



Sonoma-Marin Area Rail Transit
5401 Old Redwood Hwy, Suite 200
Petaluma, CA 94954

P: 707-794-3330
F: 707-794-3037
W: www.SonomaMarinTrain.org

BOARD OF DIRECTORS

Chris Coursey, Chair
Sonoma County Board of Supervisors

Mary Sackett, Vice Chair
Marin County Board of Supervisors

Janice Cader Thompson
Sonoma County Mayors' and
Councilmembers Association

Kate Colin
Transportation Authority of Marin

Victoria Fleming
Sonoma County Mayors' and
Councilmembers Association

Patty Garbarino
Golden Gate Bridge,
Highway/Transportation District

Ariel Kelley
Sonoma County Mayors' and
Councilmembers Association

Eric Lucan
Marin County Board of Supervisors

Kevin Jacobs
Transportation Authority of Marin

Barbara Pahre
Golden Gate Bridge,
Highway/Transportation District

Gabe Paulson
Marin County Council of Mayors and
Councilmembers

David Rabbitt
Sonoma County Board of Supervisors

GENERAL MANAGER
Eddy Cumins

August 19, 2026

Sonoma- Marin Area Rail Transit Board of Directors
5401 Old Redwood Highway, Suite 200
Petaluma, CA 94954

SUBJECT: Approve Contract No. CV-BB-26-004 with Ghilotti Bros, Inc. in the amount of \$272,869.00

Dear Board Members:

RECOMMENDATIONS:

Adopt Resolution 2026-27 authorizing the General Manager to execute Contract No. CV-BB-26-004 with Ghilotti Bros, Inc. in the amount of \$272,869.00

SUMMARY:

The St. Vincent Reinforced Box Culvert ("RCB") Reinforced Fill project will permanently fix four (4) RCBs at two locations which are failing due to settlement issues and allowing track fill and ballast to fall through, creating long term maintenance issues. The repair consists of adding steel reinforcement, a culvert pipe to ensure drainage, then filling with concrete, resulting in a permanent fix.

SMART issued a formal Invitation for Bid for St. Vincent's Reinforced Concrete Box Culvert (RBC) Reinforced Fill (ML MP 22.18 & 22.28) under Solicitation No. CV-BB-26-004 for the repair of the four concrete box culverts on June 8, 2026. The Invitation for Bid was advertised in local newspapers, construction trade journals, on SMART's website, and notifications sent to contractors on SMART's bidder lists. A pre-bid meeting and site walk was held on June 25, 2026, for interested contractors.

SMART conducted a public bid opening on July 16, 2026, where three (3) bids were received. Following evaluation of the three bids submitted, SMART made the determination that the lowest responsive responsible bid was submitted by Ghilotti Bros, Inc. in the amount of \$272,869.00.

Staff recommend adopting Resolution 2026-27 authorizing the General Manager to execute Contract No. CV-BB-26-004 with Ghilotti Bros, Inc. in the amount of \$272,869.00.

FISCAL IMPACT:

Funding for this work is included in the Fiscal Year 2026/2027 Budget and Budget Amendment #2 (Agenda Item 7) and supported with Federal Transit Administration 5337 State of Good Repair and Measure Q funds.

Sincerely,

/s/

Bill Gamlen, P.E.
Chief Engineer

Attachment: 1.) Resolution 2026-27
 2.) Agreement No. CV-BB-26-004

ON FILE WITH CLERK:

- 1.) Exhibit C – Federal Wage Determination
- 2.) Invitation for Bid
- 3.) Attachment B – General Conditions
- 4.) Attachment C – General Requirements
- 5.) Invitation for Bids Addendum Nos. 1, 2 & 3

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SONOMA-MARIN AREA RAIL TRANSIT DISTRICT APPROVING CONTRACT NO. CV-BB-26-004 WITH GHILOTTI BROS, INC. FOR REPAIRS TO TWO CONCRETE BOX CULVERTS IN SAN RAFAEL

WHEREAS, the Sonoma-Marin Area Rail Transit District (SMART) requires repair of two concrete box culverts near St. Vincent Church in San Rafael; and

WHEREAS, SMART issued a formal Invitation for Bid for St. Vincent's Reinforced Concrete Box Culvert (RBC) Reinforced Fill (ML MP 22.18 & 22.28) under Solicitation No. CV-BB-26-004 for the repair of the two concrete box culverts on June 8, 2026; and

WHEREAS, SMART advertised the contracting opportunity in local newspapers, construction trade journals, SMART's website, and SMART's bidders lists; and

WHEREAS, SMART conducted a pre-bid meeting and site walk for interested contractors on June 25, 2026; and

WHEREAS, SMART conducted a public bid opening on July 16, 2026 where it received three bids; and

WHEREAS, following evaluation of the three bids submitted, SMART made the determination that the lowest responsive responsible bid was submitted by Ghilotti Bros, Inc. in the amount of \$272,869.00.

NOW, THEREFORE, BE IT RESOLVED THAT THE BOARD OF DIRECTORS OF SMART HEREBY FINDS, DETERMINES, DECLARES, AND ORDERS AS FOLLOWS:

1. The foregoing Recitals are true and correct and are incorporated herein and form a part of this Resolution.
2. The General Manager is authorized to execute Contract No. CV-BB-26-004 with Ghilotti Bros, Inc. in the amount of \$272,869.00.

PASSED AND ADOPTED at a regular meeting of the Board of Directors of the Sonoma-Marin Area Rail Transit District held on the 19th day of August, 2026, by the following vote:

DIRECTORS:

AYES:

NOES:

Resolution No. 2026-27
Sonoma-Marin Area Rail Transit District
August 19, 2026

ABSENT:
ABSTAIN:

Chris Coursey, Chair, Board of Directors
Sonoma-Marin Area Rail Transit District

ATTEST:

Kyreen Jorgensen, Clerk of Board of Directors
Sonoma-Marin Area Rail Transit District

DOCUMENT 00 52 00
AGREEMENT FOR CONTRACTOR SERVICES

This agreement ("Agreement"), dated as of August 19, 2026 ("Effective Date") is by and between the Sonoma-Marín Area Rail Transit District, a Special District of the State of California (hereinafter "SMART"), and Ghilotti Bros., Inc., whose place of business is located at 525 Jacoby Street, San Rafael, CA 94901 under California Contractor's License Number 132128 and Department of Industrial Relations Registration Number 1000001037 (hereinafter "Contractor").

ST. VINCENT'S REINFORCED CONCRETE BOX CULVERT (RBC)
REINFORCED FILL (ML MP 22.18 & 22.18)
CONTRACT # CV-BB-26-004

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set for, Contractor and SMART agree as follows:

A G R E E M E N T

ARTICLE 1. LIST OF EXHIBITS

Section 1.01 The following exhibits are attached hereto and incorporated herein:

- (a) Exhibit A: Schedule of Rates
- (b) Exhibit B: FTA & DOT Requirements
- (c) Exhibit C: Federal Wage Determination

ARTICLE 2. WORK.

Section 2.01 Contractor shall complete all work specified in the Contract Documents, in accordance with the Specifications, Drawings, and all other terms and conditions of the Contract Documents.

ARTICLE 3. NOTICES TO SMART.

Section 3.01 SMART has designated John Riley, Project Manager, to act as SMART's Representative(s), who will represent SMART in performing SMART's duties and responsibilities and exercising SMART's rights and authorities in Contract Documents. SMART may change the individual(s) acting as SMART's Representative(s), or delegate one or more specific functions to one or more specific SMART's Representatives, including without limitation engineering, architectural, inspection and general administrative functions, at any time with written notice and without liability to Contractor. Each SMART Representative is the beneficiary of all Contractor obligations to SMART, including without limitation, all releases and indemnities.

Section 3.02 All notices or demands to SMART under the Contract Documents shall be to SMART's Representative at: **5401 Old Redwood Hwy Suite 200, Petaluma, CA, 94954** or to such other person(s) and address(es) as SMART

shall provide to Contractor.

Project Manager: John Riley
Phone: 707-794-3070
Email: jriley@sonomamarintrain.org

ARTICLE 4. CONTRACT TIME AND LIQUIDATED DAMAGES.

Section 4.01 Contract Time and Notice to Proceed. This project is expected to take no more than 60 calendar days. The Contract Time allotted is 60 calendar days.

Contract Time (the period between the start date identified in the Notice to Proceed with construction and the Substantial Completion date identified in the Notice to Proceed or as subsequently amended by a Change Order) commences on the date established in the Notice to Proceed. SMART reserves the right to modify or alter the Commencement Date of the Work. SMART may give a Notice to Proceed at any time within 60 Days after the Notice of Award. Contractor shall not do any Work at the Site prior to the date on which the Contract Time commences to run.

Contractor shall achieve Substantial Completion of the entire Work within reasonable and approved schedule from the date when the Contract Time commences to run. Contractor shall complete the Work so that a Final Inspection Report can be issued in accordance with Section 01770 (Contract Closeout).

ARTICLE 5. CONTRACT SUM.

Section 5.01 SMART shall pay Contractor the Contract Sum for completion of Work in accordance with the Contract Documents as follows:

Total Contract Sum: \$272,869.00

The Contract Sum includes all allowances (if any).

Contractor agrees that 48 CFR Part 31, Contract Cost Principles and Procedures and 2 CFR Part 200 shall be used to determine the allowability of individual terms of cost. Any costs for which payment has been made to the Contractor that are determined by subsequential audit to be unallowable under 48 CFR Part 31 or 2 CFR Part 200 are subject to repayment by the Contractor to SMART.

ARTICLE 6. CONTRACTOR REPRESENTATIONS.

In order to induce SMART to enter into this Agreement, Contractor makes the following representations and warranties:

Section 6.01 Contractor has visited the Site and has examined thoroughly and understood the nature and extent of the Contract Documents, Work, Site, locality, actual conditions, as-built conditions, all local conditions, and all federal, state and local laws and regulations that in any manner may affect cost, progress, performance or furnishing of Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Contractor and safety precautions and programs incident thereto.

Section 6.02 Contractor has examined thoroughly and understood all reports of exploration and tests of subsurface conditions, as-built drawings, drawings, products specifications or reports, available for Bidding purposes, of physical conditions, including Underground Facilities, or which may appear in the Drawings. Contractor accepts the determination set forth in these Documents and Document 00 70 00 - General Conditions of the limited extent of the information contained in such materials upon which Contractor may be entitled to rely. Contractor agrees that, except for the information so identified, Contractor does not and shall not rely on any other information contained in such reports and drawings.

Section 6.03 Contractor has conducted or obtained and has understood all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in Section 5.2 of this Document 00 52 00 - Agreement) that pertain to the subsurface conditions, as-built conditions, Underground Facilities and all other physical conditions at or contiguous to the Site or otherwise that may affect the cost, progress, performance or furnishing of Work, as Contractor considers necessary for the performance or furnishing of Work at the Contract Sum, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Document 00 70 00 - General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by Contractor for such purposes.

Section 6.04 Contractor has correlated its knowledge and the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

Section 6.05 Contractor has given SMART prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and as-built drawings and actual conditions and the written resolution thereof through Addenda issued by SMART is acceptable to Contractor.

Section 6.06 Contractor is duly organized, existing and in good standing under applicable state law, and is duly qualified to conduct business in the State of California.

Section 6.07 Contractor has duly authorized the execution, delivery and performance of this Agreement, the other Contract Documents and the Work to be performed herein. The Contract Documents do not violate or create a default under any instrument, agreement, order or decree binding on Contractor.

Section 6.08 Contractor has listed the following Subcontractors pursuant to the Subcontractor Listing Law, California Public Contract Code §4100 *et seq.*:

Name of Subcontractor and Location of Mill or Shop	Description of Work: Reference To Bid Items	DIR Registration No.	Contractor's License No.
Alta Group Inc. 1 Ave of the Palms, Suite 238 San Francisco, CA 94130	Furnish & Install Rebar Item # 2 (Partial) – 70% of Item	1000007633	840109

Name of Subcontractor and Location of Mill or Shop	Description of Work: Reference To Bid Items	DIR Registration No.	Contractor's License No.
Cell-Crete Corporation 1624 Raymond Ave Monrovia, CA 91016	Furnish & Install Lightweight Concrete Item # 3 (Partial) – 37.3% of Item	1000000262	243404

Section 6.09 Contractor has designated Justin King, **Project Manager**, to act as Contractor's Representative(s), who will represent Contractor in performing Contractor's duties and responsibilities and exercising Contractor's rights and authorities in Contract Documents. Contractor has also designated Billy Petrie, **Superintendent**, to act as Contractor's Superintendent. Contractor may change the individual(s) acting as Contractor's Representative(s), or delegate one or more specific functions to one or more specific Contractor's Representatives, at any time upon prior written notice and approval and without liability to SMART, but Contractor is limited to two representatives.

Project Manager: Justin King Superintendent: Billy Petrie
Phone: 415-755-3860 Phone: 415-720-2973
Email: justink@gbi1914.com Email: billyp@gbi1914.com

ARTICLE 7. CONTRACTOR DOCUMENTS.

Section 7.01 Contract Documents consist of the following documents incorporated by reference, including all changes, Addenda, and Modifications thereto:

Document 00 52 00: This Agreement
IFB: Invitation for Bid
Document 00 70 00: General Conditions
General Requirements: General Requirements
Technical Specifications: Plans and Technical Specifications

Section 7.02 There are no Contract Documents other than those listed in Section 7.01. The Contract Documents may only be amended, modified or supplemented as provided in Document 00 70 00 - General Conditions.

ARTICLE 8. INSURANCE.

Contractor shall procure and maintain for the duration of the Agreement insurance against all claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, its agents, representatives, employees, or subcontractors with limits and deductibles specified below:

Section 8.01 Workers' Compensation Insurance. Workers' Compensation as required by the State of California, with Statutory Limits, and Employer's Liability insurance with limit of no less than \$1,000,000 per accident for bodily injury or disease.

Section 8.02 General Liability Insurance. Commercial General Liability insurance covering products-completed and ongoing operations, property damage, bodily injury and personal injury using an occurrence policy form, in an amount no less than \$5,000,000 per occurrence. Said insurance shall remain in effect for five (5) years after Final Completion and acceptance of the final payment for the Work, contractual liability, and coverage for explosion, collapse, and underground hazards.

Said policy shall include a Railroads CG 24 17 endorsement removing the exclusion of coverage, if applicable, for bodily injury or property damage arising out of operations within 50 feet of any railroad property and affecting any railroad bridge, trestle, tracks, roadbeds, tunnel, underpass or crossing.

Section 8.03 Automobile Insurance. Automobile Liability insurance covering bodily injury and property damage in an amount no less than \$2,000,000 combined single limit for each occurrence. Said insurance shall include coverage for owned, hired, and non-owned vehicles. Said policy shall also include a CA 20 70 10 13 endorsement removing the exclusion of coverage for bodily injury or property damage arising out of operations within 50 feet of any railroad bridge, trestle, track, roadbeds, tunnel, underpass or crossing.

Section 8.04 Contractor's Pollution Liability Insurance. Contractor's Pollution Liability Insurance in an amount no less than \$2,000,000 per occurrence or claim. The Contractor's Pollution Liability policy shall be written on an occurrence basis with coverage for bodily injury, property damage and environmental damage, including cleanup costs arising out of third-party claims, for pollution conditions, and including claims of environmental authorities, for the release of pollutants caused by construction activities related to the Contract. Coverage shall include the Contractor as the named insured and shall include coverage for acts by others for whom the Contractor is legally responsible.

