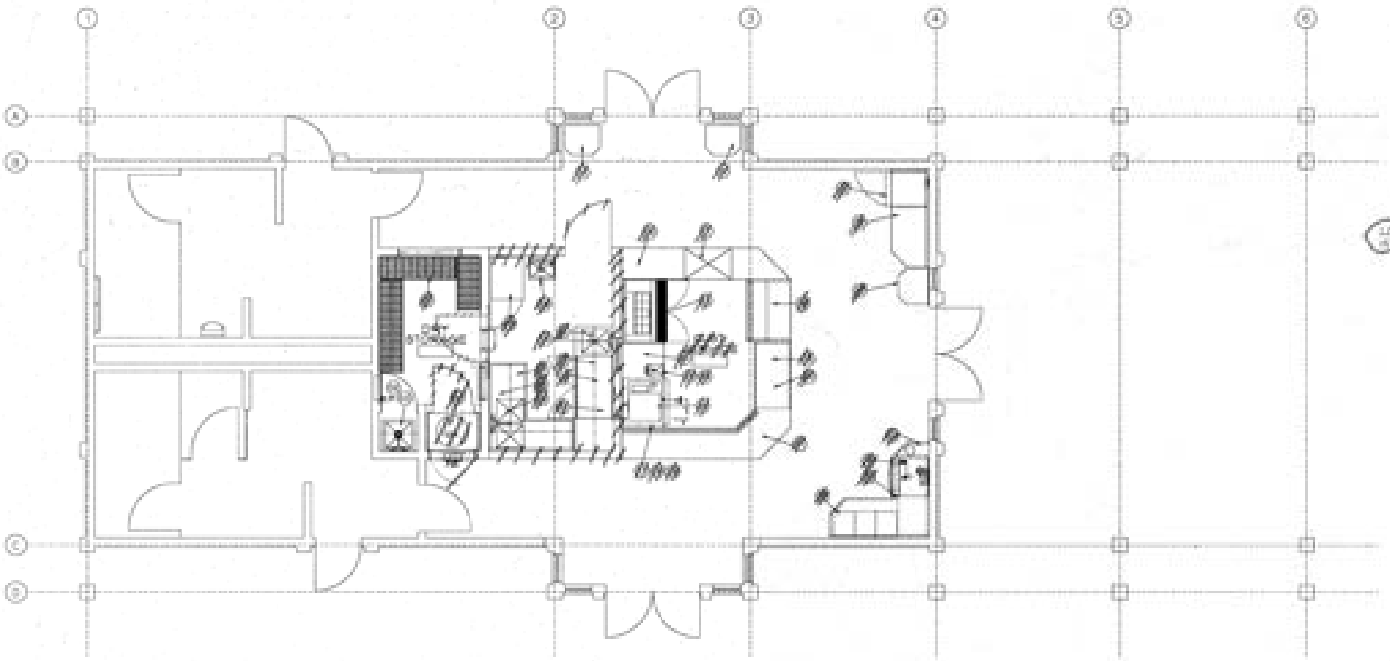
LIGHT RAIL GUIDEWAY PROJECT
San Diego

PANEL SCHEDULES, DETAILS, SHELTER & PLANS

SCALE	1/4"=1'-0"
MTDB CONTRACT NO.	LRT-662
DRAWING NO.	E3.1
SHEET NO.	149

217

MTS DOC NO. PWL355A22, WOA355A6475



FLOORPLAN

SCHEDULE

NO.	DESCRIPTION	NO.	DESCRIPTION
1		11	
2		12	
3		13	
4	WATER HEATER	14	
5		15	
6		16	
7		17	
8		18	
9		19	
10		20	
11		21	
12		22	
13		23	
14		24	
15		25	
16		26	
17		27	
18		28	
19		29	
20		30	
21		31	
22		32	
23		33	

AS BUILT
Contract No. L&T-552
Date 1-7-97

THIS DRAWING SHOWS FUTURE EQUIPMENT LOCATIONS FOR INFORMATION ONLY TO ASSIST CONTRACTOR IN LOCATING AND INSTALLING PLUMBING AND ELECTRICAL FACILITIES. ALL EQUIPMENT AND FURNITURE SHOWN ON THIS DRAWING (EXCEPT WHERE SHOWN ELSEWHERE IN THE PLANS) IS NOT A PART OF THE LUMP SUM BID FOR THE FIRST BUILDING. THESE ITEMS IF INSTALLED WILL BE INSTALLED BY CONTRACT CHANGE ORDER OR BY OTHERS AT THE DISCRETION OF THE OWNER.

NO.	DATE	REVISIONS	BY	CHK	APPD
4	By	Contract			

DESIGNED BY
DRAWN BY
CHECKED BY
MTDB PROJ. ENG.
DATE

MTDB
Metropolitan Transit Development Board
1255 Imperial avenue, Suite 1000, San Diego, CA, 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego

FLOORPLAN

SCALE
MTDB CONTRACT NO.
L&T-552
DRAWING NO. | SHEET NO.
FS.01 | 150

EQUIPMENT SCHEDULE

ITEM	QTY	DESCRIPTION	ELECTRICAL						REMARKS	PLUMBING					REMARKS
			VOLT	PHASE	W	AMPS	HP	LOAD		HW	CW	WASTE	GAS	VENT	
		DRY STORAGE SHELVING													
2	1	JANITOR'S SINK								1/2"	1/2"	2"			BACK FLOW PREVENTION DEVICE REQUIRED
3	1	JANITOR'S CLOSET													
4	1	WATER HEATER							SEE PLUMBING						
	1	REFRIGERATOR	120	1		1/4	1/3		SELF CONTAINED CONDENSATE EVAPORATOR						
	1	LAVATORY								1/2"	1/2"	2"			
	1	POT and PAN SINK										3"			TURN DOWN DISPLAY DRAINBOARDS (TYP.)
		BAR SHELVING													
	1	FAUCET								1/2"	1/2"				
	1	WINDOWS													
	1	REFRIGERATED BASE	120	1		2	1/2		SELF CONTAINED CONDENSATE EVAPORATOR						
11		SPARE NUMBER													
	1	BACKBAR SHELF													
	1	HEATED MILK WELL										1 1/2"			
	1	FAUCET								1/2"	1/2"				
	1	COUNTER													
	1	LIFT GATE													
	1	REFRIGERATED BASE	120	1		2	1/2		SELF CONTAINED CONDENSATE EVAPORATOR						
	1	COUNTER													
17	1	Cash REGISTER	15	1	15			D	DEDICATED CIRCUIT REQUIRED						
		MENU COUNTER													
13		SPARE NUMBER													
	1	REFRIGERATED SERVING TABLE	120	1		2	1/2		SELF CONTAINED CONDENSATE EVAPORATOR						
	1	S.S. COUNTER													
	1	HANDSINK								1/2"	1/2"	2"			
		SOUP and FOOD DISPENSER													
	1	EXHAUST HOOD	120	1					WALL MOUNTED HOOD LIGHTS						
	1	EXHAUST SYSTEM							SEE MECHANICAL						
	1	MAKE UP AIR SYSTEM							SEE MECHANICAL						
	1	CONVECTION OVEN	208	3	24										
	1	REFRIGERATOR	120	1		1	1/3		SELF CONTAINED CONDENSATE EVAPORATOR						
	1	COUNTER													
	1	COUNTER													
	1	ICE and BEVERAGE DISPENSER	15	1	15							3/4"			
	1	ICE MAKER	15	1	1		1/3				1/4"				
	1	COUNTER													
	1	TRAY RECEPTACLE													
20		SPARE NUMBER													
21		SPARE NUMBER													
22		SPARE NUMBER													
4'		SPARE NUMBER													
41		SPARE NUMBER													

AS BUILT
Contract No. LRT-552
Date 1-7-97

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NO.	DATE	REVISIONS	BY	CHK	APPR
	4-96	Addendum			

DESIGNED BY: [illegible] DATE: 7/96
DRAWN BY: [illegible]
CHECKED BY:
MTDB PROJ. ENG.:

MTDB
Metropolitan Transit Development Board
[illegible]

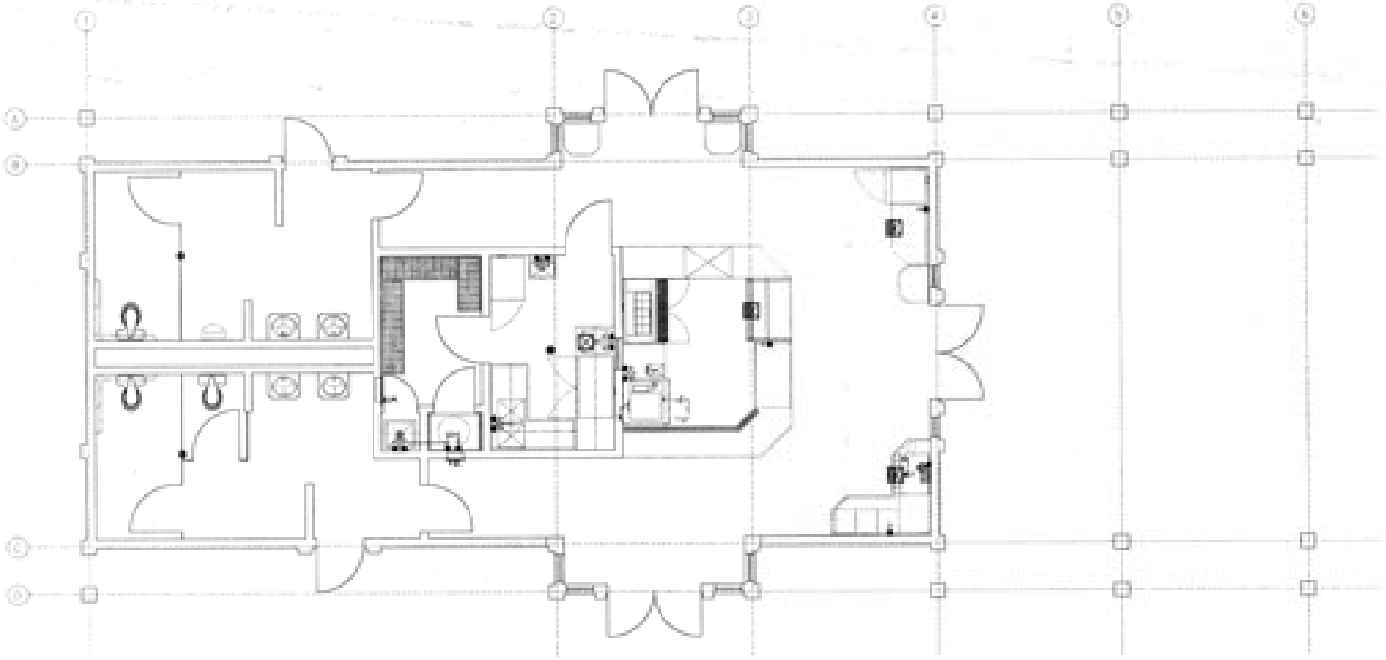
LIGHT RAIL GUIDEWAY PROJECT
San Diego

EQUIPMENT SCHEDULE

SCALE: 1/4"=1'-0"
MTDB CONTRACT NO. LRT 552
DRAWING NO. FS.02 SHEET NO. 151

219

MTS DOC NO. PW.355242, WOA355485



SCHEDULE

NO.	DESCRIPTION	NO.	DESCRIPTION
1	GREY STORE SHELF	14	BAR COUNTER
2	JANITOR'S SINK	15	HANDSINK
3	JANITOR'S CLOSET	16	BOWL + TOWEL DISP.
4	WATER HEATER	17	EXHAUST HOOD
5	REFRIGERATOR	18	EXHAUST SYSTEM
6	HANDSINK	19	F.C.U. AIR SYSTEM
7	POT + PREP SINK	20	CONVECTION OVEN
8	U-SHELF	21	REFRIGERATOR
9	FAUCET	22	COUNTER
10	WORK TABLE	23	COUNTER
11	REFRIGERATED BASE	24	ICE AND WATER DISP.
12	SPARE NUMBER	25	ICE TUNNER
13	U-SHELF	26	COUNTER
14	MEAL TRAY SHELF	27	TRASH RECEPT.
15	FAUCET	28	SPARE NUMBER
16	COUNTER	29	SPARE NUMBER
17	LIFT GATE	30	SPARE NUMBER
18	REFRIGERATED CASE	31	SPARE NUMBER
19	COUNTER	32	SPARE NUMBER
20	CASH REGISTER	33	SPARE NUMBER
21	PITCH COUNTER	34	SPARE NUMBER
22	SPARE NUMBER	35	SPARE NUMBER
23	WARM HAND TABLE	36	SPARE NUMBER

FLOORPLAN

PLUMBING LOCATION PLAN

PLUMBING SCHEDULE

- ----COLD WATER
- ----HOT WATER
- ----DIRECT WASTE
- ----GAS
- ----FLOOR SINK
- ----FLOOR SINK W/ GRATE
- ----FLOOR DRAIN W/ 3/4 GRATE
- ----FLOOR DRAIN
- ----STEAM SUPPLY
- ----STEAM RETURN

NOTE: FLOORS TO PITCH TO FLOOR DRAIN AT 1.5% ↓

VOID!

THIS DRAWING SHOWS FUTURE EQUIPMENT LOCATIONS FOR INFORMATION ONLY TO ASSIST CONTRACTOR IN LOCATING AND INSTALLING PLUMBING AND ELECTRICAL FACILITIES. ALL EQUIPMENT AND FURNITURE SHOWN ON THIS DRAWING (EXCEPT WHERE SHOWN ELSEWHERE) IN THE PLANS IS NOT A PART OF THE LUMP SUM BID FOR THE DEPOT BUILDING. THESE ITEMS IF INSTALLED WILL BE INSTALLED BY CONTRACT CHANGE ORDER OR BY OTHERS AT THE DISCRETION OF THE OWNER.

NO.	DATE	REVISIONS	BY	CHK	APPV
	4-98	Construction			

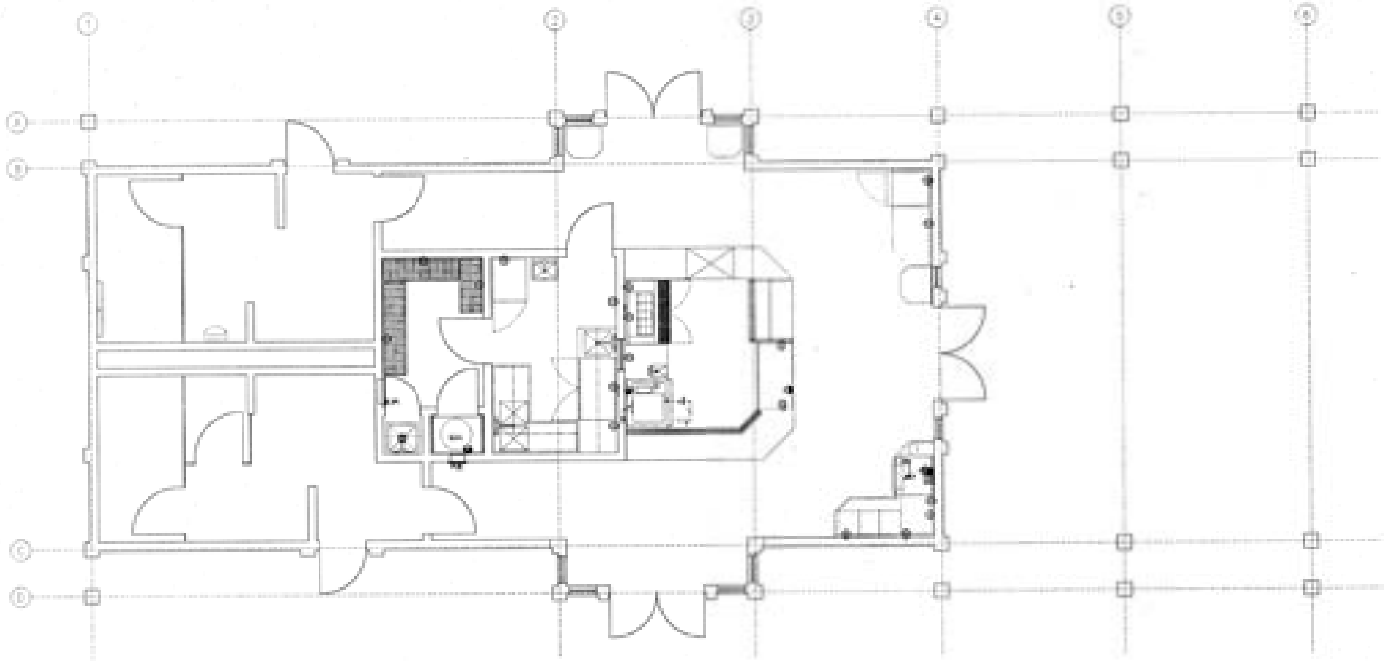
DESIGNED BY
DRAWN BY
CHECKED BY
MTDB PROJECT MGR.
DATE

MTDB
Metropolitan Transit Development Board

LIGHT RAIL GUIDEWAY PROJECT
San Diego

PLUMBING LOCATIONS

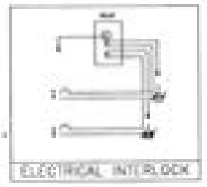
SCALE
MTDB CONTRACT NO.
L&T 8140
DRAWING NO. / SHEET NO.
FS.03 | 152



SCHEDULE			
NO.	DESCRIPTION	NO.	DESCRIPTION
1	DRY STOR. SHELV.	24	S/S COUNTER
2	JANITOR'S SINK	25	LAVATORY
3	JANITOR'S CLOSET	26	MOP / TOWEL DYR
4	WATER HEATER	27	EXHAUST HOOD
5	REFRIGERATOR	28	EXHAUST SYSTEM
6	WINDOW	29	H.V.A.C. SYSTEM
7	POT & PAN SINK	30	CONVECTION OVEN
8	OVERSHELF	31	REFRIGERATOR
9	FAUCET	32	COUNTER
10	WORKTABLE	33	COUNTER
11	REFRIGERATED BASE	34	ICE AND BEV DISP.
12	SPARE NUMBER	35	ICE MAKER
13	OVERSHELF	36	COUNTER
14	SEAL PREP SINK	37	TRASH RECEPT.
15	FAUCET	38	SPARE NUMBER
16	COUNTER	39	SPARE NUMBER
17	LIFT GATE	40	SPARE NUMBER
18	REFRIGERATED CASE	41	SPARE NUMBER
19	COUNTER	42	SPARE NUMBER
20	CASH REGISTER	43	SPARE NUMBER
21	WORK COUNTER	44	SPARE NUMBER
22	SPARE NUMBER	45	SPARE NUMBER
23	REFR. SAND. TABLE	46	SPARE NUMBER

FLOORPLAN

ELECTRICAL LOCATION PLAN



ELECTRICAL SCHEDULE
⊕ – CONVENIENCE OUTLET
◎ – JUNCTION BOX
◇ – VAPOR PROOF LIGHT
$ – SWITCH
Ⓑ – BLOWER COIL
Ⓒ – COMPRESSOR
Ⓔ – EXHAUST FAN
∿ – CONDENSATE LINE

VOID!

THIS DRAWING SHOWS FUTURE EQUIPMENT LOCATIONS FOR INFORMATION ONLY TO ASSIST CONTRACTOR IN LOCATING AND INSTALLING PLUMBING AND ELECTRICAL FACILITIES. ALL EQUIPMENT AND FURNITURE SHOWN ON THIS DRAWING (EXCEPT WHERE SHOWN ELSEWHERE IN THE PLANS) IS NOT A PART OF THE LUMP SUM BID FOR THE DEPOT INSTALLATION. THESE ITEMS IF INSTALLED WILL BE INSTALLED BY CONTRACT CHANGE ORDER OR BY OTHERS AT THE DISCRETION OF THE OWNER.

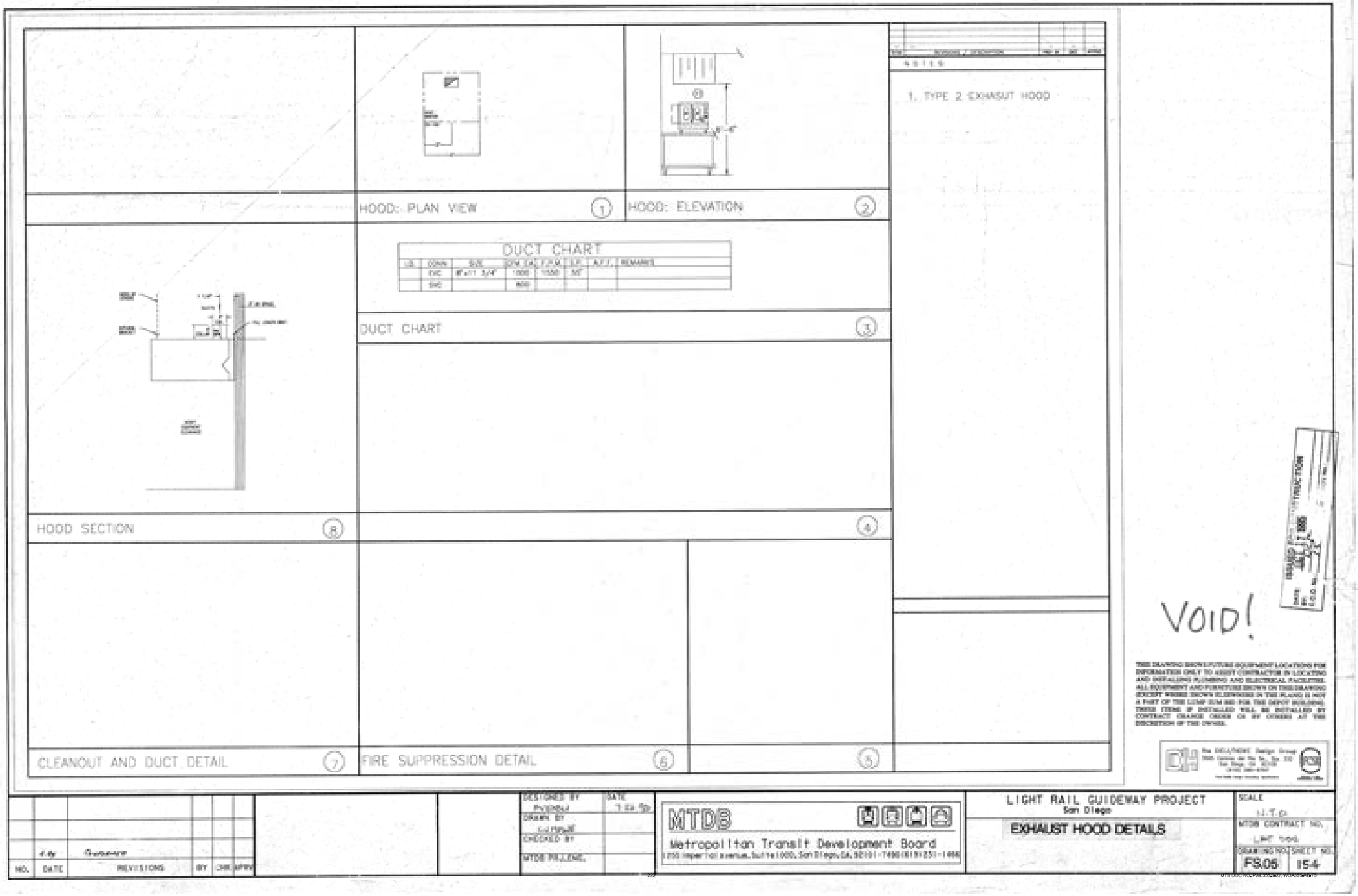
NO.	DATE	REVISIONS	BY	CHK	APPV
	4/87	Construct			

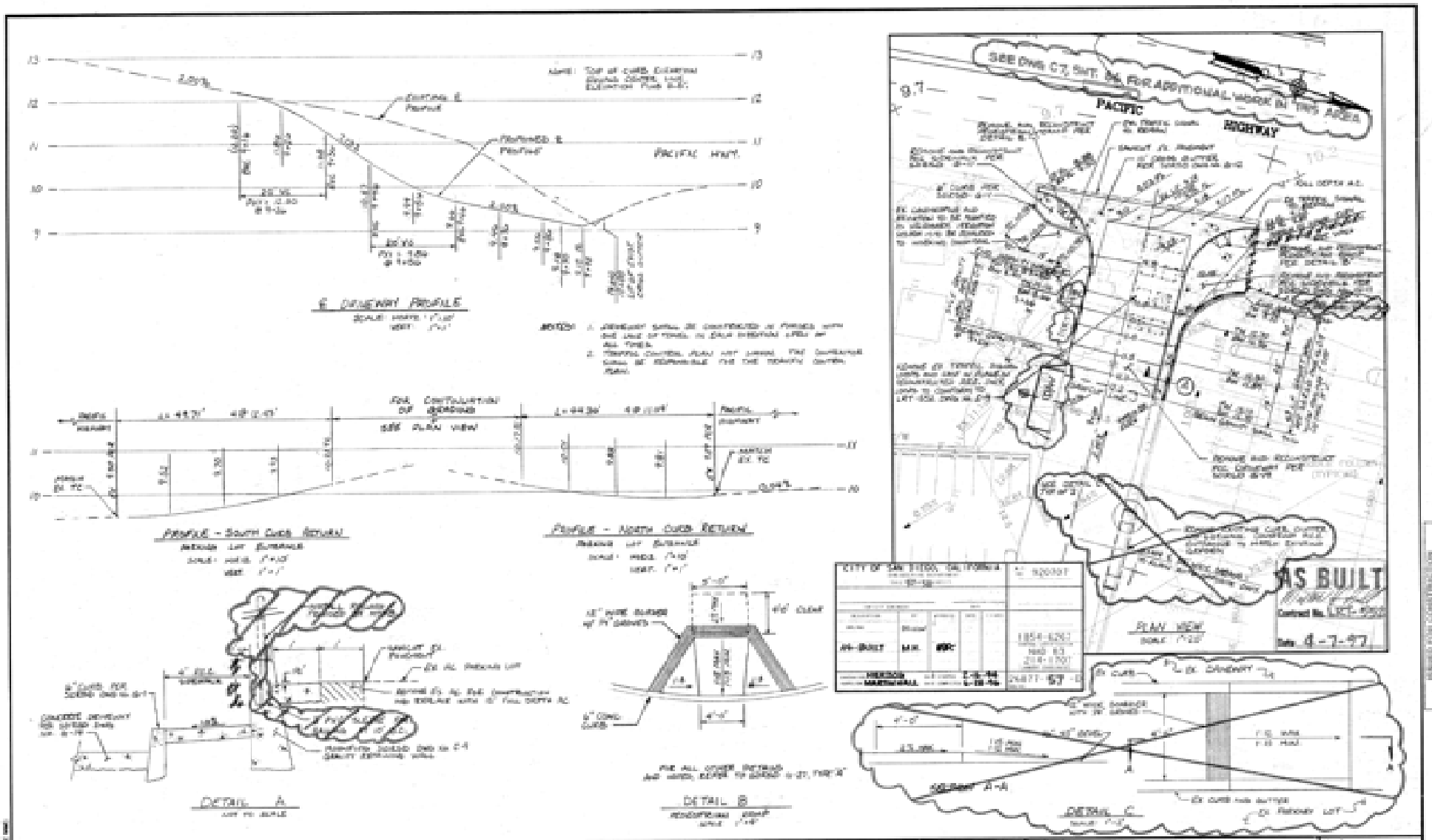
DESIGNED BY: R.V. [illegible] DATE: 7/24/87
DRAWN BY: A.J. [illegible]
CHECKED BY:
MTDB PROJ. ENG.:

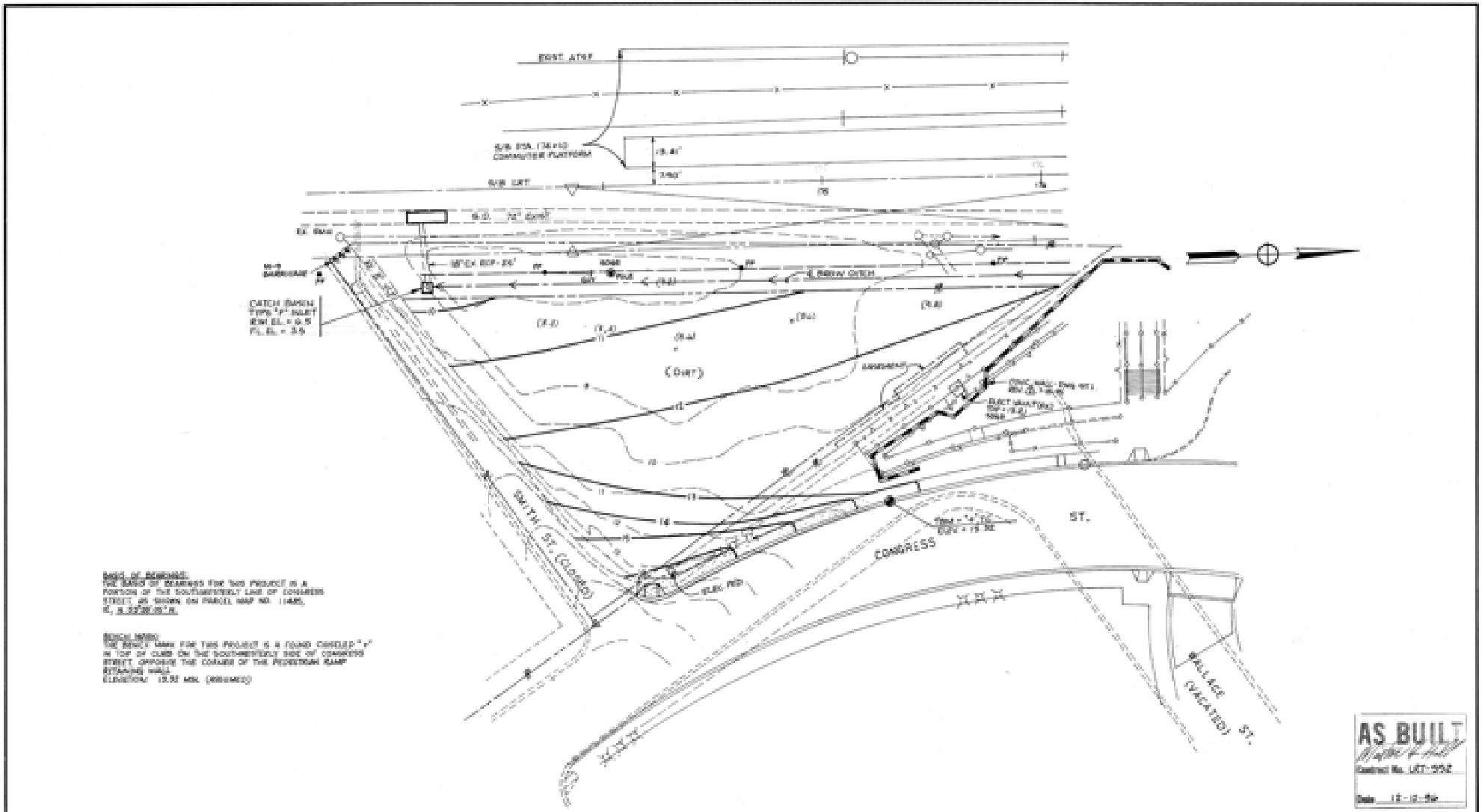
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego
ELECTRIC LOCATION

SCALE
MTDB CONTRACT NO.
DRAWING NO. FS.04
SHEET NO. 153


HOOD: PLAN VIEW
1
HOOD: ELEVATION
2
NOTES
1. TYPE 2 EXHAUST HOOD
DUCT CHART
DUCT CHART
3
HOOD SECTION
8
4
CLEANOUT AND DUCT DETAIL
7
FIRE SUPPRESSION DETAIL
6
5
VOID!
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
EXHAUST HOOD DETAILS
FS.05
154


E DRIVEWAY PROFILE
PROFILE - SOUTH CURB RETURN
PROFILE - NORTH CURB RETURN
DETAIL A
DETAIL B
DETAIL C
PLAN VIEW
AS BUILT
PACIFIC HIGHWAY
EARTH TECH
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN TRANSIT CENTER
DRIVEWAY CONSTRUCTION PLAN
LRT 552
155



BASIS OF BEARINGS:
THE BASIS OF BEARINGS FOR THIS PROJECT IS A PORTION OF THE SOUTHWESTERLY LINE OF CONGRESS STREET, AS SHOWN ON PARCEL MAP NO. 11485, N. 53°30'05" W.

BENCH MARK:
THE BENCH MARK FOR THIS PROJECT IS A FOUND CHISELED "+" IN TOP OF CURB ON THE SOUTHWESTERLY SIDE OF CONGRESS STREET, OPPOSITE THE CORNER OF THE PEDESTRIAN RAMP RETAINING WALL
ELEVATION= 15.92 MSL (ASSUMED)

NO.	DATE	REVISIONS	BY	CHK	APPV
	12-12-94	NEW DRAWING PER C.C.O.# 14			

DESIGNED BY | DATE
DRAWN BY C.E.
CHECKED BY
MTDB PROJ. ENG.

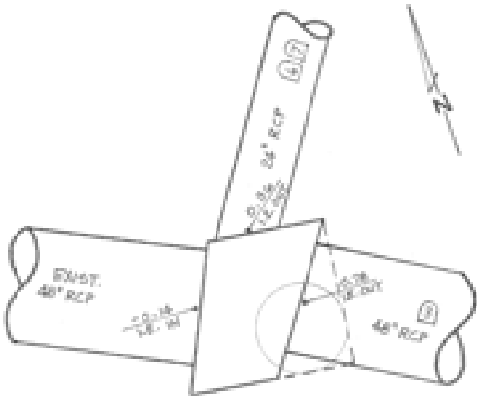
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
(San Diego)
OLD TOWN TRANSIT CENTER
FLETCHER GRADING PLAN

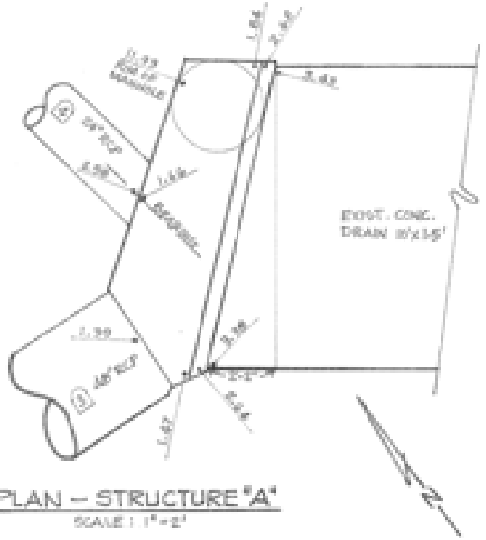
SCALE 1" = 20'
MTDB CONTRACT NO. LRT-552
DRAWING NO. G-109
SHEET NO. 156

224

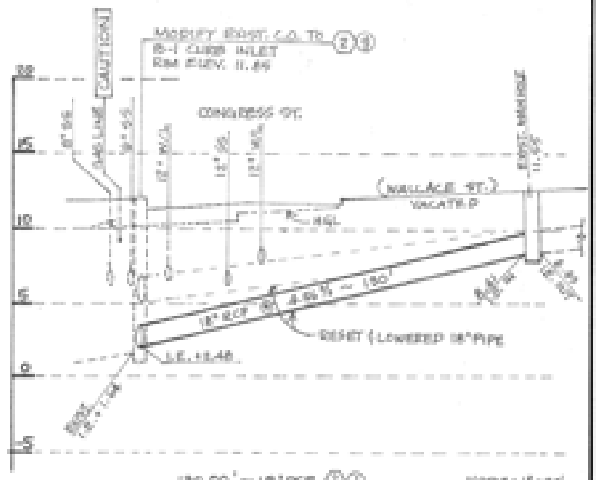
MTS DOC NO. PWL355/J-22, WOA355-AE-75



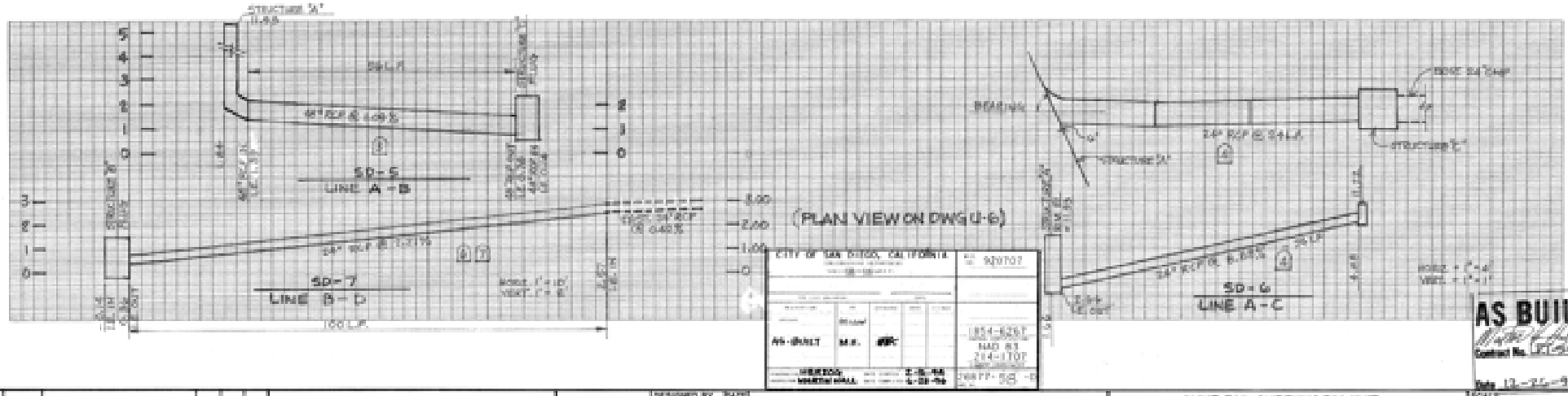
PLAN – STRUCTURE "B"
SCALE: 1"=2'



PLAN – STRUCTURE "A"
SCALE: 1"=2'



PROFILE - SYSTEM (2)
PLAN VIEW ON DWG'S U5 & U-7



NO.	DATE	REVISIONS	BY	CHK	APPD
1	11/96	NEW DRAWING	C.E.		

DESIGNED BY
DRAWN BY C.E.
CHECKED BY
MTDB PROJ. ENGR.