Coverage to be provided for bodily injury to or destruction of tangible property, including the resulting loss of use thereof, loss of use of tangible property that has been physically injured, and natural resource damage. There shall be no exclusions or limitations regarding damages or injury from existence, removal or abatement of lead paint. There shall be no insured vs. insured exclusion in the policy.

Section 8.05 Endorsements. Prior to commencing work, Contractor shall file Certificate(s) of Insurance with SMART evidencing the required coverage and endorsement(s) and, upon request, a certified duplicate original of any of those policies. Said endorsements and Certificate(s) of Insurance shall stipulate:

- (a) SMART, its officers, and employees shall be named as additional insured on all policies listed above with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts, or equipment furnished in connection with such work or operations and automobiles owned, leased, hired, or borrowed by or on behalf of the Contractor, with the exception of the workers compensation insurance policy (as applicable).
- (b) That the policy(ies) is Primary Insurance and the insurance company(ies) providing such policy(ies) shall be liable thereunder for the full amount of any loss or claim which Contractor is liable, up to and including the total limit of

liability, without right of contribution from any other insurance effected or which may be effected by the Insureds.

- (c) Inclusion of the Insureds as additional insureds shall not in any way affect its rights either as respects any claim, demand, suit or judgment made, brought or recovered against Contractor. Said policy shall protect Contractor and the Insureds in the same manner as though a separate policy had been issued to each, but nothing in said policy shall operate to increase the insurance company's liability as set forth in its policy beyond the amount or amounts shown or to which the insurance company would have been liable if only one interest had been named as an insured.
- (d) Contractor hereby grants to SMART a waiver of any right to subrogation which any insurer of said Contractor may acquire against SMART by virtue of the payment of any loss under such insurance. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not SMART has received a waiver of subrogation endorsement from the insurer.
- (e) The insurance policy(ies) shall be written by an insurance company or companies acceptable to SMART. The insurance underwriter(s) for all insurance policies except Workers' Compensation shall have an A.M. Best Company rating of A VII or better. Such insurance company shall be authorized to transact business in the state of California. Required minimum amounts of insurance may be increased should conditions of Work, in opinion of SMART, warrant such increase. Contractor shall increase required insurance amounts upon direction by SMART.

Section 8.06 Deductibles and Retentions. Contractor shall be responsible for payment of any insurance premiums, including any charges for required waivers of subrogation or the endorsement of additional insured. Contractor shall also be responsible for the payment of all deductibles or retention on Contractor's policies without right of contribution from SMART.

Section 8.07 Injuries. If injury occurs to any employee of Contractor, Subcontractor or sub-subcontractor for which the employee, or the employee's dependents in the event of employee's death, is entitled to compensation from SMART under provisions of the Workers' Compensation Insurance and Safety Act, as amended, or for which compensation is claimed from SMART, SMART may retain out of sums due Contractor under Contract Documents, amount sufficient to cover such compensation, as fixed by the Act, as amended, until such compensation is paid, or until it is determined that no compensation is due. If SMART is compelled to pay compensation, SMART may, in its discretion, either deduct and retain from the Contract Sum the amount so paid, or require Contractor to reimburse SMART.

Section 8.08 Subcontractor Responsibility. Contractor shall require and verify that subcontractors maintain insurance meeting all the requirements stated herein, and Contractor shall ensure SMART is named additional insured on insurance required from subcontractors.

Section 8.09 Claims Made Coverage. If any insurance specified above is written on a claims-made coverage form, Contractor shall:

- (a) Ensure that the retroactive date is shown on the policy, and such date must be before the date of this Agreement or beginning of any work under this Agreement;
- (b) Maintain and provide evidence of similar insurance for at least three (3) years following project completion, including the requirement of adding all additional insureds; and
- (c) If insurance is cancelled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to Agreement effective date, Contractor shall purchase “extending reporting” coverage for a minimum of three (3) years after completion of the work.

Section 8.10 Documentation. The following documentation shall be submitted to SMART:

- (a) Properly executed Certificates of Insurance clearly evidencing all coverages and limits required above. Said Certificates shall be submitted prior to the execution of this Agreement. At SMART’s request, Contractor shall provide certified copies of the policies that correspond to the policies listed on the Certificates of Insurance. Contractor agrees to maintain current Certificates of Insurance evidencing the above-required coverages and limits on file with SMART for the duration of this Agreement.
- (b) Copies of properly executed endorsements required above for each policy. Said endorsement copies shall be submitted prior to the execution of this Agreement. Contractor agrees to maintain current endorsements evidencing the above-specified requirements on file with SMART for the duration of this Agreement.
- (c) After the Agreement has been signed, signed Certificates of Insurance shall be submitted for any renewal or replacement of a policy that already exists, at least ten (10) days before expiration or other termination of the existing policy.

Please email all renewal certificates of insurance and corresponding policy documents to InsuranceRenewals@sonomamarintrain.org.

Section 8.11 Policy Obligations. Contractor’s indemnity and other obligations shall not be limited by the foregoing insurance requirements.

Section 8.12 Material Breach. If Contractor, for any reason, fails to maintain insurance coverage, which is required pursuant to this Agreement, the same shall be deemed a material breach of this Agreement. SMART, in its sole option, may terminate this Agreement and obtain damages from Contractor resulting from said breach. Alternatively, SMART may purchase such required insurance coverage, and without further notice to Contractor, SMART may deduct from sums due to Contractor any premium costs advanced by SMART for such insurance. These remedies shall be in addition to any other remedies available to SMART.

Section 8.13 Notice of Cancellation. Each insurance policy required above shall provide that coverage shall not be cancelled, except with notice to SMART.

ARTICLE 9. MISCELLANEOUS.

Section 9.01 Terms and Abbreviations. Terms and abbreviations used in this Agreement are defined in Document 00 70 00 - General Conditions and Section 01420 (References and Definitions) and will have the meaning indicated therein.

Section 9.02 Use of Recycled Paper. SMART requires that all printing jobs produced under this Agreement be printed on recycled content papers. Recycled-content papers are defined as papers containing a minimum of 30 percent postconsumer fiber by weight. All papers used in the performance of a print job for SMART shall be recycled-content paper. If paper meets the 30 percent requirement, the recycling logo should be printed on the project.

Section 9.03 Signers of this Agreement. It is understood and agreed that in no instance are the persons signing this Agreement for or on behalf of SMART or acting as an employee, agent, or representative of SMART, liable on this Agreement or any of the Contract Documents, or upon any warranty of authority, or otherwise, and it is further understood and agreed that liability of the SMART is limited and confined to such liability as authorized or imposed by the Contract Documents or applicable law.

Section 9.04 No Assignment of Contract. Contractor shall not assign any portion of the Contract Documents, and may subcontract portions of the Contract Documents only in compliance with the Subcontractor Listing Law, California Public Contract Code §4100 *et seq.*

Section 9.05 Assignment of Rights to Awarding Body. In entering into a public works contract or a subcontract to supply goods, services or materials pursuant to a public works contract, Contractor or Subcontractor offers and agrees to assign to the awarding body all rights, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. §15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time SMART tenders final payment to Contractor, without further acknowledgment by the parties.

Section 9.06 Prevailing Wages. Contractor and all Subcontractors shall pay to all workers employed not less than the prevailing rate of wages as determined in accordance with the Labor Code as indicated herein.

All Contractors, contractors, and subcontractors doing business with public agencies through the State of California (including SMART) shall comply with applicable labor compliance requirements including, but not limited to prevailing wages, SB 854, Labor Code Sections 1725.5, 1771, 1774, 1775, 1776, 1777.5, 1813, and 1815. Public Works Contractor Registration Programs, Electronic Certified Payroll Records submission to the State Labor Commissioner and other requirements, described at <http://www.dir.ca.gov/Public-Works/Contractors.html>.

Applicable projects are subject to compliance monitoring and enforcement by the California Department of Industrial Relations.

Copies of the general prevailing rates of per diem wages for each craft, classification, or type of worker needed to execute the Contract, as determined by Director of the State of California Department of Industrial Relations, are deemed included in the Contract Documents and shall be made available to any interested party on request.

Pursuant to Section 1861 of the Labor Code, Contractor represents that it is aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and Contractor shall comply with such provisions before commencing the performance of the Work of the Contract Documents.

Section 9.07 Licensing Laws. The Contractor and all subcontractors shall comply with the provisions of Chapter 9 Division 3 of the Business and Professions code concerning the licensing of contractors. All Contractors shall be licensed in accordance with the laws of the State of California and any Contractor not so licensed is subject to the penalties imposed by such laws. Prior to commencing any work under contract, all Contractors and subcontractors must show that they hold appropriate and current Contractor Licenses in the State of California. The Contractor shall provide such subcontractor information, including the class type, license, number, and expiration date to SMART.

Section 9.08 California Air Resources Board ("CARB") In-Use Off-Road Diesel-Fueled Fleets Certification of Compliance. Contractor shall comply, and shall ensure all subcontractors comply, with all applicable requirements of the most current version of the regulations imposed by California Air Resources Board ("CARB") including, without limitation, all applicable terms of Title 13, California Code of Regulations Division 3, Chapter 9 and all pending amendments ("Regulation"). Throughout this agreement, and for three (3) years thereafter, Contractor shall make available for inspection and copying any and all documents or information associated with Contractor's and its subcontractors' fleets including, without limitation, the Certificates of Reported Compliance ("CRCs"), fuel/refueling records, maintenance records, emissions records, and any other information the Contractor is required to produce, keep, or maintain pursuant to the Regulation upon two (2) calendar days' notice from SMART. Contractor shall be solely liable for any and all costs associated with compliance with the Regulation as well as for any and all penalties, fines, damages, or costs associated with any and all violations, or failures to comply with the Regulation.

Section 9.09 Drug-Free Workplace. Contractor certifies that it will provide a drug-free workplace in compliance with Government Code §8350-§8357.

Section 9.10 Continuation of Work. Should any part, term or provision of this Agreement or any of the Contract Documents, or any document required herein or therein to be executed or delivered, be declared invalid, void or unenforceable, all remaining parts, terms and provisions shall remain in full force and effect and shall in no way be invalidated, impaired or affected thereby. If the provisions of any law causing such invalidity, illegality or unenforceability may be waived, they are hereby waived to the end that this Agreement and the Contract

Documents may be deemed valid and binding agreements, enforceable in accordance with their terms to the greatest extent permitted by applicable law. In the event any provision not otherwise included in the Contract Documents is required to be included by any applicable law, that provision is deemed included herein by this reference (or, if such provision is required to be included in any particular portion of the Contract Documents, that provision is deemed included in that portion).

Section 9.11 Applicable Law and Forum. This Agreement shall be construed and interpreted according to the substantive law of California, regardless of the law of conflicts to the contrary in any jurisdiction. Venue for any action to enforce the terms of this Agreement or for the breach thereof shall be in the Superior Court of the State of California in the County of Marin.

Section 9.12 Claims Procedures. Contractor accepts the claims procedure established by Article 12 of Document 00 70 00 - General Conditions, as established under Section 930.2 of the California Government Code.

Section 9.13 Relationships of the Parties: No Intended Third-Party Beneficiaries. The Parties do not intend by this Agreement to create a partnership, joint venture, joint enterprise, or any other business relationship. There is no third person or entity who is an intended third-party beneficiary under this Agreement. No incidental beneficiary, whatever relationship such person may have with the Parties, shall have any right to bring an action or suit, or to assert any claim against the Parties under this Agreement. Nothing contained in this Agreement shall be construed to create and the Parties do not intend to create any rights in third parties.

Section 9.14 No Waiver of Breach. The waiver by SMART of any breach of any term or promise contained in this Agreement shall not be deemed to be a waiver of such term or provision or any subsequent breach of the same or any other term or promise contained in this Agreement.

Section 9.15 Use of SMART Name and Logo Restrictions. Contractor is prohibited from using SMART's name and logo unless expressly authorized herein or by written authorization from SMART's legal counsel.

Section 9.16 Acceptance of Electronic Signatures and Counterparts. The parties agree that this Contract, Agreements ancillary to this Contract, and related documents to be entered into this Contract will be considered executed when all parties have signed this Agreement. Signatures delivered by scanned image as an attachment to electronic mail or delivered electronically through the use of programs such as DocuSign must be treated in all respects as having the same effect as an original signature. Each party further agrees that this Contract may be executed in two or more counterparts, all of which constitute one and the same instrument.

Section 9.17 Time of Essence. Time is and shall be of the essence of this Agreement and every provision hereof.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the Effective Date.

CONTRACTOR: GHILOTTI BROS., INC.

By: _____
Michael M. Ghilotti, President

Date: _____

SONOMA-MARIN AREA RAIL TRANSIT (SMART)

By: _____
Eddy Cumins, General Manager

Date: _____

**CERTIFICATES OF INSURANCE ON FILE WITH AND
APPROVED AS TO SUBSTANCE FOR SMART:**

By: _____
Ken Hendricks, Procurement and Contracts Manager

Date: _____

APPROVED AS TO FORM FOR SMART:

By: _____
District Counsel

Date: _____

EXHIBIT A SCHEDULE OF RATES

ITEM	ITEM DESCRIPTION	QTY	UNIT	ITEM COST
1	Mobilization and Demobilization	1	LS	\$25,000.00
2	Site Preparation and Rebar installation	1	LS	\$125,000.00
3	Formwork, Culvert and Pour Mortar	1	LS	\$122,869.00
Total Project Cost:				\$272,869.00

GENERAL INFORMATION

LS = Lump Sum

Costs are in United States Dollars

The above costs include all labor, supervision, equipment, materials, supplies, insurance, overhead, profit, and all other direct and indirect costs associated with performing the work included in this Agreement.

Item Descriptions

Item 1: Mobilization and Demobilization

Mobilization and Demobilization will be paid for at the contract LUMP SUM (LS) price, which price shall constitute full compensation for all such work. Mobilization cannot exceed 10% of the cost of all items. The scope of work for mobilization shall include, but not limited to, furnishing all labor, materials, tools, equipment; moving all equipment and materials onto the site; and work and incidentals for the establishment of all facilities necessary for the implementation of the Project. This includes establishing the construction staging area and construction entrance, providing security for on-site storage of equipment and materials; providing sanitary facilities for workers; and all other work and operations that must be performed or costs incurred prior to beginning work on the various Contract items on the Project Site. This Item shall also include demobilization of contractor's equipment and excess materials from the site. Contractor shall leave the site in a clean manner free of loose material and debris as determined by SMART's Project Manager. Final payment for mobilization shall occur following demobilization and final cleanup when all required items per the Contract are fulfilled and the site is free of equipment and clean.

Item 2: Site Preparation and Rebar Installation

This payment item shall include full compensation for all labor, materials, tools, equipment, and all incidental work required for the improvements as needed to provide safe access to work areas, and to install the rebar cages as shown on the Contract Drawings, including accommodation in rebar cages for installation the culverts per Item 3: Formwork, Culvert and Pour Mortar.

Item 3: Formwork, Culvert, and Pour Mortar

This payment item shall include full compensation for all labor, materials, tools, equipment, and all incidental work required for installation of the culverts within the rebar cages, constructing formwork, pouring/pumping mortar to fill RCB's as shown on the Contract Drawings, including removal and disposal of formwork.