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Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
UTILITY PLANS
STORM DRAIN PROFILES, AS-BUILT

SCALE: As Shown
MTDB CONTRACT NO. LRT-552
DRAWING NO. D-2A
SHEET NO. 157

AS BUILT
Contract No. LRT-552
Date 12-20-96

PANEL 'D'

CKT	CKT BKR	VOLT-AMPS LOAD Ø1	VOLT-AMPS LOAD Ø2	LOCATION & REMARKS	LOCATION & REMARKS	VOLT-AMPS LOAD Ø1	VOLT-AMPS LOAD Ø2	CKT BKR	CKT
1	20/1	1,440		SUMP PUMP	SPARE CIR. - WIRED	900		20/1	2
3			1,440	EX'S H.P.	" - SPARE		1,440		4
5	15/1				TUNNEL LTGS.				6
7	20/1	1,440		SHELTER LIGHTING	"	180			8
9			1,440	SHELTER RECEPT.	SPARE		180	20/1	10
11				TV CAMERAS	SECURITY GATE MOT.		360	20/1	12
13				PHOTO CELL CONTROL	" - CENTER - WIRED	180			14
15					SPARE		180	20/1	16
17									18
19									20
21									22
23									24
25									26
27									28
29									30
31									32
33									34
35									36
37									38
39									40
41									42

SUBTOTALS: 3,060 | 3,060 | 1,440 | BUSBRACE = 30 AMPS | 1,440 | 1,620 | 1,620 | 3,060

MAIN TOTALS: 4,500 AMPS | 4,500 AMPS | 1,440 | * LIGHTING AND WATER HEATER ONLY = 20 AMPS

* 208% MIN. | 144 AMPS | NO | HEAT PUMPS WILL = 80 AMPS (2Ø) = 40 AMPS/Ø

PANEL 'A' CIRCUIT DIRECTORY

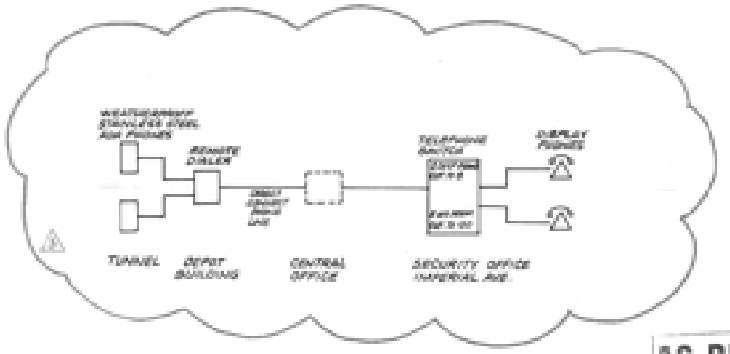
1	LIGHTING	2	EXHAUST FAN
3		4	OUTLETS, EAST WALL
5	EXTERIOR LIGHTING	6	TV CAMERAS
7	SIGN LIGHTING	8	HAND DRYER WARMER
9	WATER HEATER	10	" - HEAT
11		12	SPARE
13	SPARE	14	COUNTER OUTLETS
15	ELECTRICAL STRIKE	16	FLOOR OUTLET
17	OUTLETS, WEST WALL	18	OUTLETS, SECURITY
19		20	TOILET ENCROACHMENT
21	SIGN OUTLET, WEST WALL	22	COUNTER OUTLETS
23		24	
25	SIGN OUTLET, WEST WALL	26	
27		28	
29	SIGN LIGHTING	30	SPARE
31	CENTER OUTLETS	32	SPARE
33		34	
35		36	
37		38	
39		40	
41		42	

PANEL 'B' CIRCUIT DIRECTORY

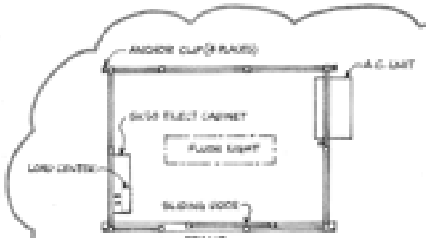
1	TROLLEY EAST DRIVE	2	
3		4	SPARE
5		6	
7	SPARE	8	
9		10	
11	IRRIGATION CONTROLLER	12	SHELTER RECEPT. ETC.
13	PHOTO CELL CONTROL	14	LTG
15	SPARE	16	VENDING MACHINE
17	GATE PLATFORM LIGHT	18	
19		20	VALIDATOR
21		22	BUS SHELTER LTS
23	PTZ #2 & 3	24	
25	OVERSIZE TAGS	26	CENTER LIGHTS & VENDING MACHINE
27		28	
29	PANEL 'D'	30	VALIDATOR
31		32	
33		34	SPARE
35	SPARE	36	BUS SHELTER RECEPT.
37		38	PTZ #1&4
39		40	TVCC INTERFACE/GATE
41		42	

PANEL 'C' CIRCUIT DIRECTORY

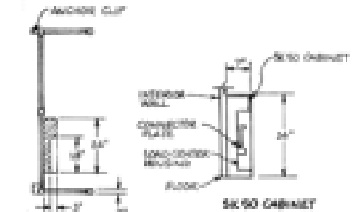
NO.	AMP	POLE	DESCRIPTION
	200	3	MAIN DISCONNECT
1	20	1	SHELTER RECEPT.
3	20	1	SPARE
5	20	1	SHELTER RECEPT.
7	20	1	VENDING MACHINE
9	20	1	VALIDATOR
11	20	1	IRRIGATION CONTROLLER
13	20	1	CONTROL
15	20	1	SHELTER LIGHTS
17	20	1	SHELTER LIGHTS
19-21	20	3	PARKING
23-25	20	3	PARKING
27	20	1	VENDING MACHINE
29	20	1	VENDING MACHINE
31	20	1	VENDING MACHINE
33	20	1	IRRIGATION PUMP
35	20	1	SPARE
37	20	1	SPARE
39-41	20	3	PLATFORM
43-45	20	3	PARKING
47-49	20	3	PARKING
51-53	20	3	RAMP
55-57	20	3	PLATFORM
59	20	1	SPARE
61			SPARE
63			SPARE
65-67			



AS BUILT
Contract No. [illegible]
Date 1-2-97



FLOOR PLAN



SK150 CABINET
STUB AREA/ SIDE VIEW

ELECTRIC STUB AREA
STUB AREA, 24"DEEP x 24"WIDE
(NOT TO SCALE)

NOTES:

1. FRAME WORK TO BE 2"x2"x.120" ALUM TUBE.
2. UNIT TO HAVE HALF GLASS DOOR (BRUSHED STEEL FINISH) WITH SIDE SHIELDING FOR INTERIOR LOUVERS.
3. UNIT TO HAVE CUSTOM 1" STANDING SEAM HIP STYLE ROOF WITH 6" EAVES AND 12" OVERHANG ON ALL SIDES
4. UNIT TO HAVE NO FLOOR; 3/16" STEEL (ASTM) STRIP BASE MOUNTED ON CONCRETE SLAB (CONCRETE BY OTHERS)
5. UNIT TO HAVE ONE 8'-0" INTERIOR SLIDING DOOR BELOW NORTH WITH FOUR STEEL ROLLERS AND MORTISE AND TYPE LOCKS SET THROUGHOUT.
6. UNIT TO BE 8'-0" CLEAR STANDING HEIGHT x 6'-0" WIDE
7. UNIT TO HAVE ONE 3 WIRE SINGLE PHASE, 60 HZ, 120 AMPS, 120/240 VOLTS, LOAD CENTER MOUNTED IN SK150 CABINET
8. UNIT TO HAVE ONE (1) 4' FLUORESCENT LIGHT FIXTURE, RECESSED IN STEEL CEILING AND CONTROLLED BY SINGLE POLE WALL SWITCH
9. UNIT TO HAVE TWO DUPLEX OUTLETS MOUNTED UNDER SHELF.
10. UNIT TO HAVE ONE WALL MOUNT HEAT/COOL AIR CONDITIONING UNIT WITH 9000 BTUH COOLING AND 11,800 BTUH HEAT AT 230 VOLTS. SEE MANUFACTURER'S DETAILS.
11. UNIT TO HAVE WALLS AND ROOF INSULATED TO R-10
12. UNIT TO HAVE FOUR INTERIOR ANCHOR CLIPS, FOUR 5/8" MUSH BOLTS WITH 9" EMBEDMENT IN 3000 LB CONCRETE. ARE REQUIRED FOR PLACEMENT OF ANCHOR BOLTS AND MOUNTING SHALL BE BY OTHERS.
13. ALL ELECTRICAL EQUIPMENT TO BE UL APPROVED AND ALL WIRING TO PER CURRENT PUBLISHED NEC. STANDARDS. EXPOSED WIRING TO BE IN SURFACE MOUNT EMT CONDUITS. CONCEALED WIRING TO BE IN FLEXIBLE ALUMINUM CONDUIT.
14. ALL EXPOSED STEEL SURFACES TO BE COATED WITH TWO COMPONENT HIGH BUILD POLYURETHANE PRIMER AND TWO COMPONENT HIGH SOLIDS POLYURETHANE FINISH COAT.

TROLLEY OPERATOR'S BOOTH
B.J.W. ENTERPRISES, INC. 9100 EL RIDGE PL. SO. EL MONTE, CA. 91733

NO.	DATE	REVISIONS	BY	CHK	APPV
3		AS-BUILT PER C.C.O.# 51			
2		AS-BUILT PER CCO # 22			
1		NEW DRAWING	C.E.		

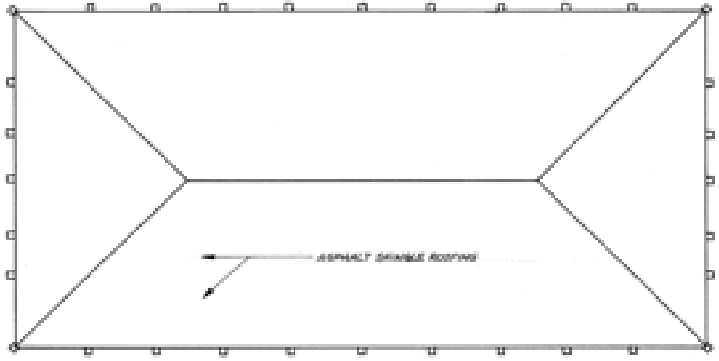
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

DESIGNED BY
DRAWN BY C.E.
CHECKED BY
MTDB PEL. ENG.
DATE 1/97

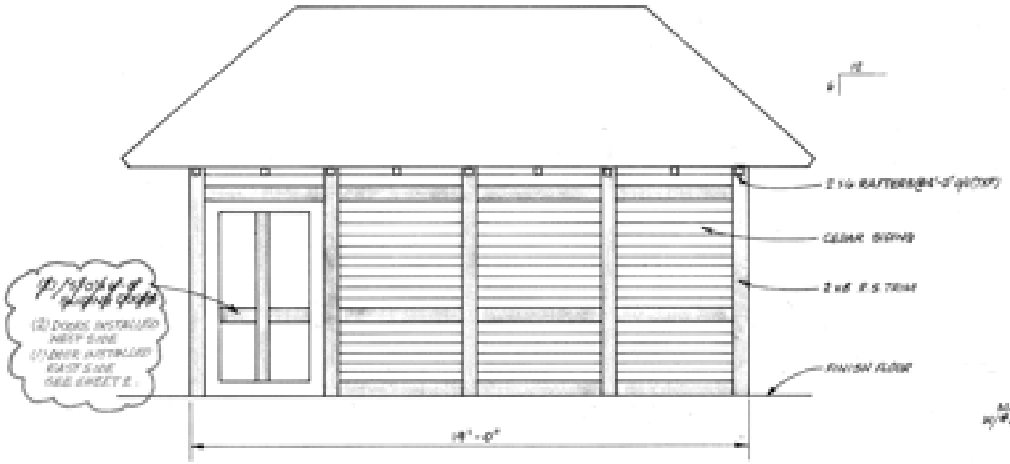
LIGHT RAIL GUIDEWAY PROJECT
OLD TOWN TRANSIT CENTER
DIAGRAMS & TROLLEY OPERATOR'S BOOTH

SCALE
MTDB CONTRACT NO. LRT-552
DRAWING NO. E1008
SHEET NO. 158

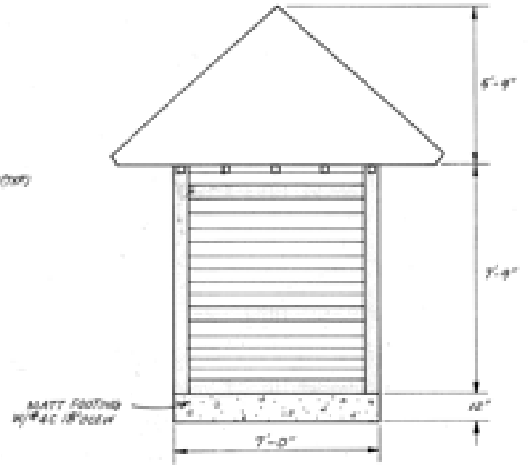
MTS DOC NO. PWL355AD-22, WOA355-AE-75



NORTH



EAST/WEST ELEV.



NORTH/SOUTH ELEV.

AS BUILT
Contract No. LRT-552
Date 1-8-97

NO.	DATE	REVISIONS	BY	CHK	APPV
		NEW GUIDEWAY REF SCH# 54			

CHOICE ONE CONSTRUCTION (S/B) TMP-8113
P.O. BOX 2108 EMPIRE, CA 95340

DESIGNED BY
DRAWN BY CE
CHECKED BY
MTDB PROJ. ENGR.

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

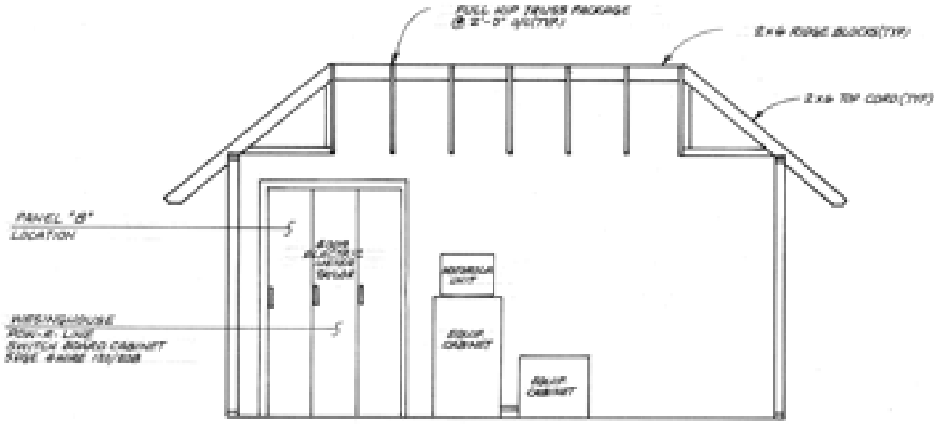
LIGHT RAIL GUIDEWAY PROJECT

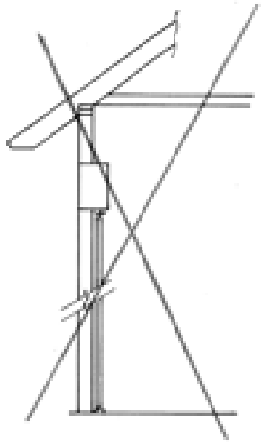
OLD TOWN TRANSIT CENTER
EQUIPMENT SHELTER 1 OF 2

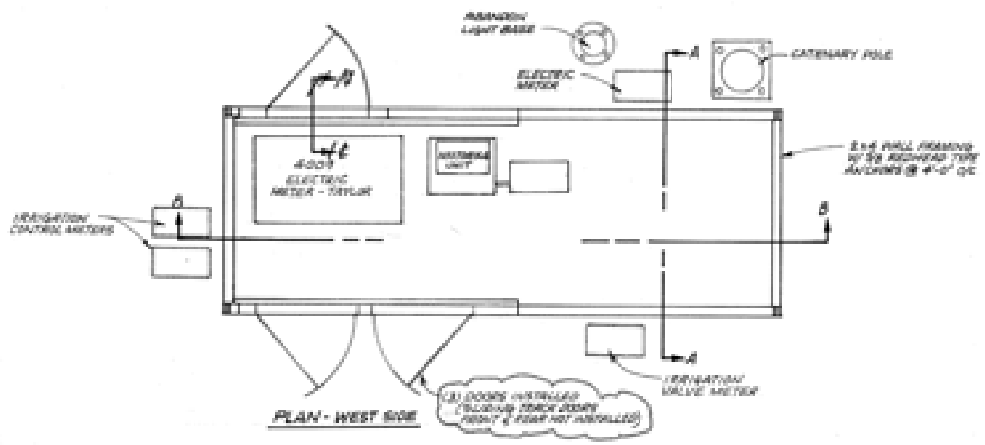
SCALE: 1/8"=1'-0"
MTDB CONTRACT NO. LRT-552
DRAWING NO. A3.3
SHEET NO. 159

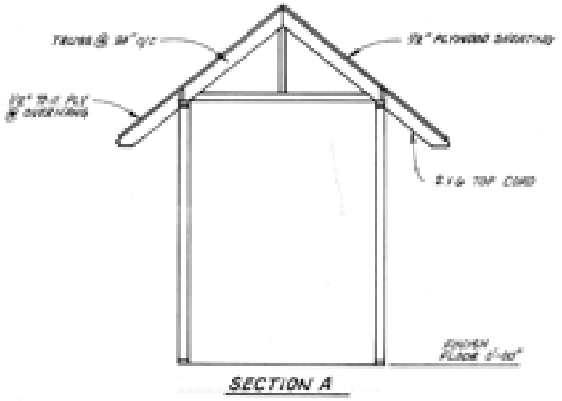
227

MTS DOC NO. PWL355/A22, WOA355-AE-75









AS BUILT

Contract No. LRT-552

Date 1-10-97

NO.	DATE	REVISIONS	BY	CHK	APPV
		NEW DRAWING PREPARED			

DESIGNED BY | DATE
DRAWN BY C.E. 5/97
CHECKED BY
MTDB PROJ. ENGR.

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT

OLD TOWN TRANSIT CENTER
EQUIPMENT SHELTER 2 OF 2

SCALE: 1/2"=1'-0"
MTDB CONTRACT NO. LRT-552
DRAWING NO. A3.4
SHEET NO. 160

228

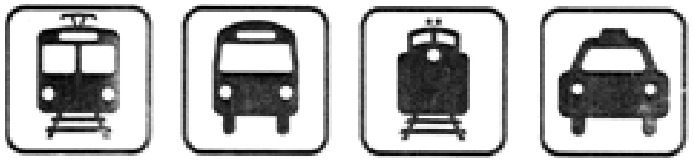
MTS DOC NO. PWL355/A22, WOA355-AE25

SAN DIEGO

METROPOLITAN TRANSIT DEVELOPMENT BOARD

CONTRACT DRAWINGS

OLD TOWN LRT EXTENSION
SIGN INSTALLATION
CONTRACT No. LRT 553.2



MTS

EARTH TECH

MAY 1996

SIGN INSTALLATION
LRT 553.2

MTDB PROVIDED SIGNS

GENERAL NOTES

1. UNLESS OTHERWISE NOTED, ALL SIGNS AT STATION AND PARKING AREAS ARE TO BE MOUNTED 84" FROM SIGN BOTTOM EDGE TO GRADE.
2. ALL SIGNS AND HARDWARE REQUIRED TO BE REMOVED BY THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED IMMEDIATELY FROM THE PROJECT SITE.
3. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE RESIDENT ENGINEER BEFORE EXCAVATING FOR SIGN POST FOUNDATIONS.
4. SIGNS INSTALLED IN THE "DEPRESSED SECTION" (STATION 24+79 THROUGH STATION 46+11) CAN BE ACCESSED AT CEDAR ST. OR JUNIPER ST.
5. SEE DETAIL SHEETS D1 THROUGH D3 FOR SUGGESTED SIGN MOUNTINGS. THE CONTRACTOR SHALL SUBMIT CATALOGUE INFORMATION AND A SAMPLE OF THE PROPOSED MOUNTING HARDWARE FOR APPROVAL BY THE RESIDENT ENGINEER.
6. ALL SIGNS ARE TO BE MOUNTED WITH TAMPER PROOF HARDWARE.
7. THE TROLLEY (WITH) NORTH OF CEDAR STREET IS CURRENTLY UNDERGOING OPERATIONAL TESTING. FULL TIME OPERATION WILL BEGIN JUNE 11, 1996. THE CONTRACTOR SHALL: COORDINATE WITH THE RESIDENT ENGINEER BEFORE PERFORMING ANY WORK WITHIN 10 FEET OF THE TRACKS.
8. ALL SIGNS REQUIRED FOR INSTALLATION ARE AVAILABLE AT SAN DIEGO TROLLEY WAREHOUSE, 1341 COMMERCIAL STREET.

SIGN	DESCRIPTION
A5-1	[illegible] (STATION NAME) 24"W X 12"H COLOR: BLACK
A5-2	[illegible] (STATION NAME) 24"W X 12"H COLOR: BLACK
A5-3	Old Town Transit Center (STATION NAME) 24"W X 12"H COLOR: BLACK
A5-4	County Center/ Little Italy (STATION NAME) 24"W X 12"H COLOR: BLACK
A5	Old Town Transit Center 72"W X 24"H COLOR: BLACK
A5-1	TO (STATION NUMBER) 12"W X 12"H COLOR: BLACK
A5-2	TO (STATION NUMBER) 12"W X 12"H COLOR: BLACK
A5-4	TO (STATION NUMBER) 12"W X 12"H COLOR: BLACK
A5-5	TO (STATION NUMBER) 12"W X 12"H COLOR: BLACK
A6	"TO SAN YSIDRO VIA CENTRE CITY" (TWO SIDED) 24"x X 24"H COLOR: BLACK
A7	"TO OLD TOWN (TWO SIDED) 18"W X 24"H COLOR: BLACK
A8	"TO SAN YSIDRO VIA CENTRE CITY" 36"W X 12"H COLOR: BLACK
A9	"TO OLD TOWN" 24"W X 12"H COLOR: BLACK
A10	"PARK PAID ZONE" 42"W X 30"H COLOR: BLACK
A10-1	[illegible] (STATION ADVANCE) 18"W X 18" COLOR: BLACK
A10-2	[illegible] (STATION ADVANCE) 18"W X 18" COLOR: BLACK
A10-3	[illegible] (STATION ADVANCE) 18"W X 18" COLOR: BLACK
A10-4	[illegible] (STATION ADVANCE) 18"W X 18" COLOR: BLACK

PART B PARKING LOT SIGNS

SIGN	DESCRIPTION
B1	"METER LOCK YOUR CAR" 18"W X 12"H COLOR: BLACK
B2	"METER PARKING IS LIMITED" 18"W X 12"H COLOR: BLACK
B3	"PARK IN MARKED STALLS" 36"W X 24"H COLOR: BLACK
B4	"20 MINUTE PARKING" 12"H X 18"W COLOR: BLACK
B5	"20 MINUTE PARKING" 12"H X 18"W COLOR: BLACK
B6	"TAXI ONLY/LIMIT 2" 24"W X 30"H BLACK
B9	"TAXI ONLY/LIMIT 2" 24"W X 30"H BLACK
B12	"SHUTTLE ONLY" 36"W X 24"H BLACK
B13	"PASSENGER LOAD AND UNLOAD ONLY" 36"W X 30"H BLACK

PART C RIGHT-OF-WAY SIGNS

SIGN	DESCRIPTION
C1	"APPROACH INTERLOCKING" 36"W X 12"H COLOR: WHITE
C2	"BEGIN AREA" 18"W X 12"H COLOR: WHITE
C4	MULTI POST MARKERS (POSTING AS "TO LIN AT 9 LF INTERVALS) 18"W X 18"H WHITE
C5	"NO TRESPASSING/ DANGER HIGH VOLTAGE" (ENGLISH) 24"W X 36"H BLACK
C6	"NO TRESPASSING/ DANGER HIGH VOLTAGE" (SPANISH) 24"W X 36"H BLACK

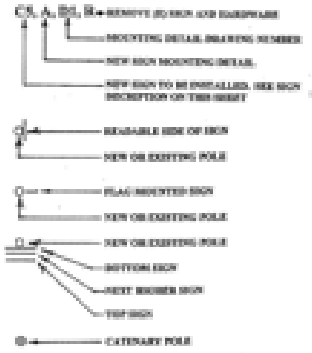
ABBREVIATION TERM

ASTM	AMERICAN STANDARDS FOR TESTING AND MATERIALS
DIA.	DIAMETER
E	EXISTING
(REF.)	REFERENCE.
NTS	NOT TO SCALE
N	NEW
PCC	PORTLAND CEMENT CONCRETE
ST.	STREET
SQ	SQUARE
ø	DIAMETER

DRAWING INDEX

DWG	TITLE
T1	TITLE SHEET
T2	DRAWING INDEX, SYMBOLS ABBREVIATIONS AND NOTES
T3	AREA AND LOCATION MAP
D01	STA 14+00 TO STA 18+00
D02	STA 18+00 TO STA 24+00
D03	STA 24+00 TO STA 30+00
D04	STA 30+00 TO STA 36+00
D05	STA 36+00 TO STA 42+00
D06	STA 42+00 TO STA 48+00
D07	STA 48+00 TO STA 54+00
D08	STA 54+00 TO STA 59+00
D09	County Center/ Little Italy Station NOT IN CONTRACT
D10	Washington Street Station NOT IN CONTRACT
D11	Old Town Station Platform
D12	Old Town Transit Center Parking Lot
D1	INSTALLATION DETAILS A, B, C, D, E
D2	INSTALLATION DETAILS F, G, H, I, K
D3	INSTALLATION DETAILS O

SYMBOLS



NO.	DATE	REVISIONS	BY	CHK	APPV

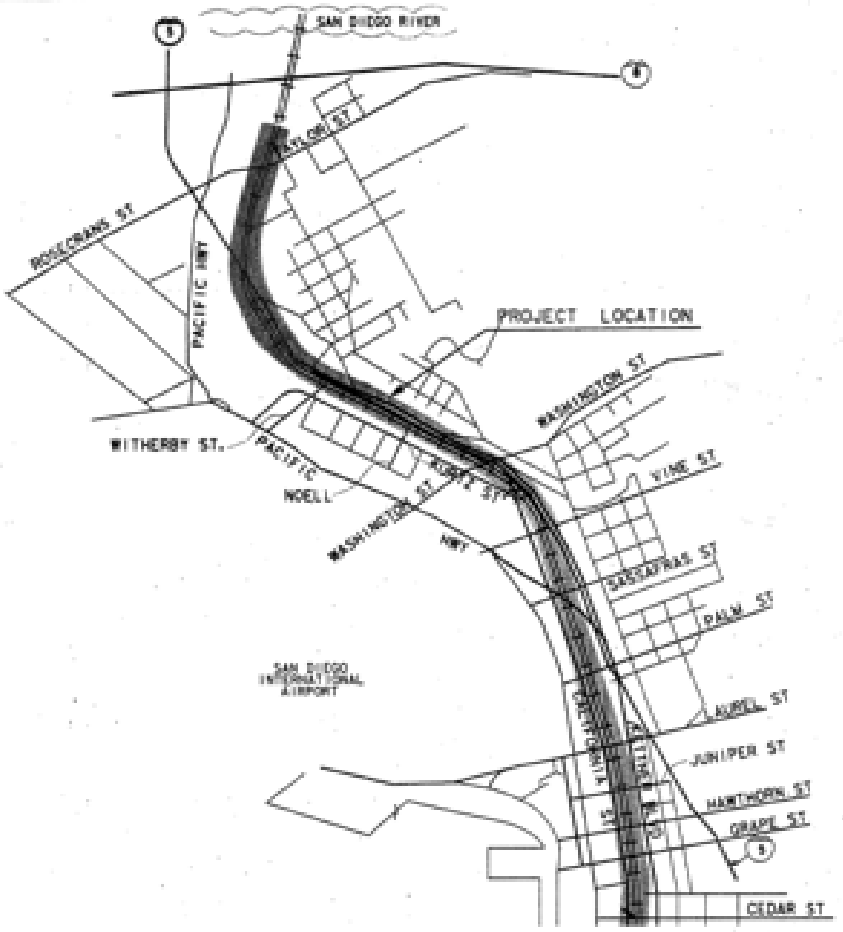
EARTH TECH

		DATE
DESIGNED BY	PMT	5/96
DRAWN BY	DPS	5/96
CHECKED BY	PMT	5/96
MTDB PROJ. ENGR.	DCB	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
DRAWING INDEX, SYMBOLS, ABBREVIATIONS AND NOTES

SCALE
MTDB CONTRACT NO. LRT 653.2
DRAWING NO. N2 SHEET NO.



LOCATION MAP

NO.	DATE	REVISIONS	BY	CHK	APPR

EARTH TECH

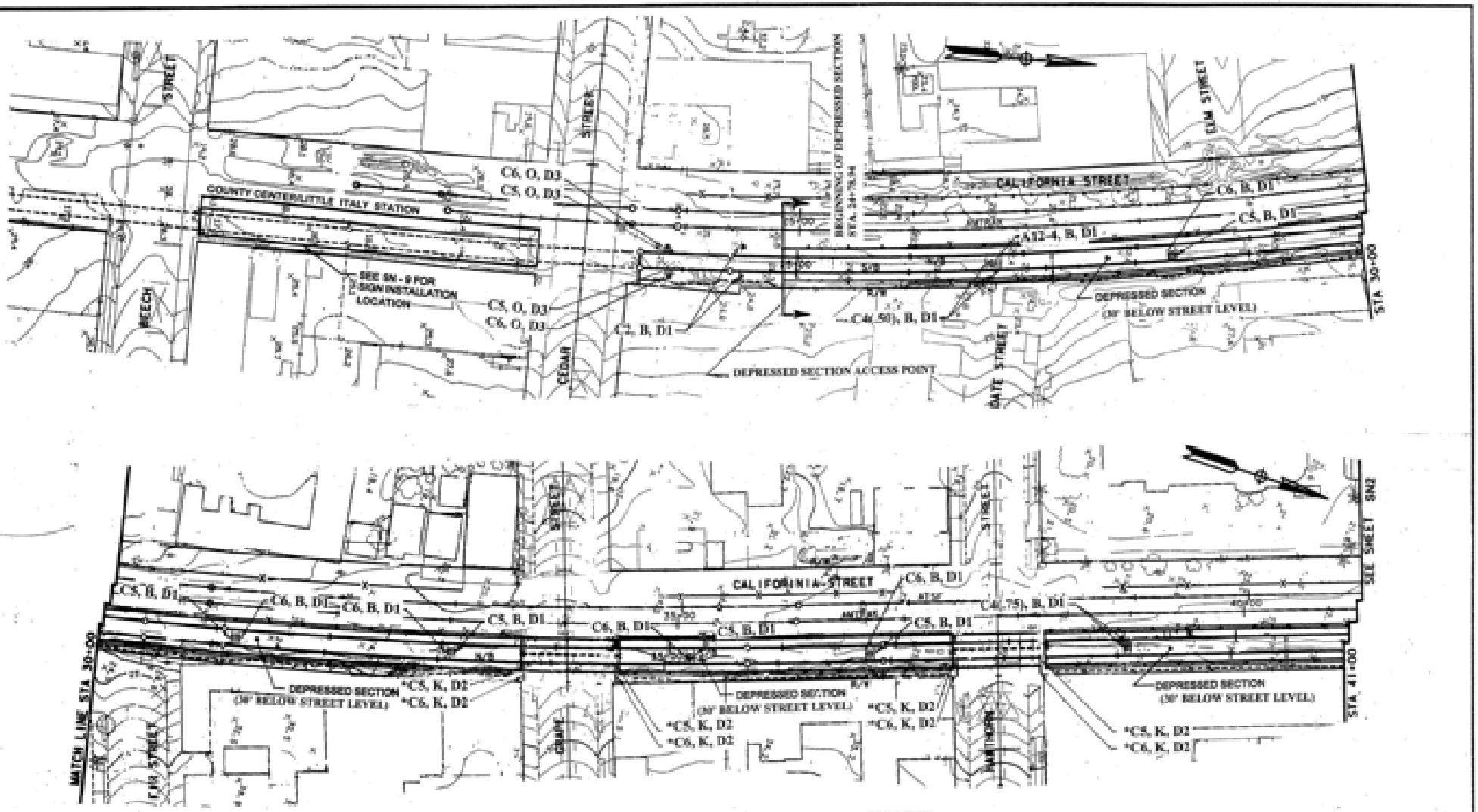
DESIGNED BY PMT DATE
DRAWN BY MR DATE
CHECKED BY PMT DATE
MTDB PROJ. MGR.

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
AREA AND LOCATION MAP

SCALE N.T.S.
MTDB CONTRACT NO. - LRT 553.2
DRAWING NO/SHEET NO. N3

FOR REDUCED PLANS
REVISED SCALE IS 80 WHEN



* THESE SIGNS ARE INSTALLED AT STREET LEVEL

NO.	DATE	REVISIONS	BY	CHK	APPV

EARTH TECH

DESIGNED BY		DATE
DRAWN BY		
CHECKED BY		
MTDB PROJ. ENGR.		

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Metropolitan Transit Development Board
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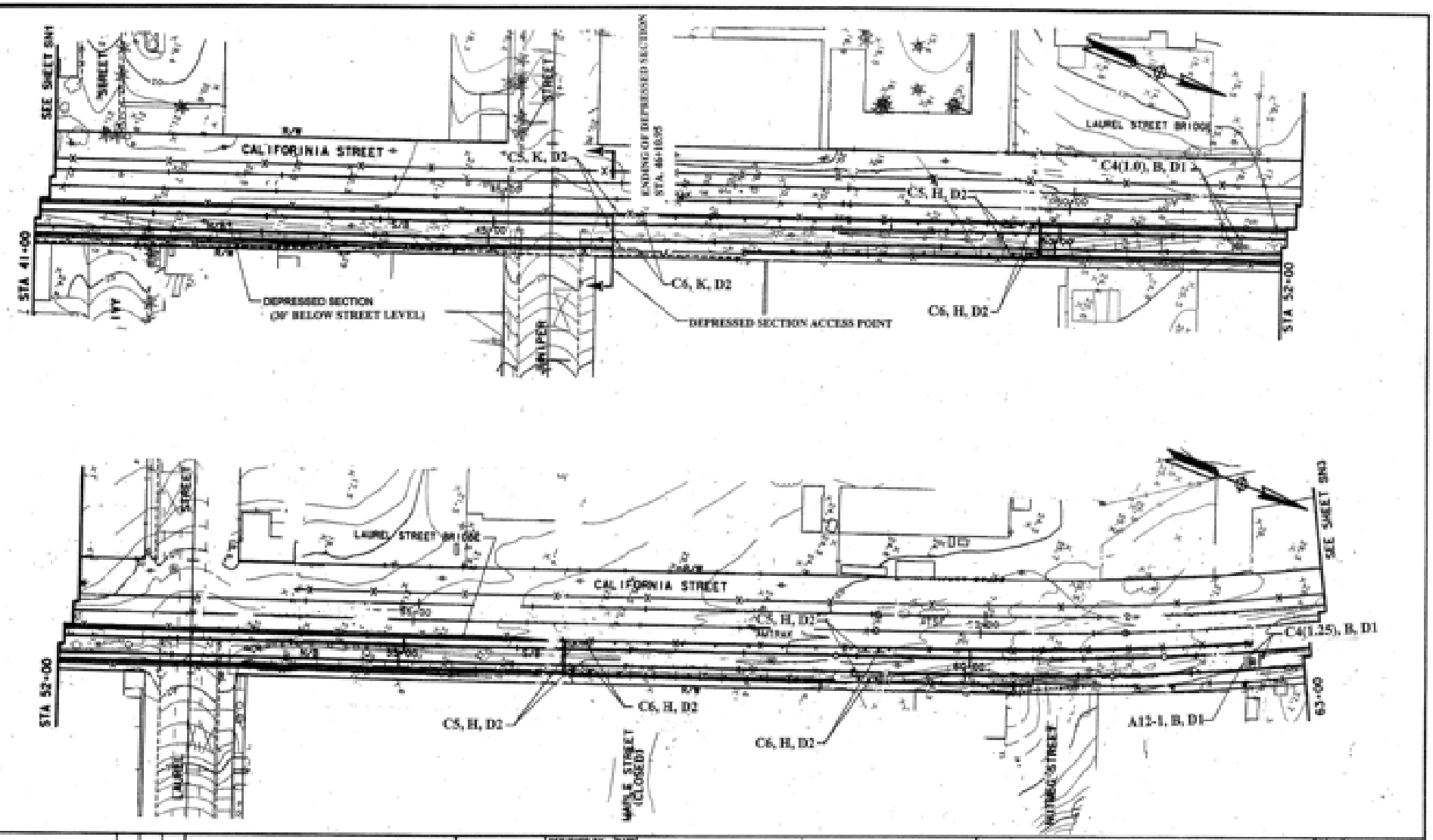
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
STA 24+00 TO 41+00

SCALE: 1" = 40' HOR. 1:2
MTDB CONTRACT NO. LRT 553.2
DRAWING NO. SN1
SHEET NO.



NO.	DATE	REVISIONS	BY	CHK	APPR

EARTH TECH

		DATE
DESIGNED BY (INIT)		
DRAWN BY (INIT)		
CHECKED BY (INIT)		
MTDB PROJ. ENGR.		