**EXHIBIT B
FTA & DOT REQUIREMENTS**

**UNITED STATES DEPARTMENT OF TRANSPORTATION (DOT),
FEDERAL TRANSIT ADMINISTRATION (FTA), CALIFORNIA DEPARTMENT OF
TRANSPORTATION (DOT), AND FEDERAL EMERGENCY MANAGEMENT
AGENCY (FEMA) REQUIREMENTS**

1. General.

In performance of its obligations pursuant to this Agreement or Purchase Order [Hereinafter "Agreement"], the Contractor, Seller, Service Provider, or Consultant [Hereinafter "Contractor"] agrees to comply with all applicable provisions of federal, state and local law, regulations, FTA and FEMA directives. The terms of the most recent amendment to any federal, state or local laws, regulations, FTA or FEMA directives, and amendments to the grant or cooperative agreement providing funding for this Agreement that may be subsequently adopted, are applicable to the Agreement to the maximum extent feasible, unless the FTA or FEMA provides otherwise in writing. The Federal or State regulations set forth in this Agreement to be observed in the performance of the Agreement are subject to change, and such changed requirements will apply to this Agreement as required. Contractor shall include in its subcontracts, and require its subcontractors of every tier to include in their respective subcontracts, provisions incorporating the requirements of this Attachment. Contractor's failure to comply with these requirements shall constitute a material breach of this Agreement and may result in the withholding of progress payments to the Contractor, in addition to other remedies.

It is the responsibility of the Contractor and its subcontractors to ensure that all clauses included in this Exhibit applicable to the work specified within the Agreement are adhered to by the Contractor and its subcontractors.

2. Access To Records and Reports.

Applicability: All Contracts

Contractor shall comply with the following requirements:

- (a) Record Retention. Contractor will retain, and will require its subcontractors of all tiers to retain, complete and readily accessible records related in whole or in part to the contract, including, but not limited to, data, documents, reports, statistics, sub-Contracts, leases, subcontracts, arrangements, other third-party Contracts of any type, and supporting materials related to those records.
- (b) Retention Period. The Contractor agrees to comply with the record retention requirements in accordance with 2 C.F.R. §200.334. The Contractor shall maintain all books, records, accounts and reports required under this Contract for a period of at not less than three (3) years after the date of termination or expiration of this Contract, except in the event of litigation or settlement of claims arising from the performance of this Contract, in which case

records shall be maintained until the disposition of all such litigation, appeals, claims or exceptions related thereto.

(c) Access to Records. The Contractor agrees to provide access to SMART, FTA, FEMA, and its contractors to inspect and audit records and information related to performance of this contract as reasonably may be required. Contractor shall also permit SMART, the Secretary of Transportation and the Comptroller General of the United States, or their authorized representatives, to inspect all project work, materials, payrolls, and other data, and to audit the books, records, and accounts of Contractor and its subcontractors pertaining to the Agreement. In accordance with 49 U.S.C. § 5325(g), Contractor shall require each subcontractor to permit SMART, the Secretary of Transportation and the Comptroller General of the United States, or their duly authorized representatives, to inspect all work, materials, payrolls, and other data and records involving that subcontractor agreement and to audit the books, records, and accounts involving that subcontractor agreement as it affects the Agreement.

(d) Access to the Site of Performance. The Contractor agrees to permit FTA, FEMA, and its contractors access to the sites of performance under this contract as reasonably may be required.

(e) State Audit, Inspection, Access to Records and Retention of Records Requirements. Contractor and its subcontractors shall establish and maintain an accounting system and records that properly accumulate and segregate incurred costs by line item for the project. Contractor and its subcontractors' accounting systems shall conform to generally accepted accounting principles (GAAP) and all records shall provide a breakdown of total costs charged to the project, including properly executed payrolls, time records, invoices and vouchers as well as all accounting generated reports. Contractor and its subcontractors shall permit representatives of the State and State Auditor to inspect, examine, make excerpts or transcribe Contractor and its subcontractors' work, documents, papers, materials, payrolls, books, records, accounts, any and all data relevant to this Agreement at any reasonable time and to audit and verify statements, invoices or bills submitted by Contractor and its subcontractors pursuant to this Agreement, and shall provide copies thereof upon request and shall provide such assistance as may be reasonably required in the course of such audit or inspection.

The State, its representatives and the State Auditor further reserve the right to examine, inspect, make copies, or excerpts of all work, documents, papers, materials, payrolls, books and accounts, and data pertaining to this Agreement and to inspect and re-examine said work, documents, papers, materials, payrolls, books, records, accounts and data during the life of the Agreement and for the three (3) year period following the final payment under this Agreement, and Contractor and its subcontractors shall in no event dispose of, destroy, alter or mutilate said work, documents, papers, materials, payrolls, books, records, accounts and data in any manner whatsoever for three (3) years after final payment under this Agreement and all pending matters are closed.

Any costs for which Contractors and its subcontractors have received payment that are determined by subsequent audit to be unallowable under the terms of

this agreement may be required to be repaid to SMART by the Contractors and its subcontractors. Should Contractor and its subcontractors fail to reimburse money due SMART within 30 days of demand, or within such other period as may be agreed between the parties hereto, SMART is authorized to withhold future payments due Contractor and its subcontractors from any source.

The Contractor agrees that the Contract Cost Principles and Procedures at least as restrictive as 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31 *et seq.*, shall be used to determine the allowability of individual items of costs.

The Contractor agrees to comply with Federal procedures in accordance with 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.

Any costs for which payments have been made to the Contractor, which are determined by subsequent audit to be unallowable under 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31 *et seq.*, or 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments, are subject to repayment by Contractor to SMART.

Any subcontract entered into as a result of this Agreement shall contain all the provisions of this section.

3. ADA Access

Applicability: All Construction, Architecture & Engineering, Operations Management, and Rolling Stock Contracts

The contractor agrees to comply with all applicable requirements of section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, which prohibits discrimination on the basis of disability, with the Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. §§ 12101 *et seq.*, which requires that accessible facilities and services be made available to persons with disabilities, including any subsequent amendments to that Act, and with the Architectural Barriers act of 1968, as amended, 42 U.S.C. §§ 4151 *et seq.*, which requires that buildings and public accommodations be accessible to persons with disabilities, including any subsequent amendments to that Act. In addition, the contractor agrees to comply with any and all applicable requirements issued by the FTA, DOT, DOJ, U.S. GSA, U.S. EEOC, U.S. FCC, any subsequent amendments thereto and any other nondiscrimination statute(s) that may apply to the Project or Services.

4. Buy America.

Applicability: All Rollingstock Purchases, Materials and Supplies Contracts, and Construction Contracts >\$150,000.

The contractor agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. part 661 and 2 CFR § 200.322. Domestic preferences for procurements, which provide

that Federal funds may not be obligated unless all steel, iron, and manufactured products used in FTA funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. § 661.7.

Construction materials used in the Project or Services are subject to the domestic preference requirement of the Build America, Buy America Act, Pub. L. 117-58, div. G, tit. IX, §§ 70911 – 70927 (2021), as implemented by the U.S. Office of Management and Budget, the U.S. Department of Transportation, and FTA. The Contractor acknowledges that this agreement is neither a waiver of § 70914(a) nor a finding under § 70914(b).

Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C), 49 U.S.C. § 5323(u) and 49 C.F.R. § 661.11.

The Contractor must submit to SMART the appropriate Buy America certification. Bids or offers that are not accompanied by a completed Buy America certification will be rejected as nonresponsive. For more information, please see the FTA's Buy America webpage at: <https://www.transit.dot.gov/buyamerica>.

5. Cargo Preference Requirements.

Applicability: All Rolling Stock Purchases, Materials & Supplies, and Construction Contracts which require transportation by ocean vessels.

The Contractor agrees to:

(a) to use privately owned United States flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to the underlying Agreement to the extent such vessels are available at fair and reasonable rates for United States flag commercial vessels;

(b) to furnish within 20 working days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in the preceding paragraph, to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590 and to the FTA or FEMA recipient (through the Contractor in the case of a subcontractor's bill-of-lading); and

(c) to include these requirements in all subcontracts issued pursuant to this Agreement when the subcontract may involve the transport of equipment, material, or commodities by ocean vessel.

6. Changes to Federal Requirements.

Applicability: All Contracts

Contractor shall at all times comply with all applicable FTA and FEMA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between the Sonoma-Marín Area Rail Transit District and FTA, or the Sonoma-Marín Area Rail Transit District and FEMA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

Applicable changes to those federal requirements will apply to each Third-Party Agreement and parties thereto at any tier.

7. Charter Service.

Applicability: All Operations & Management Contracts

The contractor agrees to comply with 49 U.S.C. 5323(d), 5323(r), and 49 C.F.R. part 604, which provides that Recipients and subrecipients of FTA assistance are prohibited from providing charter service using federally funded equipment or facilities if there is at least one private charter operator willing and able to provide the service, except as permitted under:

1. Federal transit laws, specifically 49 U.S.C. § 5323(d);
2. FTA regulations, "Charter Service," 49 C.F.R. part 604;
3. Any other federal Charter Service regulations; or
4. Federal guidance, except as FTA determines otherwise in writing.

The contractor agrees that if it engages in a pattern of violations of FTA's Charter Service regulations, FTA may require corrective measures or impose remedies on it. These corrective measures and remedies may include:

1. Barring it or any subcontractor operating public transportation under its Award that has provided prohibited charter service from receiving federal assistance from FTA;
2. Withholding an amount of federal assistance as provided by Appendix D to part 604 of FTA's Charter Service regulations; or
3. Any other appropriate remedy that may apply

The contractor should also include the substance of this clause in each subcontract that may involve operating public transit services.

8. Civil Rights.

Applicability: All Contracts

The following Federal Civil Rights laws and regulations apply to the Agreement:

1. **Federal Equal Employment Opportunity (EEO) Requirements.** These include, but are not limited to:
 - a) Nondiscrimination in Federal Public Transportation Programs. 49 U.S.C. § 5332, covering projects, programs, and activities financed under 49 U.S.C. Chapter 53, prohibits discrimination on the basis of race, color, religion, national origin, sex (including sexual orientation and gender identity), disability, or age, and prohibits discrimination in employment or business opportunity.
 - b) Prohibition against Employment Discrimination. Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000e, and Executive Order No. 11246, "Equal Employment Opportunity," September 24, 1965, as amended, prohibit discrimination in employment on the basis of race, color, religion, sex, or national origin.
2. **Nondiscrimination on the Basis of Sex.** Title IX of the Education Amendments of 1972, as amended, 20 U.S.C. § 1681 et seq. and implementing Federal regulations, "Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance," 49 C.F.R. part 25 prohibit discrimination on the basis of sex.
3. **Nondiscrimination on the Basis of Age.** The "Age Discrimination Act of 1975," as amended, 42 U.S.C. § 6101 et seq., and Department of Health and Human Services implementing regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 C.F.R. part 90, prohibit discrimination by participants in federally assisted programs against individuals on the basis of age. The Age Discrimination in Employment Act (ADEA), 29 U.S.C. § 621 et seq., and Equal Employment Opportunity Commission (EEOC) implementing regulations, "Age Discrimination in Employment Act," 29 C.F.R. part 1625, also prohibit employment discrimination against individuals age 40 and over on the basis of age.
4. **Federal Protections for Individuals with Disabilities.** The Americans with Disabilities Act of 1990, as amended (ADA), 42 U.S.C. § 12101 et seq., prohibits discrimination against qualified individuals with disabilities in programs, activities, and services, and imposes specific requirements on public and private entities. Third party contractors must comply with their responsibilities under Titles I, II, III, IV, and V of the ADA in employment, public services, public accommodations, telecommunications, and other provisions, many of which are subject to regulations issued by other Federal agencies.

Civil Rights and Equal Opportunity

The Sonoma-Marin Area Rail Transit District is an Equal Opportunity Employer. As such, SMART agrees to comply with all applicable Federal civil rights laws and implementing regulations. Apart from inconsistent requirements imposed by Federal laws or regulations, SMART agrees to comply with the requirements of 49 U.S.C. § 5323(h) (3) by not using any Federal assistance awarded by FTA or FEMA to support procurements using exclusionary or discriminatory specifications. Under this Contract, the Contractor shall at all times comply with the following requirements and shall include these requirements in each subcontract entered into as part thereof.

1. **Nondiscrimination.** In accordance with Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, disability, or age. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.
2. **Race, Color, Religion, National Origin, Sex.** In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e et seq., and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. chapter 60, and Executive Order No. 11246, "Equal Employment Opportunity in Federal Employment," September 24, 1965, 42 U.S.C. § 2000e note, as amended by any later Executive Order that amends or supersedes it, referenced in 42 U.S.C. § 2000e note. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, national origin, or sex (including sexual orientation and gender identity). Such action shall include, but not be limited to, the following: employment, promotion, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
3. **Age.** In accordance with the Age Discrimination in Employment Act, 29 U.S.C. §§ 621- 634, U.S. Equal Employment Opportunity Commission (U.S. EEOC) regulations, "Age Discrimination in Employment Act," 29 C.F.R. part 1625, the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6101 et seq., U.S. Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 C.F.R. part 90, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any Implementing requirements FTA or FEMA may issue.

4. **Disabilities.** In accordance with section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, the Americans with Disabilities Act of 1990, as amended, 42 U.S.C. § 12101 et seq., the Architectural Barriers Act of 1968, as amended, 42 U.S.C. § 4151 et seq., and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against individuals on the basis of disability. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
5. **Promoting Free Speech and Religious Liberty.** The Contractor shall ensure that Federal funding is expended in full accordance with the U.S. Constitution, Federal Law, and statutory and public policy requirements: including, but not limited to, those protecting free speech, religious liberty, public welfare, the environment, and prohibiting discrimination.

The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA or FEMA.

9. Clean Air Act and Federal Water Pollution Control Act

Applicability: All Contracts > \$150,000

The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. § 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. § 1251-1387). Violations must be reported to FTA, FEMA, and the Regional Office of the Environmental Protection Agency. The following applies for contracts of amounts in excess of \$150,000:

Clean Air Act

- a. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
- b. The contractor agrees to report each violation to SMART and understands and agrees that SMART will, in turn, report each violation as required to assure notification to the Agency, Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
- c. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FTA or FEMA.

Federal Water Pollution Control Act

- (1) The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
- (2) The contractor agrees to report each violation to SMART and understands and agrees that SMART will, in turn, report each violation as required to

assure notification to the Agency, Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

- (3) The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FTA or FEMA.

10. Contract Work Hours and Safety Standards Act.

Applicability: All Operations Management, Rolling Stock Purchases, and Construction Contracts >\$100,000.

- a. Where applicable (see 40 U.S.C. § 3701 et seq), all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by Department of Labor regulations at 29 C.F.R. Part 5. See 2 C.F.R. Part 200, Appendix II.
- b. Under 40 U.S.C. § 3702, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week.
- c. The requirements of 40 U.S.C. § 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

Compliance with the Contract Work Hours and Safety Standards Act.

- (1) Overtime requirements - No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty (40) hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half (1.5) times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek.
- (2) Violation; liability for unpaid wages; liquidated damages - In the event of any violation of the clause set forth in paragraph (1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in

violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty (40) hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

- (3) Withholding for unpaid wages and liquidated damages. SMART shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.
- (4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section."

11. Davis Bacon Act and Copeland Anti-Kickback Act

Applicability: All Construction Contracts > \$2,000

For all prime construction, alteration or repair contracts in excess of \$2,000 awarded by FTA or FEMA, the Contractor shall comply with the Davis-Bacon Act and the Copeland "Anti-Kickback" Act. Under 49 U.S.C. § 5333(a), prevailing wage protections apply to laborers and mechanics employed on FTA assisted construction, alteration, or repair projects. The Contractor will comply with the Davis-Bacon Act, 40 U.S.C. §§ 3141-3144, and 3146-3148 as supplemented by DOL regulations at 29 C.F.R. part 5, "Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction." In accordance with the statute, the Contractor shall pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, the Contractor agrees to pay wages not less than once a week. The Contractor shall also comply with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by DOL regulations at 29 C.F.R. part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in part by Loans or Grants from the United States." The Contractor is prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled.

12. Debarment and Suspension

Applicability: All Contracts > \$25,000

The Contractor shall comply and facilitate compliance with U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 C.F.R. part 1200, which adopts and supplements the U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," 2 C.F.R. part 180. These provisions apply to each contract at any tier of \$25,000 or more, and to each contract at any tier for a federally required audit (irrespective of the contract amount), and to each contract at any tier that must be approved by an FTA official irrespective of the contract amount. As such, the Contractor shall verify that its principals, affiliates, and subcontractors are eligible to participate in this federally funded contract and are not presently declared by any Federal department or agency to be:

- i. Debarred from participation in any federally assisted Award;
- ii. Suspended from participation in any federally assisted Award;
- iii. Proposed for debarment from participation in any federally assisted Award;
- iv. Declared ineligible to participate in any federally assisted Award;
- v. Voluntarily excluded from participation in any federally assisted Award; or
- vi. Disqualified from participation in any federally assisted Award.

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by SMART. If it is later determined by SMART that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to SMART, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. part 180, subpart C, as supplemented by 2 C.F.R. part 1200, while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

13. Energy Conservation.

Applicability: All Contracts

The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act. The Contractor agrees to perform an energy assessment for any building constructed, reconstructed, or modified with FTA or FEMA funds required under FTA regulations, "Requirements for Energy Assessments," 49 CFR part 622, subpart C or FEMA directives.

14. Fly America.

Applicability: All Contracts

a) Definitions. As used in this clause -

- 1) "International air transportation" means transportation by air between a place in the United States and a place outside the United States or between two places both of which are outside the United States.
- 2) "United States" means the 50 States, the District of Columbia, and outlying areas.
- 3) "U.S.-flag air carrier" means an air carrier holding a certificate under 49 U.S.C. Chapter 411.

b) When Federal funds are used to fund travel, Section 5 of the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. 40118) (Fly America Act) requires contractors, SMART, and others to use U.S.-flag air carriers for U.S. Government-financed international air transportation of personnel (and their personal effects) or property, to the extent that service by those carriers is available. It requires the Comptroller General of the United States, in the absence of satisfactory proof of the necessity for foreign-flag air transportation, to disallow expenditures from funds, appropriated or otherwise established for the account of the United States, for international air transportation secured aboard a foreign-flag air carrier if a U.S.-flag air carrier is available to provide such services.

c) If available, the Contractor, in performing work under this contract, shall use U.S.-flag carriers for international air transportation of personnel (and their personal effects) or property.

d) In the event that the Contractor selects a carrier other than a U.S.-flag air carrier for international air transportation, the Contractor shall include a statement on vouchers involving such transportation essentially as follows:

Statement of Unavailability of U.S.-Flag Air Carriers

International air transportation of persons (and their personal effects) or property by U.S.-flag air carrier was not available or it was necessary to use foreign-flag air carrier service for the following reasons. See FAR § 47.403.
[State reasons]:

e) Contractor shall include the substance of this clause, including this paragraph (e), in each subcontract.

15. Incorporation of Federal Transit Administration (FTA) Terms.

Applicability: All Contracts

The provisions within include, in part, certain Standard Terms and Conditions required under the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2 CFR § 200), whether or not expressly set forth in the preceding contract provisions. All contractual provisions required

by DOT, detailed in 2 CFR § 200 or as amended by 2 CFR § 1201, or the most recent version of FTA Circular 4220.1 are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Contract. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any request which would cause a violation of the FTA terms and conditions.

16. No Obligation by the Federal Government.

Applicability: All Contracts

The Sonoma-Marín Area Rail Transit District (SMART) and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying Contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this Contract and shall not be subject to any obligations or liabilities to the Recipient, Contractor or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying Contract. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by the FTA or FEMA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

17. Notice to FTA and U.S. DOT Inspector General of Information Related to Fraud, Waste, Abuse, or Other Legal Matters.

Applicability: All Contracts > \$25,000

If a current or prospective legal matter that may affect the Federal Government emerges, the Contractor must promptly notify the FTA Chief Counsel and FTA Regional Counsel for the Region in which the SMART is located. The Contractor must include a similar notification requirement in its subagreements at every tier, for any agreement that is a “covered transaction” according to 2 C.F.R. §§ 180.220 and 1200.220.

- (1) The types of legal matters that require notification include, but are not limited to, a major dispute, breach, default, litigation, or naming the Federal Government as a party to litigation or a legal disagreement in any forum for any reason.
- (2) Matters that may affect the Federal Government include, but are not limited to, the Federal Government’s interests in the Award, the accompanying Underlying Agreement, and any Amendments thereto, or the Federal Government’s administration or enforcement of federal laws, regulations, and requirements.
- (3) SMART must promptly notify the U.S. DOT Inspector General in addition to the FTA Chief Counsel or Regional Counsel for the Region in which SMART is located, if SMART has knowledge of potential fraud, waste, or abuse occurring on a Project or Service receiving assistance from FTA. The notification

provision applies if a person has or may have submitted a false claim under the False Claims Act, 31 U.S.C. § 3729 et seq., or has or may have committed a criminal or civil violation of law pertaining to such matters as fraud, conflict of interest, bribery, gratuity, or similar misconduct. This responsibility occurs whether the Project or Service is subject to this Agreement or another agreement between SMART and FTA, or an agreement involving a principal, officer, employee, agent, or Third Party Participant of SMART. It also applies to subcontractors at any tier. Knowledge, as used in this paragraph, includes, but is not limited to, knowledge of a criminal or civil investigation by a Federal, state, or local law enforcement or other investigative agency, a criminal indictment or civil complaint, or probable cause that could support a criminal indictment, or any other credible information in the possession of SMART.

18. Patent Rights and Rights in Data and Copyrights Requirements.

Applicability: All Research Project Contracts

Intellectual Property Rights

This Project is funded through a Federal award with FTA for experimental, developmental, or research work purposes. As such, certain Patent Rights and Data Rights apply to all subject data first produced in the performance of this Contract. The Contractor shall grant the Sonoma-Marín Area Rail Transit District intellectual property access and licenses deemed necessary for the work performed under this Contract and in accordance with the requirements of 37 C.F.R. part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by FTA or U.S. DOT.

The terms of an intellectual property agreement and software license rights will be finalized prior to execution of this Contract and shall, at a minimum, include the following restrictions:

Except for its own internal use, the Contractor may not publish or reproduce subject data in whole or in part, or in any manner or form, nor may the Contractor authorize others to do so, without the written consent of FTA, until such time as FTA may have either released or approved the release of such data to the public. This restriction on publication, however, does not apply to any contract with an academic institution.

For purposes of this Contract, the term "subject data" means recorded information whether or not copyrighted, and that is delivered or specified to be delivered as required by the Contract. Examples of "subject data" include, but are not limited to computer software, standards, specifications, engineering drawings and associated lists, process sheets, manuals, technical reports, catalog item identifications, and related information, but do not include financial reports, cost analyses, or other similar information used for performance or administration of the Contract.

1. The Federal Government reserves a royalty-free, non-exclusive and irrevocable license to reproduce, publish, or otherwise use, and to authorize others to use for "Federal Government Purposes," any subject data or copyright described below. For "Federal Government Purposes," means use only for the direct purposes of the Federal Government. Without the copyright owner's consent, the Federal Government may not extend its Federal license to any other party.
 - a. Any subject data developed under the Contract, whether or not a copyright has been obtained; and
 - b. Any rights of copyright purchased by the Contractor using Federal assistance in whole or in part by the FTA.
2. Unless FTA determines otherwise, the Contractor performing experimental, developmental, or research work required as part of this Contract agrees to permit FTA to make available to the public, either FTA's license in the copyright to any subject data developed in the course of the Contract, or a copy of the subject data first produced under the Contract for which a copyright has not been obtained. If the experimental, developmental, or research work, which is the subject of this Contract, is not completed for any reason whatsoever, all data developed under the Contract shall become subject data as defined herein and shall be delivered as the Federal Government may direct.
3. Unless prohibited by state law, upon request by the Federal Government, the Contractor agrees to indemnify, save, and hold harmless the Federal Government, its officers, agents, and employees acting within the scope of their official duties against any liability, including costs and expenses, resulting from any willful or intentional violation by the Contractor of proprietary rights, copyrights, or right of privacy, arising out of the publication, translation, reproduction, delivery, use, or disposition of any data furnished under that contract. The Contractor shall be required to indemnify the Federal Government for any such liability arising out of the wrongful act of any employee, official, or agents of the Federal Government.
4. Nothing contained in this clause on rights in data shall imply a license to the Federal Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Federal Government under any patent.
5. Data developed by the Contractor and financed entirely without using Federal assistance provided by the Federal Government that has been incorporated into work required by the underlying Contract is exempt from the requirements herein, provided that the Contractor identifies those data in writing at the time of delivery of the Contract work.
6. The Contractor agrees to include these requirements in each subcontract for experimental, developmental, or research work financed in whole or in part with Federal assistance.

19. Program Fraud and False or Fraudulent Statements and Related Acts

Applicability: All Contracts

The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. part 31, apply to its actions pertaining to this Project or Service. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.

The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. chapter 53, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5323(l) on the Contractor, to the extent the Federal Government deems appropriate.

The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

20. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment.

Applicability: All Contracts

- a) SMART, Contractors, and Subcontractors are prohibited from obligating or expending loan or grant funds to:
 - 1) Procure or obtain;
 - 2) Extend or renew a contract to procure or obtain; or
 - 3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
- (ii) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other

- national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
- (iii) Telecommunications or video surveillance services provided by such entities or using such equipment.
 - (iv) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.
- b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.
- c) See Public Law 115-232, section 889 for additional information.
- d) See also § 200.471.

21. Prompt Payment.

Applicability: All Public Works Contracts

The contractor shall promptly pay any and all subcontractor invoices by an instrument that guarantees availability of funds immediately upon deposit of said instrument. The Prime Contractor is required to pay subcontractors for satisfactory performance of their contracts no later than (7) seven days from receipt of payment by SMART. *California Business and Professions Code §7108.5*

If the Contractor determines the work of the subcontractors to be unsatisfactory, the Contractor must immediately notify in writing the SMART project manager, with a separate notice to the DBELO if the subcontractor is a DBE and state the reasons. Failure by the Contractor to comply with this requirement will be construed to be a breach of the contract and may be subject to sanctions as specified in the contract.

The Prime Contractor must pay retainage to the subcontractor within (30) thirty days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by SMART. Should SMART make incremental acceptance of a portion of a prime contract, the work of the subcontractor covered by that acceptance is deemed to be satisfactorily completed.

Prime contractors shall provide proof of subcontractor payment to SMART for the previous payment period.

22. Public Transportation Employee Protective Arrangements

Applicability: All Transit Operations Contracts

The Contractor agrees to comply with the following employee protective arrangements of 49 U.S.C. § 5333(b):

1. U.S. DOL Certification. Under this Contract or any Amendments thereto that involve public transportation operations that are supported with federal assistance, a certification issued by U.S. DOL is a condition of the Contract.
2. Special Warranty. When the Contract involves public transportation operations and is supported with federal assistance appropriated or made available for 49 U.S.C. § 5311, U.S. DOL will provide a Special Warranty for its Award, including its Award of federal assistance under the Tribal Transit Program. The U.S. DOL Special Warranty is a condition of the Contract.
3. Special Arrangements. The conditions of 49 U.S.C. § 5333(b) do not apply to Contractors providing public transportation operations pursuant to 49 U.S.C. § 5310. FTA reserves the right to make case-by-case determinations of the applicability of 49 U.S.C. § 5333(b) for all transfers of funding authorized under title 23, United States Code (flex funds), and make other exceptions as it deems appropriate, and, in those instances, any special arrangements required by FTA will be incorporated herein as required.

23. Restrictions on Lobbying

Applicability: All Contracts > \$100,000

Conditions on use of funds.

- (a) No appropriated funds may be expended by the recipient of a Federal contract, grant, loan, or cooperative agreement to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (b) Each person who requests or receives from an agency a Federal contract, grant, loan, or cooperative agreement shall file with that agency a certification, that the person has not made, and will not make, any payment prohibited by paragraph (a) of this section.

- (c) Each person who requests or receives from an agency a Federal contract, grant, loan, or a cooperative agreement shall file with that agency a disclosure form if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under paragraph (a) of this section if paid for with appropriated funds.
- (d) Each person who requests or receives from an agency a commitment providing for the United States to insure or guarantee a loan shall file with that agency a statement, whether that person has made or has agreed to make any payment to influence or attempt to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with that loan insurance or guarantee.
- (e) Each person who requests or receives from an agency a commitment providing for the United States to insure or guarantee a loan shall file with that agency a disclosure form if that person has made or has agreed to make any payment to influence or attempt to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with that loan insurance or guarantee.

Certification and disclosure.

(a) Each person shall file a certification, and a disclosure form, if required, with each submission that initiates agency consideration of such person for:

- (1) Award of a Federal contract, grant, or cooperative agreement exceeding \$100,000; or
- (2) An award of a Federal loan or a commitment providing for the United States to insure or guarantee a loan exceeding \$150,000.

(b) Each person shall file a certification, and a disclosure form, if required, upon receipt by such person of:

- (1) A Federal contract, grant, or cooperative agreement exceeding \$100,000; or
- (2) A Federal loan or a commitment providing for the United States to insure or guarantee a loan exceeding \$150,000, Unless such person previously filed a certification, and a disclosure form, if required, under paragraph (a) of this section.

(c) Each person shall file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under paragraphs (a) or (b) of this section. An event that materially affects the accuracy of the information reported includes:

- (1) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(2) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or,

(3) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(d) Any person who requests or receives from a person referred to in paragraphs (a) or (b) of this section:

- (1) A subcontract exceeding \$100,000 at any tier under a Federal contract;
- (2) A subgrant, contract, or subcontract exceeding \$100,000 at any tier under a Federal grant;
- (3) A contract or subcontract exceeding \$100,000 at any tier under a Federal loan exceeding \$150,000; or,
- (4) A contract or subcontract exceeding \$100,000 at any tier under a Federal cooperative agreement, Shall file a certification, and a disclosure form, if required, to the next tier above.

(e) All disclosure forms, but not certifications, shall be forwarded from tier to tier until received by the person referred to in paragraphs (a) or (b) of this section. That person shall forward all disclosure forms to the agency.

(f) Any certification or disclosure form filed under paragraph (e) of this section shall be treated as a material representation of fact upon which all receiving tiers shall rely. All liability arising from an erroneous representation shall be borne solely by the tier filing that representation and shall not be shared by any tier to which the erroneous representation is forwarded. Submitting an erroneous certification or disclosure constitutes a failure to file the required certification or disclosure, respectively. If a person fails to file a required certification or disclosure, the United States may pursue all available remedies, including those authorized by section 1352, title 31, U.S. Code.

(g) For awards and commitments in process prior to December 23, 1989, but not made before that date, certifications shall be required at award or commitment, covering activities occurring between December 23, 1989, and the date of award or commitment. However, for awards and commitments in process prior to the December 23, 1989 effective date of these provisions, but not made before December 23, 1989, disclosure forms shall not be required at time of award or commitment but shall be filed within 30 days.

(h) No reporting is required for an activity paid for with appropriated funds if that activity is allowable under either subpart B or C.