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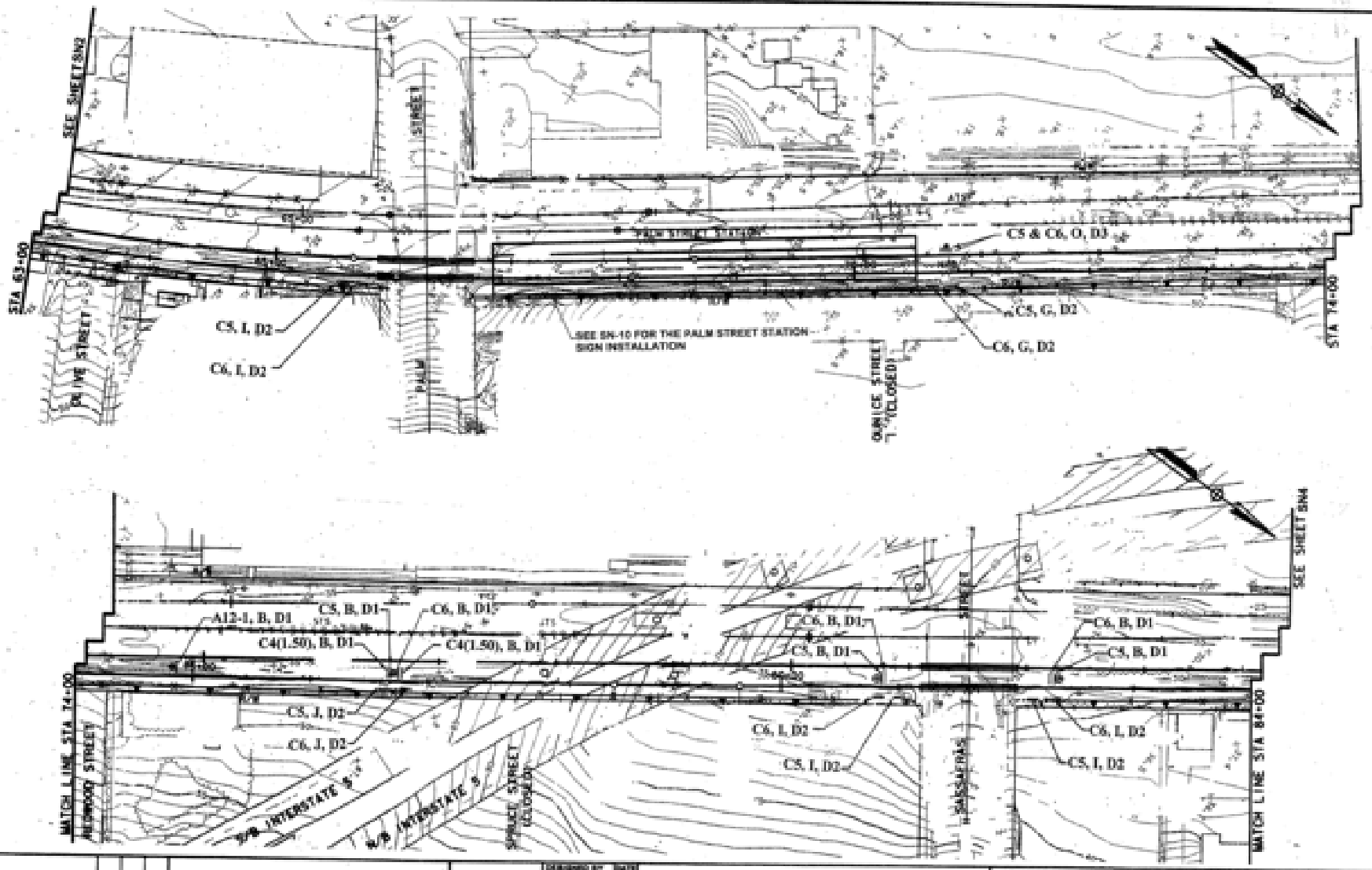
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
STA 41+00 TO 63+00

SCALE 1"=40' HORIZ
MTDB CONTRACT NO. LRT 550
DRAWING NO./SHEET NO. SN2



EARTH TECH

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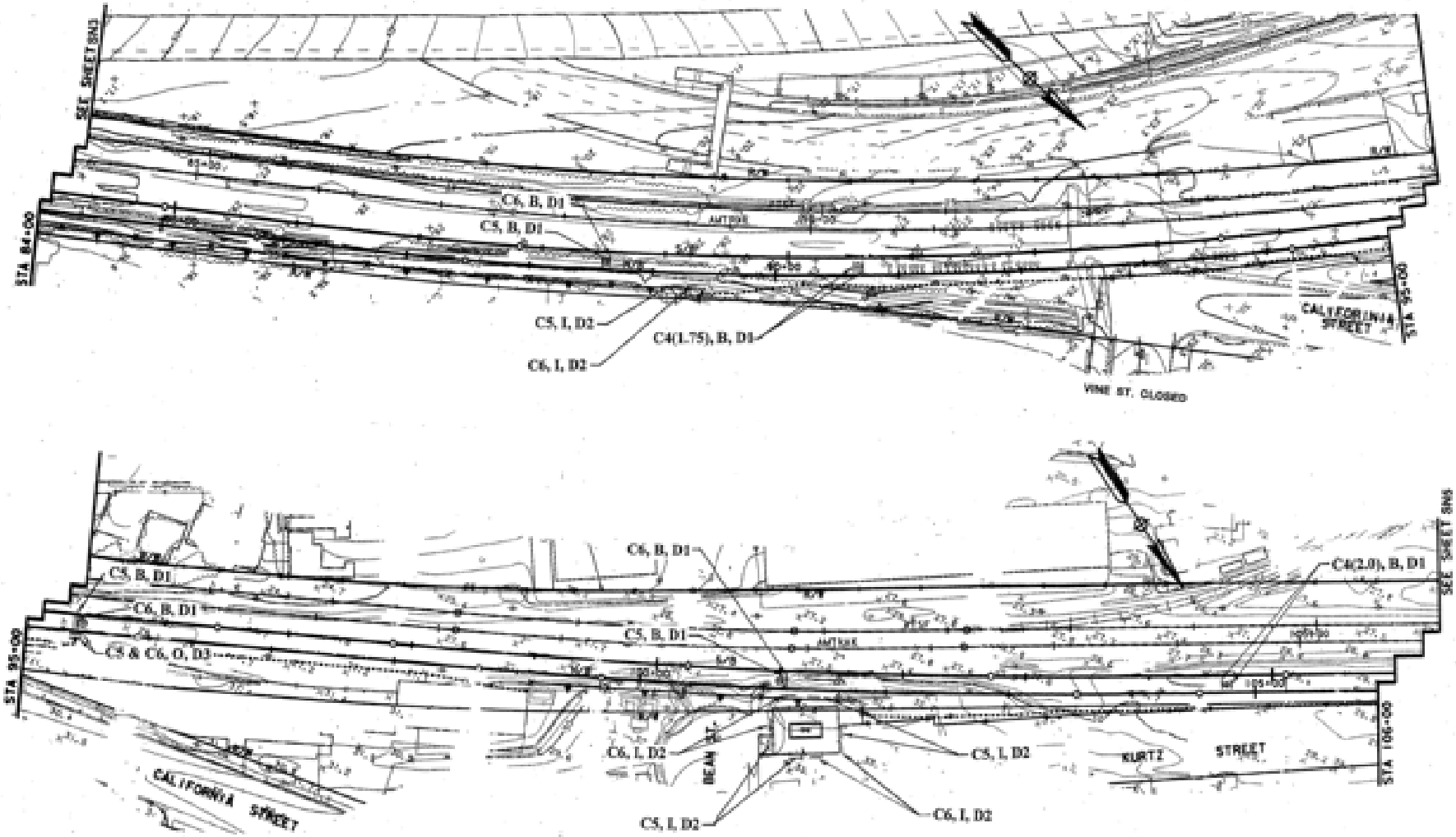
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
STA 63+00 TO 84+00

SCALE 1"=40' HORIZ
MTDB CONTRACT NO. LRT 653.2
DRAWING NO. SN3
SHEET NO.



NO.	DATE	REVISIONS	BY	CHK	APPD

EARTH TECH

		DATE
DESIGNED BY (PM)		
DRAWN BY		
CHECKED BY (PM)		
MTDB PROJ. ENGR.		

MTDB
Metropolitan Transit Development Board
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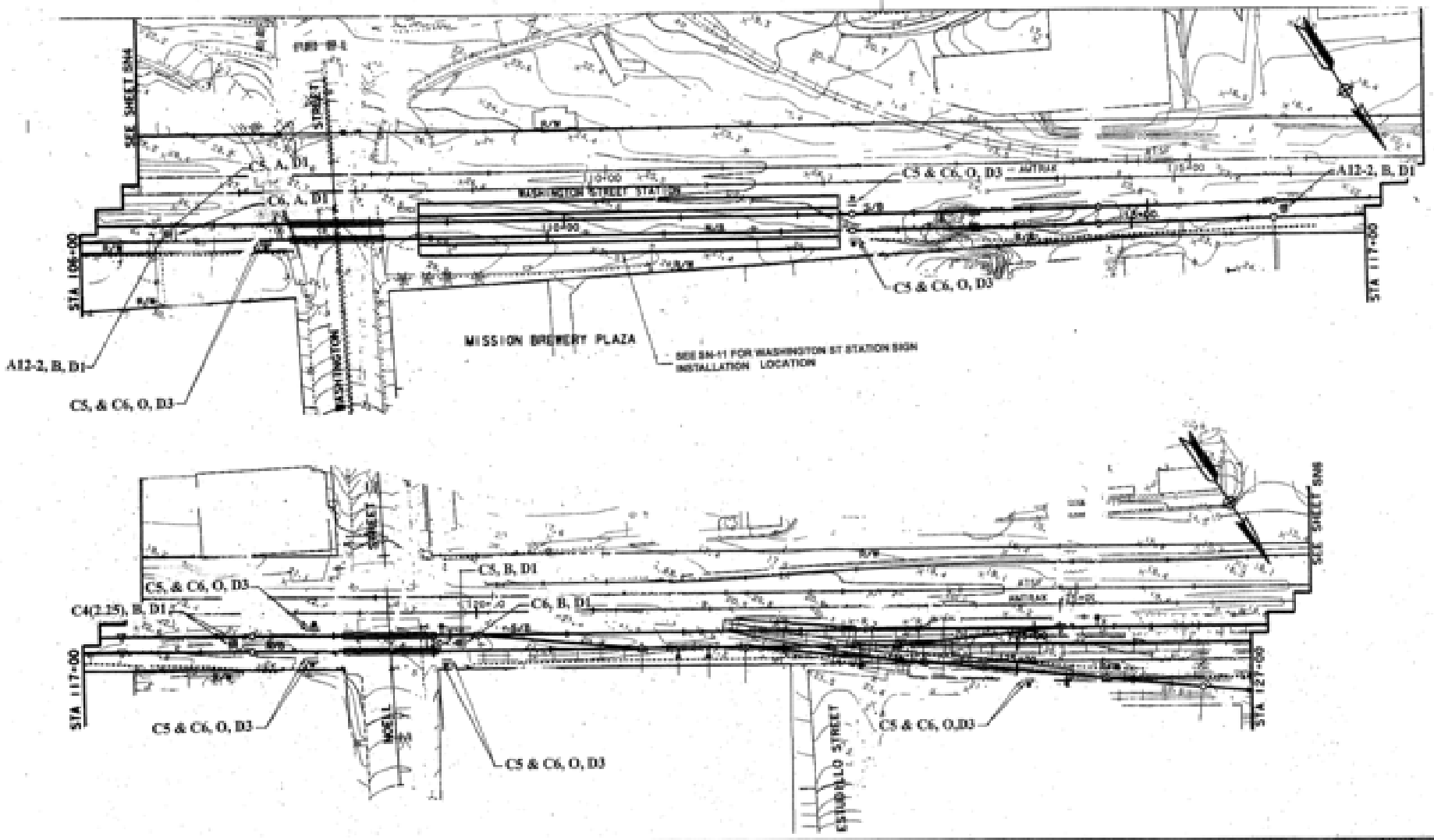
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
STA 84+00 TO 106+00

SCALE: 1" = 40' FOR 11 X 17
MTDB CONTRACT NO.: LRT 553.2
DRAWING NO.: SN4
SHEET NO.:



EARTH TECH

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Metropolitan Transit Development Board
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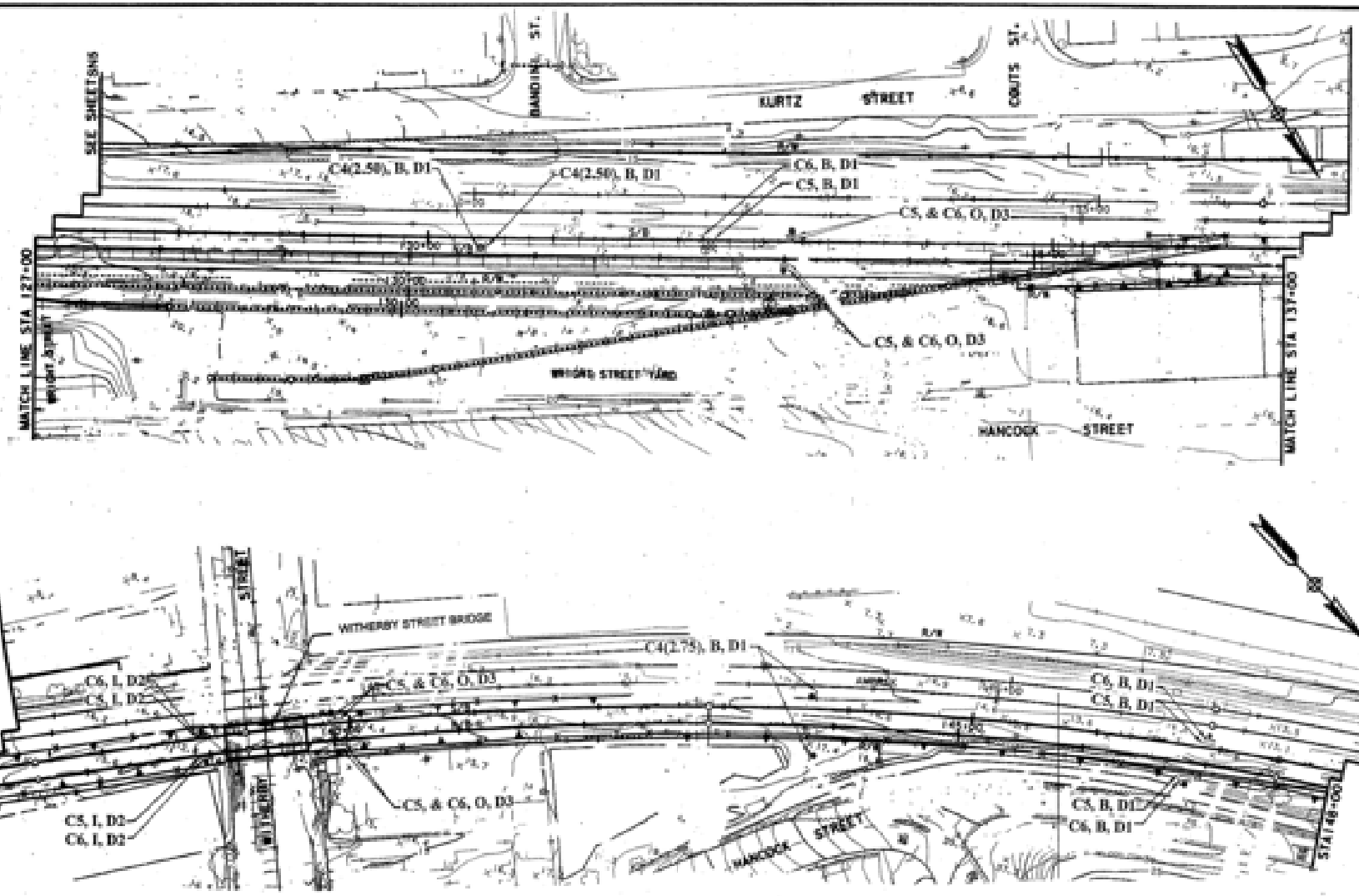
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
STA 106+00 TO 127+00

SCALE 1" = 40' HORIZ
MTDB CONTRACT NO. LRT 553.2
DRAWING NO. SN5
SHEET NO.



EARTH TECH

NO.	DATE	REVISIONS	BY	CHK APPV

DESIGNED BY (PM) DATE
DRAWN BY DATE
CHECKED BY (PM) DATE
MTDB PROJ. ENGR. DATE

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Metropolitan Transit Development Board
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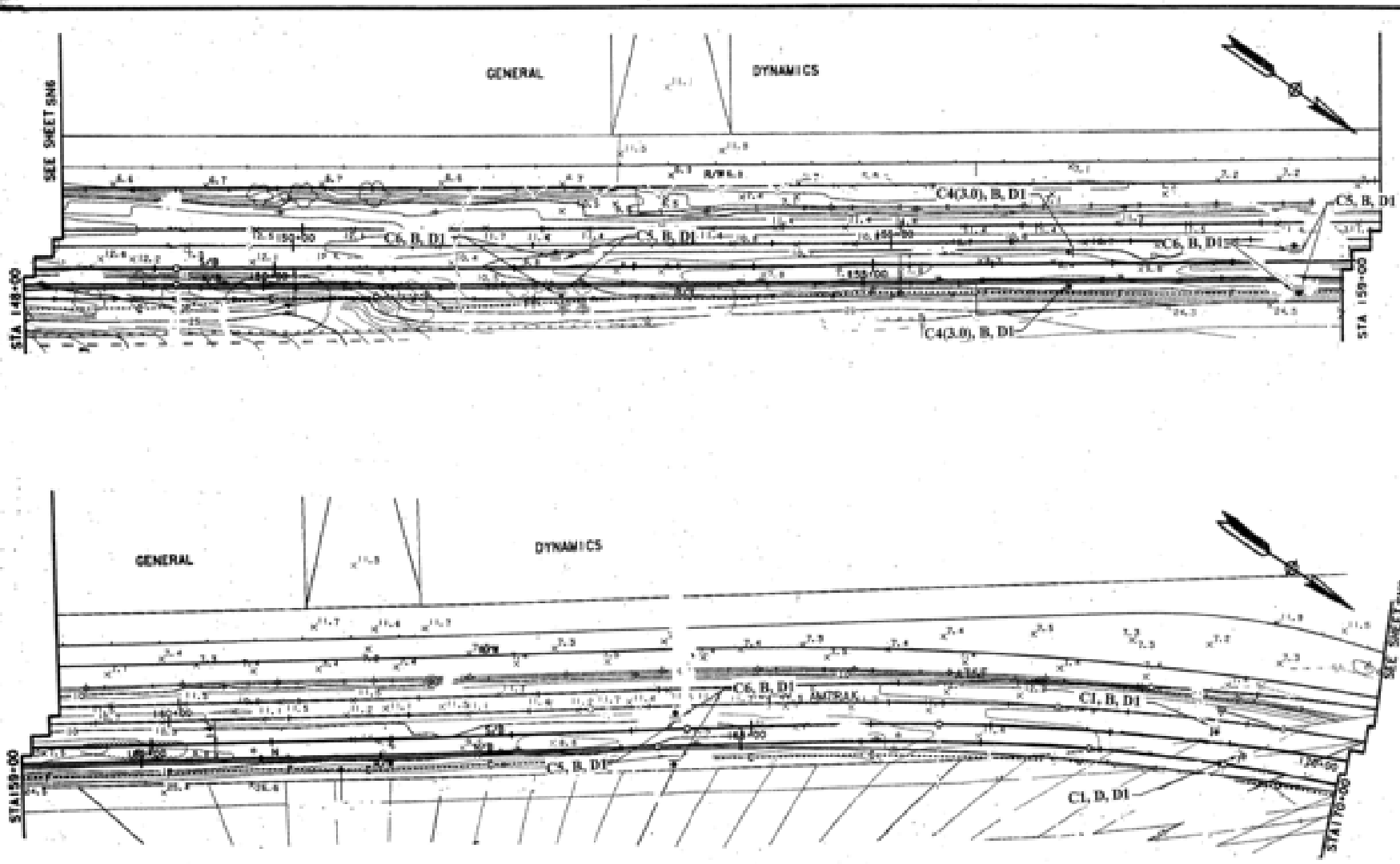
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO

OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
STA 127+60 TO 148+00

SCALE 1"=40' HOR 1:2
MTDB CONTRACT NO.
LRT 663.2
DRAWING NO. SN6 SHEET NO.



EARTH TECH

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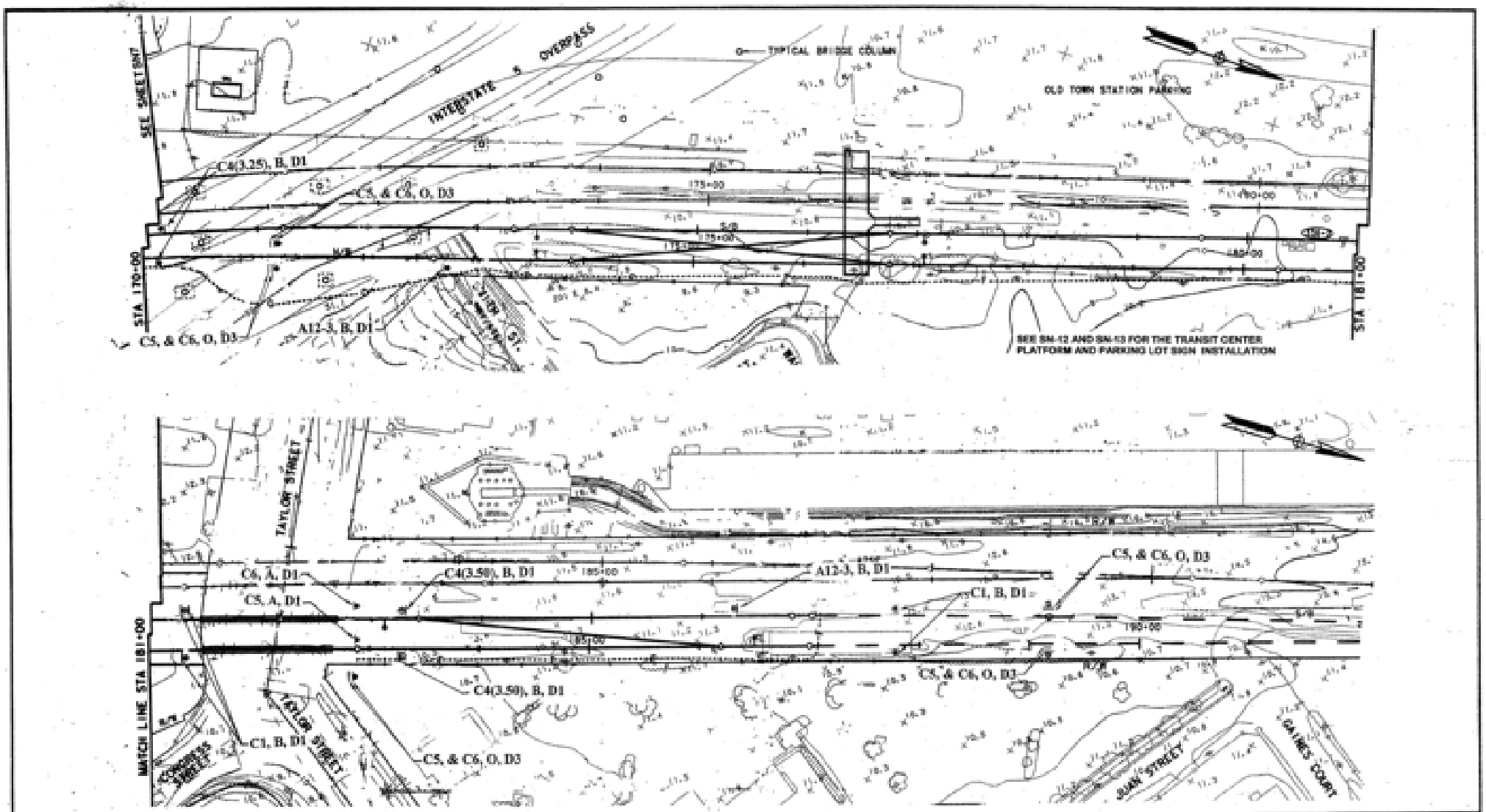
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
STA 148+00 TO 170+00

SCALE: 1"=40' HORIZ
MTDB CONTRACT NO. LRT 553.2
DRAWING NO. SN7
SHEET NO.



NO.	DATE	REVISIONS	BY	CHK	APPV

EARTH TECH

DESIGNED BY — DATE
DRAWN BY — DATE
CHECKED BY — DATE
MTDB FILE, DWG, DGN

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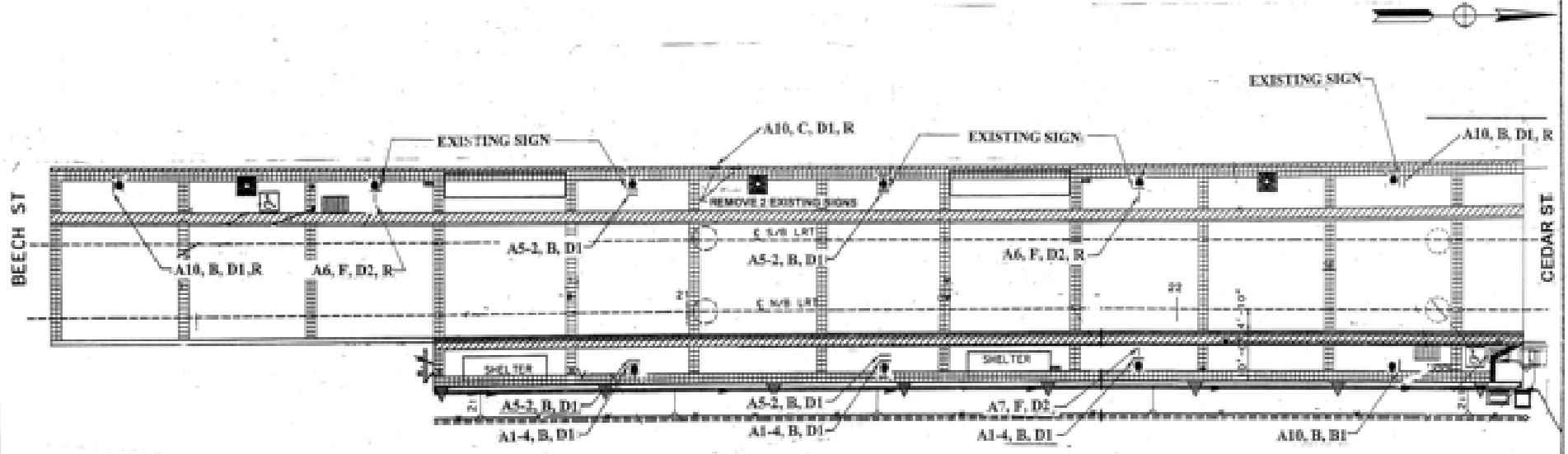
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO

OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
STA 170+00 TO 190+00

SCALE 1" = 40' HOR. 2
MTDB CONTRACT NO.
LRT 553.2
DRAWING/SHEET NO.
SN6



NO.	DATE	REVISIONS	BY	CHK	APRV

EARTH TECH

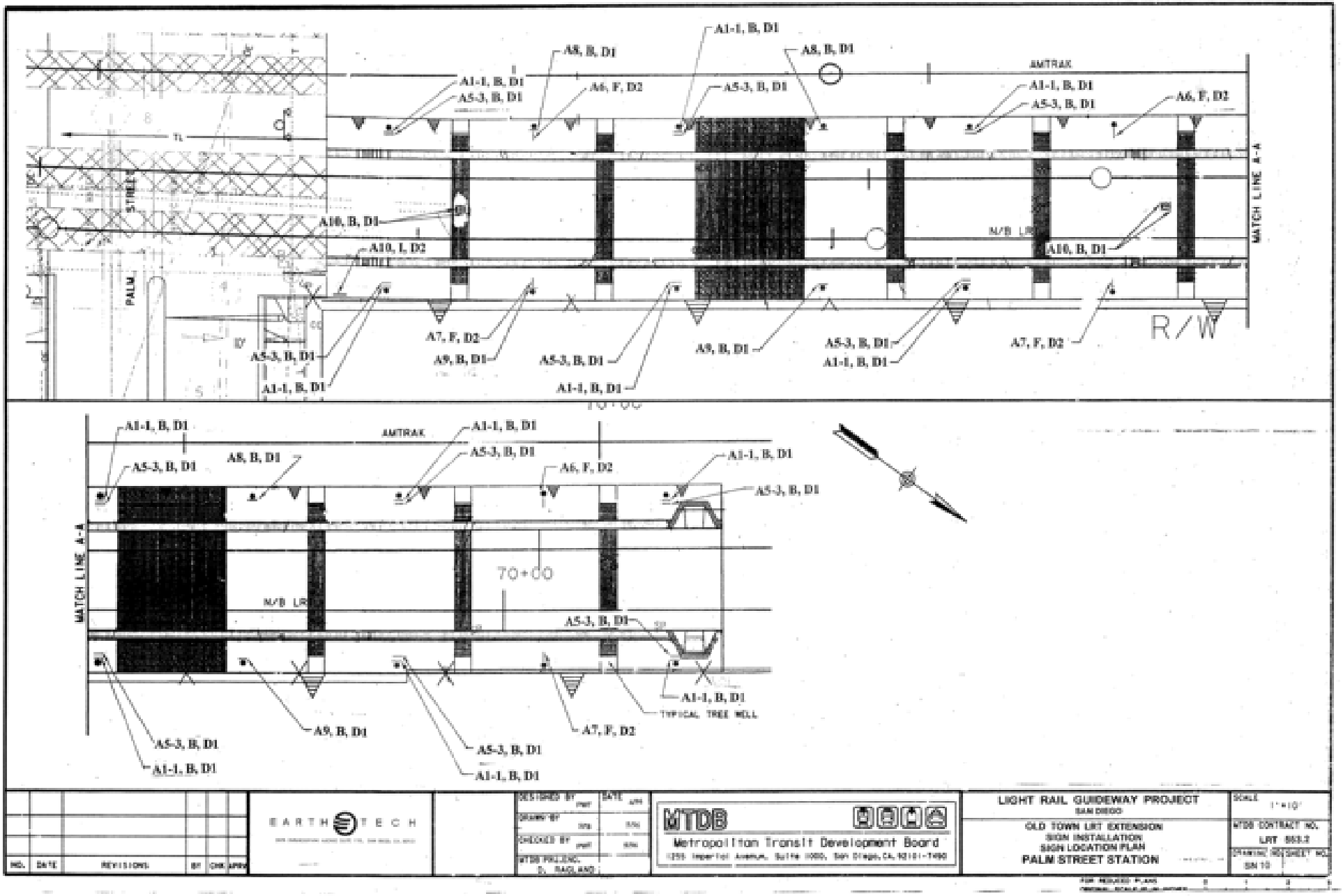
DESIGNED BY PMT DATE
DRAWN BY SPA
CHECKED BY PMT
MTDB PROJECT D. RAGLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
COUNTY CENTER - LITTLE ITALY STATION

SCALE 1"=10'
DPDS CONTRACT NO. LRT 553.2
DRWG DN 3 SHEET NO.

PDF RECORDED PLOT
ORIGINAL SCALE IS IN INCHES

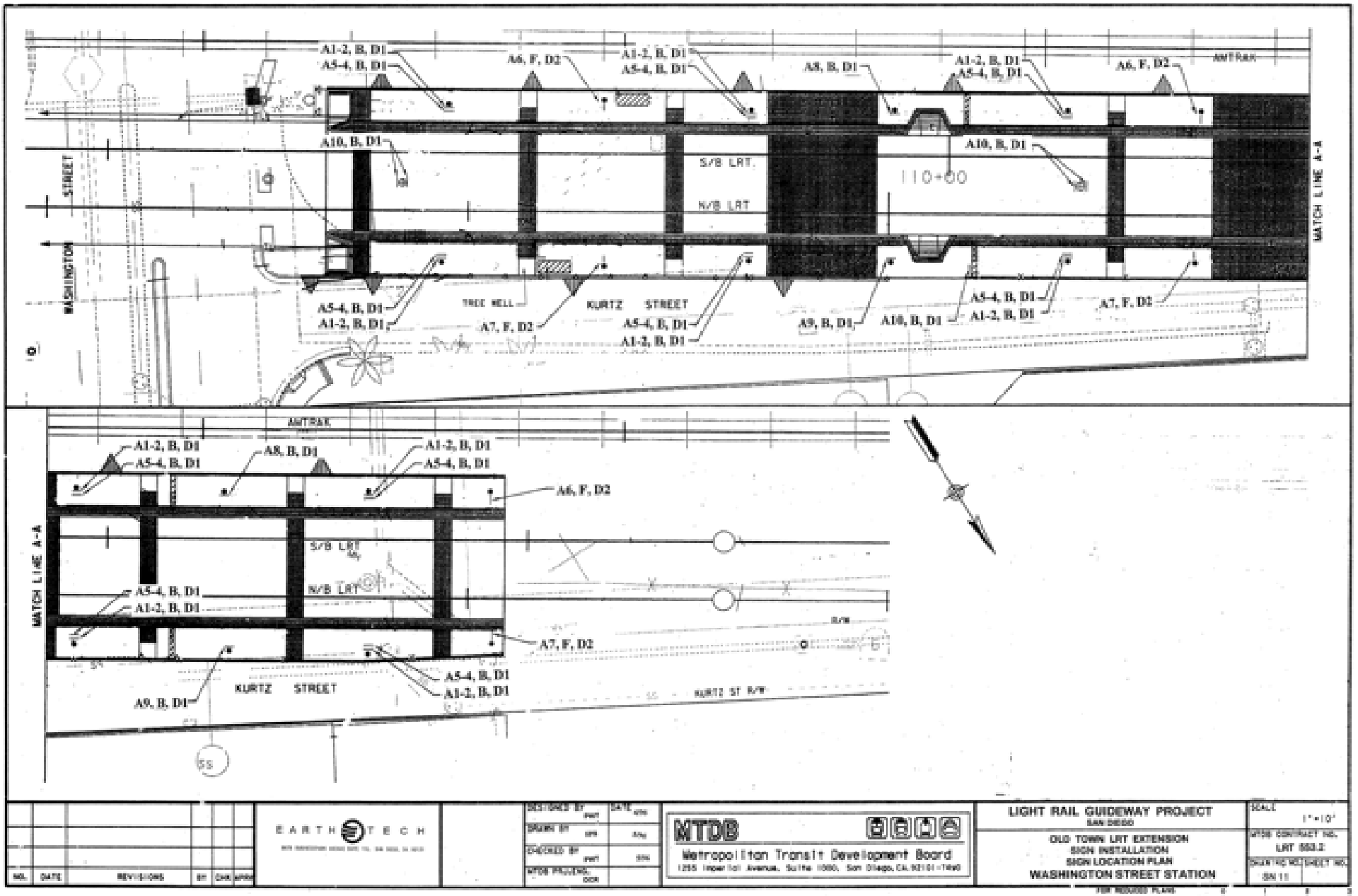


EARTH TECH

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-1490

LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
PALM STREET STATION

MTDB CONTRACT NO. LRT 553.2
SHEET NO. SN 10



EARTH TECH

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO

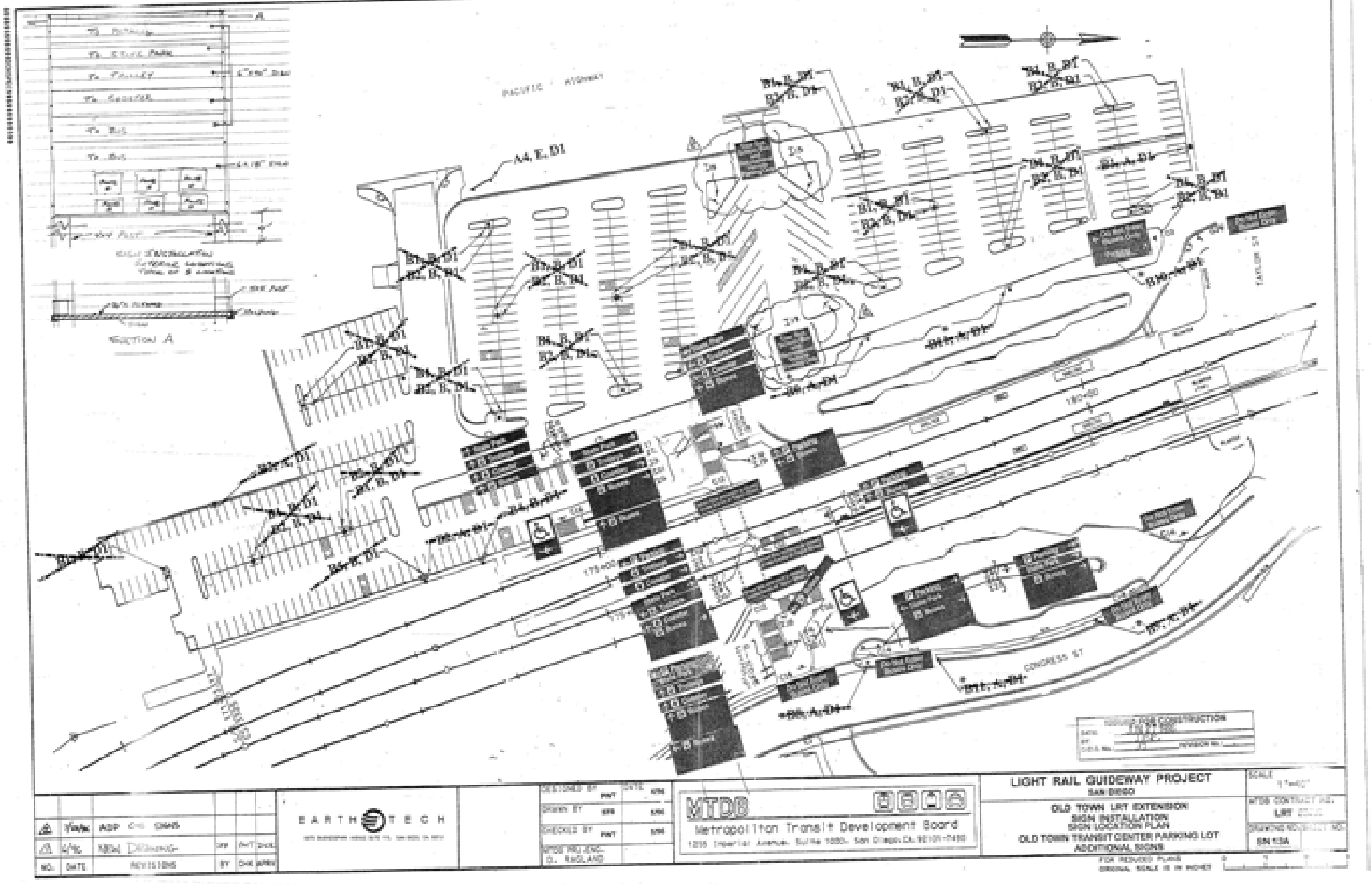
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
WASHINGTON STREET STATION

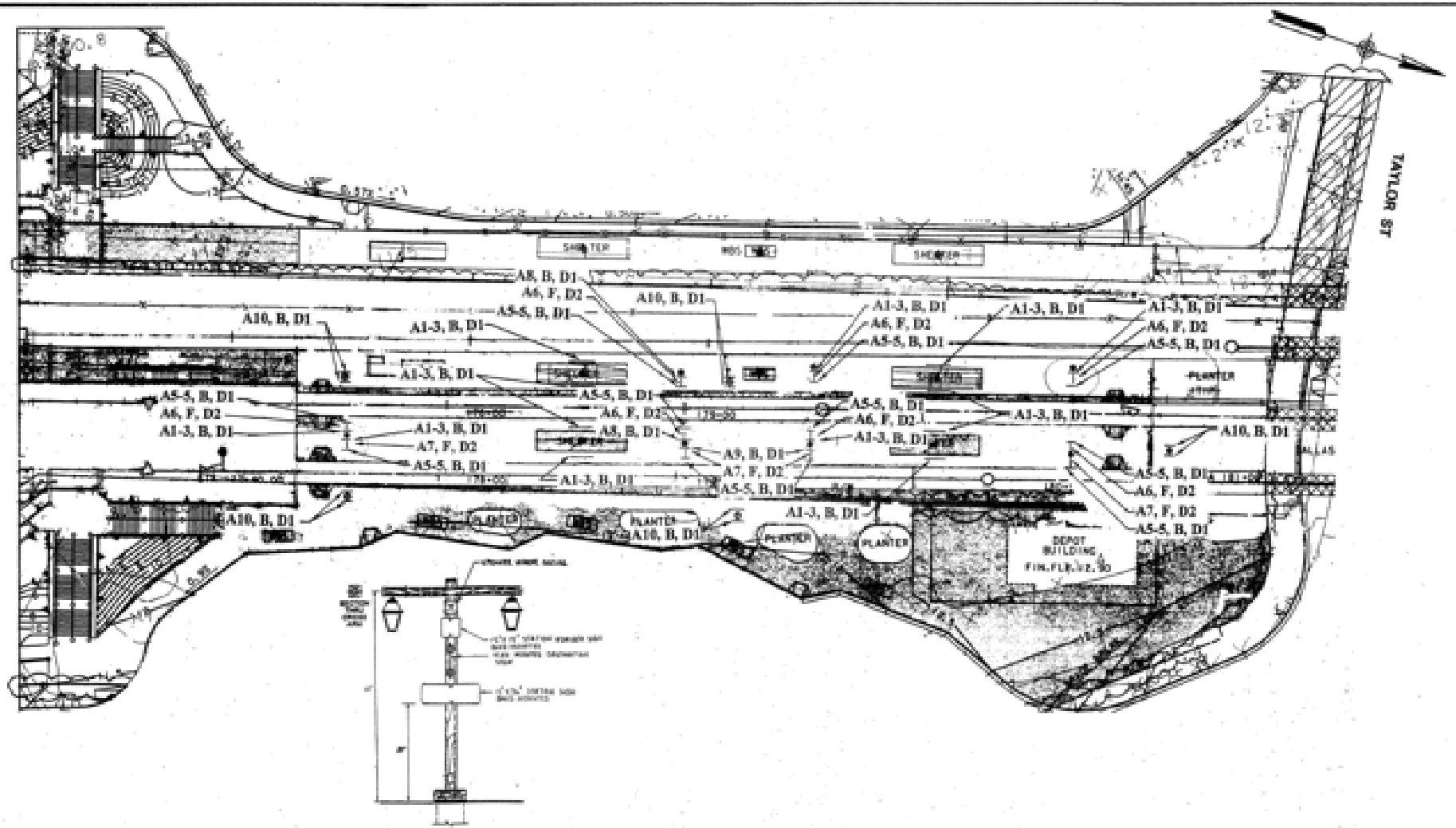
SCALE: 1"=10'
MTDB CONTRACT NO.: LRT 553.2
DRAWING NO./SHEET NO.: SN 11

NO. | DATE | REVISIONS | BY | CHK | APPR

DESIGNED BY | DATE
DRAWN BY
CHECKED BY
MTDB PROJ. ENG.