24. Safe Operation of Motor Vehicles.

Applicability: All Contracts

Seat Belt Use

The Contractor is encouraged to adopt and promote on-the-job seat belt use policies and programs for its employees and other personnel that operate company-owned vehicles, company rented vehicles, or personally operated vehicles. The terms "company-owned" and "company-leased" refer to vehicles

owned or leased either by the Contractor or SMART.

Distracted Driving

The Contractor agrees to adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers, including policies to ban text messaging while using an electronic device supplied by an employer, and driving a vehicle the driver owns or rents, a vehicle Contractor owns, leases, or rents, or a privately-owned vehicle when on official business in connection with the work performed under this Contract.

25. Seismic Safety.

Applicability: All A&E and Construction Contracts

The contractor agrees that any new building or addition to an existing building will be designed and constructed in accordance with the standards for Seismic Safety required in Department of Updated February 2024 Transportation (DOT) Seismic Safety Regulations 49 C.F.R. part 41 and will certify to compliance to the extent required by the regulation. The contractor also agrees to ensure that all work performed under this contract, including work performed by a subcontractor, is in compliance with the standards required by the Seismic Safety regulations and the certification of compliance issued on the project.

26. Simplified Acquisition Threshold

Applicability: All Contracts > \$350,000

Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. § 1908, or otherwise set by law, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. (Note that the simplified acquisition threshold determines the procurement procedures that must be employed pursuant to 2 C.F.R. §§ 200.317–200.327. The simplified acquisition threshold does not exempt a procurement from other eligibility or processes requirements that may apply. For example, Buy America's eligibility and process requirements apply to any procurement in excess of \$150,000. 49 U.S.C. § 5323(j)(13).)

27. Solid Wastes (Recovered Materials).

Applicability: All Contracts > \$10,000

The Contractor agrees to comply with all the requirements of Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. 6962), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in Subpart B of 40 CFR Part 247. The Contractor agrees to comply with the U.S. Environmental Protection Agency (US EPA), "Comprehensive Procurement Guideline for

Products Containing Recovered Materials”, 40 CFR Part 247.

28. Special DOL EEO Clause

Applicability: All Construction Contracts > \$10,000

The contractor and subcontractor shall abide by the requirements of 41 CFR 60-1.4(a), 60-300.5(a) and 60- 741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals with disabilities, and to treat qualified individuals without discrimination on the basis of their physical or mental disability in all employment practices.

29. Drug and Alcohol Testing

Applicability: All Transit Operations Service Contracts

The Contractor agrees to establish and implement a drug and alcohol testing program that complies with 49 C.F.R. part 655, produce any documentation necessary to establish its compliance with part 655, and permit any authorized representative of the United States Department of Transportation or its operating administrations, the State Oversight Agency, or the Sonoma-Marín Area Rail Transit District, to inspect the facilities and records associated with the implementation of the drug and alcohol testing program as required under 49 C.F.R. part 655 and review the testing process. The Contractor agrees further to certify annually its compliance with part 655 before June 30 and to submit the Management Information System (MIS) reports to the Sonoma-Marín Area Rail Transit District. To certify compliance the Contractor shall use the “Substance Abuse Certifications” in the “Annual List of Certifications and Assurances for Federal Transit Administration Grants and Cooperative Agreements”, which is published annually in the Federal Registrar.

30. Termination.

Applicability: All Contracts > \$10,000

In addition to the Termination provisions contained in the Agreement, the following Termination provisions apply.

(a) Termination for Convenience. SMART may terminate this Agreement, in whole or in part, at any time by written notice to the Contractor when it is in SMART’s best interest. The Contractor shall be paid its costs, including Agreement close-out costs, and profit on work performed up to the time of termination. The Contractor shall promptly submit its termination claim to SMART to be paid the Contractor. If the Contractor has any property in its possession belonging to SMART, the Contractor will account for the same, and dispose of it in the manner SMART directs.

(b) Termination for Default [Breach or Cause]. If the Contractor does not deliver supplies in accordance with the Agreement delivery schedule, or, if the Agreement is for services, the Contractor fails to perform in the manner called for in the contract, or if the Contractor fails to comply with any other provisions of the contract, SMART may terminate this Agreement for default. Termination shall be effected by serving a Notice of Termination on the Contractor setting forth the manner in which the Contractor is in default. The Contractor will only be paid the Contract price for supplies delivered and accepted, or services performed in accordance with the manner of performance set forth in the contract. If it is later determined by SMART that the Contractor had an excusable reason for not performing, such as a strike, fire, or flood, events which are not the fault of or are beyond the control of the Contractor, then SMART, after setting up a new delivery of performance schedule, may allow the Contractor to continue work, or treat the termination as a Termination for Convenience.

(c) Opportunity to Cure. SMART in its sole discretion may, in the case of a termination for breach or default, allow the Contractor up to ten (10) calendar days in which to cure the defect. In such case, the notice of termination will state the time period in which cure is permitted and other appropriate conditions.

If Contractor fails to remedy to SMART's satisfaction the breach or default of any of the terms, covenants, or conditions of this Agreement within ten (10) calendar days after receipt by Contractor of written notice from SMART setting forth the nature of said breach or default, SMART shall have the right to terminate the Agreement without any further obligation to Contractor. Any such termination for default shall not in any way operate to preclude SMART from also pursuing all available remedies against Contractor and its sureties for said breach or default.

(d) Waiver of Remedies for any Breach. In the event that SMART elects to waive its remedies for any breach by Contractor of any covenant, term or condition of this Agreement, such waiver by SMART shall not limit SMART's remedies for any succeeding breach of that or of any other term, covenant, or condition of this Agreement.

(e) Termination for Default (Construction) If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will ensure its completion within the time specified in this contract or any extension or fails to complete the work within this time, or if the Contractor fails to comply with any other provision of this contract, SMART may terminate this contract for default. SMART shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of the default. In this event, SMART may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to SMART resulting from the Contractor's refusal or failure to complete the work within specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by SMART in completing the work.

The Contractor's right to proceed shall not be terminated nor shall the Contractor be charged with damages under this clause if:

1. The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include: acts of God, acts of another contractor in the performance of a contract with SMART, epidemics, quarantine restrictions, strikes, freight embargoes; and
2. The Contractor, within [10] days from the beginning of any delay, notifies SMART in writing of the causes of delay. If, in the judgment of SMART, the delay is excusable, the time for completing the work shall be extended. The judgment of SMART shall be final and conclusive for the parties, but subject to appeal under the Disputes clause(s) of this contract.
3. If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of SMART.

If, after serving a Notice of Termination for Default, SMART determines that the Contractor has an excusable reason for not performing, SMART, after setting up a new work schedule, may allow the Contractor to continue work, or treat the termination as a Termination for Convenience.

31. Veterans Hiring Preference.

Applicability: All Construction Contracts

Veterans Employment - Construction contracts of Federal financial assistance shall ensure that contractors working on a capital project funded using such assistance give a hiring preference, to the extent practicable, to veterans (as defined in section 2108 of title 5) who have the requisite skills and abilities to perform the construction work required under the contract. This subsection shall not be understood, construed or enforced in any manner that would require an employer to give a preference to any veteran over any equally qualified applicant who is a member of any racial or ethnic minority, female, an individual with a disability, or a former employee.

32. Violation and Breach of Contract.

Applicability: All Contracts

Rights and Remedies of SMART

The duties and obligations imposed by the Agreement and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by SMART or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

Rights and Remedies of Contractor

Inasmuch as the Contractor can be adequately compensated by money damages for any breach of this Contract, which may be committed by SMART, the Contractor expressly agrees that no default, act or omission of SMART shall constitute a material breach of this Contract, entitling Contractor to cancel or rescind the Contract (unless SMART directs Contractor to do so) or to suspend or abandon performance.

Remedies

Unless this Agreement provides otherwise, all claims, counterclaims, disputes and other matters in question between SMART and the Contractor arising out of or relating to this Agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within California.

Disputes

Disputes arising in the performance of this Agreement which are not resolved by agreement of the parties shall be decided in writing by SMART's General Manager. This decision shall be final and conclusive unless within ten (10) days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the General Manager. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the General Manager shall be binding upon the Contractor and the Contractor shall abide by the decision.

Performance during Dispute

Unless otherwise directed by SMART, Contractor shall continue performance under this Contract while matters in dispute are being resolved.

Claims for Damages

Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the party or of any of its employees, agents or others for whose acts it is legally liable, a claim for damages therefor shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

33. Conformance with National ITS Architecture

Applicability: All ITS Contracts

Intelligent Transportation Systems (ITS) projects shall conform to the National ITS Architecture and standards pursuant to 23 CFR § 940. Conformance with the National ITS Architecture is interpreted to mean the use of the National ITS Architecture to develop a regional ITS architecture in support of integration and the subsequent adherence of all ITS projects to that regional ITS architecture. Development of the regional ITS architecture should be consistent with the transportation planning process for Statewide and Metropolitan Transportation Planning (49 CFR Part 613 and 621).

34. Federal Tax Liability and Recent Felony Convictions

Applicability: All Contracts

(1) The contractor certifies that it:

- (a) Does not have any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability; and
- (b) Was not convicted of the felony criminal violation under any Federal law within the preceding 24 months. If the contractor cannot so certify, SMART will refer the matter to FTA or FEMA as applicable and not enter into any Third Party Agreement with the Third Party Participant without FTA's or FEMA's written approval.

(2) Flow-Down. The Contractor shall flow this requirement down to subcontractors at all lower tiers, without regard to the value of any subagreement.

35. Severability

Applicability: All Contracts

The Contractor agrees that if any provision of this Agreement or any amendment thereto is determined to be invalid, then the remaining provisions thereof that conform to federal laws, regulations, requirements, and guidance will continue in effect.

36. Trafficking in Persons

Applicability: All Contracts

The contractor agrees that it and its employees that participate in this contract, may not:

- (a) Engage in severe forms of trafficking in persons during the period of time that the contract is in effect;
- (b) Procure a commercial sex act during the period of time that the contract is in effect; or
- (c) Use forced labor in the performance of the contract or subagreements thereunder.

37. Geographic Restrictions.

Applicability: All Contracts

Contractor shall refrain from using state or local geographic preferences, except those expressly mandated or encouraged by Federal statute.

38. Metric System.

Applicability: All Contracts

To the extent required by U.S. DOT or FTA, Contractor shall use the metric system of measurement in its project activities pursuant to the Metric Conversion Act, as amended by the Omnibus Trade and Competitiveness Act, 15 U.S.C. 205a et seq.; Executive Order No 12770 "Metric Usage in Federal Government Programs, 15 U.S.C. § 205a note; and other regulations, guidelines, and policies issued by U.S. DOT or FTA. To the extent practicable and feasible, SMART agrees to accept products and services with dimensions expressed in the metric system of measurement.

39. Environmental Protection.

Applicability: All Contracts

Contractor shall comply with the following requirements:

(a) Contractor shall comply with all applicable requirements of the National Environmental Policy Act of 1969, as amended, 42 U.S.C. §§ 4321 *et seq.* consistent with Executive Order. No. 11514, as amended, "Protection and Enhancement of Environmental Quality," 42 U.S.C. § 4321 note; PTA statutory requirements on environmental matters at 49 U.S.C. § 5324(b); Council on Environmental Quality regulations on compliance with the National Environmental Policy Act of 1969, as amended, 40 C.F.R. Part 1500 *et seq.*; and joint FHWA/FTA regulations, "Environmental impact and Related Procedures," 23 C.F.R. Part 771 and 49 C.F.R. Part 622.

(b) Contractor shall comply with all Federal transit laws, such as 49 U.S.C. §5323(c)(2) and 23 U.S.C. §139, as applicable.

(c) Contractor shall report and require each subcontractor at any tier to report any violation of these requirements resulting from any Contract activity of Contractor or subcontractor to FTA, FEMA, and the appropriate U.S. EPA Regional Office.

40. Privacy Act.

Applicability: All Contracts

Contractor agrees to comply with and assures the compliance of its employees with the information restrictions and other applicable requirements of the Privacy Act of 1974, 5 U.S.C § 552. Among other things, the Contractor agrees to obtain the express consent of the Federal Government before the Contractor or its employees operate a system of records on behalf of the Federal Government before the Contractor or its employees operate a system of records on behalf of the Federal Government. Contractor understands that the requirements of the Privacy Act, including civil and criminal penalties for violation of the Act, apply to those individuals involved, and that failure to comply with the terms of the Privacy Act may result in termination of the underlying contract.

41. Transit Vehicle Manufacturer (TVM) Certifications

Applicability: All Rolling Stock Contracts

49 CFR 26.49 – Contractor must submit to SMART a certification from each transit vehicle manufacture that desires to bid or propose upon a DOT-assisted transit vehicle procurement that it has complied with the requirements of 49 CFR 26.49. SMART may, however, with FTA approval, establish project-specific goals for DBE participation in the procurement of transit vehicles in lieu of complying through the overall goal setting procedures.

42. Rights to Inventions Made Under a Contract or Agreement.

Applicability: All Research and Development Contracts

Contractor agrees to comply with the requirements of 37 C.F.R. §401.2(a), “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms under Government Grants, Contracts and Cooperative Agreements” and any implementing regulations issued by SMART.

43. Domestic Preferences for Procurements

Applicability: All Contracts

Contractor shall make every effort to provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). This section must be included in all subcontracts.

For the purposes of this section:

- 1) “Produced in the United States” means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
- 2) “Manufactured products” means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

44. DHS Seal, Logo, and Flags.

Applicability: All Contracts

The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FTA or FEMA pre-approval when applicable.

45. Whistleblower Protections

Applicability: All Contracts

An employee of the Contractor or Subcontractor must not be discharged, demoted, or otherwise discriminated against as a reprisal for disclosing to a person or body described in paragraph (a)(2) of 41 U.S.C. 4712 information that the employee reasonably believes is evidence of gross mismanagement of a Federal contract or grant, a gross waste of Federal funds, an abuse of authority relating to a Federal contract or grant, a substantial and specific danger to public health or safety, or a violation of law, rule, or regulation related to a Federal contract (including the competition for or negotiation of a contract) or grant. The Contractor and their subcontractors must inform their employees in writing of employee whistleblower rights and protections under 41 U.S.C. 4712. See statutory requirements for whistleblower protections at 10 U.S.C. 4701, 41 U.S.C. 4712, 41 U.S.C. 4304, and 10 U.S.C. 4310.

46. Small and Minority Businesses, Women's Business Enterprises

Applicability: All Contracts

When possible, the Contractor should ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are considered in accordance with 2 C.F.R. § 200.321.

Such considerations include:

- Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- Assuring that such businesses are solicited whenever they are potential sources;
- Dividing total requirements into smaller tasks or quantities to permit maximum participation;
- Establishing delivery schedules to encourage participation;
- Using the services and assistance of organizations such as SBA and the Minority Business Development Agency.
- Requiring the Contractor under a Federal award to apply this section to subcontracts.