TBM REQUIRED PLANS


A4, E, D1
PACIFIC HIGHWAY
TAYLOR ST
CONGRESS ST
SECTION A
EARTH TECH
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
OLD TOWN TRANSIT CENTER PARKING LOT
ADDITIONAL SIGNS
SN 13A



TYPICAL SIGN ARRANGEMENT ON LIGHT POST

NTS

NO.	DATE	REVISIONS	BY	CHK	APPV

EARTH TECH

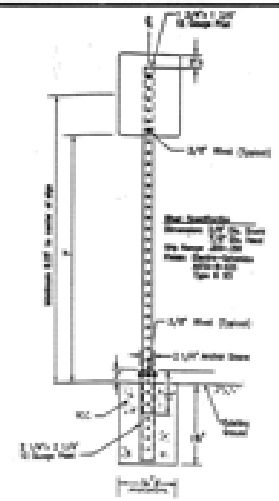
DESIGNED BY — DATE
DRAWN BY — DATE
CHECKED BY — DATE
MTDB PROJ. ENG. D. RADLAND

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

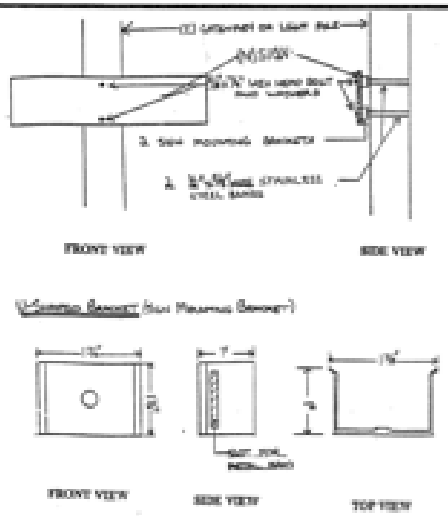
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
OLD TOWN STATION PLATFORM

SCALE 1" = 20'
MTDB CONTRACT NO. LRT 553.2
DRAWING NO. SIN12 SHEET NO.

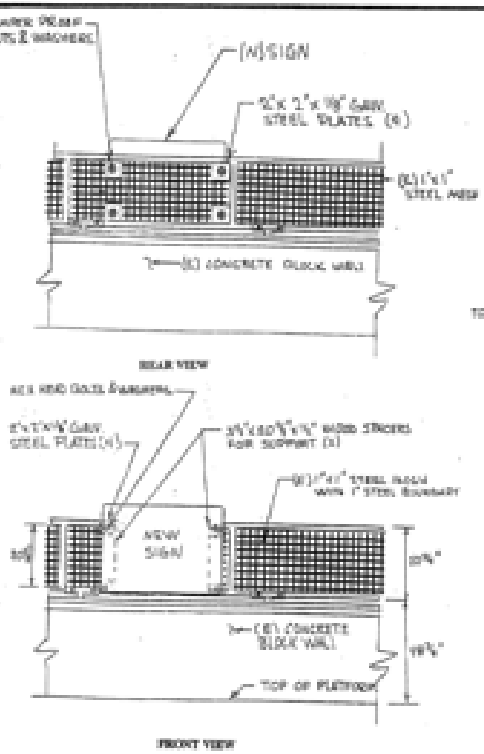
FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES 0 1 2 3



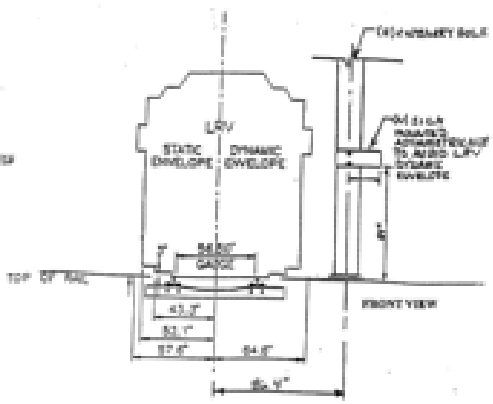
TYPICAL MOUNTING DETAIL A
NTS

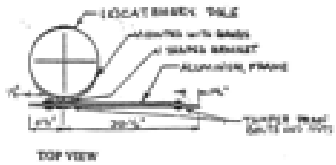


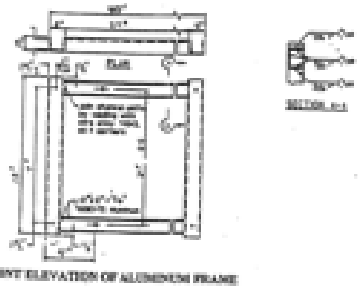
TYPICAL MOUNTING DETAIL B
NTS



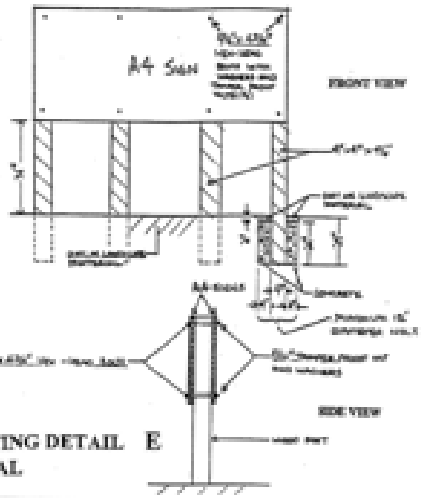
TYPICAL MOUNTING DETAIL C
NTS







TYPICAL MOUNTING DETAIL D
NTS



MOUNTING DETAIL E
TYPICAL

NO.	DATE	REVISIONS	BY	CHK	APPV

EARTH TECH

DESIGNED BY PWT	DATE 4/99	
DRAWN BY TPS	SPK	
CHECKED BY PWT	SPK	
MTDB PROJ. ENGR. (RCE)		

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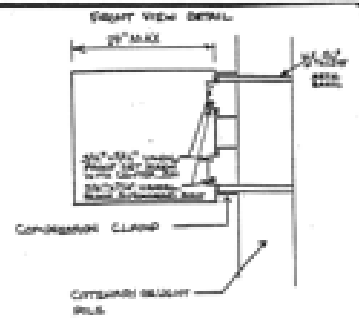
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO

OLD TOWN LRT EXTENSION
SIGN INSTALLATION

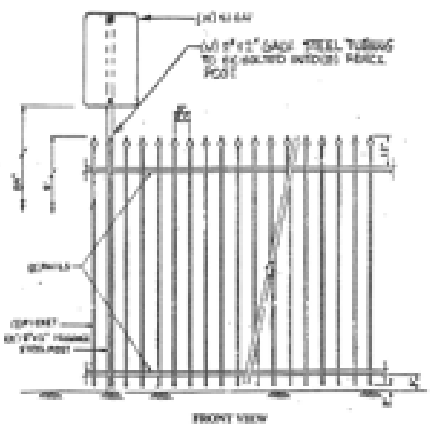
INSTALLATION DETAILS A, B, C, D, E

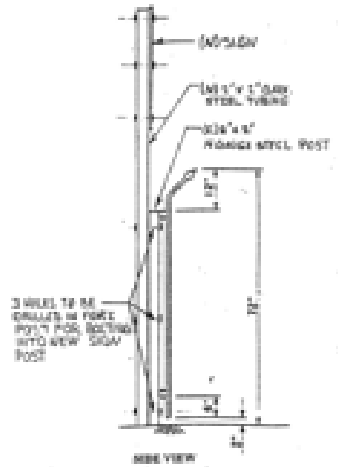
SCALE	AS SHOWN
MTDB CONTRACT NO.	LRT 653.2
DRAWING NO.	SHEET NO.
D1	



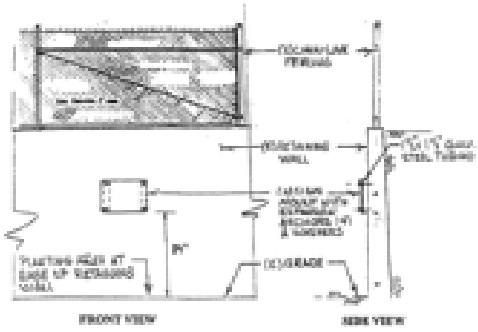
THE BOTTOM EDGE OF A SIGN MOUNTED SIGN SHOULD BE 84" ABOVE THE PLATFORM SURFACE

TYPICAL MOUNTING DETAIL F



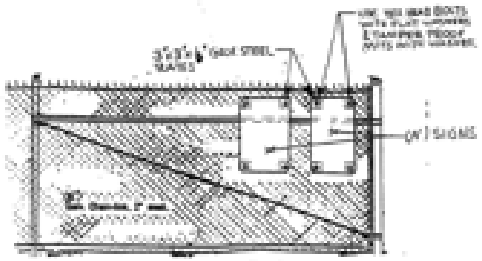


TYPICAL MOUNTING DETAIL H
NTS

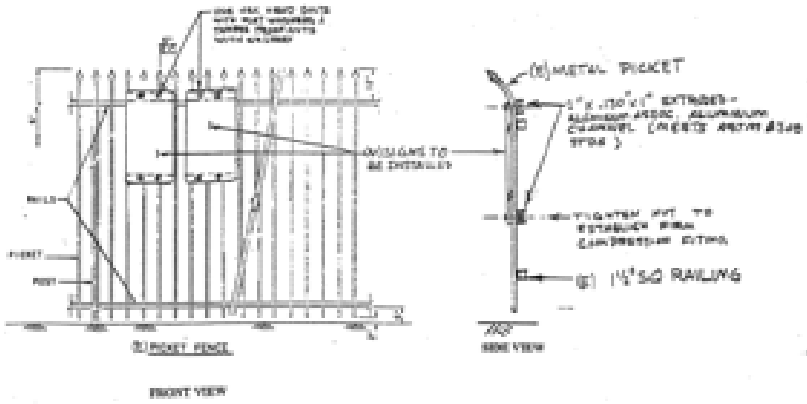


TYPICAL MOUNTING DETAIL G
NTS

SIGN INSTALLATION ON CHAIN-LINK FENCE



TYPICAL MOUNTING DETAIL I
NTS



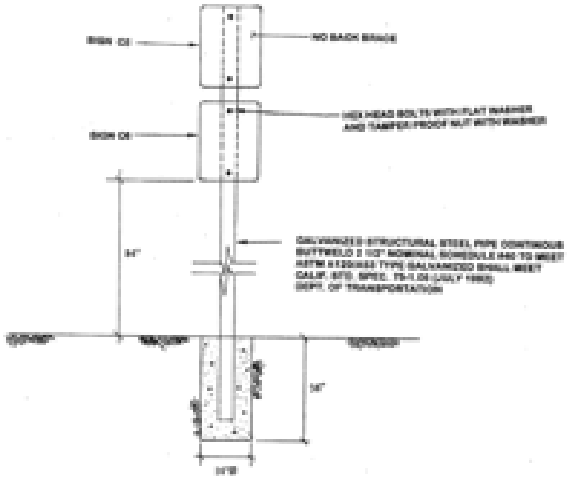
TYPICAL MOUNTING DETAIL K
NTS

EARTH TECH

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
INSTALLATION DETAILS F, G, H, I, K

SCALE: AS SHOWN
MTDB CONTRACT NO. LRT 553.2
DRAWING NO. SHEET NO.



TYPICAL MOUNTING DETAIL O
NTS

NO.	DATE	REVISIONS	BY	CHK	APPV

EARTH TECH

DESIGNED BY PMT DATE
DRAWN BY DATE
CHECKED BY PMT DATE
MTDB PM DATE

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO

OLD TOWN LRT EXTENSION
SIGN INSTALLATION

INSTALLATION DETAILS O

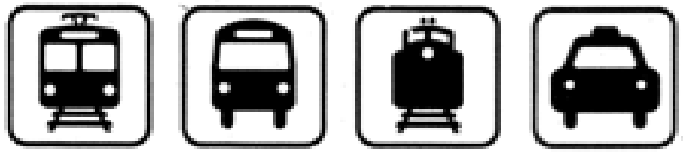
SCALE: AS SHOWN
MTDB CONTRACT NO.: LRT 553.2
DRAWING NO.: D3
SHEET NO.:

SAN DIEGO

METROPOLITAN TRANSIT DEVELOPMENT BOARD

CONTRACT DRAWINGS

OLD TOWN LRT EXTENSION
TRAIL BLAZER AND STATION SIGN INSTALLATION
LRT 553.4

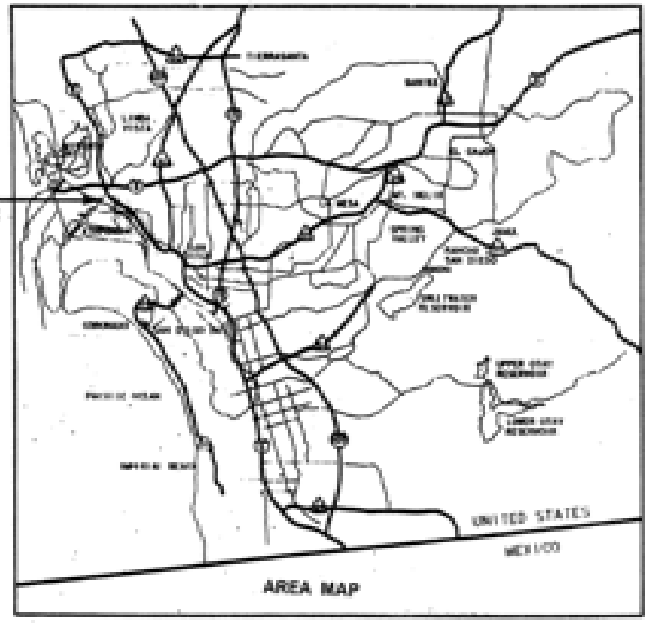


MTS

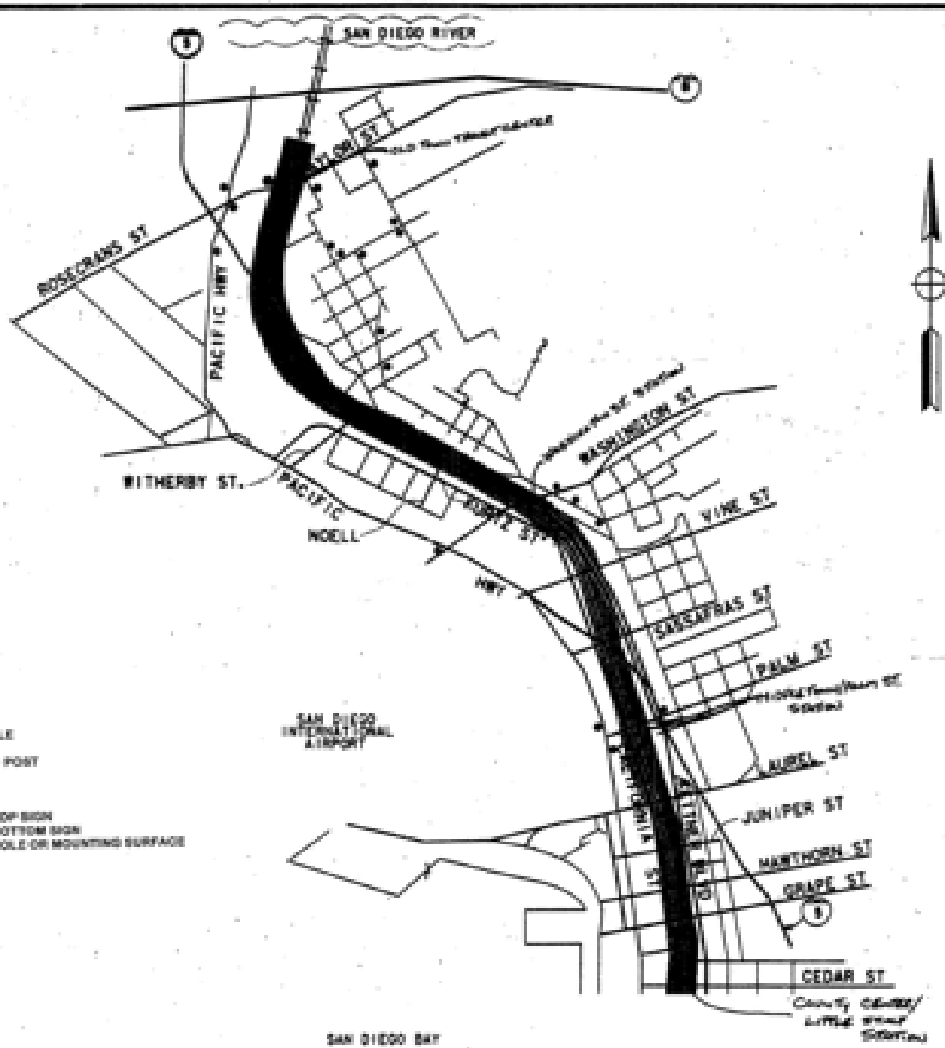
EARTH TECH

JANUARY 1997

TRAIL BLAZER SIGNS
LRT-553.4



AREA MAP



LOCATION MAP

GENERAL NOTES

1. UNLESS OTHERWISE NOTED, ALL SIGNS ARE TO BE MOUNTED A MINIMUM OF 84" FROM SIGN BOTTOM EDGE TO GRADE.
2. ALL SIGNS AND HARDWARE REQUIRED TO BE REMOVED BY THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED IMMEDIATELY FROM THE PROJECT SITE.
3. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE RESIDENT ENGINEER BEFORE EXCAVATING FOR SIGN POST FOUNDATIONS.
4. SEE DETAIL SHEETS D1 FOR SUGGESTED SIGN MOUNTINGS. THE CONTRACTOR SHALL SUBMIT CATALOGUE INFORMATION AND A SAMPLE OF THE PROPOSED MOUNTING HARDWARE FOR APPROVAL BY THE RESIDENT ENGINEER.
5. ALL SIGNS ARE TO BE MOUNTED WITH TAMPER PROOF HARDWARE.

SYMBOLS

- ○ - LIGHT POLE
- ▽ - SIGN AND POST
- TOP SIGN
- BOTTOM SIGN
- POLE OR MOUNTING SURFACE

ABBREVIATION TERM

ASTM	AMERICAN STANDARDS FOR TESTING AND MATERIALS
DIA.	DIAMETER
(E)	EXISTING
NTS	NOT TO SCALE
IN	INCH
ST	STREET

DRAWING INDEX

DRAWING No.	SHEET TITLE
N1	TITLE SHEET
N2	DRAWING INDEX, SYMBOLS, ABBREVIATIONS AND NOTES
	AREA AND LOCATION MAP
SN2	TWIGGS, JUAN STREET, SAN DIEGO, AVENUE
SN3	SAN DIEGO, AVENUE, OLD TOWN AVENUE, PACIFIC HIGHWAY
SN4	WASHINGTON, HANCOCK STREETS, PACIFIC HIGHWAY
SN5	SPORTS ARENA BLVD., ROSECRANS ST., OLD TOWN AVE.
SN6	COUNTY CENTER/LITTLE ITALY STATION
SN10	PALM STREET STATION
SN11	WASHINGTON STREET STATION
SN12	OLD TOWN STATION PLATFORM
SN13	SIGN LOCATION
D1	INSTALLATION DETAILS A, B, C, D, E, F, AND G
D2	TYPICAL SIGNS SHEET 1 OF 2
D3	TYPICAL SIGNS AND GRAFFITI SHEET 2 OF 2

NOTE:
* APPROXIMATE LOCATIONS

NO.	DATE	REVISIONS	BY	CHK	APPR

EARTH TECH

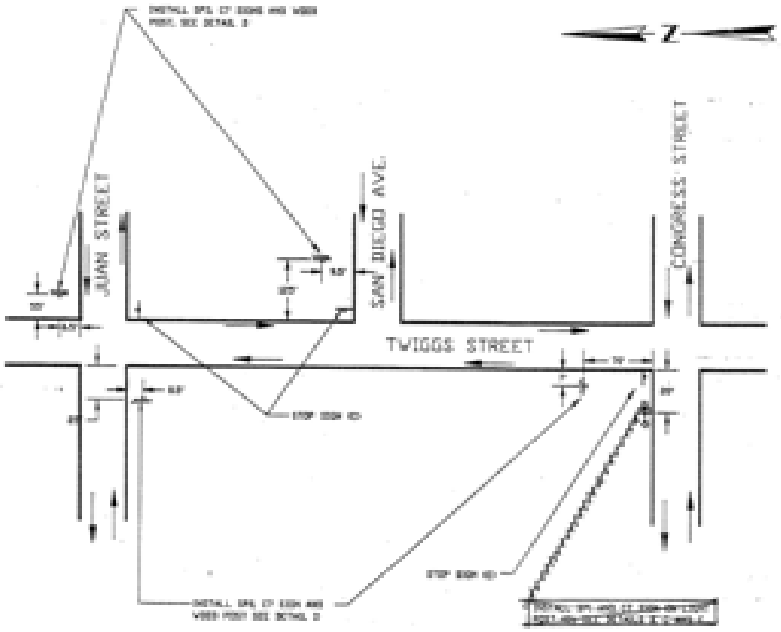
		DATE
DESIGNED BY	PMT	6/06
DRAWN BY	BRB	7/06
CHECKED BY	PMT	6/06
MTDB PROJ. ENG.	G. RADLAND	

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

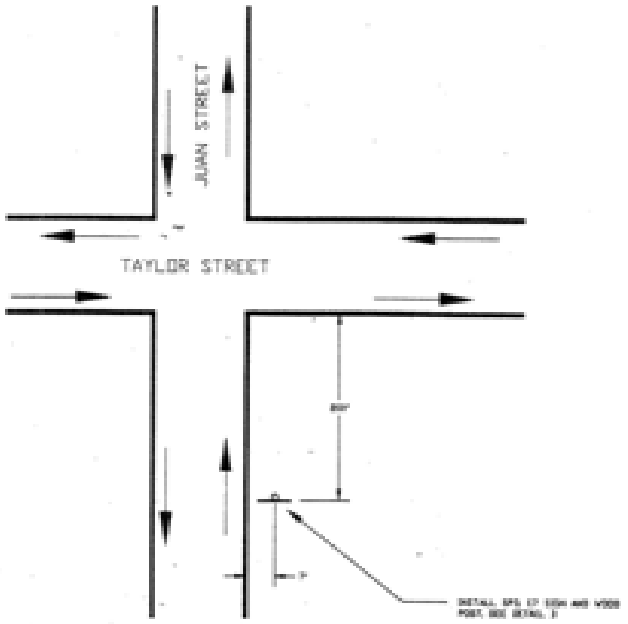
OLD TOWN LRT PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
AREA AND LOCATION MAP

SCALE	N. T. S.
MTDB CONTRACT NO.	-LRT-553.4
DRAWING NO.	SHEET NO.
NO.	

FOR ISSUED PLANS



TWIGGS, JUAN, and SAN DIEGO STREET



JUAN STREET

NO.	DATE	REVISIONS	BY	CHK	APPR

EARTH TECH

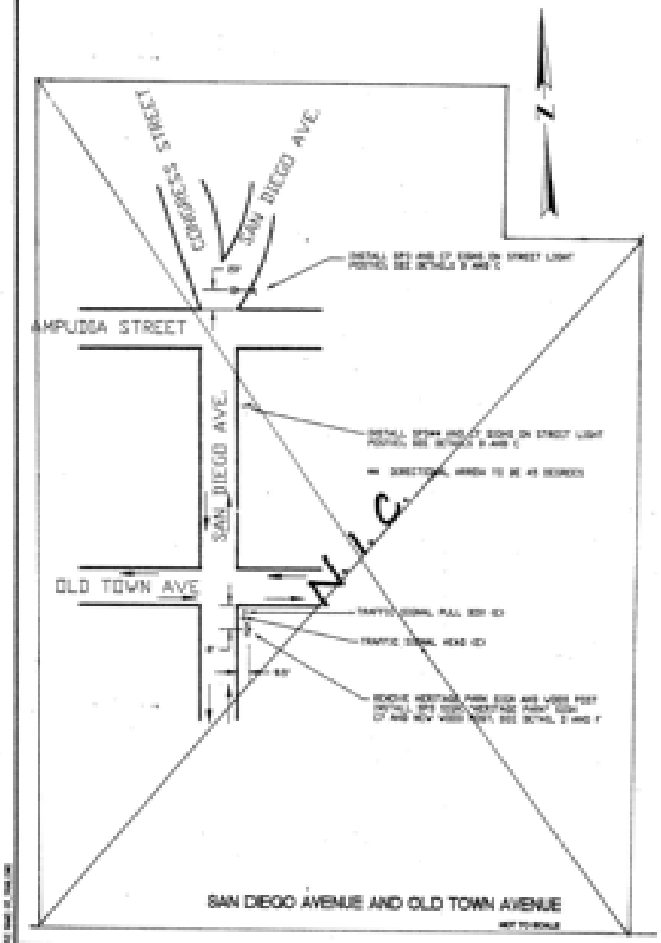
DESIGNED BY	SDR	5/06
DRAWN BY	S.P.H.	5-06
CHECKED BY	PMT	5/06
MTDB TRLL ENG.	SDR	5-06

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, Ca. 92101-7490 (619)231-1466

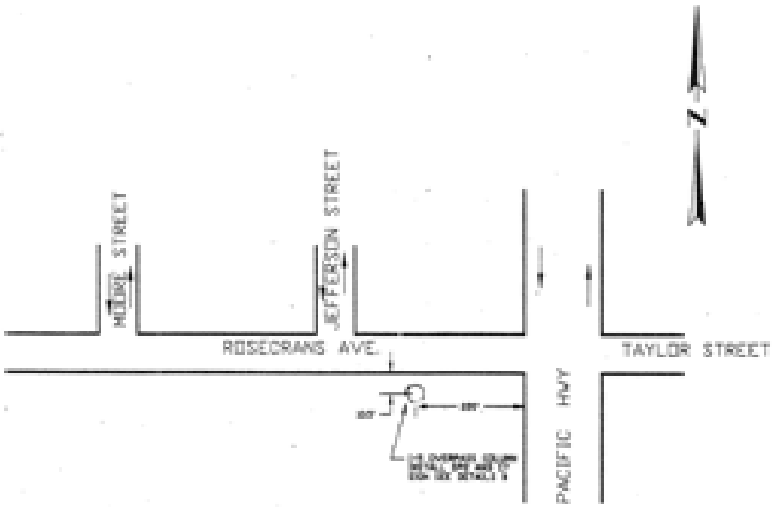
OLD TOWN LRT PROJECT
SAN DIEGO

OLD TOWN LRT EXTENSION
TRAIL BLAZER SIGN INSTALLATION
TWIGGS ST., JUAN ST., SAN DIEGO AVE

SCALE	AS NOTED
MTDB CONTRACT NO.	LRT-553.4
DRAWING NO.	SHEET NO.
SK2	



SAN DIEGO AVENUE AND OLD TOWN AVENUE



PACIFIC HIGHWAY AND ROSECRANS AVENUE

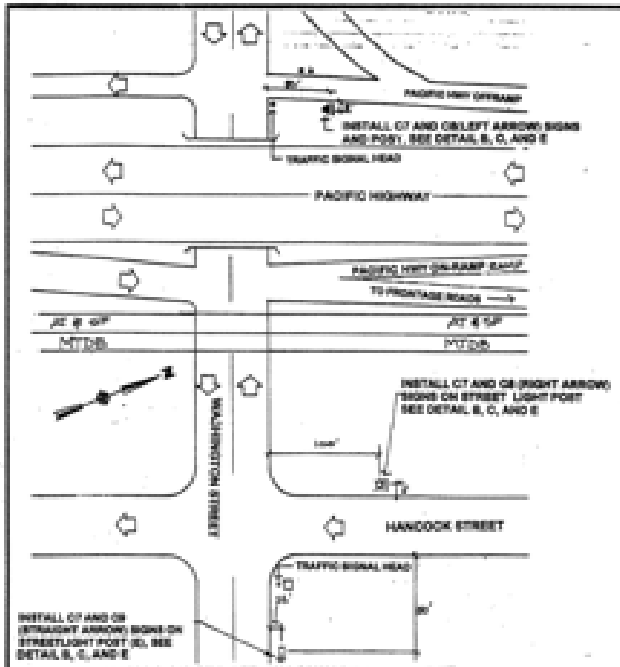
EARTH TECH

MTDB
Metropolitan Transit Development Board

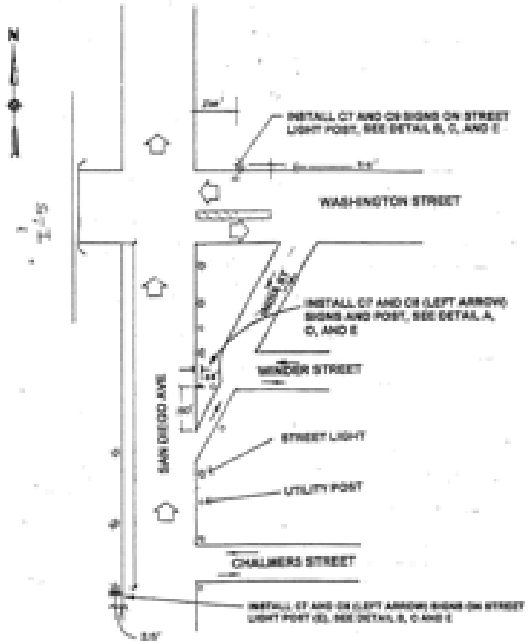
OLD TOWN LRT PROJECT
SAN DIEGO

OLD TOWN LRT EXTENSION
TRAIL BLAZER SIGN INSTALLATION
SAN DIEGO AVE, OLD TOWN AVE, PACIFIC HWY

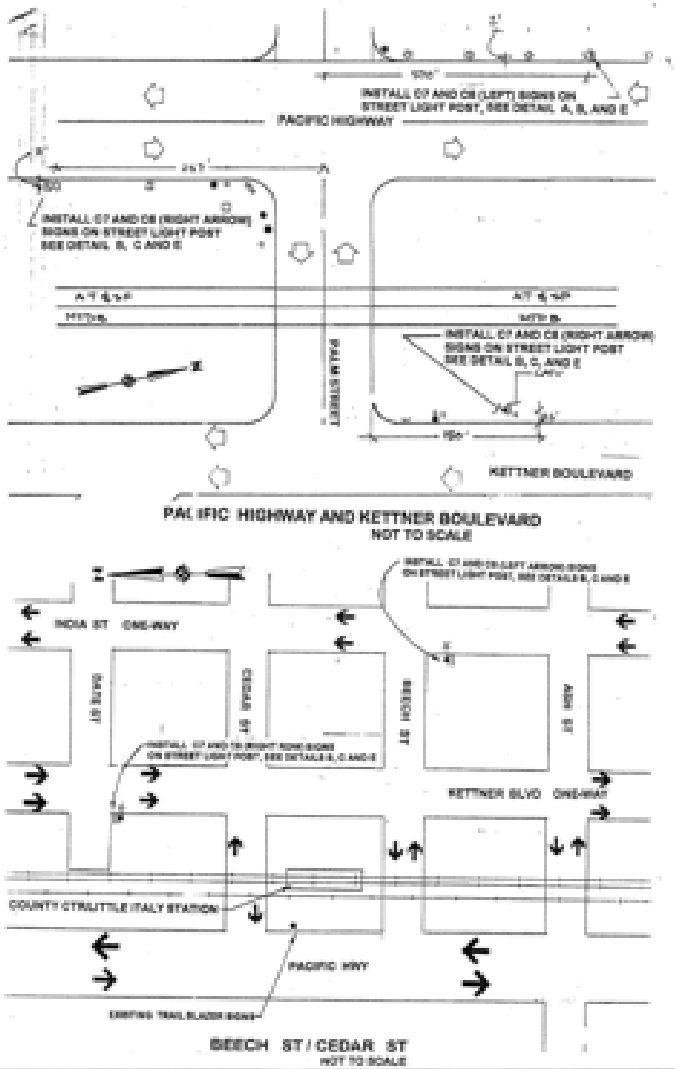
SCALE: AS NOTED
MTDB CONTRACT NO. LRT-553.4
DRAWING NO. SN 3
SHEET NO.



HANCOCK STREET, WASHINGTON STREET AND PACIFIC HIGHWAY OFFRAMP
NOT TO SCALE



WASHINGTON STREET AND SAN DIEGO AVE
NOT TO SCALE



PACIFIC HIGHWAY AND KETTNER BOULEVARD
NOT TO SCALE

BEECH ST / CEDAR ST
NOT TO SCALE

NO.	DATE	REVISIONS	BY	CHK	APPV

EARTH TECH

		DATE
DESIGNED BY	PWT	
DRAWN BY	BRB	
CHECKED BY	PWT	
MTDB PRJ. ENG.	DOB	

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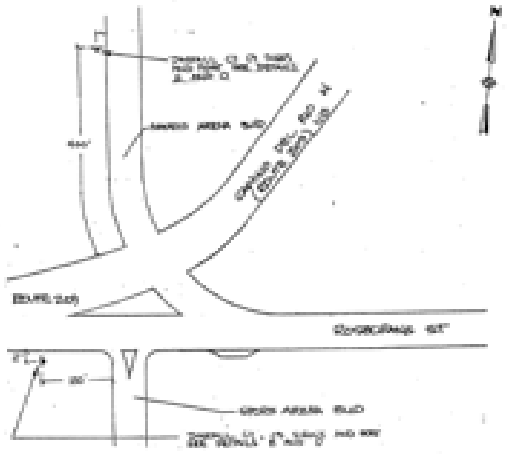
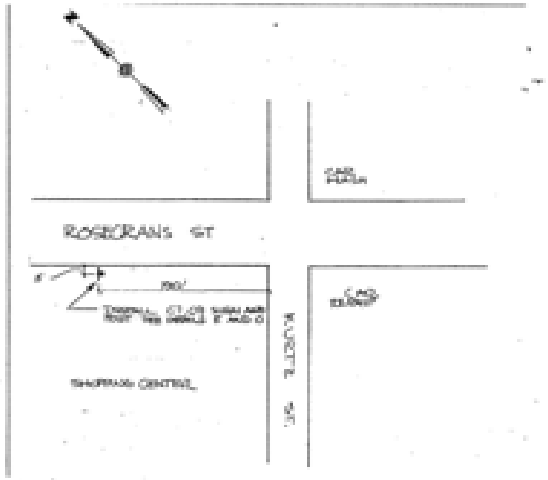
OLD TOWN LRT PROJECT
SAN DIEGO

OLD TOWN LRT EXTENSION
TRAIL BLAZER SIGN INSTALLATION
BEECH ST / CEDAR ST
WASHINGTON ST., HANCOCK ST., AND PACIFIC HWY.

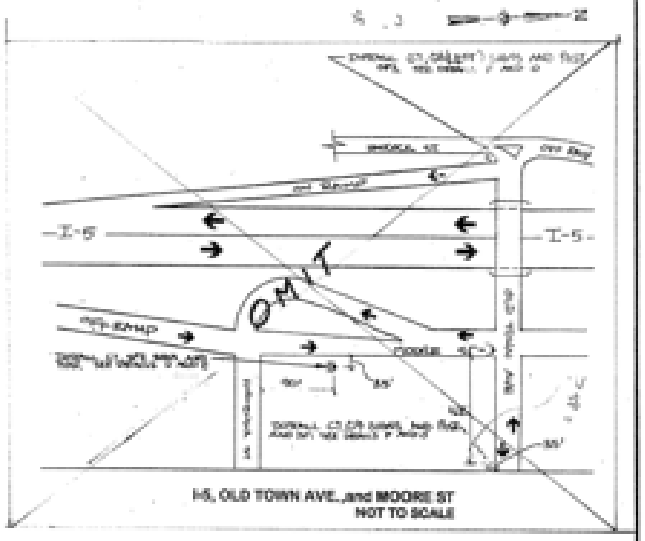
SCALE	NOT TO SCALE
MTDB CONTRACT NO.	LRT-553.4
DRAWING NO.	SIGNAGE NO.
SN-4	



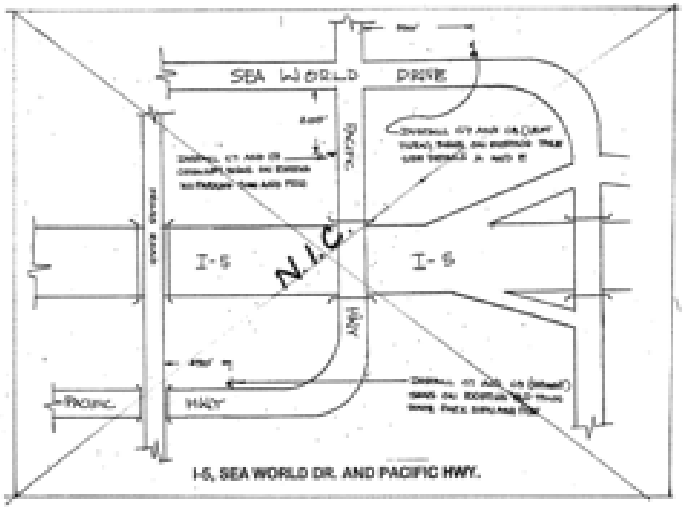
SPORTS ARENA BLVD, ROUTE 209, and ROSECRANS ST
NOT TO SCALE



ROSECRANS ST and KURTZ ST.
NOT TO SCALE



I-5, OLD TOWN AVE, and MOORE ST
NOT TO SCALE



I-5, SEA WORLD DR. AND PACIFIC HWY.

NO.	DATE	REVISIONS	BY	CHK	APPV
1	9/5/96	ADDED "SEA WORLD DRIVE" DETAIL			

EARTH TECH

DESIGNED BY PBT	DATE 4/96	
DRAWN BY BPS	4/96	
CHECKED BY PBT	4/96	
MTDB PRJ. ENG. DCS	4/96	

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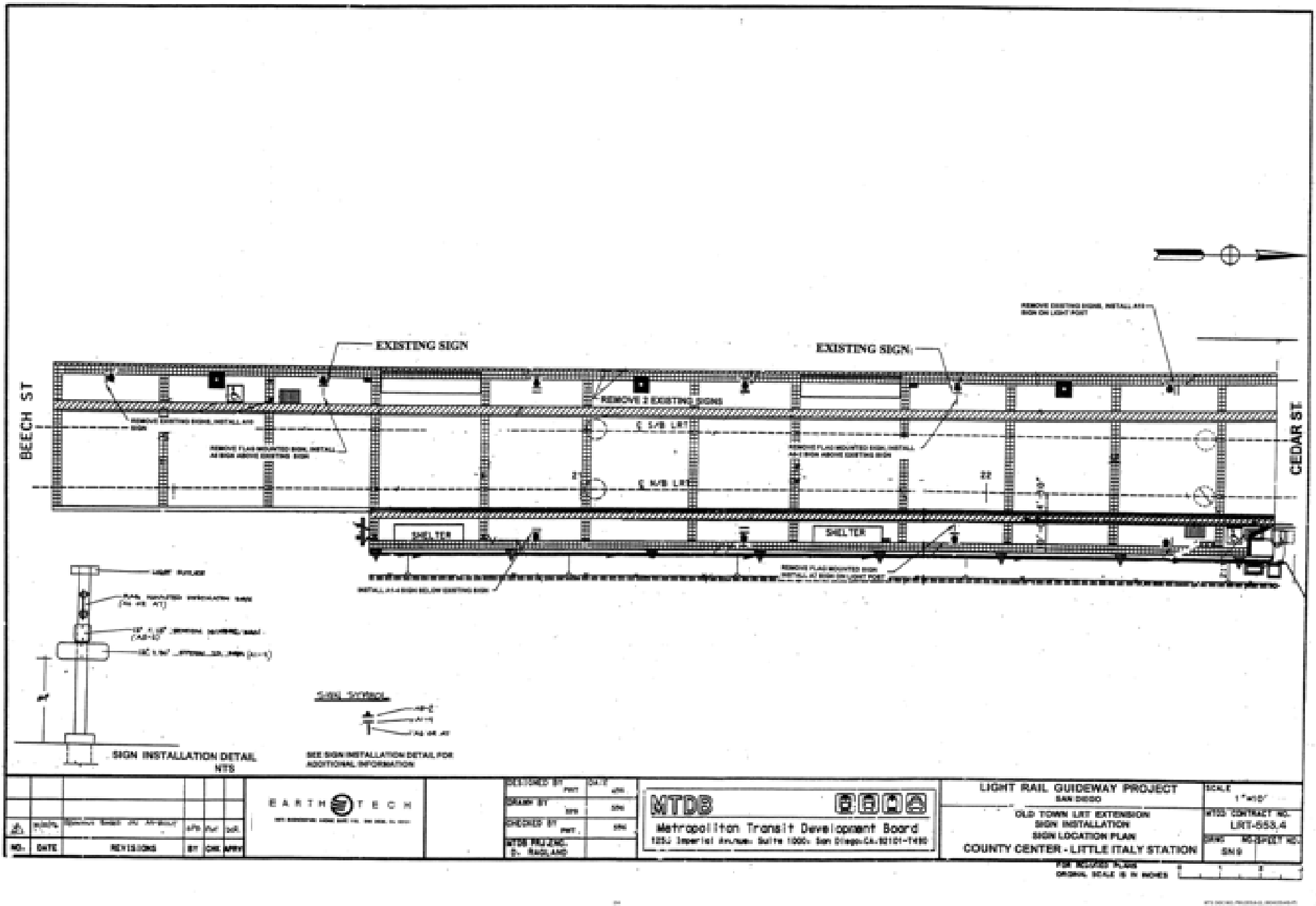
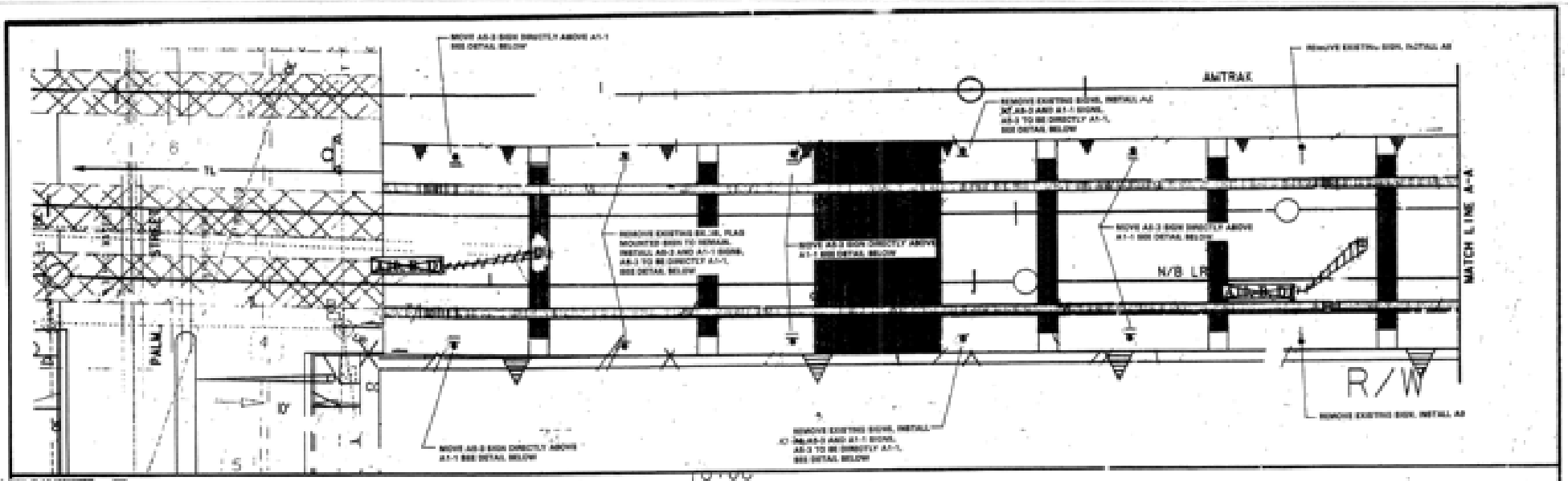
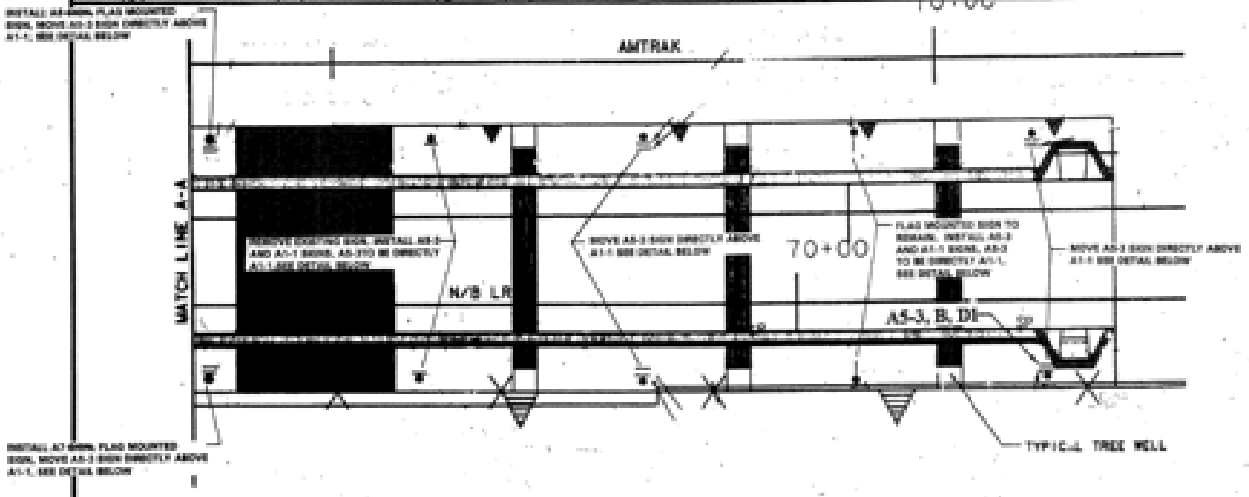
OLD TOWN LRT PROJECT
SAN DIEGO

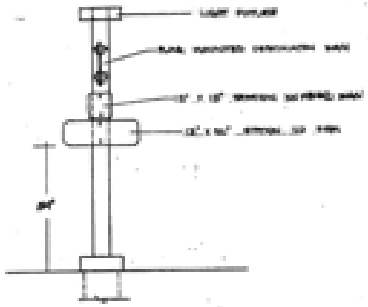
OLD TOWN LRT EXTENSION
TRAIL BLAZER SIGN INSTALLATION
SPORTS ARENA BLVD, ROSECRANS ST,
OLD TOWN AVE, and MOORE ST.

SCALE	NOT TO SCALE
MTDB CONTRACT NO.	LRT-553.4
DRAWING NO.	SNS
SHEET NO.	


EXISTING SIGN
EXISTING SIGN
REMOVE 2 EXISTING SIGNS
BEECH ST
CEDAR ST
SHELTER
SHELTER
SIGN INSTALLATION DETAIL
NTS
SEE SIGN INSTALLATION DETAIL FOR ADDITIONAL INFORMATION
EARTH TECH
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
COUNTY CENTER - LITTLE ITALY STATION
LRT-653.4







NO.	DATE	REVISIONS	BY	CHK	APPD

EARTH TECH

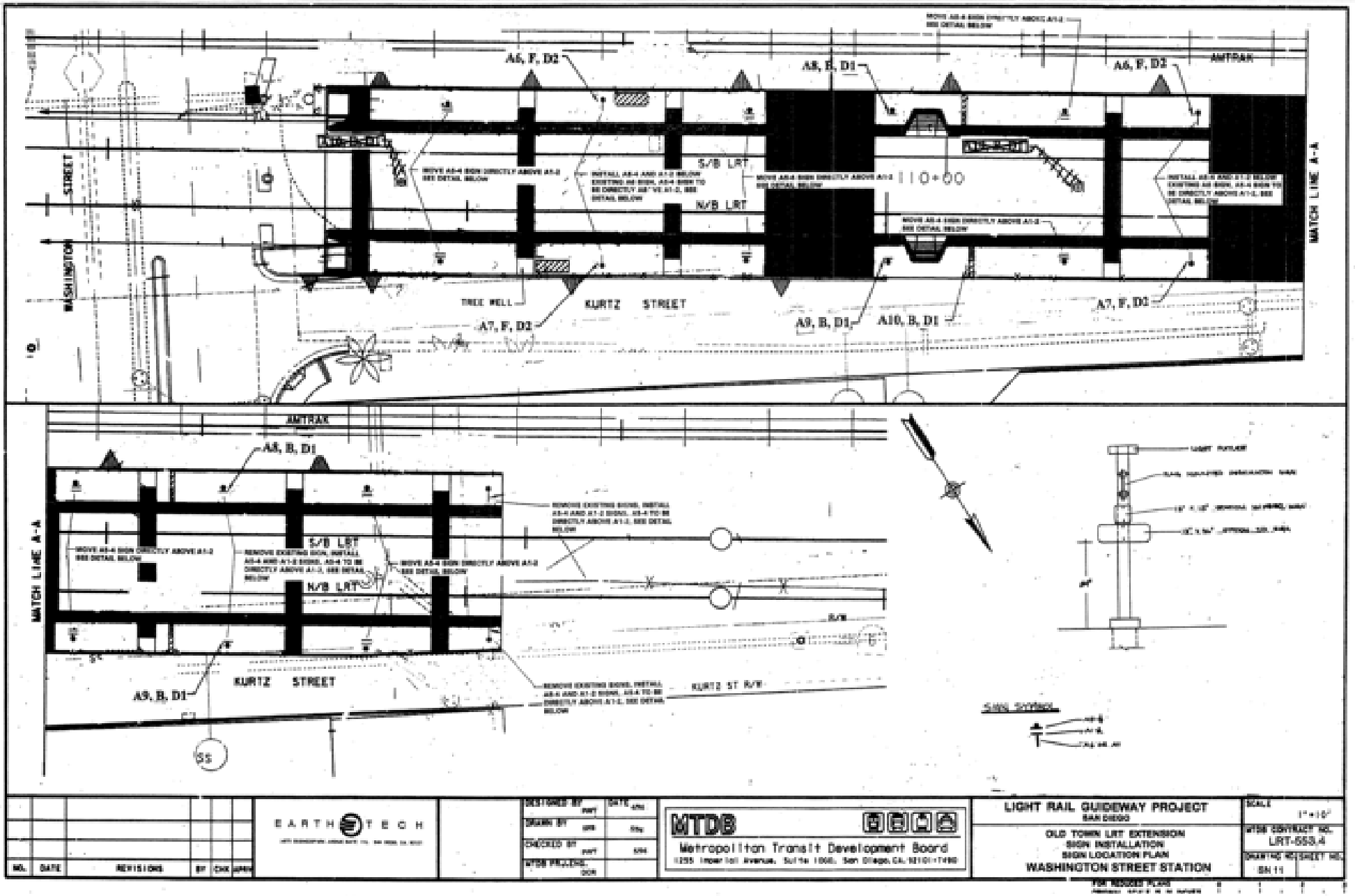
DESIGNED BY PMT DATE
DRAWN BY DRN
CHECKED BY PMT
MTDB PROJECT MGR. D. RADLAND

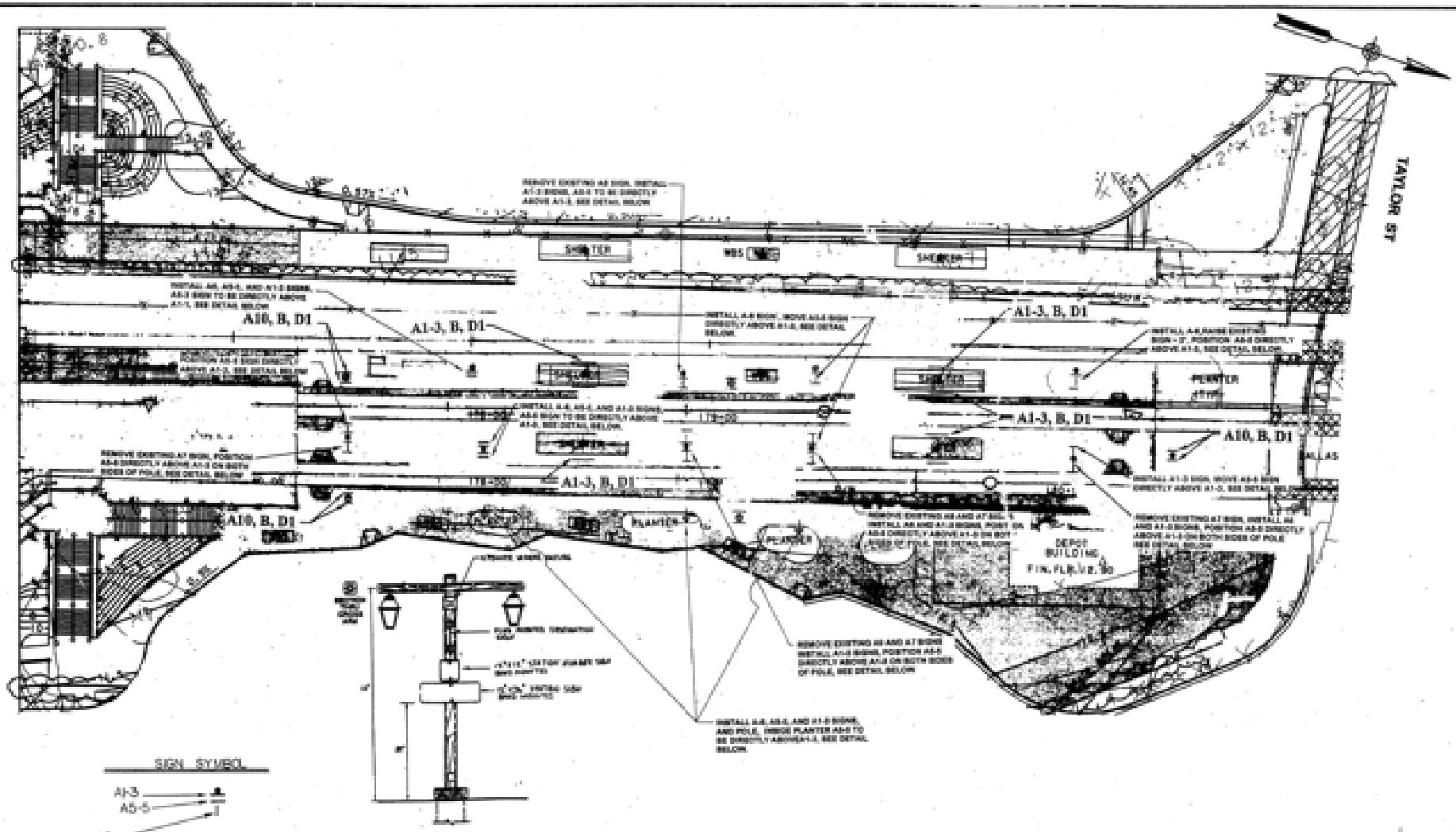
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
PALM STREET STATION

SCALE 1"=10'
MTDB CONTRACT NO. LRT-553.4
DRAWING NO/SHEET NO. SIN 10

FOR REDUCED PLANS


A6, F, D2
A8, B, D1
A6, F, D2
AMTRAK
S/B LRT
N/B LRT
110+00
MATCH LINE A-A
WASHINGTON STREET
TREE WELL
KURTZ STREET
A7, F, D2
A9, B, D1
A10, B, D1
A7, F, D2
AMTRAK
A8, B, D1
MATCH LINE A-A
S/B LRT
N/B LRT
A9, B, D1
KURTZ STREET
KURTZ ST R/W
SIGN SYMBOL
EARTH TECH
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
WASHINGTON STREET STATION
SCALE
1"=10'
MTDB CONTRACT NO.
LRT-553.4
DRAWING NO.
SIGN 11
SHEET NO.
NO.
DATE
REVISIONS
BY
CHK
APPR
DESIGNED BY
DRAWN BY
CHECKED BY
MTDB PROJECT MGR.
DATE



TYPICAL SIGN ARRANGEMENT ON LIGHT POST

NTS

NO.	DATE	REVISIONS	BY	CHK.	APPR.

EARTH TECH

DESIGNED BY PMT	DATE
DRAWN BY	
CHECKED BY PMT	
MTDB PROJECT O. RACLAND	

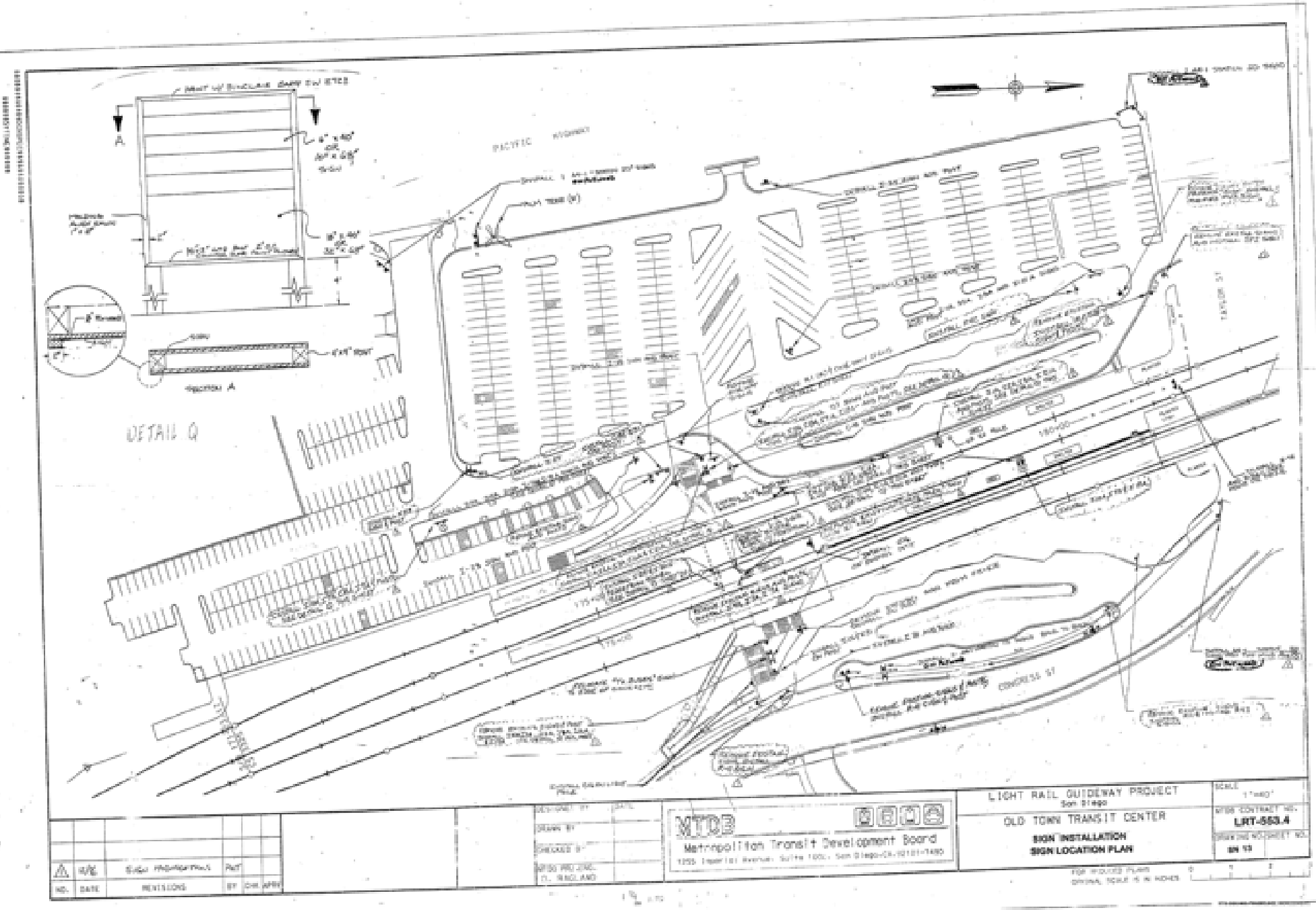
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

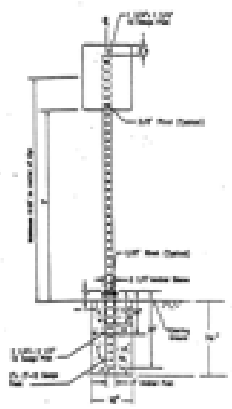
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO

OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
OLD TOWN STATION PLATFORM

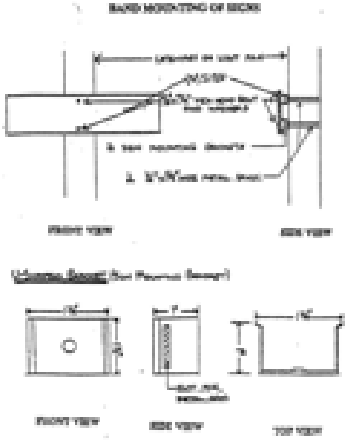
SCALE	1"=20'
MTDB CONTRACT NO.	LRT-553.4
DRAWING NO./SHEET NO.	SN12

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

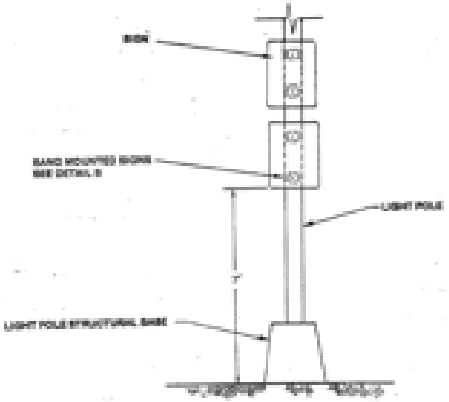

DETAIL Q
PACIFIC HIGHWAY
CONCORD ST
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
SIGN INSTALLATION
SIGN LOCATION PLAN
MTDB CONTRACT NO.
LRT-553.4
SN 13



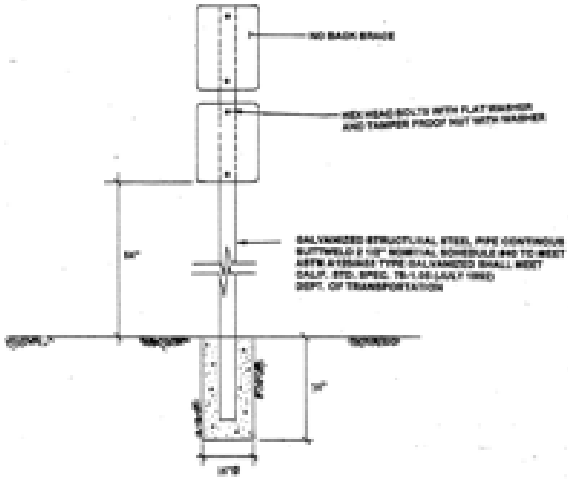
TYPICAL MOUNTING DETAIL A
NTS



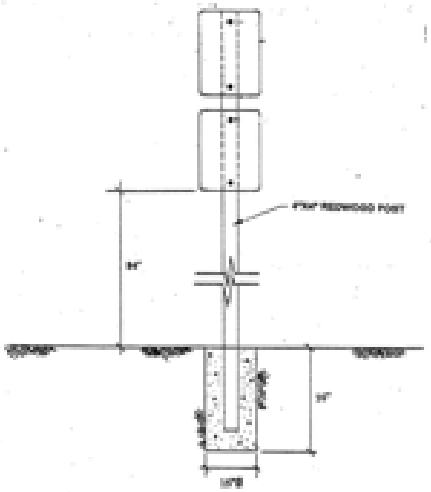
TYPICAL MOUNTING DETAIL B
NTS



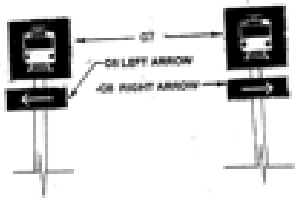
TYPICAL MOUNTING DETAIL C
NTS

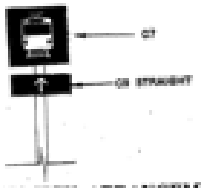


TYPICAL MOUNTING DETAIL O
NTS

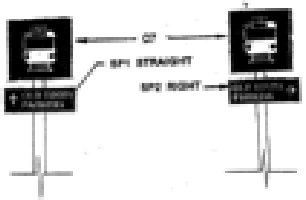


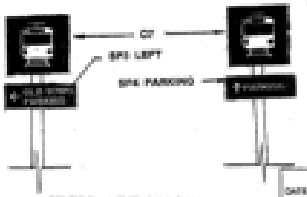
TYPICAL MOUNTING DETAIL D
NTS



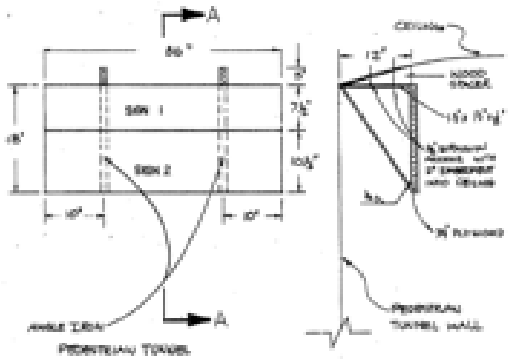


C7/C8 AND C7/C9 SIGN ARRANGEMENT
DETAIL E





SIGN ARRANGEMENT
DETAIL F



PEDESTRIAN TUNNEL
INSTALLATION DETAIL SHEET C
NTS

SECTION A-A
NTS

ISSUED FOR CONSTRUCTION
DATE: 05 / 1 / 08
BY: DCR
C.C.O. No.: DCR
REVISION No.:

NO.	DATE	REVISIONS	BY	CHK	APPV

EARTH TECH

		DATE
DESIGNED BY	PWT	
DRAWN BY	EPS	4/04
CHECKED BY	PWT	5/04
MTDB FIELD ENGR.	DCR	1/08

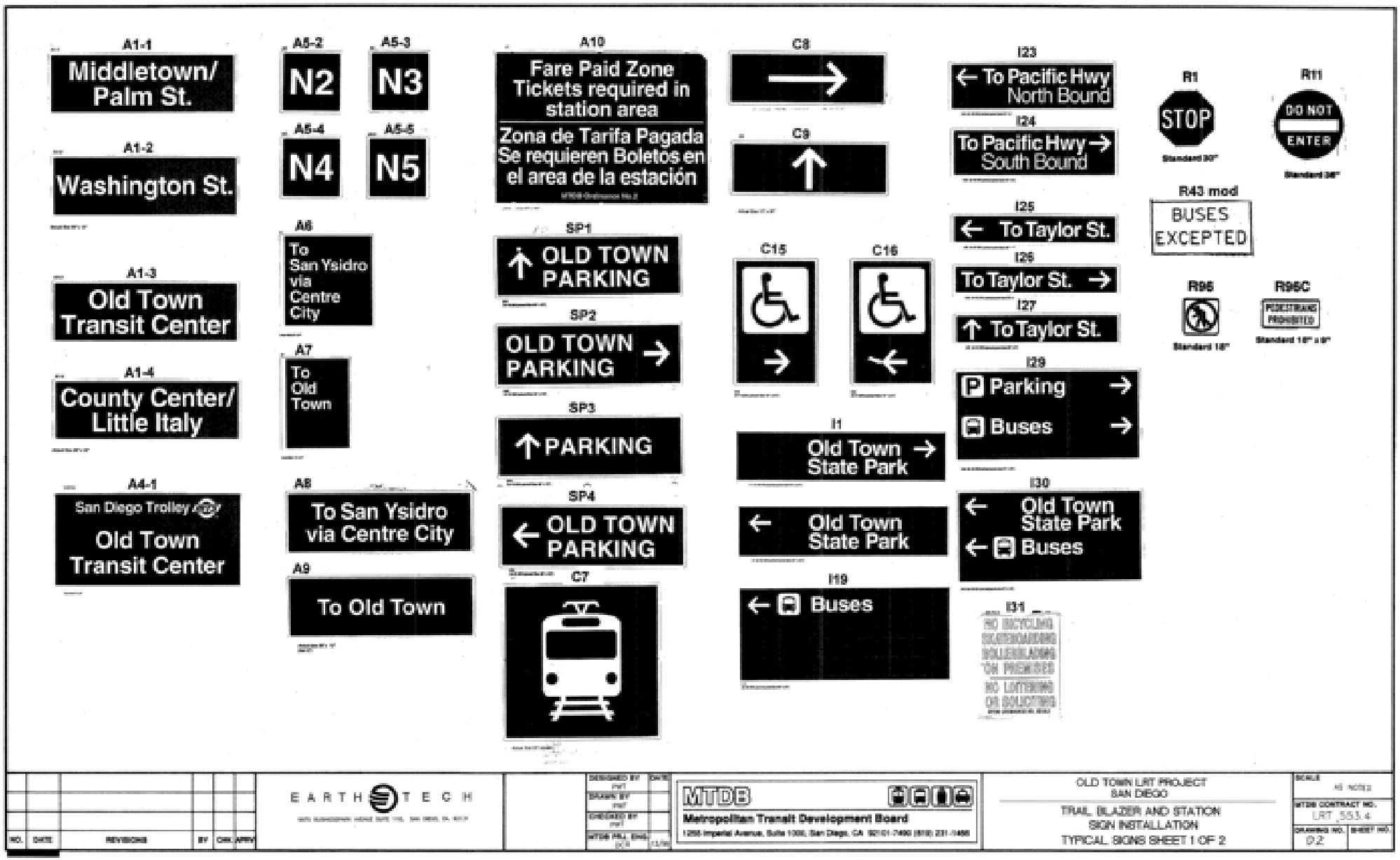
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

OLD TOWN LRT PROJECT
SAN DIEGO

OLD TOWN LRT EXTENSION
TRAIL BLAZER SIGN INSTALLATION

INSTALLATION DETAILS A,B,C,D,E, F AND G

SCALE	
AS SHOWN	
MTDB CONTRACT NO.	
LRT-5353.4	
DRAWING NO.	SHEET NO.
G1	


A1-1
Middletown/ Palm St.
A1-2
Washington St.
A1-3
Old Town Transit Center
A1-4
County Center/ Little Italy
A4-1
San Diego Trolley
Old Town Transit Center
A5-2
N2
A5-3
N3
A5-4
N4
A5-5
N5
A6
To San Ysidro via Centre City
A7
To Old Town
A8
To San Ysidro via Centre City
A9
To Old Town
A10
Fare Paid Zone
Tickets required in station area
Zona de Tarifa Pagada
Se requieren Boletos en el area de la estación
SP1
OLD TOWN PARKING
SP2
OLD TOWN PARKING
SP3
PARKING
SP4
OLD TOWN PARKING
C7
C8
C9
C15
C16
I1
Old Town State Park
Old Town State Park
I19
Buses
I23
To Pacific Hwy North Bound
I24
To Pacific Hwy South Bound
I25
To Taylor St.
I26
To Taylor St.
I27
To Taylor St.
I29
Parking
Buses
I30
Old Town State Park
Buses
I31
NO BICYCLING
SKATEBOARDING
ROLLERBLADING
ON PREMISES
NO LOITERING
OR SOLICITING
R1
STOP
R11
DO NOT ENTER
R43 mod
BUSES EXCEPTED
R95
R95C
PEDESTRIANS PROHIBITED
EARTH TECH
MTDB
Metropolitan Transit Development Board
OLD TOWN LRT PROJECT
SAN DIEGO
TRAIL BLAZER AND STATION
SIGN INSTALLATION
TYPICAL SIGNS SHEET 1 OF 2
MTDB CONTRACT NO.
LRT 353.4
D.2

I1A

I11A

I2A

I12A

I3A

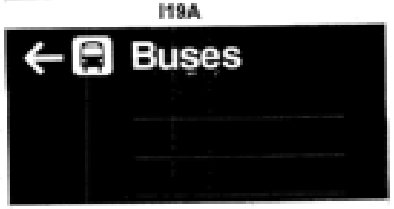
I13A

I4A

I16A

I7A

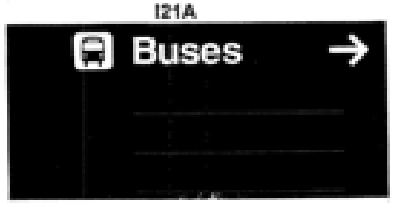
I19A



I8A

I9A

I21A



I10A

Sign	Size	Quantity	Title
A1-1	36"X12"	8	MIDDLE/PALM ST.
A1-2	36"X12"	8	WASHINGTON ST.
A1-3	36"X12"	13	OLD TOWN TRANSIT CENTER
A1-4	36"X12"	1	COUNTY CENTER/ LITTLE ITALY
A4-1	72"X36"	7	OLD TOWN TRANSIT CENTER
A5-2	12"X12"	1	N2
A5-3	12"X12"	8	N3
A5-4	12"X12"	8	N4
A5-5	12"X12"	7	N5
A6	24"X24"	15	SAN YSIDRO VIA CENTRE CITY
A7	18"X24"	5	TO OLD TOWN
A8	36"X12"	1	SAN YSIDRO VIA CENTRE CITY
A9	36"X12"	3	TO OLD TOWN
A10	42"X30"	17	FARE PAID ZONE
SP2	36"X12"	5	OLD TOWN PARKING (RIGHT ARROW)
SP3	36"X12"	6	OLD TOWN PARKING (LEFT ARROW)
SP4	36"X12"	1	PARKING (STRAIGHT ARROW)
C7	30"X30"	28	TRAIL BLAZER
C8	30"X10	10	HORIZONTAL ARROW
C9	30"X10"	6	STRAIGHT ARROW
C15	16"X24"	1	ACCESSIBLE PATH (RIGHT ARROW)
C16	16"X24"	3	ACCESSIBLE PATH (LEFT ARROW)
I1	40"X9.5	1	OLD TOWN STATE PARK (RIGHT ARROW)
I19	40"X18"	1	BUSES w/ ROUTE (LEFT ARROW) 3" ltr
I23	32"x6"	2	PACIFIC HWY (LEFT ARROW)
I24	32"x6"	1	PACIFIC HWY (RIGHT ARROW)
I25	32"x6"	2	TAYLOR ST (LEFT ARROW)
I26	32"x6"	2	TAYLOR ST (RIGHT ARROW)
I28	32"x6"	1	TAYLOR ST (STRAIGHT ARROW)
I29	36"x18"	1	PARKING/BUSES (RIGHT ARROW)
I30	36"x18"	1	OLD TOWN STATE PARK/BUSES(LEFT)
I31	18"X24"	2	NO BIKING, ROLLER BLADING
I1A	66"x16"	5	OLD TOWN STATE PARK (RIGHT ARROW) 5" lt
I2A	66"X10"	3	TROLLEYS (RIGHT ARROW) 5" lettering
I3A	66"X10"	4	COASTER (RIGHT ARROW) 5" Lettering
I4A	66"x10"	1	PARKING (RIGHT ARROW) 5" lettering
I7A	66"x16"	5	OLD TOWN STATE PARK (LEFT ARROW) 5" let
I8A	66"x10"	4	TROLLEYS (LEFT ARROW) 5" lettering
I9A	66"x10"	5	COASTER (LEFT ARROW) 5" lettering
I10A	66"x10"	3	PARKING (LEFT ARROW) 5" lettering
I11A	66"x16"	1	OLD TOWN STATE PARK (STRAIGHT ARROW)
I12A	66"x10"	2	TROLLEYS (STRAIGHT ARROW) 5" lettering
I13A	66"x10"	1	COASTER (STRAIGHT ARROW) 5" lettering
I16A	66"x32"	3	BUSES w/ ROUTE (STRAIGHT ARROW) 5" letts
I19A	66"x32"	3	BUSES w/ ROUTE (LEFT ARROW) 5" lettering
I21A	66"X32"	5	BUSES w/ ROUTE (RIGHT ARROW)5" Lettering
R1	30"	1	STOP SIGN
R11	36"X36"	8	DO NOT ENTER
R42	30"X36"	1	LEFT TURN ONLY
R43	24"X12"	2	BUSES EXEMPT
R96	18"	1	NO PEDESTRIAN
R96C	18"X9"	1	PEDESTRIAN PROHIBITED

NO. | DATE | REVISIONS | BY | CHK | APPD

EARTH TECH

DESIGNED BY PMT | DATE 11/06
DRAWN BY PMT | DATE 11/06
CHECKED BY PMT | DATE 11/06
MTDB PM | DATE

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

OLD TOWN LRT PROJECT
SAN DIEGO

TRAIL BLAZER AND STATION
SIGN INSTALLATION
TYPICAL SIGNS + QUANTITIES SHEET 2 OF 2

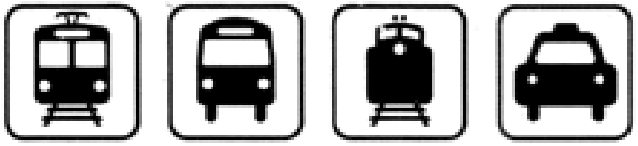
SCALE: AS NOTED
MTDB CONTRACT NO.: LRT 553.4
DRAWING NO.: 03
SHEET NO.:

SAN DIEGO

METROPOLITAN TRANSIT DEVELOPMENT BOARD

CONTRACT DRAWINGS

OLD TOWN LRT EXTENSION
TRAIL BLAZER S D STATION SIGN INSTALLATION
LRT 553.4

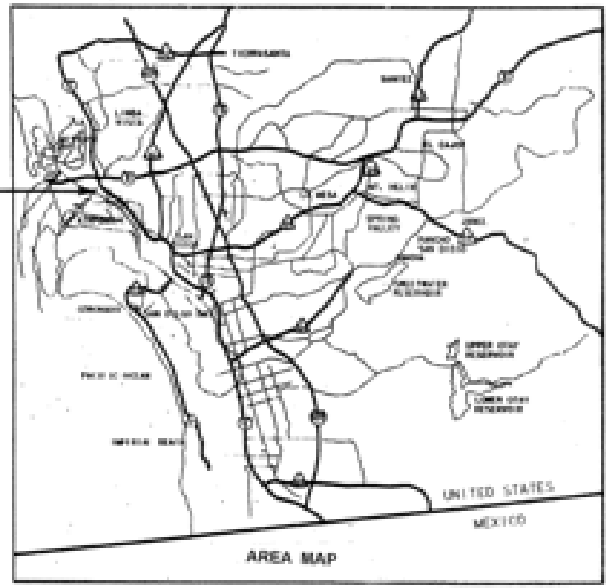


MTS

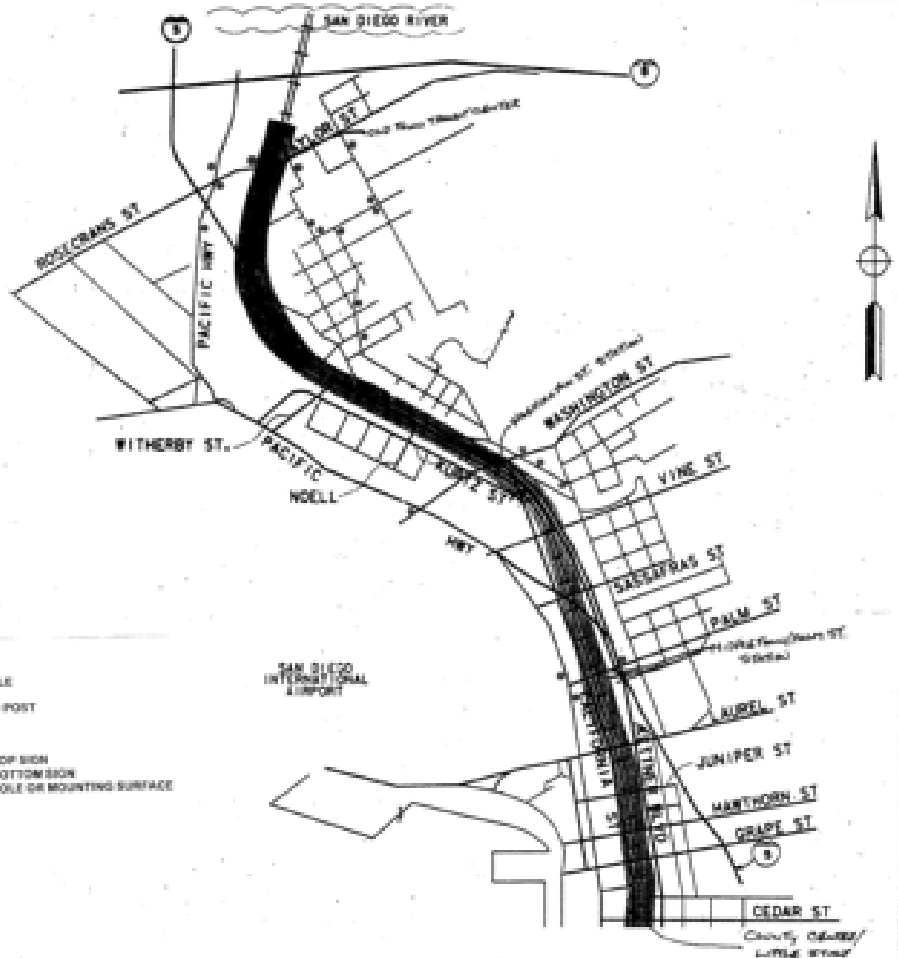
EARTH TECH

JANUARY 1997

TRAIL BLAZER SIGNS
LRT-553.4



AREA MAP



LOCATION MAP

NOTE:
* APPROXIMATE LOCATIONS

GENERAL NOTES

1. UNLESS OTHERWISE NOTED, ALL SIGNS ARE TO BE MOUNTED A MINIMUM OF 84" FROM SIGN BOTTOM EDGE TO GRADE.
2. ALL SIGNS AND HARDWARE REQUIRED TO BE REMOVED BY THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED IMMEDIATELY FROM THE PROJECT SITE.
3. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE RESIDENT ENGINEER BEFORE EXCAVATING FOR SIGN POST FOUNDATIONS.
4. SEE DETAIL SHEETS D1 FOR SUGGESTED SIGN MOUNTINGS. THE CONTRACTOR SHALL SUBMIT CATALOGUE INFORMATION AND A SAMPLE OF THE PROPOSED MOUNTING HARDWARE FOR APPROVAL BY THE RESIDENT ENGINEER.
5. ALL SIGNS ARE TO BE MOUNTED WITH TAMPER PROOF HARDWARE.