EXHIBIT C

FEDERAL WAGE DETERMINATION

**ST. VINCENT'S REINFORCED CONCRETE BOX CULVERT
(RBC) REINFORCED FILL (ML MP 22.18 & 22.28)**

ON FILE WITH CLERK OF THE BOARD



INVITATION FOR BID

FOR

**ST. VINCENT'S REINFORCED CONCRETE BOX CULVERT
(RBC) REINFORCED FILL (ML MP 22.18 & 22.28)**

ON FILE WITH CLERK OF THE BOARD



ATTACHMENT B GENERAL CONDITIONS

for the

**ST. VINCENT'S REINFORCED CONCRETE BOX CULVERT
(RBC) REINFORCED FILL (ML MP 22.18 & 22.28)**

CONTRACT NO. CV-BB-26-004

ON FILE WITH CLERK OF THE BOARD



SONOMA-MARIN AREA RAIL TRANSIT DISTRICT

ATTACHMENT C

GENERAL REQUIREMENTS

**ST. VINCENT'S REINFORCED CONCRETE BOX
CULVERT (RBC) REINFORCED FILL (ML MP 22.18 &
22.28)**

CONTRACT NO. CV-BB-26-004

ON FILE WITH CLERK OF THE BOARD



SONOMA - MARIN AREA RAIL TRANSIT
DISTRICT

ATTACHMENT D
PLANS & TECHNICAL SPECIFICATIONS

ST. VINCENT'S REINFORCED
CONCRETE BOX CULVERT (RBC)
REINFORCED FILL (ML MP 22.18 & 22.28)

CONTRACT NO. CV-BB-26-004

(THIS PAGE IS LEFT INTENTIONALLY BLANK)

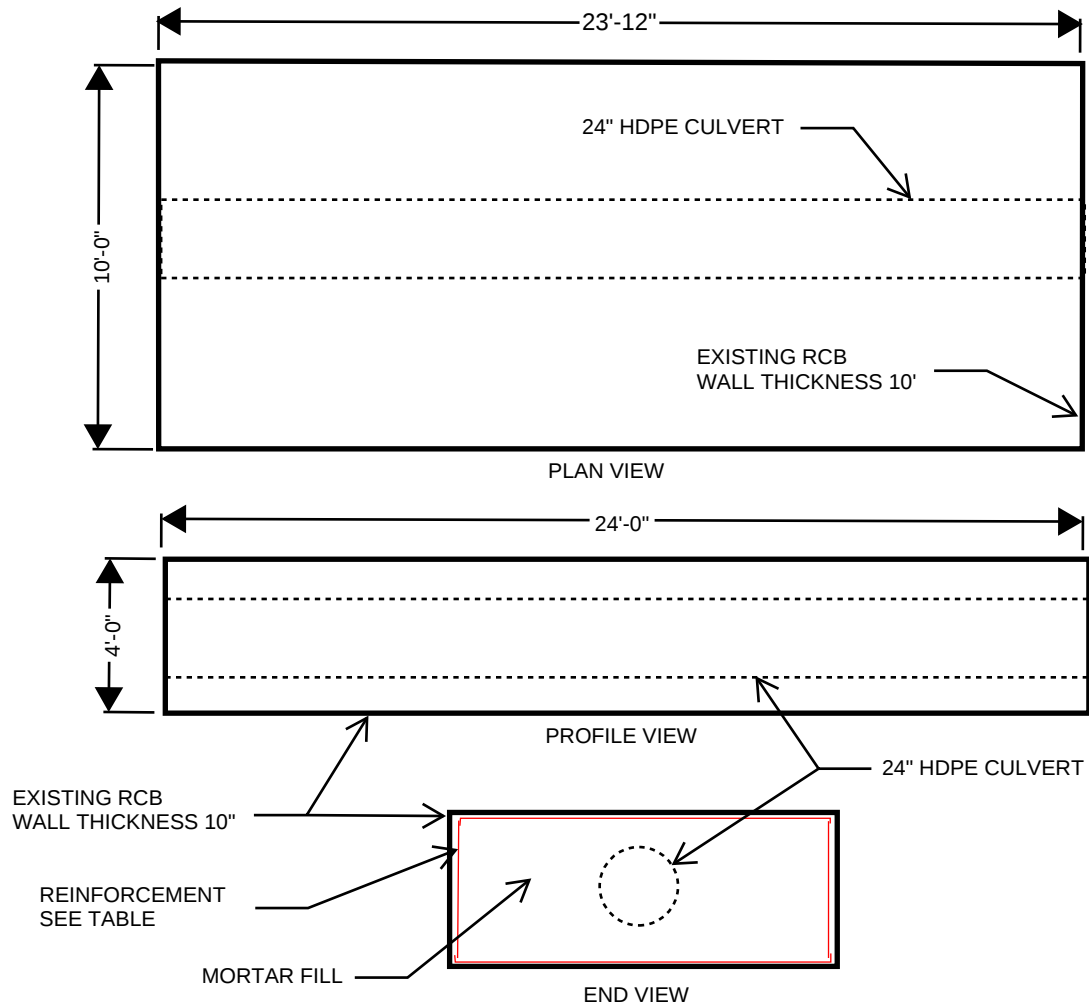
Table of Contents

SECTION 03 11 00 CONCRETE FORMING

SECTION 03 15 00 CONCRETE ACCESSORIES

SECTION 03 20 00 CONCRETE REINFORCING

SECTION 03 61 11 NON-SHRINK GROUT



REINFORCEMENT

- 2" TO 3" CLEAR ALL AROUND (DOBIES UNDER)
- 1' OVERLAP MIN. AT ALL REBAR JOINS
- #9 VERTICAL BARS MAY BE USED TO SUPPORT CENTER OF TOP MAT IF NECESSARY TO PREVENT SAGGING (NOT INCLUDED IN MATERIALS QUANTITY ESTIMATE)

TOP MAT: #9 @ 12" BOTH WAYS
 BOTTOM MAT: #5 @ 12" BOTH WAYS
 VERTICAL: #4 @ 12" VERTICAL ONLY

FORMWORK AND FILL

- TOTAL OF FOUR (4) RCB's TO BE FILLED
- TIMBER FORMWORK AS NEEDED AT RCB ENDS TO ALLOW MORTAR TO COMPLETELY FILL RCB
- CONCRETE ANCHORS INTO RCB TO SUPPORT FORMWORK IS ALLOWABLE
- CORE HOLES IN EXPOSED TOP OF RCB TO ALLOW PUMPING OF MORTAR IS ALLOWABLE. HOLES SHALL BE FILLED
- VOIDS, IF ANY, AT ENDS SHALL BE PATCHED AFTER FORM REMOVAL

MATERIALS TABLE

Estimated quantities - Contractor shall verify quantities with their own take-offs

Description	Unit	Quantity
Grout	CY	131
Double Wall HDPE:	LF	96
#4 Rebar:	Lbs	737
#5 Rebar:	Lbs	2,194
#9 Rebar:	Lbs	7,154
Dobies:	As Needed	
Tie Wire:	As Needed	
Forming Timbers:	As Needed	

SPECIFICATIONS

03 11 00 CONCRETE FORMING
 03 15 00 CONCRETE ACCESSORIES
 03 20 00 CONCRETE REINFORCING
 03 61 11 NON-SHRINK GROUT

SMART - RCB REPAIR
MP22.18 & MP22.28
JANUARY 2026

SECTION 03 11 00

CONCRETE FORMING

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes:

1. Transport, labor, materials, and equipment to design, install, and remove formwork, including screeds, and related work for cast-in-place concrete.
2. Setting in forms, anchor bolts, metal inserts, sleeves, etc., embedded in concrete.
3. Miscellaneous concrete work, including but not limited to areaways, cast-in-place valve boxes, pits, splash blocks, equipment bases, and other items as shown or required to complete the work.

1.02 REFERENCES

A. ACI: American Concrete Institute:

1. ACI 117, Specifications for Tolerances for Concrete Construction and Materials.
2. ACI 347, Guide to Formwork for Concrete.
3. ACI 318, Building Code Requirements for Structural Concrete.

B. SSPWC: Standard Specifications for Public Works Construction.

C. AREMA: American Railway Engineering and Maintenance of Way Association.

D. CPUC: California Public Utilities Commission, General Orders 26-D and 118.

E. CBC: California Building Code (CCR Title 24 Part 2).

1.03 SUBMITTALS – NOT USED

1.04 QUALITY ASSURANCE

A. Quality Assurance:

1. Construct forms according to ACI 347 and conforming to tolerances specified in ACI 301, as applicable, unless exceeded by code requirements or otherwise indicated or specified.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials for forms in timely manner to ensure uninterrupted progress.
- B. Store materials by methods that prevent damage and permit ready access for inspection and identification.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Except for metal forms, use all new material. Non-metal materials may be reused provided they are completely cleaned and reconditioned, re-coated for each use, and are still capable of producing concrete work of required quality.

2.02 FORM MATERIAL

- A. Form Lumber: WCLIB Construction grade or better, WWPA No. 1 or better, or equal. Use dimensions as required to support required loads, but not less than 2 inch x 4 inch.
- B. Form Plywood: PS 1, Group I, Exterior Grade B-B plyform or better, minimum 5-ply and $\frac{3}{4}$ inch thick for exposed locations grade marked, not mill oiled. Plywood having medium or high density overlay is acceptable.
- C. Coated Form Plywood: For exposed architectural concrete, plastic overlaid plywood of grade specified above, factory coated with a form coating and release agent.
- D. Form Ties: Prefabricated rod, flat band, wire, internally threaded disconnecting type, or equal, not leaving metal within 1 inch of concrete surface.
- E. Form Coating: Non-staining clear coating free from oil, silicone, wax, not grain-raising. Where form liners are used, provide form coatings recommended by form liner manufacturer.
- F. Form Liner: Rigid or resilient, types as shown on the drawings for the patterns indicated, matching approved sample.
- G. Chamfer Strips: Clear white pine with planes surface against concrete.

PART 3 - EXECUTION

3.01 FORMWORK

- A. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces.
- B. Kerf wood inserts for forming keyways, reglets, recesses, and the like, to prevent swelling and assure ease of removal.

- C. Provide for openings, offsets, keyways, recesses, moldings, reglets, chamfers, blocking, screeds, bulkheads, anchorages, inserts, and other features as required.
- D. Form ties shall be of the removable-end, permanently embedded body type and shall have sufficient strength and rigidity to support and maintain the form in proper position and alignment without the use of auxiliary spreaders.
- E. Formwork shall not be braced against track that will be used for the passing of trains.
- F. Formwork including all bracing shall not impair the railroad track clearances specified by CPUC.
- G. Conform to ACI 301 and ACI 347 except as exceeded by the requirements of Code, regulatory agencies, or specifications. Formwork tolerances shall conform to ACI 117.
- H. At station platforms make provision for expansion joints at all re-entrant corners and at a maximum of 20 feet in each direction.
- I. Corners and Angles: Provide 3/4 inch by 3/4 inch beveled chamfer strips for all exposed concrete corners and angles unless otherwise indicated. Form concealed concrete corners and angles square unless otherwise indicated.
- J. Reglets and Rebates: Form required reglets and rebates to receive frames, flashing, and other equipment. Obtain required dimensions, details, and precise positions for work to be installed under other sections and form concrete accordingly.
- K. Form Joints: Fill joints to produce smooth surfaces and intersections. Use polymer foam or equivalent fillers at joints and where forms abut or overlap existing concrete to prevent leakage of mortar.
- L. Recesses, Drips, and Profiles: Provide smooth milled wood or preformed rubber or plastic shapes of types shown and required.
- M. Cleanouts and Cleaning: Provide temporary openings in all wall forms and other vertical forms for cleaning and inspection. Clean forms and surfaces to receive concrete prior to placing.
- N. Re-Use: Clean and recondition form material before re-use.

3.02 FORM CONSTRUCTION

- A. Notify Quality Manager one full working day prior to concrete placement, so that the forms can be inspected. Contractor shall correct any defective work found in Quality Manager's inspection, prior to delivery of concrete to the project. Formwork surfaces that were in good condition and accepted for use, but were damaged during removal and handling, shall not be reused on additional pours.

- B. Forms shall be braced or tied to maintain the desired position, shape, and alignment during and after concrete placement.
- C. Form panels on each side of the panel joint shall be precisely aligned, by means of supports or fasteners common to both panels, to result in a continuous unbroken concrete plane surface.
- D. Forms shall be brought to a true line and grade, or a wooden guide strip shall be provided at the proper location on the forms so that the top surface can be finished with a screed or template for concrete which is to be finished to a specified elevation, slope, or contour.
- E. Support form materials by structural members spaced sufficiently close to prevent deflection. Undulations exceeding either 3/32 inch or 1/270 of the center-to-center distance between studs, joists, form stiffeners, form fasteners, or wales are unacceptable and will be rejected by Quality Manager. Formwork tolerances shall not exceed the limits in ACI 117.
- F. Provide formwork sufficiently tight to prevent leakage of cement paste during concrete placement. Solidly butt joints and provide backup material at joints as required to prevent leakage and fins.
- G. Accurately place and securely support items to be built into the concrete.
- H. Sides of all footings and grade beams shall be formed, unless permission is obtained to place concrete directly against earth. Where this permission is granted, the footing or grade beam dimension shall be increased by 3 inches. Remove formwork prior to backfilling operations.
- I. Should any form or forming system, even though previously approved for use, produce a concrete surface with unacceptable undulations, its use shall be discontinued until modifications satisfactory to Quality Manager have been made.

3.03 FORM COATINGS

- A. Coat form contact surfaces with form coating material before reinforcement is placed.
- B. Do not allow excess form coating to accumulate in the forms or to come in contact with surfaces that will bond to fresh concrete.
- C. Apply form coating in strict accordance with the manufacturer's written recommendations.

3.04 CONCRETE PLACEMENT

- A. The rate of deposition of concrete in forms shall be controlled to prevent deflections of the forms or form panels in excess of the deflections permitted by these specifications.

3.05 REMOVAL OF FORMS

- A. Take care in removing forms to avoid surface gouging, corner or edge breakage, and other damage to the concrete.
- B. Solidly pack form tie holes, rod holes, and similar holes in the concrete as specified in Section 03 30 00, Cast-In-Place Concrete.
- C. Remove forms in accordance with SSPWC Section 303-1.4.
- D. Do not remove concrete forms until concrete attains sufficient strength to support its own weight and all superimposed loads as determine by testing field cured concrete cylinders, but not sooner than specified in ACI 347, paragraph 3.7.
- E. Store reusable forms for exposed architectural concrete to prevent damage to contact surfaces.

3.06 FORMWORK TOLERANCES

- A. Deflection: Limit deflection of forming surfaces from concrete pressure to L/240.
- B. Finish Lines of Concrete: Position formwork to maintain hardened concrete finish lines within following permissible deviations.
 - 1. Variation from Plumb:

a.	In 10 feet	1/4 inch
b.	In 20 feet	3/8 inch
c.	In 40 feet or more	3/4 inch
 - 2. Variation from Level or Grades Indicated

a.	In 10 feet	1/4 inch
b.	In 20 feet	3/8 inch
c.	In 40 feet or more	3/4 inch
 - 3. Cross-Sectional Dimensions

a.	Minus	1/4 inch
b.	Plus	1/2 inch

- C. Slab Openings: Variations in size and location of sleeves and slab openings shall not exceed 1/4 inch.
- D. Station Platforms: The platform edge facing the track shall be formed and built to the following tolerances:
 - 1. Vertical edge of the platform shall be constructed at 5'-7" from design track centerline, with horizontal tolerance of 1/4" +/-.
 - 2. Top surface of the platform shall be constructed at 4'-0" above design top of rail with a vertical tolerance of +0 / -1/4".

3.07 SURVEY AND ADJUSTMENT

- A. Check forms before and during placement of concrete using an instrument and make corrections as work proceeds.