SYMBOLS

- LIGHT POLE
- SIGN AND POST
- TOP SIGN
- BOTTOM SIGN
- POLE OR MOUNTING SURFACE

ABBREVIATION TERM

ASTM	AMERICAN STANDARDS FOR TESTING AND MATERIALS
DIA.	DIAMETER
(E)	EXISTING
NTS	NOT TO SCALE
N	NEW
ST	STREET

DRAWING INDEX

DRAWING No.	SHEET TITLE
N1	TITLE SHEET
N2	DRAWING INDEX, SYMBOLS, ABBREVIATIONS AND NOTES AREA AND LOCATION MAP
SN2	TAWSES, JUAN STREET, SAN DIEGO, AVENUE
SN3	SAN DIEGO, AVENUE, OLD TOWN AVENUE, PACIFIC HIGHWAY
SN4	WASHINGTON, HANCOCK STREETS, PACIFIC HIGHWAY
SN5	SPORTS ARENA BLVD., ROSECRANS ST., OLD TOWN AVE.
SN6	COUNTY CENTER/LITTLE ITALY STATION
SN10	PALM STREET STATION
SN11	WASHINGTON STREET STATION
SN12	OLD TOWN STATION PLATFORM
SN13	SIGN LOCATION
D1	INSTALLATION DETAILS A, B, C, D, E, F, AND G
D2	TYPICAL SIGNS SHEET 1 OF 2
D3	TYPICAL SIGNS AND QUANTITIES SHEET 2 OF 2

NO.	DATE	REVISIONS	BY	CK	APP'D

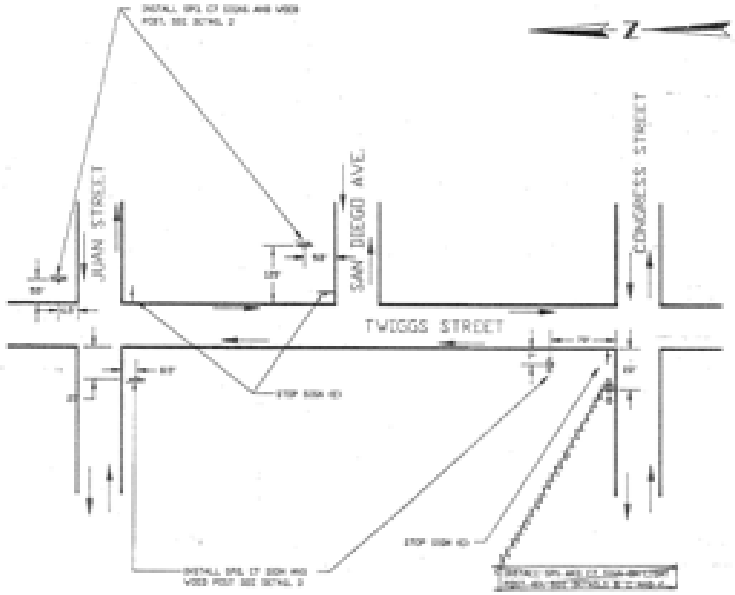
EARTH TECH

		DATE
DESIGNED BY	PMT	4/04
DRAWN BY	SPB	5/04
CHECKED BY	PMT	5/04
MTDB PROJECT MANAGER	D. ENGLAND	

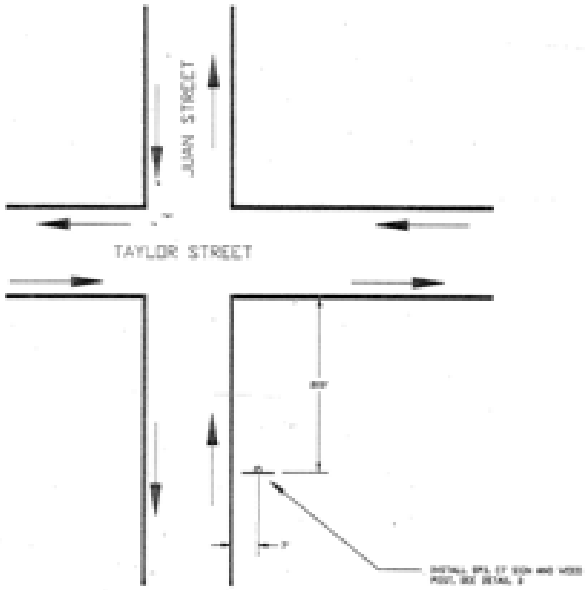
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490

OLD TOWN LRT PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
AREA AND LOCATION MAP

SCALE	N. T. S.
MTDB CONTRACT NO.	(LRT-553.4
DRAWING NO.	SHEET NO. N2



TWIGGS, JUAN, and SAN DIEGO STREET



JUAN STREET

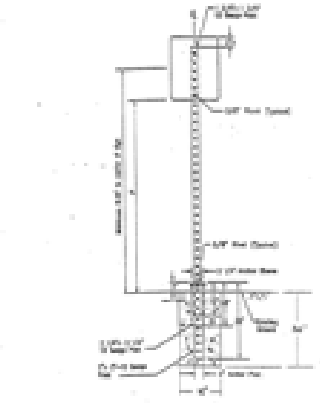
EARTH TECH

MTDB
Metropolitan Transit Development Board

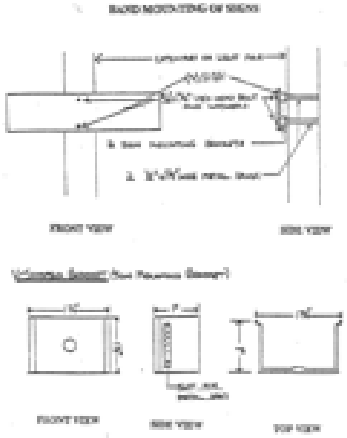
OLD TOWN LRT PROJECT
SAN DIEGO

OLD TOWN LRT EXTENSION
TRAIL BLAZER SIGN INSTALLATION
TWIGGS ST., JUAN ST., SAN DIEGO AVE

LRT-553.4



TYPICAL MOUNTING DETAIL A
NTS



TYPICAL MOUNTING DETAIL B
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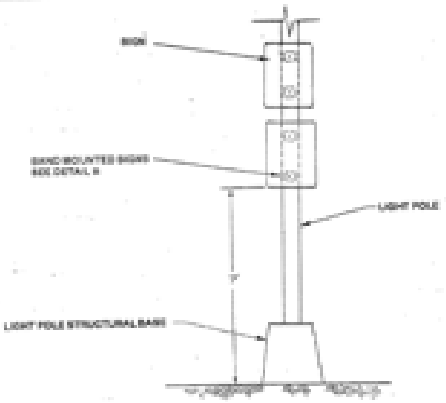

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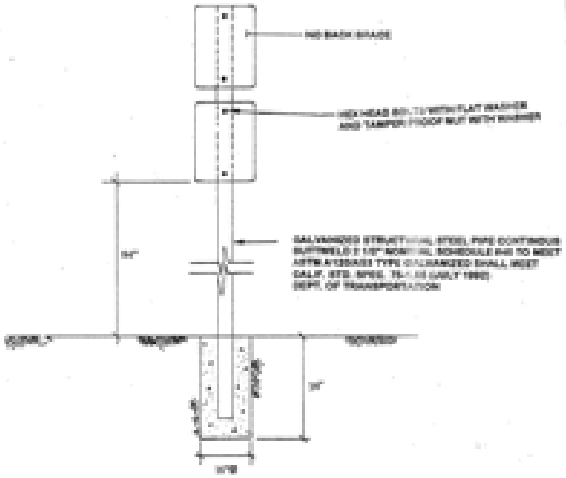

TYPICAL MOUNTING DETAIL O
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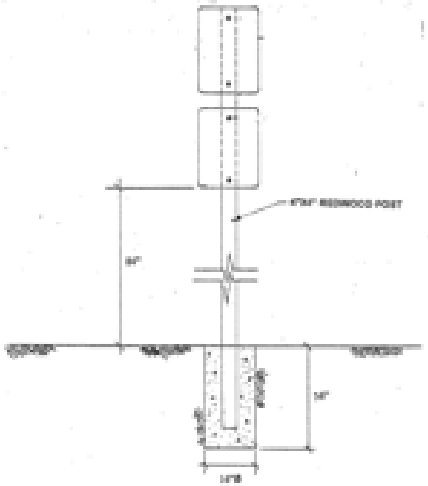

TYPICAL MOUNTING DETAIL D
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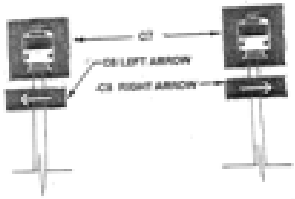
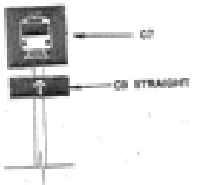
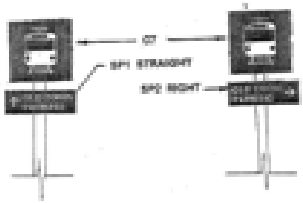
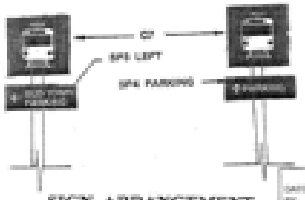


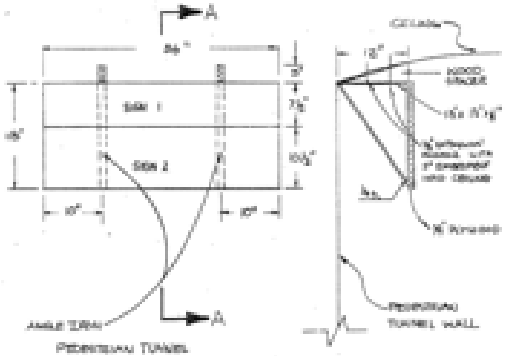


C7/C8 AND C7/C9 SIGN ARRANGEMENT
DETAIL E





SIGN ARRANGEMENT
DETAIL F



PENINSULA TUNNEL
INSTALLATION DETAIL, PANEL C
NTS

SECTION A-A
NTS

NO.	DATE	REVISIONS	BY	CHK	APVD		

EARTH TECH

		DATE
DESIGNED BY (PM)		
DRAWN BY	SPS	4/99
CHECKED BY (PM)		5/99
MTDB (PRJ. ENG.)	SCR	5/99

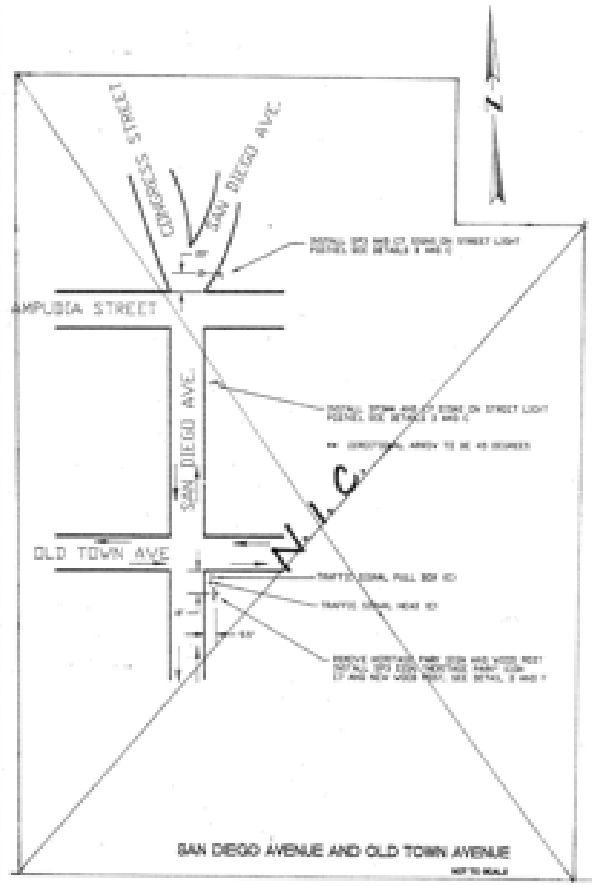
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

OLD TOWN LRT PROJECT
SAN DIEGO

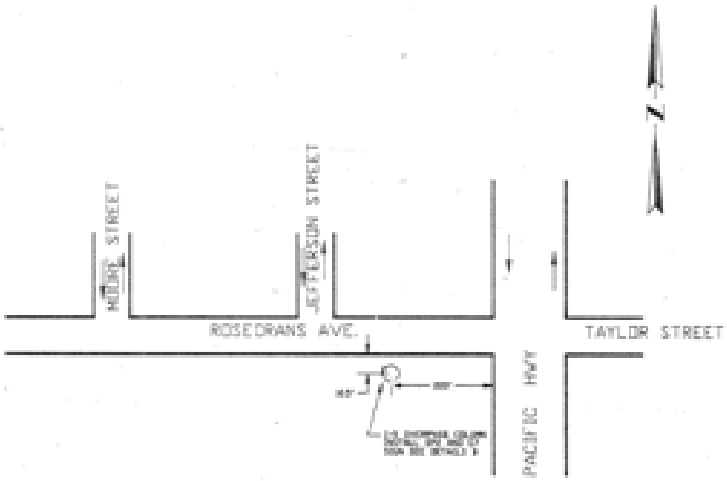
OLD TOWN LRT EXTENSION
TRAIL BLAZER SIGN INSTALLATION

INSTALLATION DETAILS A,B,C,D,E, F AND O

SCALE	AS SHOWN
MTDB CONTRACT NO.	LRT-553.4
DRAWING NO.	SHEET NO.
D 1	



SAN DIEGO AVENUE AND OLD TOWN AVENUE



PACIFIC HIGHWAY AND ROSECRANS AVENUE

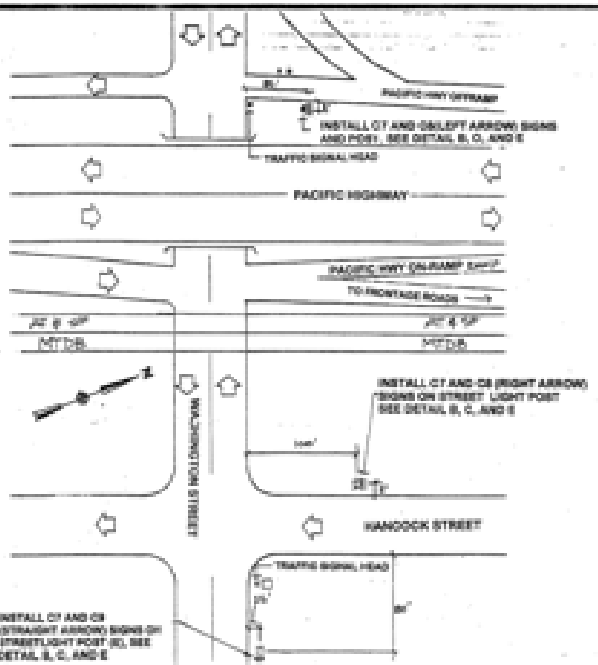
EARTH TECH

MTDB
Metropolitan Transit Development Board

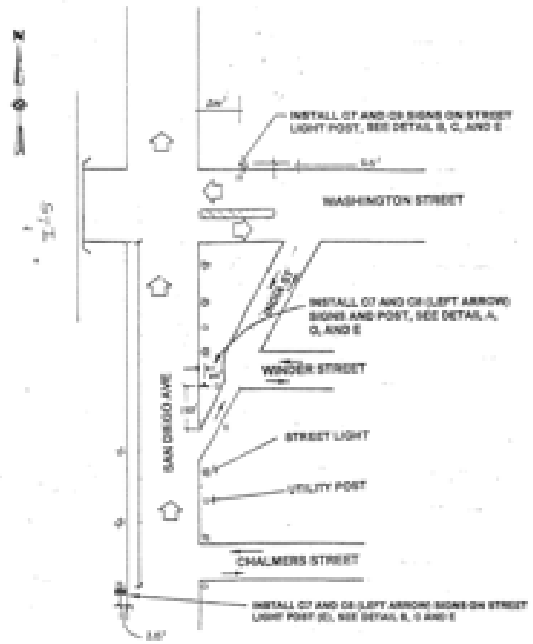
OLD TOWN LRT PROJECT
SAN DIEGO

OLD TOWN LRT EXTENSION
TRAIL BLAZER SIGN INSTALLATION
SAN DIEGO AVE, OLD TOWN AVE, PACIFIC HWY

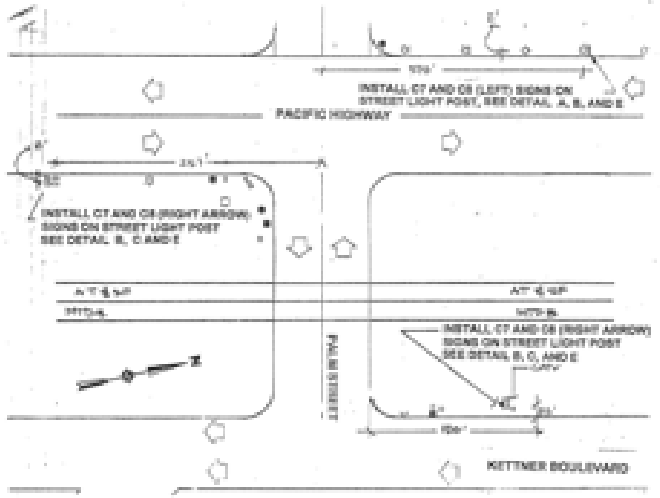
LRT-553.4



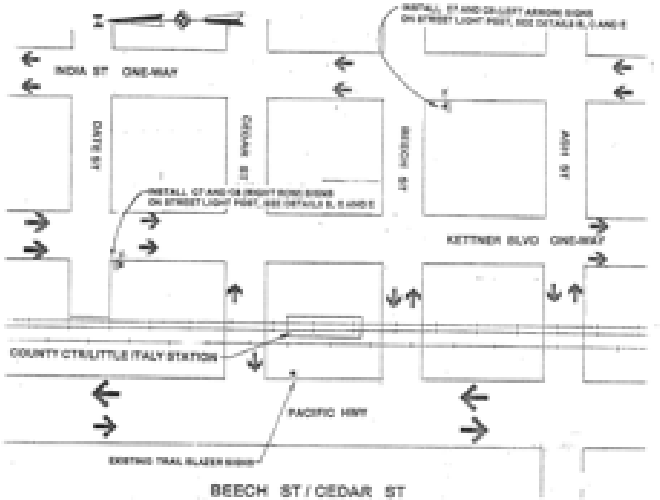
HANCOCK STREET, WASHINGTON STREET AND PACIFIC HIGHWAY OFFRAMP
NOT TO SCALE



WASHINGTON STREET AND SAN DIEGO AVE
NOT TO SCALE



PACIFIC HIGHWAY AND KETTNER BOULEVARD
NOT TO SCALE



BEECH ST / CEDAR ST
NOT TO SCALE

NO.	DATE	REVISIONS	BY	CHK	APPD

EARTH TECH

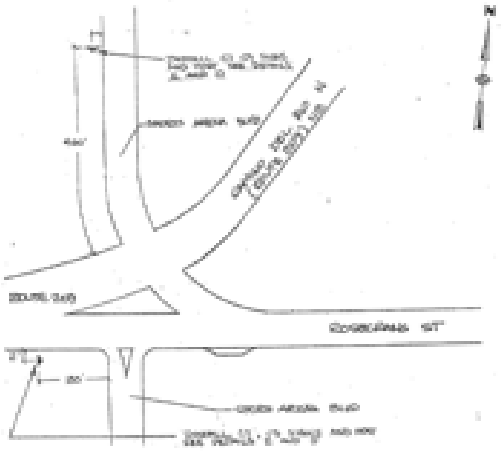
		DATE
DESIGNED BY	PWT	6/05
DRAWN BY	SKB	6/05
CHECKED BY	PWT	6/05
MTDB PEL ENG. DIR.		6/05

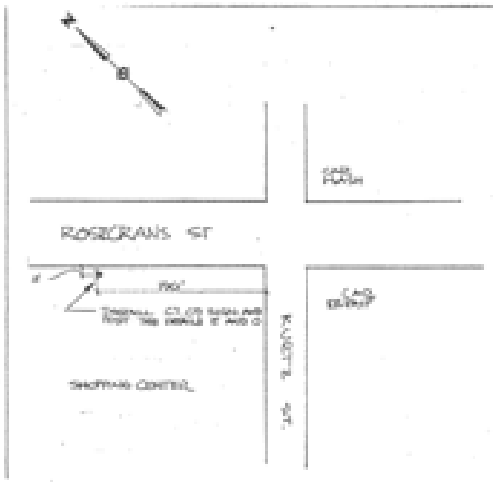
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

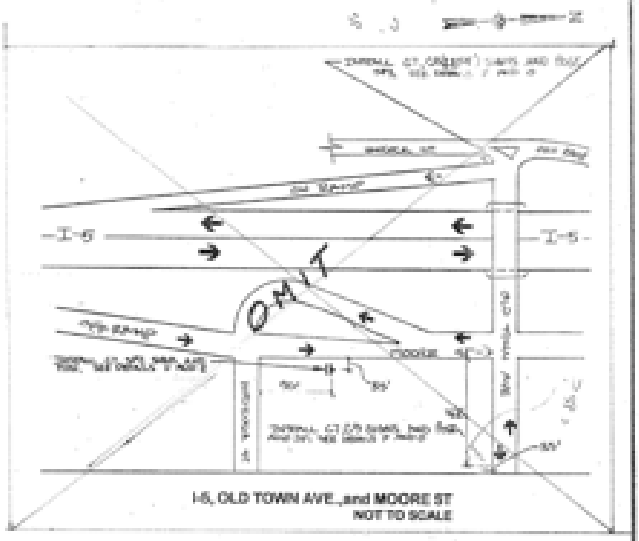
OLD TOWN LRT PROJECT
SAN DIEGO

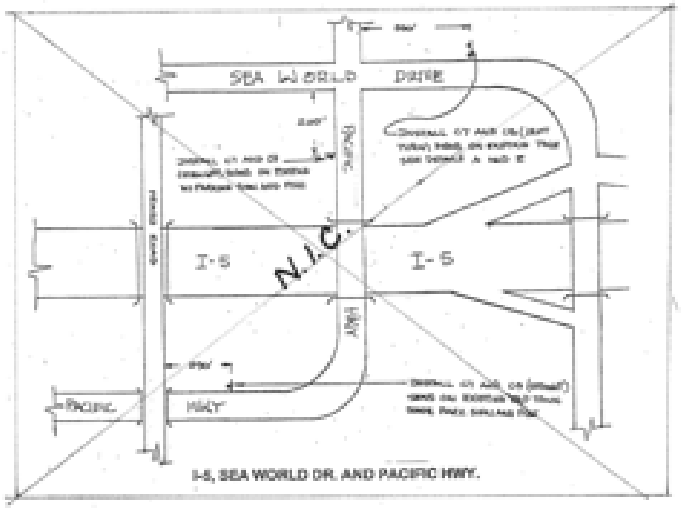
"OLD TOWN LRT EXTENSION
TRAIL BLAZER SIGN INSTALLATION
BEECH ST / CEDAR ST
WASHINGTON ST., HANCOCK ST., AND PACIFIC HWY."

SCALE	NOT TO SCALE
MTDB CONTRACT NO.	LRT-553.4
DRAWING NO.	SIN-4
SHEET NO.	









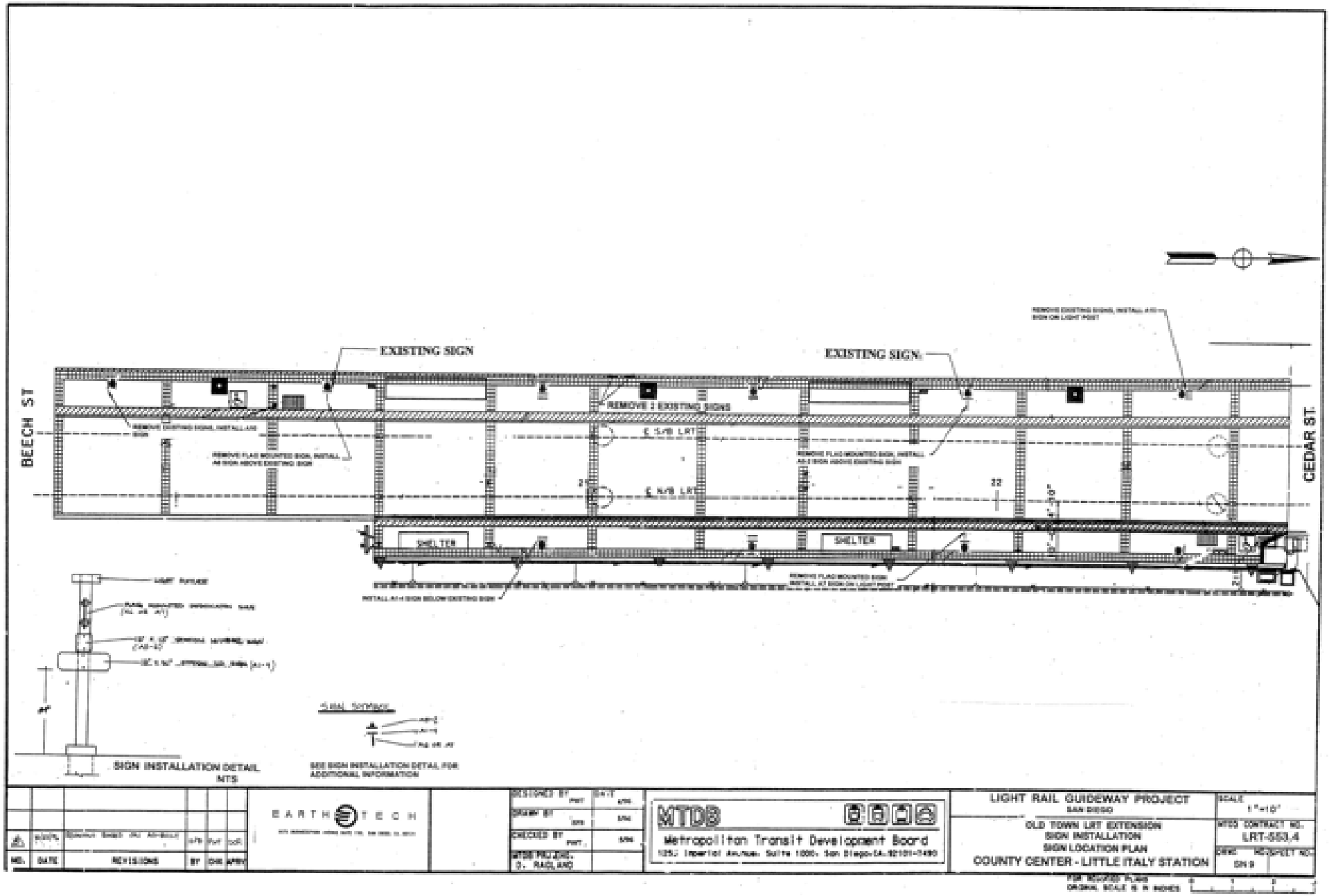
EARTH TECH

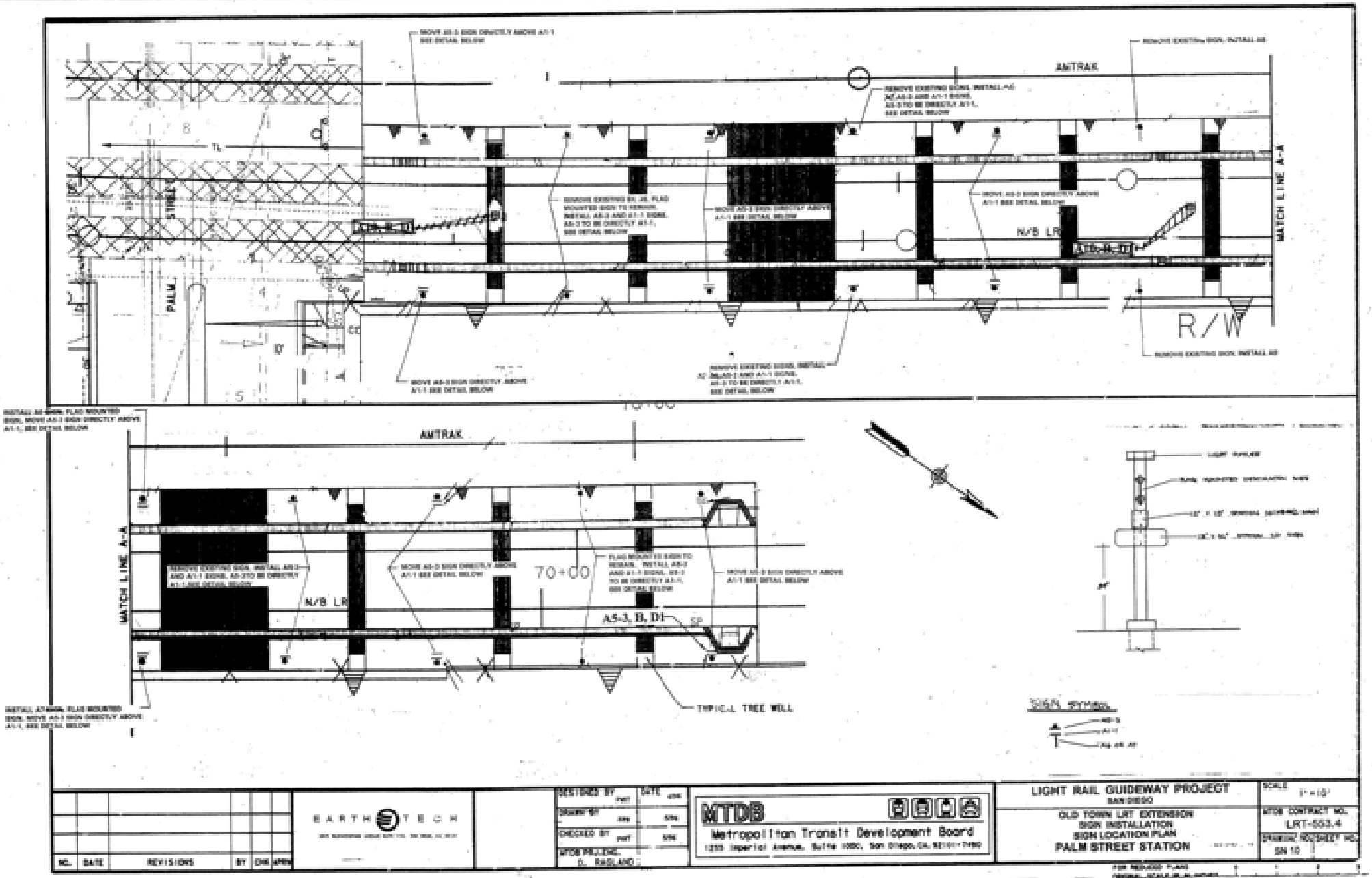
MTDB
Metropolitan Transit Development Board

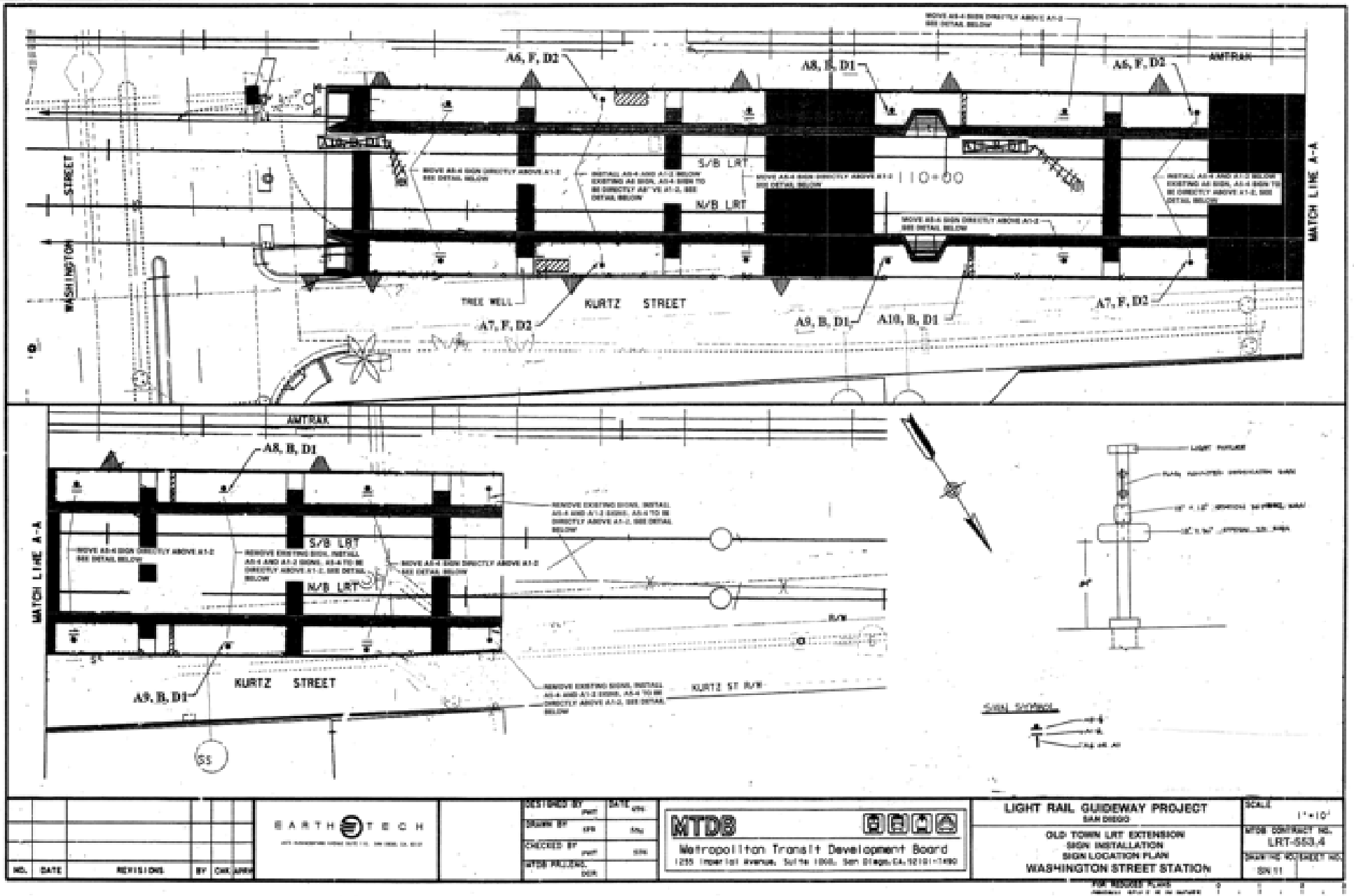
OLD TOWN LRT PROJECT
SAN DIEGO

OLD TOWN LRT EXTENSION
TRAIL BLAZER SIGN INSTALLATION
SPORTS ARENA BLVD, ROSECRANS ST.
OLD TOWN AVE. and MOORE ST.