3.08 EMBEDDED PIPING AND ROUGH HARDWARE

- A. Where work of other sections require openings for passage of pipes, conduits, and other inserts in the concrete, obtain all dimensions and other information from installer of same. All necessary pipe sleeves, anchors, or other required inserts shall be accurately installed as part of the work of other sections, according to following requirements.
- B. Conduits or Pipes: Locate so as not to reduce strength of concrete. In no case place pipes, other than conduits, in a slab 4-1/2 inches thick or less. Conduit buried in a concrete slab shall not have an outside diameter greater than 1/3 the slab thickness nor be placed below the bottom reinforcing steel or over top reinforcing steel.
- C. Sleeves: Pipe sleeves may pass through slabs or walls if not exposed to rusting or other deterioration and are of uncoated or galvanized iron or steel. Provide sleeves of diameter large enough to pass any hub or coupling on pipe, including any insulation.
- D. Conduits: Conduits may be embedded in walls only if the outside diameter does not exceed 1/3 the wall thickness, are spaced no closer than 3 diameters on centers, and do not impair the strength of the structure.

3.09 FIELD QUALITY CONTROL

- A. Inspection: Obtain inspection and approval of forms from Quality Manager before placing concrete.

END OF SECTION

SECTION 03 15 00
CONCRETE ACCESSORIES

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Joint fillers.
- B. Joint sealing compound.
- C. Elastomeric joint seals.
- D. Plastic pads, spacers, and fillers.

1.02 RELATED SECTIONS

- A. Waterstops are specified in Section 03 15 13 - Waterstops.
- B. Elastomeric bearing pads are specified in Section 03 15 15 - Elastomeric Bearing Pads.
- C. Elastomeric noise abatement seals at trackway acoustical barriers are specified in Section 03 40 00 - Precast Concrete.
- D. Metal stair nosings, armor protection for concrete edges, metal anchors, inserts, sleeves, and various metal accessories related to cast-in-place concrete work are specified in Section 05 50 00 - Metal Fabrications.
- E. Expansion and seismic control joints are specified in Section 07 95 00 - Expansion Control.
- F. Calking and sealants related to the sealing of openings in walls and weatherproofing of station structures are specified in Section 07 90 00 - Joint Protection.

1.03 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. ASTM C272 Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions
 - 2. ASTM C578 Specification for Rigid, Cellular Polystyrene Thermal Insulation
 - 3. ASTM C920 Specification for Elastomeric Joint Sealant

- | | | |
|-----|------------|--|
| 4. | ASTM D994 | Specification for Preformed Expansion Joint Filler for (Bituminous Type) |
| 5. | ASTM D1190 | Specification for Concrete Joint Sealer, Hot-Applied Elastic Type |
| 6. | ASTM D1621 | Test Method for Compressive Properties of Rigid Cellular Plastics |
| 7. | ASTM D1622 | Test Method for Apparent Density of Rigid Cellular Plastics |
| 8. | ASTM D1751 | Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types) |
| 9. | ASTM D2628 | Specification for Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements |
| 10. | ASTM D3405 | Specification for Joint Sealants, Hot-Applied, for Concrete and Asphalt Pavements |
| 11. | ASTM D3406 | Specification for Joint Sealant, Hot-Applied, Elastomeric-Type, for Portland Cement Concrete Pavements |
| 12. | ASTM D3542 | Specification for Preformed Polychloroprene Elastomeric Joint Seals for Bridges |
| 13. | ASTM E84 | Test Method for Surface Burning Characteristics of Building Materials |

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

1. Manual for Railway Engineering

1.04 SUBMITTALS

- A. General: Refer to Section 01 33 00 - Submittal Procedures, and Section 01 33 23 - Shop Drawings, Product Data, and Samples, for submittal requirements and procedures.
- B. Shop Drawings: Submit drawings showing locations of all joints to be filled and sealed.
- C. Product Data: Submit manufacturers' product data of joint fillers, sealing compounds, elastomeric joint seals, and plastic materials, verifying compliance with specified requirements.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Joint Filler: Premolded, of sizes and thickness indicate, conforming to ASTM D994 or ASTM D1751, as applicable.

1. For structural joints and joints subject to movement, provide elastomeric joint seals conforming to ASTM D2628 or ASTM D3542, as applicable.

- B. Joint Sealing Compound: Concrete joint sealant, conforming to ASTM C920 (Type S or M, Class 25, Use T), ASTM D1190, ASTM D3405, or ASTM D3406, as applicable, for sealing of expansion (isolation) and contraction (control) joints in slabs and at junctions of slabs and vertical surfaces.

Color of joint sealant shall be as selected by the Engineer from manufacturer's standards.

1. For asphalt pavements, provide ASTM D3405 sealant only. For concrete pavements and roadways, provide ASTM C920 or ASTM D3406 sealant.

- C. Elastomeric Joint Seals: Preformed solid or multi-web design, virgin crystalization-resistant polychloroprene (neoprene) conforming with ASTM D2628 or ASTM D3542, as applicable. Seals shall be designed to function in a compressed installation mode.

1. Lubricant Adhesive: ASTM D2628 or ASTM D3542, as applicable.

- D. Plastic Pads, Spacers, and Fillers: Extruded closed-cell polystyrene rigid board meeting requirements of ASTM C578, Type V, with the following physical properties:

1. Minimum weight and density when tested in accordance with ASTM D1622: 3.0 pounds per cubic foot.
2. Minimum compressive strength when tested in accordance with ASTM D1621: 100 pounds per square inch.
3. Maximum water absorption when tested in accordance with ASTM C272: 0.10 percent by volume.
4. Maximum allowable flame spread when tested in accordance with ASTM E84: 10 flame- spread index (UBC Class I).

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that joint surfaces are dry to the extent necessary for successful sealant application as recommended by the sealant manufacturer.

- B. Verify also that ambient and concrete-surface temperatures and humidity are within the ranges recommended by the manufacturer for successful sealant application.

3.02 PREPARATION

- A. Thoroughly clean joints free of dirt, debris, dust, and laitance.
- B. Prime joint surfaces, where required, as recommended by the manufacturer of the joint sealing compound or elastomeric joint seal, as applicable.
- C. Mix multi-component sealing compound as recommended by the manufacturer.

3.03 INSTALLATION

- A. Installation/Application Requirements: Joint fillers and sealing compounds shall be installed in accordance with the respective manufacturers' installation and application instructions. Comply also with ASTM D1190, ASTM D3405, Appendix XI., and ASTM D3406, Appendix XL, for application of sealants, as applicable. Coordinate the placement of joint fillers and securing them in position with the work of Section 03 11 00 - Concrete Formwork.
- B. Expansion (Isolation) Joints:
 - 1. Provide premolded joint filler to full depth of slabs, less 1/2 inch. Install joint filler with top edge 1/2 inch below the surface, and tool adjacent concrete edges to a 1/4-inch radius. Use steel pins to hold material in place during placing and floating of concrete. Finished joints shall be tight and leakproof.
 - 2. After a minimum of 28 days after slabs have been placed and finished, fill expansion joints with joint sealing compound to 1/8 inch below surface of slabs. No traffic shall be permitted to travel over sealed joints until sealing compound has properly cured.
- C. Contraction (Control) Joints: Saw-cut contraction joints and weakened plane joints shall be filled with joint sealing compound in areas and locations indicated. Joints shall be filled and tooled flush to within 1/16 inch of the slab surface.
- D. Roadway and Bridge: Provide elastomeric joint seals as applicable to the conditions. Install as indicated and in accordance with the manufacturer's installation instructions and recommendations.
- E. Plastic Pads, Spacers, and Fillers: Install as indicated over or against clean surfaces. Apply adhesive where required to hold material in place.

END OF SECTION

SECTION 03 20 00

CONCRETE REINFORCING

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section specifies the labor, materials, and equipment necessary and incidental to placing reinforcing bars and mesh for cast-in-place concrete and masonry. It also specifies miscellaneous concrete work, including but not limited to areaways, cast-in-place valve boxes, pits, splash blocks, equipment bases, and other items as shown or required to complete the work as indicated in the Contract Drawings.

1.02 REFERENCES

- A. Reference Standards:
 - 1. American Concrete Institute (ACI):
 - a. ACI 301, Specifications for Structural Concrete.
 - b. ACI 318, Building Code Requirements for Structural Concrete.
 - c. ACI SP-66, ACI Detailing Manual.
 - 2. ASTM International (ASTM):
 - 3. American Welding Society (AWS):
 - a. AWS D1.4, Structural Welding Code—Reinforcing Steel.
 - 4. California Department of Transportation (Caltrans): Standard Specifications Section 52, Reinforcement.
 - 5. American Railway Engineering and Maintenance-of-Way Association (AREMA)
 - a. Manual for Railway Engineering.

1.03 SUBMITTALS

- A. General
 - 1. Submittals shall be made in accordance with Section 01 33 00 included in the General Requirements.
- B. Plans and Procedures:

1. Plan, procedures, and materials for anchoring reinforcing bars into existing concrete.
- C. Certificates:
 1. Manufacturer or supplier's certification that products meet specified requirements.
 2. Welding operator's certificate.
- D. Product Data and Shop Drawings:
 1. Shop Drawings indicating bar sizes, spacing, locations, and quantities of reinforcing steel and wire fabric, bending and cutting schedules, supporting and spacing devices, and lengths of any lap splices.
 2. Product data for mechanical couplers.
 3. Product data for epoxy bonding adhesive.

1.04 QUALITY ASSURANCE

- A. Quality Assurance
 1. Perform work in accordance with ACI 301, ACI SP-66, ACI 318, and Caltrans Standard Specifications.
 2. Employ certified welding operators for all welding both in shop and in field if welding rebar is required.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in a timely manner to ensure uninterrupted progress.
- B. Store materials by methods that permit ready access for inspection and identification.
- C. Bundle bars, tag with identification, and transport and store so as not to damage any material. Use tags indicating size, length, and other marking shown on placement drawings. Maintain tags after bundles are broken.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Reinforcing Steel: ASTM A615 or ASTM A706, Grade 60, for structural concrete.
- B. Spiral Reinforcement: ASTM A82.

- C. Mechanical Couplers: Sleeve-threaded per Caltrans Standard Specifications Section 52 - 1.08C(2).
- D. Magnesium Phosphate Concrete: Conform to Caltrans Standard Specifications Section 51-1.02C.
- E. Welded Wire Fabric: ASTM A185, furnished in sheets only.
- F. Welding Electrodes: AWS D1.4, Table 5.1 and 5.5 low hydrogen electrodes, E9018 for Grade 60 steel, E70XX Series for grade 40 steel.

2.02 ACCESSORY MATERIALS

- A. Tie Wire: ASTM A82, annealed copper-bearing steel, minimum 0.0625 inch (16 gauge) uncoated diameter.
- B. Tie Wire shall be galvanized only if indicated in the Drawings.
- C. Chairs and Similar Support Items:
 - 1. Standard manufactured products conforming to CRSI Manual of Standard Practice.
 - 2. Use dense precast concrete supports with embedded wire ties for reinforcement placed on grade. Elsewhere, use wire bar supports.
 - 3. Items in contact with formed surfaces shall not have the potential of staining concrete surfaces exposed to view.

2.03 FABRICATION

- A. Comply with CRSI Manual of Standard Practice for fabrication of reinforcing steel.
- B. Fabricate bars of the indicated sizes and bend and form to required shapes and lengths by methods not injurious to materials. Do not heat reinforcement for bending. Bend bars No. 6 size and larger in the shop only. Bars with unscheduled kinks or bends are subject to rejection. Use only tested and approved bar materials.
- C. Use only ASTM A706 steel where welding is proposed. Perform welding, where shown or approved, by the direct electric arc process in accordance with AWS D1.4 using specified low-hydrogen electrodes. Preheat 6 inches each side of joint. Protect joints from drafts during the cooling process; accelerated cooling is prohibited. Do not tack weld bars. Clean metal surfaces to be welded of all loose scale and foreign material. Clean welds each time electrode is changed and chip burned edges before placing welds.

1. When wire brushed, the completed welds must exhibit uniform section, smooth welded metal, feather edges without undercuts or overlays, freedom from porosity and clinkers, and good fusion and penetration into the base metal. Cut out welds or parts of welds found defective with chisel and replace with proper welding. Prequalification of welds shall be in accordance with Code.

PART 3 - EXECUTION

3.01 PLACEMENT

- A. Coordinate with placement of formwork, formed openings, and other work.
- B. Install mechanical couplers in accordance with manufacturer's instructions.
- C. Place, support, and secure reinforcement against displacement. Do not deviate from required position. Spot welding of chairs or other items to reinforcing steel is not permitted.
- D. Provide additional reinforcing bars at wall and slab openings as detailed. Before placing bars, and again before concrete is placed, clean bars of loose mill scale, oil, or any other coating that might destroy or reduce bond.
- E. Drill, install, and bond reinforcing steel dowels into existing concrete as indicated on the drawings, in accordance with Caltrans Standard Specifications Section 52 using the approved magnesium phosphate concrete (not mortar) and in accordance with the approved plan, procedures, and materials.
- F. Maintain concrete cover around reinforcing as indicated on drawings.
- G. Accurately place bars and wire tie in precise position where bars cross. Bend ends of wire ties away from the forms. Wire tie bars to corners of ties and stirrups. Support bars according to CRSI's Placing Reinforcing Bars using approved accessories and chairs. Place precast concrete cubes with embedded wire ties to support reinforcing steel bars in concrete placed on grade and in footings. Use care not to damage vapor barriers where they occur.
- H. Provide stainless steel or exterior quality vinyl plastic tipped chairs, bolsters, and accessories where exposed on exterior or interior concrete surfaces not to be painted or permanently covered.
- I. Do not splice reinforcing bars at the points of maximum stress except where indicated. Lap splices as shown or required to develop the full strength or stress of bars. Stagger splices in horizontal wall bars at least 48 inches longitudinally in alternate bars and opposite faces.
- J. Field weld bars only where specified for fabrication.
- K. Take adequate precautions to assure that reinforcing position and spacing is maintained during placement of concrete.

- L. Lap one full mesh plus 2 inches, but not less than 6 inches. At splices, wire tie, and support the same as specified for bars.

3.02 FIELD QUALITY CONTROL

- A. Quality Manager will perform field inspections under Section 01 45 00 included in the General Requirements. Reinforcement shall be placed in accordance with the approved detailed shop drawings.
 - 1. Obtain inspection and approval of reinforcing before concrete is placed.
 - 2. Whether welding is done in the shop or at the site, perform welding of reinforcing bars under inspection of the testing laboratory welding inspector retained by the Contractor.

END OF SECTION

SECTION 03 61 11

NON-SHRINK GROUT

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Cementitious Grout
- B. Epoxy Grout
- C. Epoxy Adhesive

1.02 RELATED SECTIONS

- A. Masonry grout for filling cells of unit masonry is specified in Section 04 22 00 - Concrete Unit Masonry.
- B. Grout for filling and finishing joints of ceramic tile and cut stone is specified in applicable sections under Division 9 - Finishes.

1.03 DEFINITION

- A. For the purpose of these Specifications, "non-shrink grout" shall be defined as a high-strength mortar or grout which does not shrink in the plastic state, is dimensionally stable in the hardened state, and bonds permanently to a clean metal baseplate and concrete substrate.