SCALE: NOT TO SCALE
MTDB CONTRACT NO.: LRT-553.4
DRAWING NO.: 3A6


BEECH ST
CEDAR ST
EXISTING SIGN
EXISTING SIGN
REMOVE 2 EXISTING SIGNS
SHELTER
SHELTER
SIGN INSTALLATION DETAIL
NTS
SEE SIGN INSTALLATION DETAIL FOR ADDITIONAL INFORMATION
EARTH TECH
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
COUNTY CENTER - LITTLE ITALY STATION
LRT-553.4


AMTRAK
TL
PALM
STREET
N/B LR
MATCH LINE A-A
R/W
AMTRAK
MATCH LINE A-A
N/B LR
70+00
A5-3, D, D1
TYPICAL TREE WELL
SIGN SYMBOL
LIGHT RAILER
EARTH TECH
DESIGNED BY
DRAWN BY
CHECKED BY
MTDB PROJ. ENG.
D. RAILAND
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA, 92101-7490
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
PALM STREET STATION
SCALE
1" = 10'
MTDB CONTRACT NO.
LRT-553.4
DRAWING/SHEET NO.
SN 10
NO.
DATE
REVISIONS
BY
CHK
APPR



NO.	DATE	REVISIONS	BY	CHK	APPR

EARTH TECH

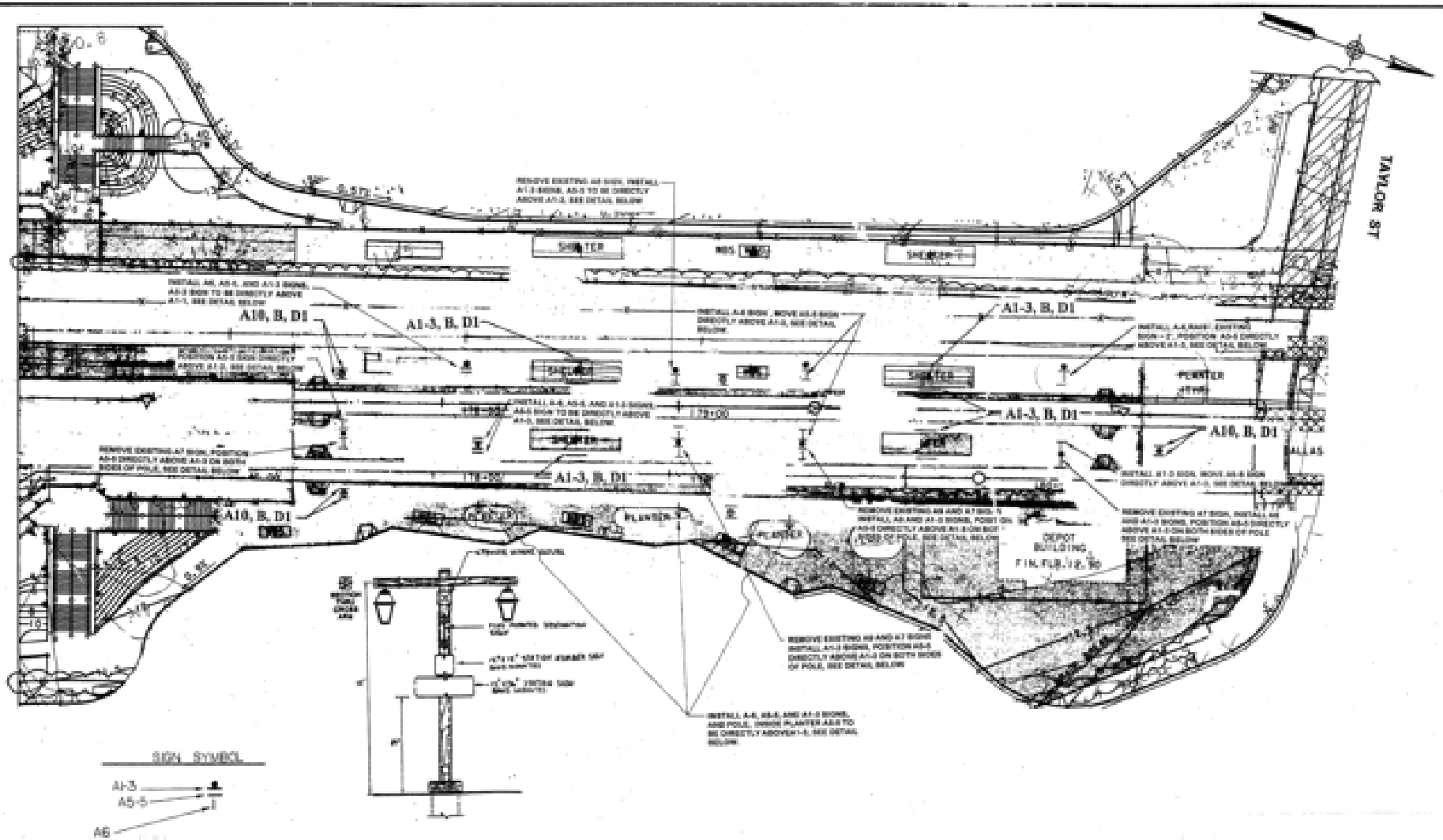
		DATE
DESIGNED BY		
DRAWN BY		
CHECKED BY		
MTDB PROJ.ENG.		

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-1490

LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO
OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
WASHINGTON STREET STATION

SCALE	
MTDB CONTRACT NO.	LRT-553.4
DRAWING NO.	SHEET NO.
SIN 11	

FOR REVISED PLANS



TYPICAL SIGN ARRANGEMENT ON LIGHT POST

NTS

NO.	DATE	REVISIONS	BY	CHK.	APPV

EARTH TECH

DESIGNED BY	PART	DATE
DRAWN BY		
CHECKED BY	PART	
MTDB FIELDING COORD.	D. RAILAND	

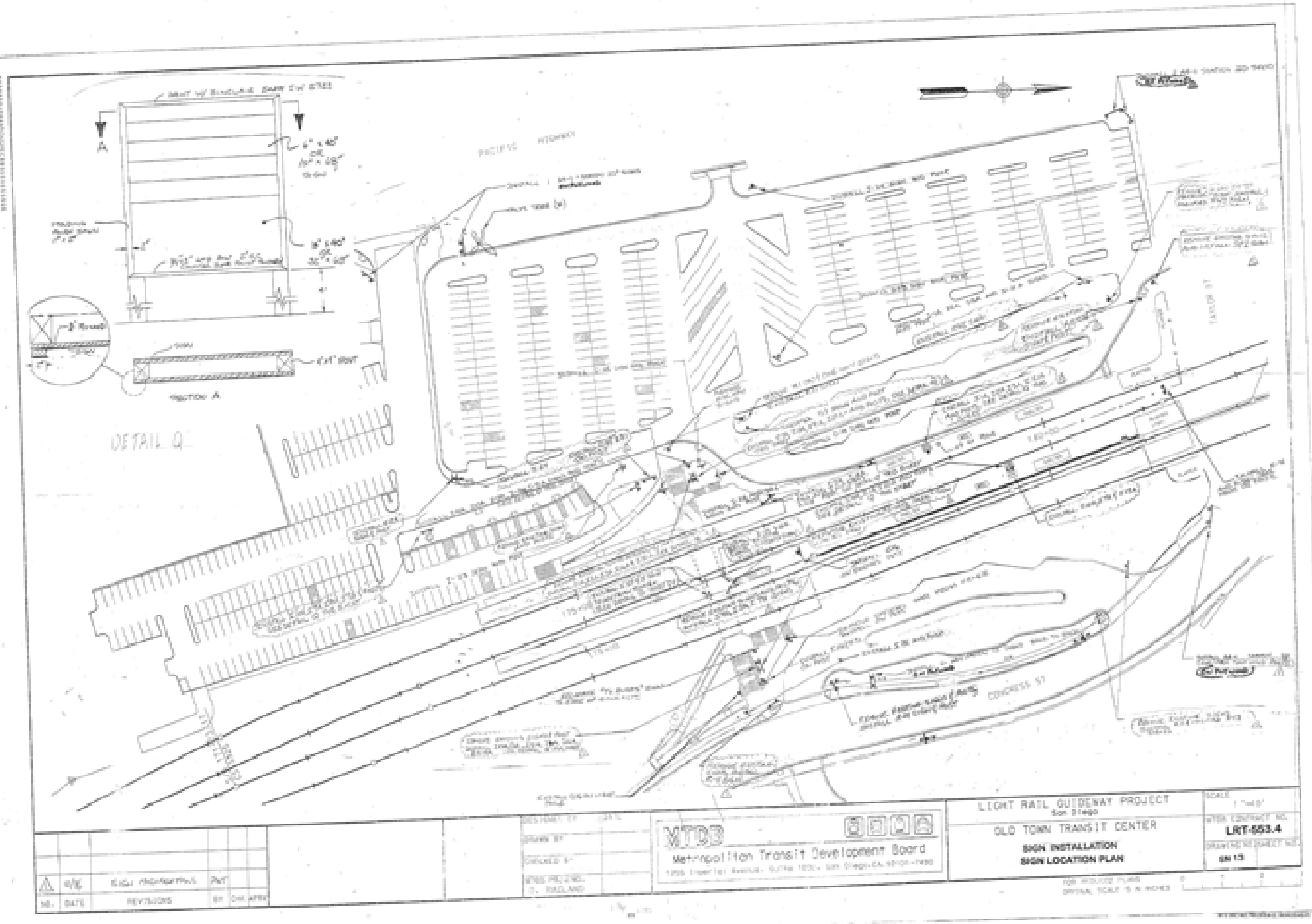
MTDB
Metropolitan Transit Development Board
(619) [illegible] Avenue, Suite 1000, San Diego, CA. 92101-7490

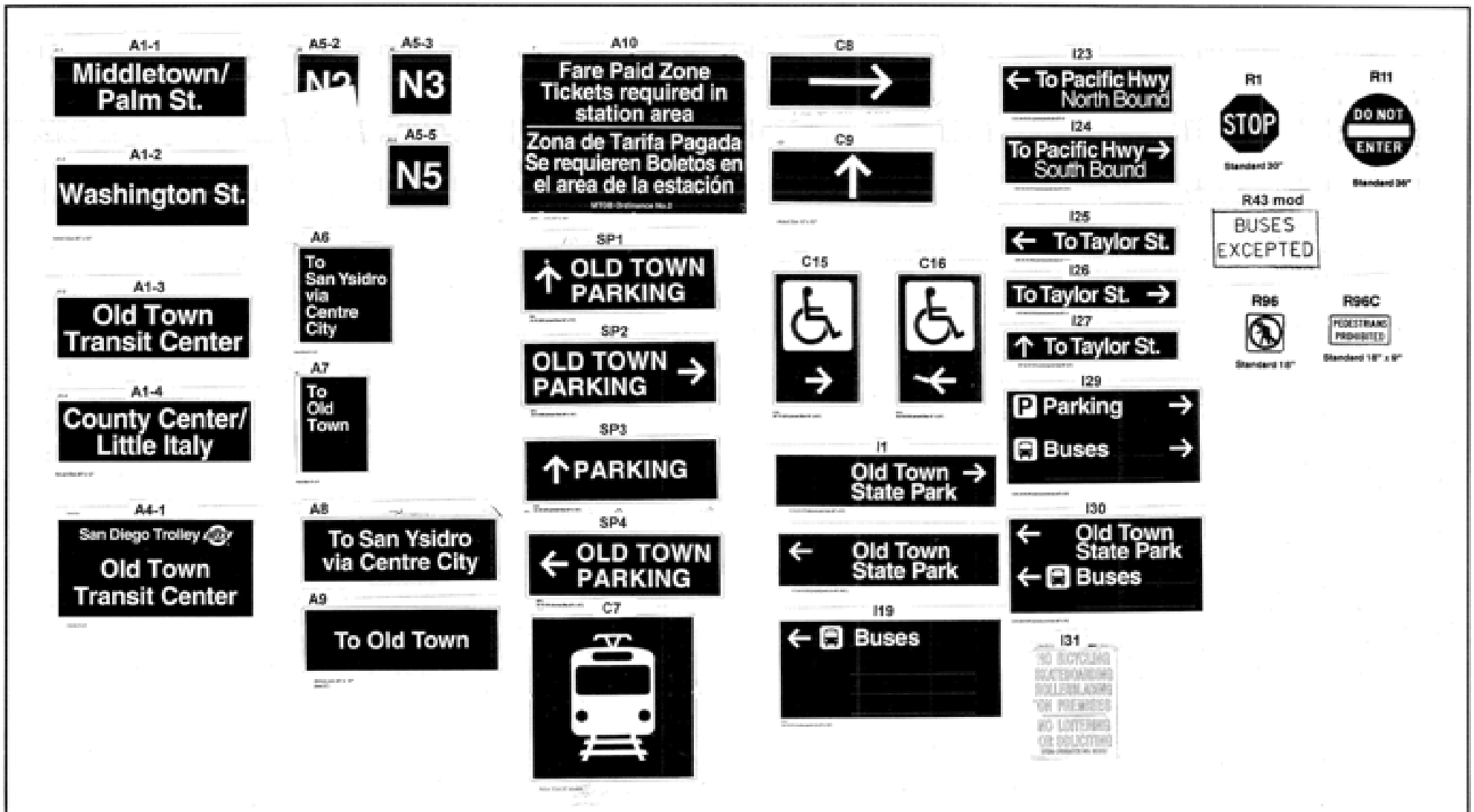
LIGHT RAIL GUIDEWAY PROJECT
SAN DIEGO

OLD TOWN LRT EXTENSION
SIGN INSTALLATION
SIGN LOCATION PLAN
OLD TOWN STATION PLATFORM

SCALE	1" = 20'
MTDB CONTRACT NO.	LRT-553.4
DRAWING NO.	SHEET NO. 5 of 12

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES


DETAIL Q
SECTION A
CONCESS ST
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
SIGN INSTALLATION
SIGN LOCATION PLAN
LRT-653.4
SN 13


A1-1
Middletown/ Palm St.
A1-2
Washington St.
A1-3
Old Town Transit Center
A1-4
County Center/ Little Italy
A4-1
San Diego Trolley
Old Town Transit Center
A5-2
N2
A5-3
N3
A5-5
N5
A6
To San Ysidro via Centre City
A7
To Old Town
A8
To San Ysidro via Centre City
A9
To Old Town
A10
Fare Paid Zone
Tickets required in station area
Zona de Tarifa Pagada
Se requieren Boletos en el area de la estación
SP1
OLD TOWN PARKING
SP2
OLD TOWN PARKING
SP3
PARKING
SP4
OLD TOWN PARKING
C7
C8
C9
C15
C16
I1
Old Town State Park
Old Town State Park
I19
Buses
I23
To Pacific Hwy North Bound
I24
To Pacific Hwy South Bound
I25
To Taylor St.
I26
To Taylor St.
I27
To Taylor St.
I29
Parking
Buses
I30
Old Town State Park
Buses
I31
NO BICYCLING
SKATEBOARDING
ROLLERBLADING
ON PREMISES
NO LOITERING
OR SOLICITING
R1
STOP
R11
DO NOT ENTER
R43 mod
BUSES EXCEPTED
R95
R95C
PEDESTRIANS PROHIBITED
EARTH TECH
MTDB
Metropolitan Transit Development Board
OLD TOWN LRT PROJECT
SAN DIEGO
TRAIL BLAZER AND STATION SIGN INSTALLATION
TYPICAL SIGNS SHEET 1 OF 2

I1A

I11A

I2A

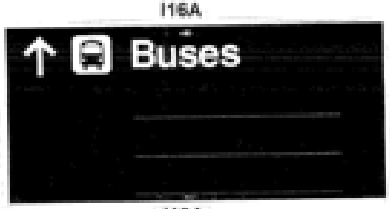
I12A

I3A

I13A

I4A

I16A



I7A

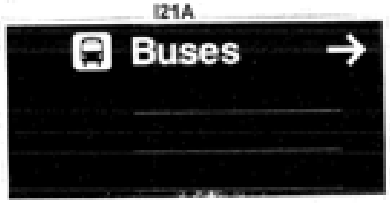
I8A

I19A

I9A

I10A

I21A



Sign	Size	Quantity	Title
A1-1	36"X12"	8	MIDDLE/PALM ST.
A1-2	36"X12"	8	WASHINGTON ST.
A1-3	36"X12"	13	OLD TOWN TRANSIT CENTER
A1-4	36"X12"	1	COUNTY CENTER/ LITTLE ITALY
A4-1	72"X36"	7	OLD TOWN TRANSIT CENTER
A5-2	12"X12"	1	N2
A5-3	12"X12"	8	N3
A5-4	12"X12"	8	N4
A5-5	12"X12"	7	N5
A6	24"X24"	15	SAN YSIDRO VIA CENTRE CITY
A7	18"X24"	5	TO OLD TOWN
A8	36"X12"	1	SAN YSIDRO VIA CENTRE CITY
A9	36"X12"	3	TO OLD TOWN
A10	42"X30"	17	FARE PAID ZONE
SP2	36"X12"	5	OLD TOWN PARKING (RIGHT ARROW)
SP3	36"X12"	6	OLD TOWN PARKING (LEFT ARROW)
SP4	36"X12"	1	PARKING (STRAIGHT ARROW)
C7	30"X30"	28	TRAIL BLAZER
C8	30"X10	10	HORIZONTAL ARROW
C9	30"X10"	6	STRAIGHT ARROW
C15	18"X24"	1	ACCESSIBLE PATH (RIGHT ARROW)
C16	18"X24"	3	ACCESSIBLE PATH (LEFT ARROW)
I1	48"X9.5	1	OLD TOWN STATE PARK (RIGHT ARROW)
I19	48"X18"	1	BUSES w/ ROUTE (LEFT ARROW) 3" ltr
I23	32"x6"	2	PACIFIC HWY (LEFT ARROW)
I24	32"x6"	1	PACIFIC HWY (RIGHT ARROW)
I25	32"x6"	2	TAYLOR ST (LEFT ARROW)
I26	32"x6"	2	TAYLOR ST (RIGHT ARROW)
I28	32"x6"	1	TAYLOR ST (STRAIGHT ARROW)
I29	36"x18"	1	PARKING/BUSES (RIGHT ARROW)
I30	36"x18"	1	OLD TOWN STATE PARK/BUSES(LEFT)
I31	18"X24"	2	NO BIKING, ROLLER BLADING
I1A	68"x16"	5	OLD TOWN STATE PARK (RIGHT ARROW) 5" lt
I2A	68"X10"	3	TROLLEYS (RIGHT ARROW) 5" lettering
I3A	68"X10"	4	COASTER (RIGHT ARROW) 5" Lettering
I4A	68"x10"	1	PARKING (RIGHT ARROW) 5" lettering
I7A	68"x16"	5	OLD TOWN STATE PARK (LEFT ARROW) 5" let
I8A	68"x10"	4	TROLLEYS (LEFT ARROW) 5" lettering
I9A	68"x10"	5	COASTER (LEFT ARROW) 5" lettering
I10A	68"x10"	3	PARKING (LEFT ARROW) 5" lettering
I11A	68"x16"	1	OLD TOWN STATE PARK (STRAIGHT ARROW)
I12A	68"x10"	2	TROLLEYS (STRAIGHT ARROW) 5" lettering
I13A	68"x10"	1	COASTER (STRAIGHT ARROW) 5" lettering
I16A	68"X32"	3	BUSES w/ ROUTE (STRAIGHT ARROW) 5" lette
I19A	68"x32"	3	BUSES w/ ROUTE (LEFT ARROW) 5" lettering
I21A	68"X32"	5	BUSES w/ ROUTE (RIGHT ARROW)5" Lettering
R1	30"	1	STOP SIGN
R11	36"X36"	8	DO NOT ENTER
R42	30"X36"	1	LEFT TURN ONLY
R43	24"X12"	2	BUSES EXEMPT
R96	18"	1	NO PEDESTRIAN
R96C	18"X9"	1	PEDESTRIAN PROHIBITED

NO. | DATE | REVISIONS | BY | CHK | APP'D

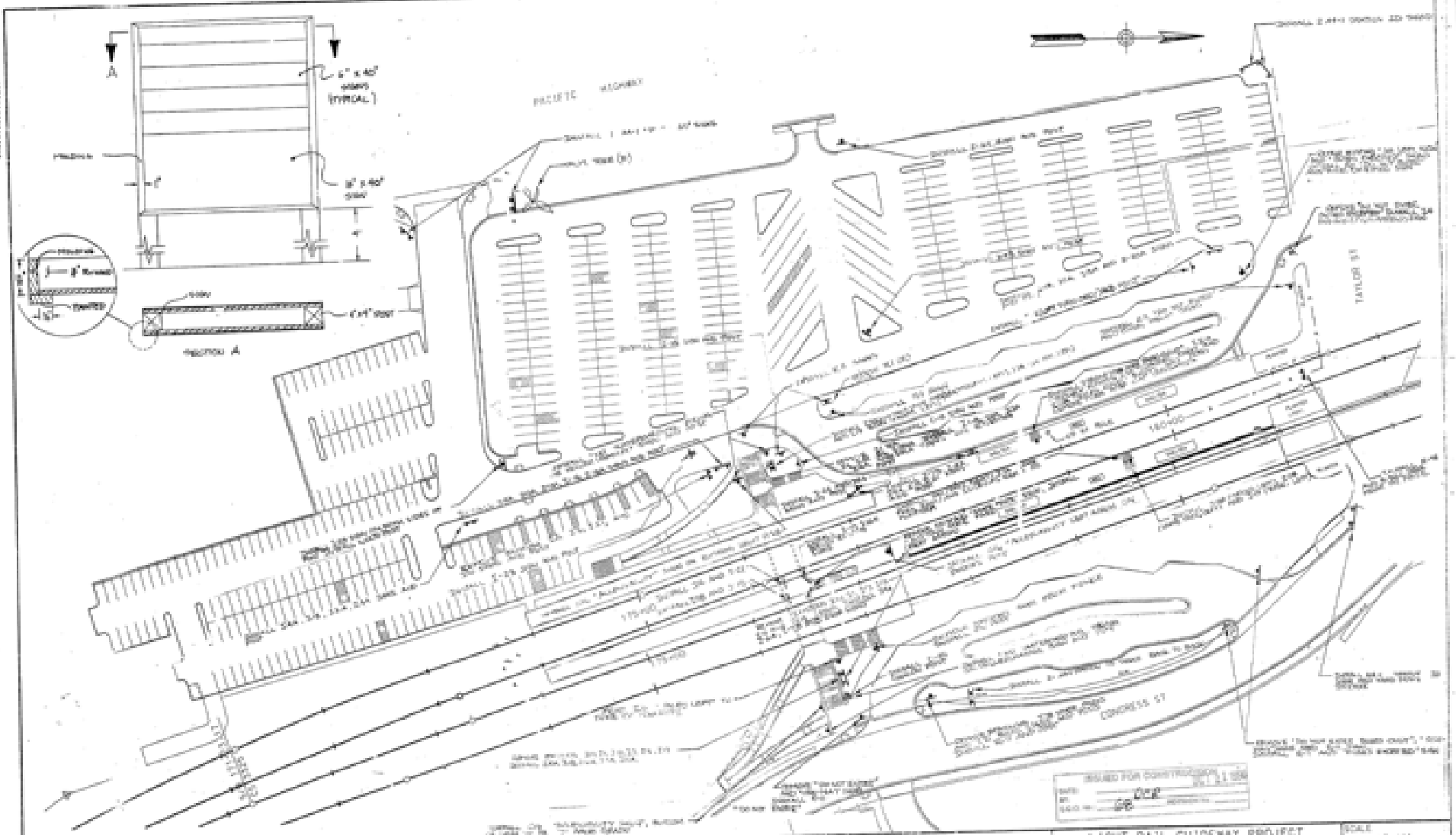
EARTH TECH

DESIGNED BY PMT DATE 12/06
DRAWN BY PMT DATE 12/06
CHECKED BY PMT DATE 12/06
MTDB PM/__ ENG/__ DATE

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

OLD TOWN LRT PROJECT
SAN DIEGO
TRAIL BLAZER AND STATION
SIGN INSTALLATION
TYPICAL SIGNS + QUANTITIES SHEET 2 OF 2

SCALE: AS NOTED
MTDB CONTRACT NO. LRT 553.4
DRAWING NO. D 5 | SHEET NO.


A
SECTION A
TAYLOR ST
CONGRESS ST
ISSUED FOR CONSTRUCTION
MTDB
Metropolitan Transit Development Board
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
SIGN INSTALLATION
SIGN LOCATION PLAN
NO. DATE REVISIONS BY CHK ATH

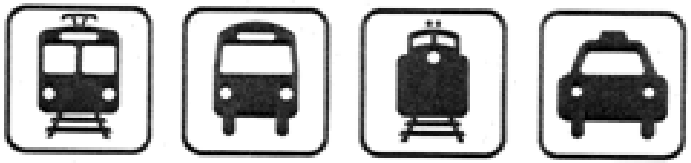
SAN DIEGO

METROPOLITAN TRANSIT DEVELOPMENT BOARD

CONFORMED DRAWINGS

OLD TOWN TRANSIT CENTER
TROLLEY & BUS SHELTER IMPROVEMENTS
CONTRACT LRT-553.5

AS BUILT
Conformed to LRT-553.5
Date 12-19-97

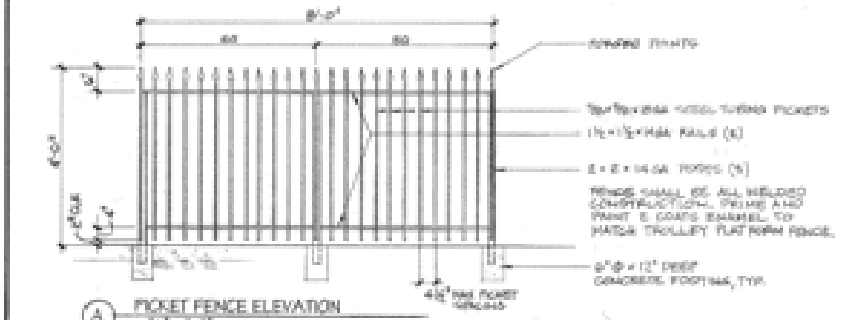


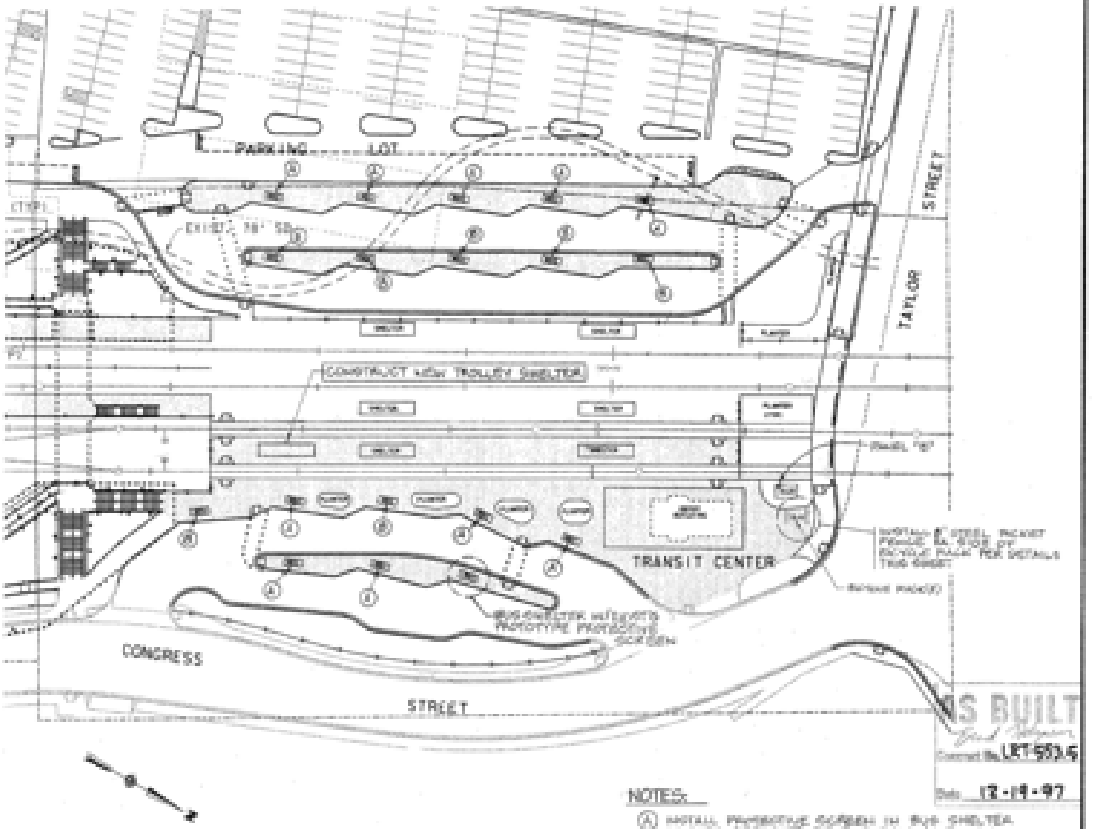
MTS

EARTH TECH

JUNE 12, 1997

OLD TOWN TROLLEY & BUS SHELTER IMPROVEMENTS
LRT - 553.5 CONFORMED 6/10/97





NOTES:

Ⓐ INSTALL PROTECTIVE SCREEN ON BUS SHELTER ON SIDE OPPOSITE OF BUS BAY. (TOTAL 10)

Ⓑ INSTALL MODIFIED PROTECTIVE SCREEN ON BUS SHELTER. (TOTAL 7)

AS BUILT

Contract No. LRT-553.6

Date 12-19-97

NO.	DATE	REVISIONS	BY	CHK	APPD
0	09-15-97	AS-BUILT	C.E.		
1	11-17-97	COUNTERSIGNED	ABC	JRM	

EARTH TECH

DESIGNED BY (CA)
DRAWN BY
CHECKED BY
MTDB PM/L ENG.

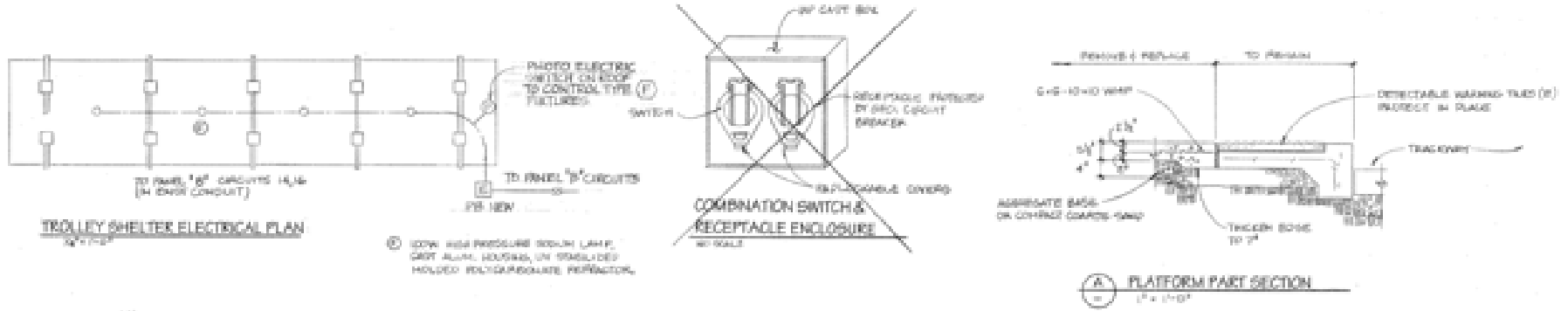
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
TROLLEY & BUS SHELTER SITE PLAN

SCALE: AS NOTED
MTDB CONTRACT NO. LRT-553.6
DRAWING NO. C-1
SHEET NO. 1

0 SHEET ISSUE FOR BID



NOTES:
1. ABRASIVE CONCRETE TO MEASURE JOINT MARK OF STAMPED "BOARDWALK" PATTERN AND EDGES OF DETECTABLE WARNING STRIP.
2. REMOVE DIRECTIONAL BAR MAT AND REINSTALL AFTER PLATFORM CONCRETE PAVING IS REPLACED

AS BUILT
Contract No. LRT-553.5
Date 12-19-97

NO.	DATE	REVISIONS	BY	CHK	APPV
1	12-19-97	AS - BUILT	C.E.		
0	5/9/97	ISSUE FOR BID			

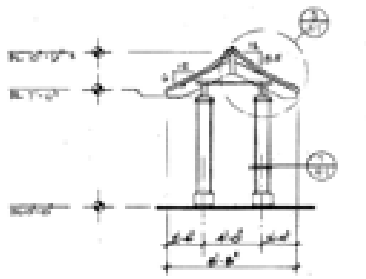
EARTH TECH

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-7490 (619) 231-1466

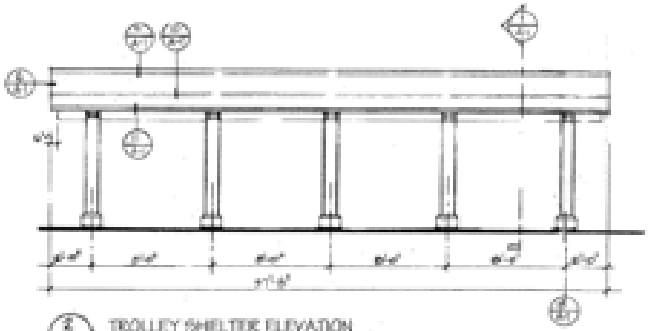
LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
TROLLEY SHELTER & PLATFORM PLAN

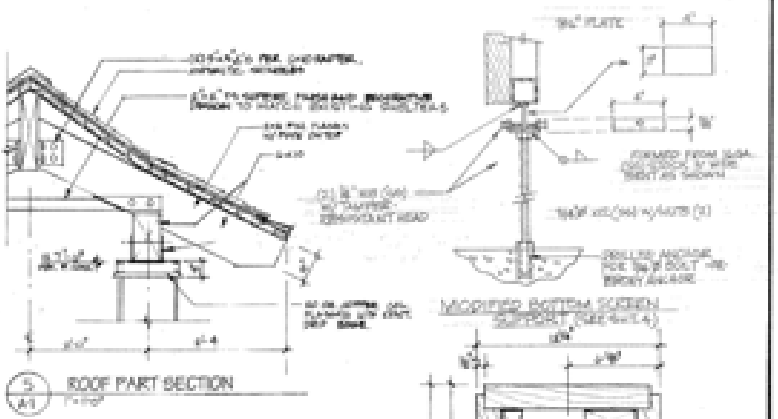
SCALE: AS NOTED
MTDB CONTRACT NO. LRT-553.5
DRAWING NO. C-2
SHEET NO. 2



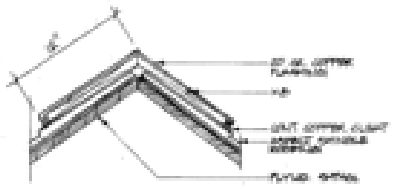
1 A-1 TROLLEY SHELTER SECTION



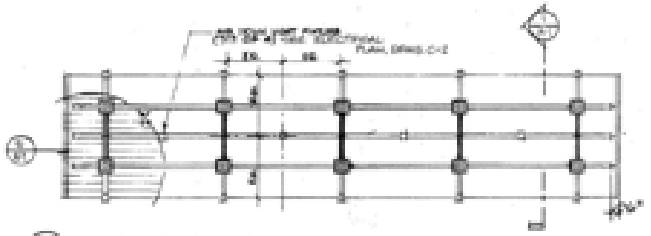
2 A-1 TROLLEY SHELTER ELEVATION



3 A-1 ROOF PART SECTION

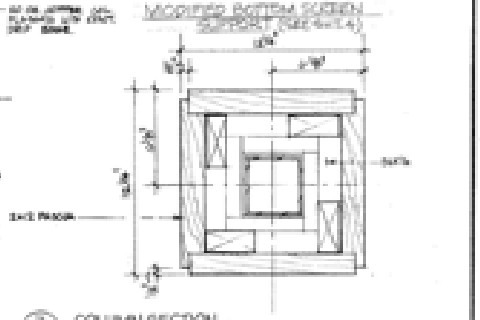


9 A-1 RIDGE FLASHING

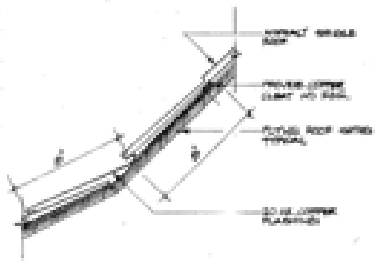


3 A-1 REFLECTED CEILING PLAN

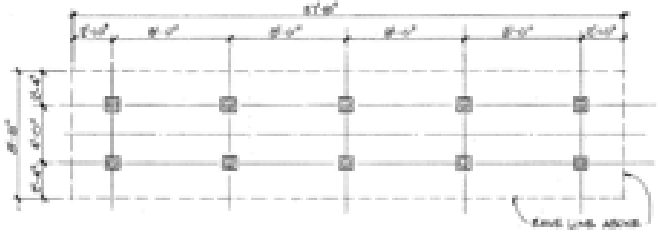
6 A-1 EDGE FLASHING



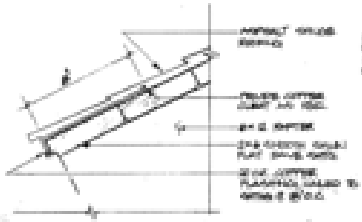
7 A-1 COLUMN SECTION



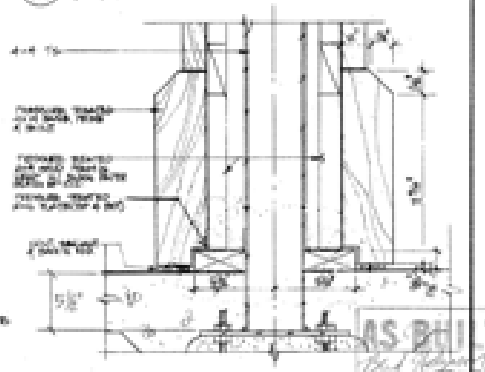
10 A-1 ROOF FLASHING



4 A-1 SHELTER FLOOR PLAN



11 A-1 EAVE FLASHING



8 A-1 COLUMN BASE

AS BUILT
Contract No. LRT-553.5
Date 12-19-97

NO.	DATE	REVISIONS	BY	CHK	APPD
1	12-19-97	AS-BUILT AND S. DETAIL	C.E.		
	4/4/97	CONFORMED	ARC	ARE	

EARTH TECH

DESIGNED BY JAG
DRAWN BY
CHECKED BY
MTDB PM/L ENGR.

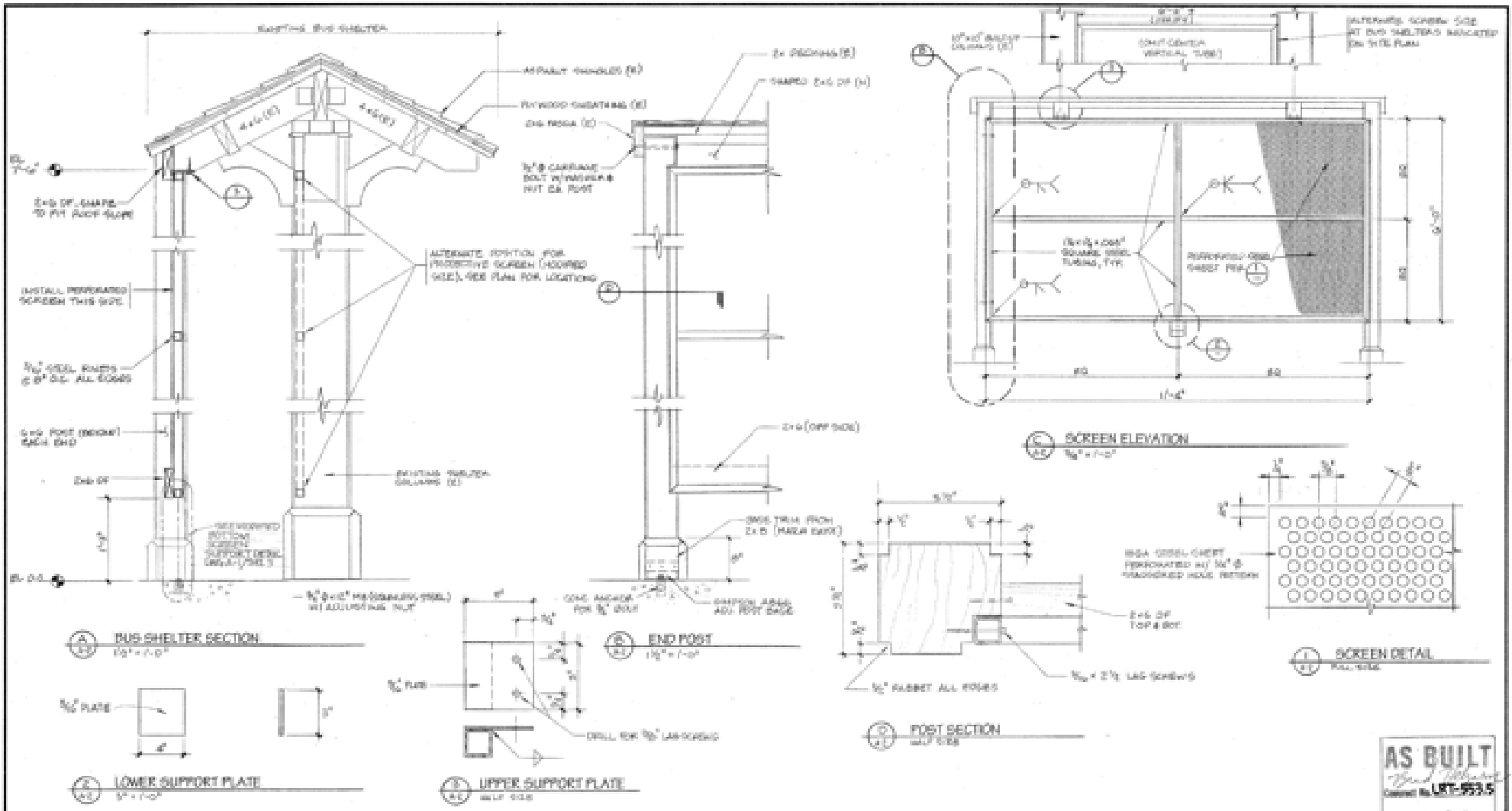
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

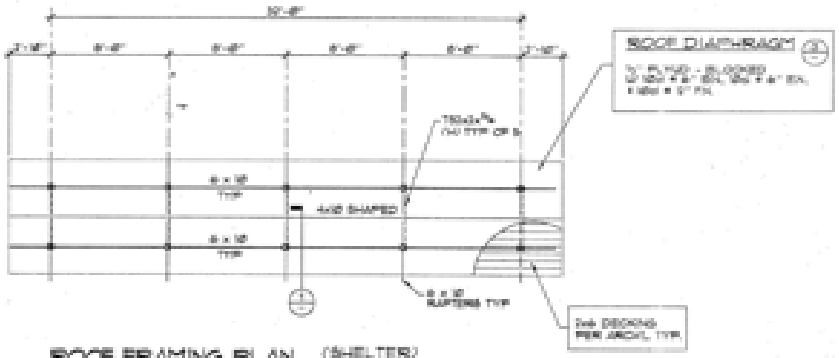
LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
TROLLEY SHELTER ARCHITECTURAL DETAILS

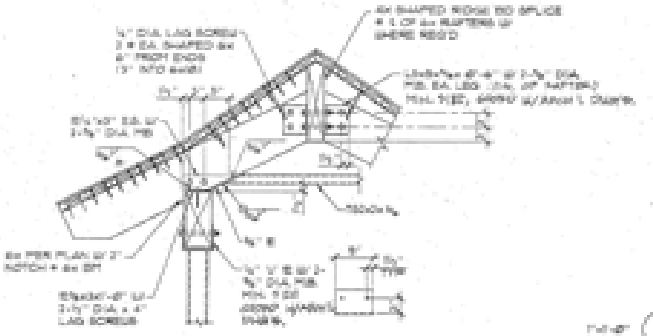
SCALE AS NOTED
MTDB CONTRACT NO. LRT-553.5
DRAWING NO. A-1
SHEET NO. 3

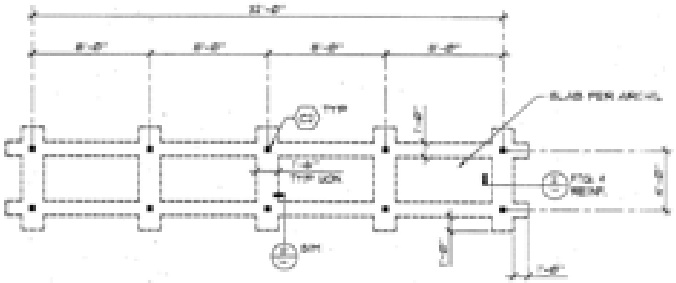
1 SHEET ISSUE FOR BID


BUS SHELTER SECTION
END POST
SCREEN ELEVATION
SCREEN DETAIL
POST SECTION
LOWER SUPPORT PLATE
UPPER SUPPORT PLATE
AS BUILT
Contract No. LRT-553.5
Date 12-19-97
EARTH TECH
MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA. 92101-7490 (619) 231-1466
LIGHT RAIL GUIDEWAY PROJECT
San Diego
OLD TOWN TRANSIT CENTER
BUS SHELTER PROTECTIVE SCREEN DETAILS
AS NOTED
LRT-553.5
A-2
4

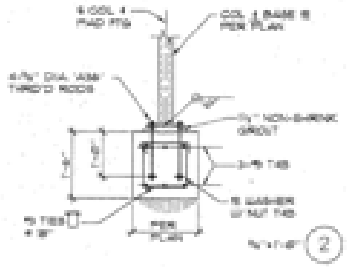


ROOF FRAMING PLAN (SHELTER)





FOUNDATION PLAN (SHELTER)



COLUMN SCHEDULE			
MARK	COLUMN SIZE	BASE @ (SEE M. ON DETAILS)	ANCHOR BOLTS
ⓒ	TS5½ x 3½ x ⅝	15¾ x 9 x Ø1'-0"	
ⓓ	TS4 x 4 x ¼	15½ x 10" x Ø1'-10"	4 - ¾" DIA.

AS BUILT
Based on Utility Info
Contract No. LRT-553.5
Date 12-19-97

NO.	DATE	REVISIONS	BY	CHK	APPV
1	12-19-97	AS-BUILT			
0	6-15-95	CONFORMED			

EARTH TECH

DESIGNED BY (CIVIL)
DRAWN BY
CHECKED BY
MTDB PROJ. ENG.
DATE PLOTTED

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

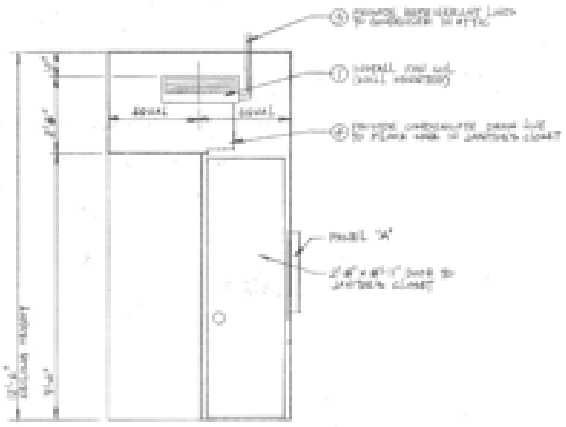
LIGHT RAIL GUIDEWAY PROJECT
San Diego

OLD TOWN TRANSIT CENTER
TROLLEY SHELTER STRUCTURAL DETAILS

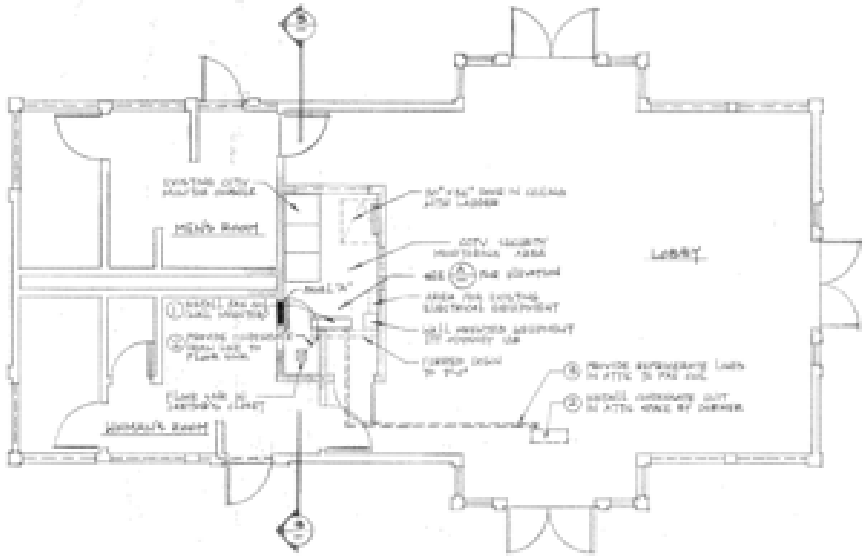
SCALE: AS NOTED
MTDB CONTRACT NO. LRT-553.5
DRAWING NO. S-1
SHEET NO. 6

LIST OF EQUIPMENT AND CONSTRUCTION NOTES

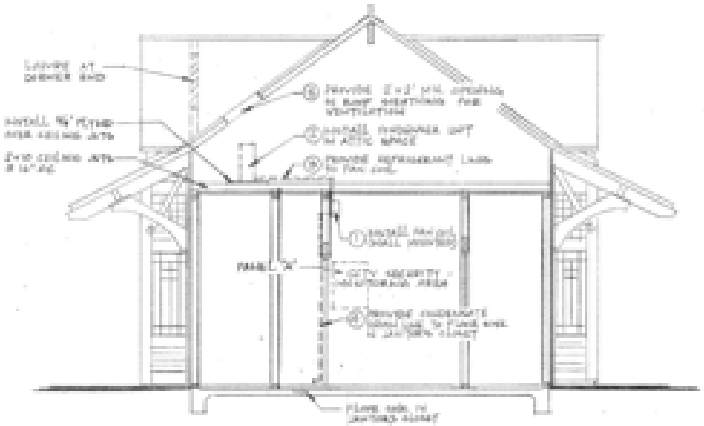
1. PROVIDE ONE (1) MAU UNIT. MAU UNIT SHALL BE CARRIER MODEL 48JJ004, 3/4 TON CAPACITY, 115 VOLT, SINGLE PHASE, 60 HZ WITH A MINIMUM OF 18.1 MBH. UNIT TO HAVE 0" CLEARANCE ON TOP, RIGHT AND LEFT SIDES AND LOCATED WITHIN THE CCTV SECURITY MONITORING AREA AS SHOWN ON PLAN.
2. PROVIDE ONE (1) CONDENSER UNIT. CONDENSER SHALL BE CARRIER MODEL 38AUQ004, 3/4 TON CAPACITY, 115 VOLT, SINGLE PHASE, 60 HZ WITH A MINIMUM OF 18.1 MBH. UNIT TO HAVE 6" MINIMUM CLEARANCE ON CUL SIDE, 24" ON END SIDE, 36" ON SERVICE SIDE AND MOUNTED ON 3" HIGH PLATFORM. CONDENSER TO BE EQUIPPED WITH A 3/4" THICK NEOPRENE PAD.
3. PROVIDE AIR TYPE COPPER TUBING REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS.
4. PROVIDE COPPER TUBING CONDENSATE DRAIN LINE PER MANUFACTURER'S RECOMMENDATIONS.
5. PROVIDE 2'-0"x2' LOUVERED OPENING IN BASE MORTARS AS SHOWN ON PLANS. OPENING TO BE LOCATED BETWEEN EXISTING BASE MORTARS.



WEST WALL ELEVATION
CCTV SECURITY MONITORING AREA



OLD TOWN DEPOT FLOOR PLAN



BUILDING SECTION (WEST/EAST)

EARTH TECH

DESIGNED BY	DATE
FELIP	04-17
DRAWN BY	
FELIP	04-17
CHECKED BY	
KMAG	04-17
MTDB PROJ. ENGR.	
D. BARRANCO	04-17

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 (619) 231-1466

OLD TOWN TRANSIT CENTER
SECURITY MONITORING ROOM
AIR CONDITIONING INSTALLATION

SCALE	
AS NOTED	
MTDB CONTRACT NO.	
187-658.6	
DRAWING NO.	SHEET NO.
M1	1

NO.	DATE	REVISIONS	BY	CHK	APPV

ATTACHMENT B
NEGOTIATED FEE PROPOSAL

Work Order Estimate Summary

MTS Doc. No.
Work Order No. WOAXXX-AE-75
Attachment: B

Work Order Title: Old Town Transit Center Wayfinding Signage Design Services

Project No:

Table 1 - Cost Codes Summary (Costs & Hours)

Item	Cost Codes	Cost Codes Description	Total Costs
1			
2			
		Totals =	

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

Item	TASKS/WBS	TASKS/WBS Description	Labor Hrs	Total Costs
1		Project Management and Coordination	168.0	36,926.8
2		Outside Agency Coordination and Approvals	70.0	15,364.2
3		Survey and Goetechnical Engineering During Design	339.0	58,032.1
4		Design, Specifications, and Estimate	1,348.0	276,438.9
5		Construction Procurement Bid Support	166.0	35,744.6
6		Design Support During Construction (DSDC)		
		Totals =	**2,091.0**	**$422,506.60**

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

(If Applicable, Select One)				Consultant	Labor Hrs	Total Costs
DBE	DVBE	SBE	Other			
				Psomas	940.0	$176,991.65
				Anil Verma Associates	1,151.0	$245,514.94
				Totals =	**2,091.0**	**$422,506.60**

Work Order Estimate Summary

Consultant/Subconsultant: **Psomas**

Total Hours = **940**

Total Costs = **$176,991.65**

Work Order Title: **Old Town Transit Center Wayfinding Signage Design Services**

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Admin - 3	CADD - Senior	Contract Manager	Engineer - 2	Engineer - Senior	Engineer - Principal	Engineer - 3	Field Technician - 2	Field Technician - 3	Field Technician - Senior	Project Manager	Surveyor 2	Surveyor -3	Surveyor - Senior	Task Manager	Technical Expert	Technical Expert (Survey)	Total Hours	Totals
				$ 116.92	$ 145.75	$ 196.68	$ 167.32	$ 261.95	$ 274.38	$ 218.08	$ 90.06	$ 143.45	$ 171.88	$ 241.82	$ 117.95	$ 150.20	$ 203.06	$ 243.18	$ 312.38	$ 305.13		
1	**Task 1**	**Project Management and Coordination**																				
	1.1 Project Management and Coordination				30				12	4									1		47	$10,377.70
	1.2 Meetings including agendas, minutes, materials			20	20				10												50	$9,592.38
	1.3 Schedule				12				2												14	$2,908.93
	1.4 Status reports				12				2												14	$2,908.93
	1.5 QA/QC						20														20	$5,238.96
		Subtotals (Hours) =	N/A	20	74		20	26	4										1		145	$31,026.90
		Subtotals (Costs) =		$2,914.97	$14,554.40		$5,238.96	$7,133.84	$872.34										$312.38		**145**	**$31,026.90**
2	**Task 2**	**Outside Agency Coordination and Approvals**																				
	2.1 Stakeholder		$793.75	11	13		4	4													32	$7,099.15
	2.2 Coordination			7	7		3	4													21	$4,280.37
	2.3 As builts			4	2																6	$976.36
	2.4 Site visit with MTS		$21.75	4	4			3													11	$2,214.60
		Subtotals (Hours) =	N/A	26	26		7	11													70	$14,570.47
		Subtotals (Costs) =	$815.50	$3,789.47	$5,113.71		$1,833.64	$3,018.16													**70**	**$14,570.47**
3	**Task 3**	**Survey and Goetechnical Engineering During Design**																				
	3.1A Design Survey											40	40	6	40	105	8	16	4	2	261	$41,928.28
	3.1B Data Collection and review		$21.75	16	10																26	$4,320.54
		Subtotals (Hours) =	N/A	16	10							40	40	6	40	105	8	16	4	2	287	$46,248.82
		Subtotals (Costs) =	$21.75	$2,331.98	$1,966.81							$5,738.04	$6,875.30	$1,450.90	$4,717.94	$15,770.92	$1,624.45	$3,890.94	$1,249.53	$610.26	**287**	**$46,248.82**
4	**Task 4**	**Design, Specifications, and Estimate**																				
	4.1 Drawings				40				10												50	$10,611.03
	4.1.1 Demolition Plans			30																	30	$4,372.46
	4.1.2 Improvement Plans																					
	4.1.2 a Improvements Plans - Pavement			30																	30	$4,372.46
	4.1.2 b Improvement Plans - Landscaping																					
	4.1.2 c Improvement Plans - Irrigation																					
	4.1.3 Wayfinding Signage Plans																					
	4.1.3 a Wayfinding Signage Plans - Sign Layouts, Types and																					
	4.1.3 b Wayfinding Signage Plans - Structural									130									14		144	$32,724.40
	4.1.4 Erosion and Sedimentation Control Plans			30																	30	$4,372.46
	4.1.5 Electrical Plans																					
	4.2 60,90, 100% submittals			20	30		8	10													68	$13,654.78
	4.3 Technical Specifications			30	12			2													44	$7,281.39
	4.4 Construction cost estimate and bid form				6																6	$1,180.09
		Subtotals (Hours) =	N/A	140	88		8	22	130										14		402	$78,569.06
		Subtotals (Costs) =		$20,404.82	$17,307.93		$2,095.59	$6,036.33	$28,351.03										$4,373.37		**402**	**$78,569.06**
5	**Task 5**	**Construction Procurement Bid Support**																				
	5.1 Bid RFIs			16	16				4												36	$6,576.39
	5.2 Front end division 1 specs																					
		Subtotals (Hours) =	N/A	16	16				4												36	$6,576.39
		Subtotals (Costs) =		$2,331.98	$3,146.90				$1,097.51												**36**	**$6,576.39**
6	**Task 6**	**Design Support During Construction (DSDC)**																				
	6.1 Construction Meetings																					
	6.2 Submittal/Shop Drawing review																					
	6.3 RFIs																					
	6.4 Site visits																					
		Subtotals (Hours) =	N/A																			
		Subtotals (Costs) =																				
	Totals (Summary) =													**Totals =**							**940**	**$176,991.65**
	Total (Hours) =		N/A	218	214		35	63	134			40	40	6	40	105	8	16	19	2	940	
	Total (Costs) =		$837.25	$31,773.22	$42,089.74		$9,168.19	$17,285.85	$29,223.37			$5,738.04	$6,875.30	$1,450.90	$4,717.94	$15,770.92	$1,624.45	$3,890.94	$5,935.29	$610.26		$176,991.65
	Percentage of Total (Hours) =		N/A	23%	23%		4%	7%	14%			4%	0.04255319	0.00638298	0.04255319	0.11170213	0.00851064	0.017021277	0.020212766	0.00212766	100%	
	Percentage of Total (Costs) =		0%	18%	24%		5%	10%	17%			3%	0.03884532	0.00819759	0.02665631	0.08910542	0.00917813	0.021983735	0.033534295	0.00344794		82%

Work Order Estimate
Summary

Consultant/Subconsultant: Psomas/Anil Verma Associates, Inc.

Total Hours = 1,151

Total Costs = $245,514.94

Work Order Title: Old Town Transit Center Wayfinding Signage Design Services

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Architect-Principal	Architect - Senior	Architect-3 QA/QC	Architect-3 (Designer)	Planner-2 (Arch. CADD)	Engineer-Senior	Planner-2 (Electric)	Architect - Senior (Landscape)	Planner-2 (Landscape)		Total Hours	Totals
				$ 514.98	$ 244.77	$ 200.72	$ 200.72	$ 167.59	$ 285.65	$ 167.59	$ 244.77	$ 167.59	$ -		
1	Task 1	Project Management and Coordination													
	1.1 Project Management and Coordination			1	18									19	$4,920.79
	1.2 Meetings including agendas, minutes, materials														
	1.3 Schedule														
	1.4 Status reports				4									4	$979.07
	1.5 QA/QC														
		Subtotals (Hours) =	N/A	1	22									23	$5,899.86
		Subtotals (Costs) =		$514.98	$5,384.88									**23**	**$5,899.86**
2	Task 2	Outside Agency Coordination and Approvals													
	2.1 Stakeholder														
	2.2 Coordination														
	2.3 As builts														
	2.4 Site visit with MTS		$793.75												
		Subtotals (Hours) =	N/A												
		Subtotals (Costs) =	$793.75												**$793.75**
3	Task 3	Survey and Goetechnical Engineering During Design													
	3.1A Design Survey														
	3.1B Data Collection and review		$862.50		8		20			12	12			52	$11,783.24
		Subtotals (Hours) =	N/A		8		20			12	12			52	$11,783.24
		Subtotals (Costs) =	$862.50		$1,958.14		$4,014.35			$2,011.05	$2,937.21			**52**	**$11,783.24**
4	Task 4	Design, Specifications, and Estimate													
	4.1 Drawings		$862.50												$862.50
	4.1.1 Demolition Plans														
	4.1.2 Improvement Plans														
	4.1.2 a Improvements Plans - Pavement														
	4.1.2 b Improvement Plans - Landscaping				4						20	40		64	$12,577.90
	4.1.2 c Improvement Plans - Irrigation				4						60	12		76	$17,676.14
	4.1.3 Wayfinding Signage Plans														
	4.1.3 a Wayfinding Signage Plans - Sign Layouts, Types and Finishes			2	12	80	248	120						462	$89,913.00
	4.1.3 b Wayfinding Signage Plans - Structural														
	4.1.4 Erosion and Sedimentation Control Plans														
	4.1.5 Electrical Plans				12				20	40				72	$15,353.69
	4.2 60,90, 100% submittals				24	30	24		9	9	12	12		132	$28,832.01
	4.3 Technical Specifications				6	48			20		12			86	$19,753.24
	4.4 Construction cost estimate and bid form				4		6			6	6			54	$12,901.40
		Subtotals (Hours) =	N/A	2	66	158	278	120	49	55	110	64		946	$197,869.88
		Subtotals (Costs) =	$862.50	$1,029.97	$16,154.63	$31,713.37	$55,799.48	$20,110.46	$13,996.83	$9,217.30	$26,924.39	$10,725.58		**946**	**$197,869.88**
5	Task 5	Construction Procurement Bid Support													
	5,1 Bid RFIs		$1,700.00		8	24	16		2	16	16			82	$18,855.81
	5,2 Front end division 1 specs														
					4	4	8	16	8		8			48	$10,312.41
		Subtotals (Hours) =	N/A		12	28	24	16	10	16	24			130	$29,168.22
		Subtotals (Costs) =	$1,700.00		$2,937.21	$5,620.09	$4,817.22	$2,681.40	$2,856.50	$2,681.40	$5,874.41			**130**	**$29,168.22**
6	Task 6	Design Support During Construction (DSDC)													
	6,1 Construction Meetings														
	6,2 Submittal/Shop Drawing review														
	6,3 RFIs														
	6.4 Site visits														
		Subtotals (Hours) =	N/A												
		Subtotals (Costs) =													
	Totals (Summary) =													**1,151**	**$245,514.94**
	Total (Hours) =		N/A	3	108	186	322	136	59	83	146	64		1151	
	Total (Costs) =		$4,218.75	$1,544.95	$26,434.85	$37,333.46	$64,631.05	$22,791.86	$16,853.33	$13,909.74	$35,736.00	$10,725.58			$244,721.19
	Percentage of Total (Hours) =		N/A	0%	9%	16%		12%	5%	7%	13%	6%		72%	
	Percentage of Total (Costs) =		2%	1%	11%	15%		9%	7%	6%	15%	4%			74%

Work Order Estimate Summary

Consultant/ Subconsultant: **Psomas**

Work Order Title: **Old Town Transit Center Wayfinding Signage Design Services**

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	Miles	$0.725			30	$21.75	30	$21.75				
2													
3													
4													
5													
6													
7													
8													
9													
10													
				Subtotal =		Subtotal =	**$21.75**	Subtotal =	**$21.75**	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											**60**	**$43.50**
2													
3													
4													
5													
6													
7													
8													
9													
10													
		Subtotal =		Subtotal =		Subtotal =		Subtotal =		Subtotal =		**Totals =**	**$43.50**

Work Order Estimate Summary

Consultant/ Subconsultant: **Psomas/Anil Verma Associates, Inc.**

Work Order Title: **Old Town Transit Center Wayfinding Signage Design Services**

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	Miles	$0.725			750	$543.75	500	$362.50	500	$362.50	2,000	$1,450.00
2	Reproductions	Allow	$50.00					10	$500.00	10	$500.00		
3	Deliveries	Allow	$50.00			5	$250.00					5	$250.00
4													
5													
6													
7													
8													
9													
10													
				Subtotal =		Subtotal =	**$793.75**	Subtotal =	**$862.50**	Subtotal =	**$862.50**	Subtotal =	**$1,700.00**

TASKS/WBS (6-10)

ODC Item	Description	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Totals Quantity	Totals Total
1	Travel / Mileage											**3,750**	**$2,718.75**
2	Reproductions											**20**	**$1,000.00**
3	Deliveries											**10**	**$500.00**
4													
5													
6													
7													
8													
9													
10													
		Subtotal =		Subtotal =		Subtotal =		Subtotal =		Subtotal =		**Totals =**	**$4,218.75**

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 4/9/26

Agenda Item No. 14

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

April 16, 2026

SUBJECT:

Purchase of Solar-Powered Waste Compactors – 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. L1711.0-26 (in substantially the same format as Attachment A) with Big Belly Solar, LLC for the purchase of eighty-four (84) solar-powered waste compactors in the amount of $496,274.71 (inclusive of shipping and taxes).

Budget Impact

The project will be funded by the FY 26 Capital Improvement Program (CIP) WBSE# 1009128601 - Transit Amenity Improvement. Total contract cost is estimated to be $496,274.71 (inclusive of shipping and taxes) (Attachment C).

DISCUSSION:

MTS Listening Tour –Project Priorities Identified

In the summer of 2022, MTS conducted a listening tour to identify the needs and priorities of hard-to-reach residents within the MTS service area. Key priorities for capital improvements included cleanliness, security, shade structures, Wi-Fi, outlets, restrooms, lighting, and transit stop beautification.

On May 11, 2023 (AI 17), the Board approved $3 million in CIP funding to address priorities identified through the listening tour, including $250,000 for upgraded trash receptacles at downtown Trolley Stations. Subsequent CIP and operating budget priorities for customer-facing projects have been guided by the listening tour results.

Representative projects include features such as better lighting, cleanliness, beautification and more.[1]

[1] More information on these initiatives can be found on MTS's website at https://www.sdmts.com/rider-info/now-better-transit and https://www.sdmts.com/cleaner.

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for nine cities.

Solar Waste Compactor Trash and Recycling Containers – Invitations for Bid (IFB)

Fiscal Year 2025 Invitation for Bids and Contract Award

On January 18, 2024 (AI 9), the Board approved MTS Doc. No. L1653.03-24 with Big Belly Solar, LLC for the purchase of up to 174 solar-powered waste compactors consisting of a mix of smaller and larger units, in the amount of $778,980.96. The contract included a base of 78 units in the amount of $300,097.18, with an option for 96 additional units. The optional units were subsequently funded through a Clean California Local Grant Program administered by Caltrans in the amount of $478,000. The program facilitated the procurement and installation of waste and recycling receptacles by MTS spanning from E Street to the San Ysidro Transit Center. The overall contract resulted in the procurement of 174 receptacles (78 base units and 96 optional units).

Big Belly Smart Max: Waste Compactors Located at E Street Transit Center

Fiscal Year 2026 Invitation for Bids & Today's Proposed Action

Building on the results of the listening tour and the success of the previously installed receptacles, today's proposed action would authorize the purchase of 84 solar-powered waste compactors. These units will be deployed in 42 paired sets for trash and recycling, feature 150-gallon capacity, and include smart technology to enable remote monitoring of fill levels and equipment status through an integrated management system.

Big Belly Original Product Graphic: Smart Max

MTS Policy No. 52, “Procurement of Goods and Services”, requires a formal competitive process for procurements and service contracts over $150,000.00. On January 9, 2026, MTS IFB to purchase solar-powered waste compactors.

In response to the IFB, a total of two (2) bids were received by the deadline of February 9, 2026, and are summarized as follows:

Bidder Name	Total Bid Amount	Certification
Business Bay*	$362,414.00	N/A
Big Belly Solar, LLC**	$620,421.42	N/A
MTS Independent Cost Estimate (ICE)	$492,802.40	N/A

**Non-Responsive Bidder*
***Lowest responsive and responsible Bidder*

During the review of Business Bay’s submission, staff discovered that that the bidder failed to submit the required bid form. Per the IFB, staff deemed Business Bay’s submission non-responsive due to the missing MTS Bid Form.

The solicitation included a request for 106 total units, based on the MTS ICE estimate of $492,802.40, which calculated a unit price of $4,649.08. Big Belly Solar, LLC submitted a bid proposing a unit price of $5,325.32 (excluding sales tax). Given a total funding limit of $500,000 for this project, staff recommended reducing the quantities. As noted in the IFB solicitation, the requested quantities do not represent guaranteed usage and could end up being higher or lower. With only a single bidder, negotiations with the bidder are permissible.

On March 18, 2026, MTS asked Big Belly Solar, LLC to reduce the total unit quantities to align with the project’s available funding, including shipping costs and taxes. On March 20, 2026, Big Belly Solar, LLC returned a revised Bid Form that reduced the total quantity from 106 units to 84

units, with the same unit pricing per compactor. As a result, the total cost dropped from $620,421.42 to $496,274.71.

MTS also conducted an additional cost and price analysis by reaching out to a government agency and reviewing their most recent purchase history. Based on the analysis, MTS concluded that the pricing was still fair and reasonable.

Therefore, staff recommend that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. L1711.0-26 (in substantially the same format as Attachment A) with Big Belly Solar LLC, for the purchase of 84 solar-powered waste compactors in the amount of $496,274.71 (inclusive of shipping and taxes).

/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. L1711.0-26
B. Scope of Work
C. Bid Form

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. L1711.0-26

PURCHASE OF SOLAR-POWERED WASTE COMPACTORS

THIS AGREEMENT is entered into this 1st day of May, 2026 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: Big Belly Solar dba Big Belly

Address: 150 A Street, Suite 103

Needham MA 02494
City State Zip

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

Email: bphillips@bigbelly.com

Telephone: (617) 431-4435

Authorized person to sign contracts Brian Phillips (Name) CRO, President (Title)

The Contractor agrees to provide 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), and Forms (Exhibit D).

The contract term is for up to (3) months effective May 1, 2026 through July 31, 2026.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $496,274.71 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	BIG BELLY SOLAR, LLC
By: _____ Sharon Cooney, Chief Executive Officer Approved as to form: By: _____ Karen Landers, General Counsel	By _____ Title: _____

4. SCOPE OF WORK/TECHNICAL SPECIFICATIONS

1. OVERVIEW

MTS is seeking a Contractor for the provision of 53 Smart Solar-Powered Waste Compactor and 53 Smart Solar- Power Recycling Waste Compactor Units (total of 106). These Smart Solar units must be equipped units and designed to compact trash at the point of disposal, reduce collection frequency, and provide remote monitoring of fill levels and equipment status through an integrated management system.

2. DESCRIPTION OF EQUIPMENT

The Contractor shall furnish and deliver smart waste and recycling stations that meet the following minimum technical requirements:

- **Power Source:** Fully self-powered through integrated solar panels and internal battery system capable of supporting continuous operation in outdoor environments.
- **Capacity:** Minimum 150 gallons of waste storage per unit, with internal compaction capability to increase holding capacity by at least five (5) times compared to standard bins.
- **Compaction System:** Automated compaction mechanism powered by solar energy, with safety interlocks and low-noise operation.
- **Sensors:** Integrated fill-level sensors capable of monitoring real-time capacity and transmitting data to a centralized management platform.
- **Communication System:** Wireless connectivity (cellular or equivalent) to transmit operational data, including fullness status, collection frequency, and maintenance alerts.
- **Monitoring Platform:** Cloud-based software or dashboard accessible via web or mobile device, allowing remote monitoring, reporting, and route optimization for collection services.
- **Materials and Durability:** Constructed of heavy-duty, corrosion-resistant materials suitable for long-term outdoor exposure, with vandal-resistant and weatherproof design.
- **Access and Maintenance:** Front-loading access doors with lockable mechanisms for secure servicing. Internal liners or bins must be easily removable for waste collection.
- **Recycling Option:** Units may include dual or multi-stream configurations for separation of trash, recycling, and compostable materials.
- **Branding and Signage:** Exterior panels shall allow for custom decals or signage as directed by the City/Agency.
- **Safety:** Hopper Disposal Interface that provides a physical barrier between the user and the compaction. Soft-Open Hopper response with use of foot pedal. Interlocked access doors protect users and service personnel. Collection door automatically locks when closed. No pinch points or sharp edges.

3. PERFORMANCE REQUIREMENTS

- Units shall operate continuously under outdoor conditions with minimal maintenance.
- Solar charging system must maintain sufficient power for compaction and data transmission for a minimum of three consecutive cloudy days.
- Fill-level accuracy must be at least 90%.
- Communication up time shall be a minimum of 95%.

4. DELIVERY AND INSTALLATION

- Contractor shall deliver fully assembled units or provide on-site assembly and installation.
- Contractor shall verify proper operation of solar, compaction, and sensor systems.

Note: MTS will handle the installation of units.

5. TRAINING AND DOCUMENTATION

Contractor shall provide:

- Training for MTS staff on operation, monitoring, and maintenance.
- User manuals, warranty information, and troubleshooting guides.

6. ACCESSORIES TO BE INCLUDED

Custom Graphic Wraps, Message Panels, and Stickers to comply with the City of San Diego recycling waste bin requirements. Wheeled Interior Lift Bin (bar and comb styles).

7. 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. If MTS rejects an incorrectly submitted invoice and sends it back for correction, the net 30 days restart from the corrected 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.

8. [NOT APPLICABLE] PAYMENT PROCESSING SECURITY AND PAYMENT CARD INDUSTRY (PCI) DATA SECURITY STANDARD (DSS) COMPLIANCE

9. [NOT APPLICABLE] CONTRACTOR'S INFORMATION SECURITY RESPONSIBILITIES

10. [NOT APPLICABLE] SAFETY DATA SHEETS (SDS)

11. 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.

12. WARRANTY

Bidders shall outline in detail their warranty on the equipment offered, including the method of adjustment in cases of equipment, component or parts failure. Warranty shall also be stated for installation labor, materials, and method of adjustment.

13. REPLACEMENT PARTS

Replacement parts and technical support for the specified equipment must be guaranteed by the manufacturer; to be available for a ten (10) year period from the date of purchase. Manufacturer shall keep parts books and maintenance manuals up-to-date for that period.

14. DELIVERY AND ACCEPTANCE

Equipment or any deliverable provided under this contract shall be delivered **F.O.B. to SDTI, 1341 Commercial Street, San Diego, California 92113** unless otherwise specified, in first class condition, complete and ready for operation, and the Contractor shall assume all responsibility and risk of loss incident to said delivery.

Contractor shall indicate delivery date on the Bid Form unless already specified, in which case, shall be made within the time set forth. Delivery is part of the consideration and must be adhered to as specified.

Contractor will not be held liable for failure to make delivery because of strikes, construction of property, governmental regulations, acts of God or any other causes beyond his control, provided a written extension of time is obtained from MTS.

Upon delivery, MTS will acknowledge receipt of said items or products. Delivery shall not constitute acceptance. Upon inspection and testing (if necessary) by MTS, a determination will be made whether said items or products are in conformance with contract requirements. If found in conformance, MTS shall approve the Contractor's invoice for payment; thereby constituting acceptance. Payment terms begin from this point. If the delivered items or products are found not in compliance, MTS will immediately notify the Contractor, and furnish all details of deficiencies. Contractor shall correct the deficiencies or supply new items or products (at the discretion of MTS) and resubmit for inspection and testing (if necessary).

15. [NOT APPLICABLE] LIQUIDATED DAMAGES

PURCHASE OF SOLAR WASTE COMPACTORS IFB
Big Belly Solar Bid Form
MTS Doc. No. L1711.0-26

Quantity	Item Description	Unit of Measure	Lead Time (in calendar days)	Unit Price	Total Price*
42	Smart Solar Waste Compactor - Trash	Each	90	$ 5,325.32	$ 223,663.44
42	Smart Solar Waste Compactor - Recycling	Each	90	$ 5,325.32	$ 223,663.44
				Subtotal	*$ 447,326.88*
				CA Tax (7.75%)	$ 34,667.83
1	Delivery & Shipping	Each		$ 14,280.00	$ 14,280.00
				GRAND TOTAL	**$ 496,274.71**

Metropolitan Transit System

DRAFT FOR EXECUTIVE COMMITTEE REVIEW DATE: 4/9/2026

Agenda Item No. 15

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

April 16, 2026

SUBJECT:

Roadway Worker Early Warning (Zoneguard) - Sole Source Award

AGENDA ITEM WILL BE PROVIDED BEFORE BOARD MEETING

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.