1.04 REFERENCES

- A. American Concrete Institute (ACI):
 - 1. ACI 503.2 Specification for Bonding Plastic Concrete to Hardened Concrete with a Multi-Component Epoxy Adhesive
- B. American Society for Testing and Materials (ASTM):
 - 1. ASTM C109 Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or 50-mm Cube Specimens)
 - 2. ASTM C157 Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete
 - 3. ASTM C579 Test Methods for Compressive Strength of Chemical Resistant Mortars, Grouts, Monolithic Surfacing and Polymer Concretes

- | | | |
|----|------------|--|
| 4. | ASTM C827 | Test Method for Change in Height at Early Ages of Cylindrical Specimens from Cementitious Mixtures |
| 5. | ASTM C881 | Specification for Epoxy-Resin-Base Bonding Systems for Concrete |
| 6. | ASTM C1090 | Test Method for Measuring Changes in Height of Cylindrical Specimens from Hydraulic-Cement Grout |
| 7. | ASTM C1107 | Specification for Packaged Dry, Hydraulic-Cement Grout (Non-shrinkable) |
- C. U. S. Army Corps of Engineers, Concrete Research Division (CRD):
- | | | |
|----|----------|---|
| 1. | CRD-C620 | Standard Method of Sampling Fresh Grout |
| 2. | CRD-C621 | Non-shrink Grout |

1.05 SUBMITTALS

- A. General: Refer to Section 01 33 00 - Submittal Procedures, and Section 01 33 23 - Shop Drawings, Product Data, and Samples, for submittal requirements and procedures.
- B. Product Data: Submit manufacturer's product data and installation instructions.
- C. Certification: Submit certificates of compliance or laboratory test reports which indicate the following:
- | | |
|----|---|
| 1. | Materials used in the grout are free from metallic components and corrosion-producing elements. |
| 2. | Materials meet specified shrinkage and compressive strength requirements. |

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Handle grout the same as concrete with regard to temperature and curing, as specified in Section 03 30 00 - Cast-In-Place Concrete and Section 03 35 00 - Concrete Finishing.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Cementitious Grout: Provide non-shrink, non-metallic, non-corrosive cement-based grout conforming to the following requirements:

1. Applicable Standards: ASTM C1107 and CRD-C621.
 2. Grout shall be manufactured specifically for use in supporting heavy loads (loads in excess of 300 pounds per square foot concentrated load or 100 pounds per square foot uniform load). Grout: ASTM C1107, Grade A, B, or C, as appropriate for the condition or circumstance.
 3. Shrinkage at 28 days: No shrinkage before hardening (0.00 shrinkage when tested in accordance with ASTM C827); no shrinkage after hardening (0.00 shrinkage when tested in accordance with CRD-C621).
 4. Compressive strength, minimum:
 - a. At one day: 1000 psi
 - b. At three days: 2500 psi
 - c. At seven days: 3500 psi
 - d. At 28 days: 5000 psi
 5. Initial setting time, after addition of water: approximately one hour at 70 degrees F.
 6. Provide nonsag trowelability or flowability as necessary for the particular application.
- B. Water: Clean and potable, free of impurities detrimental to grout.
- C. Epoxy Grout: Provide non-shrink, non-metallic, non-corrosive epoxy grout conforming to the following requirements:
1. Grout shall be manufactured specifically for use in supporting heavy loads.
 2. Shrinkage at 28 days: None (0.00 shrinkage when tested in accordance with ASTM C827 modified procedure) with a minimum effective bearing area (EBA) of 95 percent coverage of the tested base plate.
 3. Compressive strength, minimum: 10,000 psi at seven days, when tested in accordance with ASTM C579.
 4. Initial setting time: Approximately one hour at 70 degrees F.
 5. Provide flowable consistency as necessary for the particular application.
 6. Epoxy grouts which are volatile and which give off noxious fumes are not acceptable.
- D. Epoxy Adhesive: ASTM C881, Type V, epoxy-based bonding agent.

2.02 MIXING

- A. Mix grout ingredients for both cementitious grout and epoxy grout in accordance with the respective manufacturer's mixing instructions and recommendations. Mix grout materials in proper mechanical mixers.
- B. Mix grout as close to work area as possible.

2.03 SOURCE QUALITY CONTROL

- A. Inspections and Tests: Perform visual inspections and shrinkage tests using an appropriate independent testing laboratory, and strength tests as necessary to verify performance requirements of grout. Sampling and testing of grout shall conform with applicable ASTM or CRD-C620 requirements.
- B. Visual Inspections: Perform visual inspection of the grout mixing and placement to determine and verify that grout consistency, slump, and stiffness are appropriate and proper for the location and type of installation.
- C. Shrinkage Tests:
 - 1. Cementitious Grout: Grout shall meet the following performance requirements:
 - a. Expansion: 0.4 percent maximum at 3, 14, and 28 days. Grout shall exhibit no displacement when tested in accordance with ASTM C157.
 - b. Shrinkage: None (0.00 shrinkage at 28 days when tested in accordance with ASTM C827 and ASTM C1090). There shall be no vertical volume shrinkage of grout in the plastic or hardened stage at any time.
 - 2. Epoxy Grout: Grout shall meet the following performance requirements:
 - a. Expansion: Grout shall exhibit no displacement when tested in accordance with ASTM C827 and ASTM C157, modified procedures.
 - b. Shrinkage: None (0.00 shrinkage when tested in accordance with ASTM C827, modified procedure; specific gravity of indicator ball will be changed to approximately 1.0).
 - c. Effective Bearing Area: 95 percent minimum coverage of the tested base plate.
- D. Strength Tests: Compressive strength of grout shall meet the following requirements:

1. Cementitious Grout: 5,000 psi minimum at 28 days when tested in accordance with ASTM C109.
2. Epoxy Grout: 10,000 psi minimum at 7 days when tested in accordance with ASTM C579.

PART 3 – EXECUTION

3.01 SURFACE PREPARATION

- A. Concrete surfaces to receive grout shall be prepared by chipping, sandblasting, water blasting, or other accepted methods to remove defective concrete, laitance, dirt, oil, grease, and other foreign matter to achieve sound, clean concrete surfaces. Lightly roughen concrete for bond, but not enough to interfere with proper placement of grout.
- B. Cover concrete areas with protective waterproof covering until ready to place grout.
- C. Remove foreign matter from steel surfaces to be in contact with grout. Clean contact steel surfaces as necessary by wire brushing and wiping dust clean.
- D. Align and level components to be grouted, and maintain in final position until grout placement is complete and accepted.
- E. Install forms for grout around the column base plates and other spaces to be grouted. The tops of such forms shall be one inch above the surfaces to be grouted.
- F. Remove protective waterproof covering and clean contaminated surfaces immediately before grouting.
- G. Provide air-relief holes in large baseplates and in baseplates where underneath obstructions may cause air entrapment.
- H. Saturate concrete surfaces with clean water, and remove excess water immediately before grouting.
- I. Where necessary or appropriate for better bond, epoxy adhesive may be applied to clean, dry substrate surfaces in accordance with applicable requirements of ACI 503.2.

3.02 PLACING GROUT

- A. Place grout in accordance with the respective manufacturer's installation instructions and recommendations. Pour grout from one side only until grout rises at least one inch above the plate on opposite side of said plate. Strapping and plunging or other recommended method may be used to force grout to flow under the entire area.

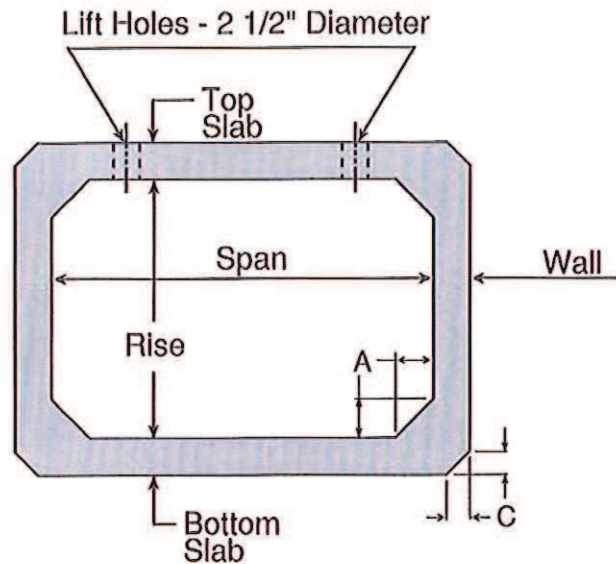
- B. Neatly trowel edges of grout base, tapered at an angle of 60 degrees when measured from the horizontal, or as indicated. Provide dry-pack cementitious grout where additional grout is required for shoulders.
- C. Do not remove leveling shims for at least 48 hours after grout has been placed.
- D. After shims have been removed, if used, fill voids with grout, packing the material with a suitable tool.
- E. Do not use grout which has begun to set or if more than one hour has elapsed after initial mixing.

3.03 CURING

- A. Cementitious grout shall be cured the same as specified for concrete in Section 03 35 00 - Concrete Finishing.
- B. Epoxy grout shall be cured as recommended by the grout manufacturer.

END OF SECTION

Precast Box Culverts



Typical Section

Standard Box Dimensions					
Span (Ft.)	Rise (Ft.)	Top Slab (In.)	Bottom Slab (In.)	Wall (In.)	Weight (Lbs./ft.)
3	2	7	6	4	848
3	3	7	6	4	952
4	2	7 1/2	6	5	1146
4	3	7 1/2	6	5	1276
4	4	7 1/2	6	5	1405
5	2	8	7	6	1541
5	3	8	7	6	1696
5	4	8	7	6	1851
5	5	8	7	6	2006
6	2	8	7	7	1821
6	3	8	7	7	2002
6	4	8	7	7	2183
6	5	8	7	7	2364
6	6	8	7	7	2545
7	2	8	8	8	2238
7	3	8	8	8	2446
7	4	8	8	8	2652
7	5	8	8	8	2859
7	6	8	8	8	3066
7	7	8	8	8	3272

Standard Box Dimensions					
Span (Ft.)	Rise (Ft.)	Top Slab (In.)	Bottom Slab (In.)	Wall (In.)	Weight (Lbs./ft.)
8	3	8	8	8	2652
8	4	8	8	8	2859
8	5	8	8	8	3066
8	6	8	8	8	3272
8	7	8	8	8	3479
8	8	8	8	8	3686
9	4	9	9	9	3511
9	5	9	9	9	3744
9	6	9	9	9	3976
9	7	9	9	9	4209
9	8	9	9	9	4441
9	9	9	9	9	4674
10	4	10	10	10	4228
10	5	10	10	10	4486
10	6	10	10	10	4745
10	7	10	10	10	5003
10	8	10	10	10	5261
10	9	10	10	10	5520
10	10	10	10	10	5778

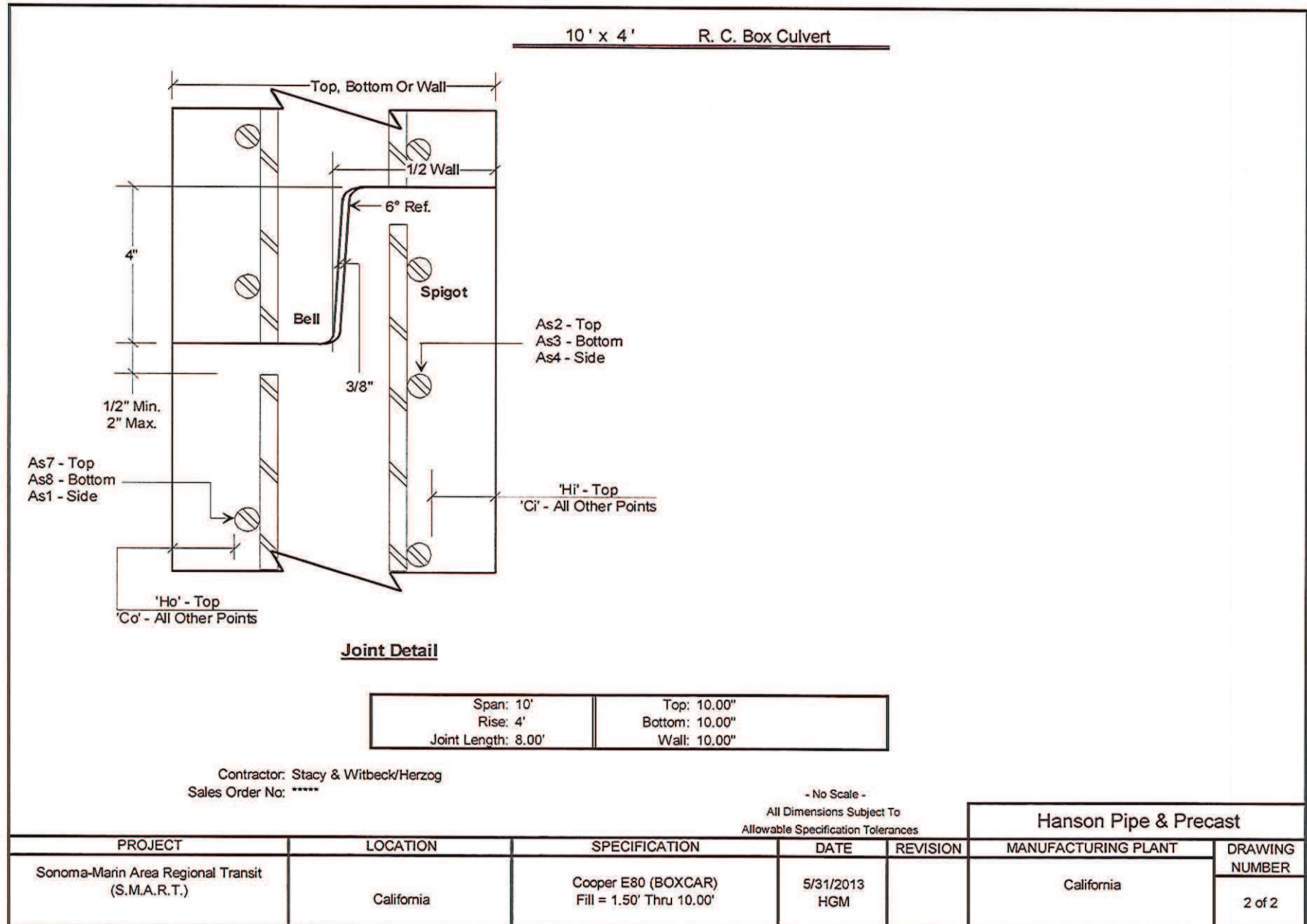
Standard Box Dimensions					
Span (Ft.)	Rise (Ft.)	Top Slab (In.)	Bottom Slab (In.)	Wall (In.)	Weight (Lbs./ft.)
11	4	11	11	11	5010
11	5	11	11	11	5294
11	6	11	11	11	5578
11	7	11	11	11	5862
11	8	11	11	11	6146
11	9	11	11	11	6430
11	10	11	11	11	6715
11	11	11	11	11	6999
12	4	12	12	12	5856
12	5	12	12	12	6166
12	6	12	12	12	6476
12	7	12	12	12	6786
12	8	12	12	12	7096
12	9	12	12	12	7406
12	10	12	12	12	7716
12	11	12	12	12	8026
12	12	12	12	12	8336

Note:

- A = Wall thickness
- C = 2" for 4", 5" and 6" wall
- C = 4" for 7" and greater wall
- Contact manufacturer for standard joint lengths.

-No Scale-
All dimensions subject to allowable specification tolerances.

TITLE	PLANT	STATE	SECTION, PAGE	DATE	
Reinforced Concrete Precast Box Section	Grand Prairie Houston	TX	4.1	08-15-06	



INVITATION FOR BIDS
FOR
ST. VINCENT'S REINFORCED CONCRETE BOX CULVERT (RBC)
REINFORCED FILL (ML MP 22.18 & 22.28)

SOLICITATION NO. CV-BB-26-004

ADDENDUM NO. 1, 2 & 3

ISSUED June 16, 2026

ON FILE WITH CLERK OF THE BOARD