



INVITATION FOR BID

SUBJECT: RIVERSIDE AT BEALE STREET BRIDGE REPAIR & RIVERFRONT
LOOP GRADE CROSSING REPAIR

DATE: MAY 24, 2023

INVITATION NO.: 23-11-2

BID DUE: July 6, 2023 **TIME:** 11:00 a.m. C.S.T.

The Memphis Area Transit Authority invites bids for supplies and/or services set forth above in accordance with the specifications enclosed herewith.

Bids **MUST** be received at MATA by the date and time set forth above.

Sincerely,
Ashley Best
Ashley Best
Contract Administrator

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MEMPHIS AREA TRANSIT AUTHORITY

LEGAL NOTICE TO BIDDERS

Bids will be received by the Memphis Area Transit Authority (MATA) at its Purchasing offices, 1330 Levee Road, Memphis, TN, 38108, **until 11:00 a.m. local time, on Thursday, July 6, 2023**, and opened and read aloud at that time for furnishing the following:

**RIVERSIDE AT BEALE STREET BRIDGE REPAIR &
RIVERFRONT LOOP GRADE CROSSING REPAIR**

Bidders must submit their bid with the enclosed label attached to the envelope.

A Pre-Bid Conference will be held at **10:00 a.m. on Tuesday, May 30, 2023**, at MATA's Trolley Division, 547 N. Main Street, Memphis, TN 38105. All parties interested in bidding on this project are hereby invited and urged to attend this meeting. A walkthrough will take place immediately after the pre-bid meeting.

MATA hereby notifies all Bidders that in regard to any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this advertisement and will not be discriminated against on the grounds of race, color, sex, religion, political affiliation or national origin in consideration of an award.

Any name appearing on the Comptroller General's list of ineligible contractors is not an eligible bidder. The contractor will be required to comply with all applicable Equal Employment Laws and Regulations.

Further information and bid requirements may be obtained by contacting Ashley Best, Contract Administrator at (901) 722-7182 or via email: abest@matatransit.com or Shelia Maclin, Manager of Purchasing, (901) 722-7102 or via email: smaclin@matatransit.com.

Award of the contract will be made on the basis of the Lowest Responsive and Responsible bidder as selected by the Authority, provided it is in their best interest to do so.

MATA reserves the right to reject any and all bids, and to waive any informality in bidding.

May 24, 2023 & July 4-5, 2023

Gary Rosenfeld
Chief Executive Officer

SECTION A
INFORMATION FOR BIDDERS

INFORMATION FOR BIDDERS

1. PROJECT DESCRIPTION

The Memphis Area Transit Authority (hereinafter referred to as MATA) seeks sealed BIDS from qualified firms to provide construction services for **Riverside at Beale Street Bridge Repair**.

These instructions provide detailed legal and technical requirements for procurement of construction services.

MATA is a public agency responsible for providing public transportation services within the City of Memphis and surrounding communities.

2. RECEIPT AND OPENING OF BIDS

MATA invites bids on the forms attached hereto. All blanks must be appropriately filled in. BIDS will be received at the office of MATA's Purchasing Department, Memphis, Area Transit Authority, 1330 Levee Road, Memphis, TN 38108, until 11:00 a.m., **THURSDAY, JULY 6, 2023**, and opened and read aloud. **BIDS received after 11:00 a.m. will be returned to the BIDDER unopened.**

Each bid must be submitted in a sealed envelope bearing on the outside the following information in accordance with Section 62-6-119 of the State of Tennessee Contractor's License Law and Rules and Regulations, 1997 edition.

- a) Name of Project:
- b) Contractor's Name:
- c) Contractor's Address:
- d) Contractor's License Number, expiration date, and that part of the classification applying to the bid. This information shall also be provided for the contractor applying to the bid for electrical, plumbing or heating, ventilation and air conditioning work.

MATA will supply red and white Bid/Proposal label, which must be attached to the exterior of the bid envelope. It is necessary for each BIDDER to provide evidence of a license in the appropriate classification(s) before such bid may be considered.

All BIDS shall be deemed received at the above address. BIDDERS are solely responsible for ensuring that his/her BID is timely delivered. BIDDERS who rely on overnight delivery services, the United States mail, private mail services, local couriers or delivery services remain solely responsible for timely delivery of the BID and assume all risk of late delivery, mis-delivery and non-delivery.

All BIDS will be date/time stamped, logged and deposited by MATA Staff.

BIDDERS are reminded that all BIDS must be securely sealed, have the enclosed label attached and be clearly marked "Bid".

After normal business hours (4:30 p.m. – 8:00 a.m.), BIDS will be accepted at the MATA dispatcher's office, 1370 Levee Road, Memphis, TN 38108; however,

BIDDERS are reminded of their sole responsibility for ensuring that their BID is deposited in the Purchasing Department

BIDDERS may verify receipt of BIDS by contacting MATA at (901) 722-7182.

Any BID may be withdrawn prior to the above scheduled time for opening of bids or authorized postponement thereof. Any BID received after the time and date specified shall not be opened.

BIDDERS must comply with all applicable licensing requirements.

MATA reserves the right to reject any and all bids and to waive any informality in bidding. MATA RESERVES THE RIGHT TO DELAY AWARD OF THIS CONTRACT FOR A PERIOD OF UP TO ONE HUNDRED TWENTY (120) DAYS AFTER RECEIPT OF BIDS.

3. PREPARATION OF BIDS

Bidders must submit one (1) original copy and one (1) electronic copy (flash drive) of their bid. Each BID must be submitted using bid forms in Section C and must include in the initial sealed envelope the following fully executed items:

- a) His written bid on the form provided in Section C; all spaces complete in ink or typewritten.
- b) Bid security in form of Bid Bond or certified check in the amount of the 5% RETAINAGE of the BIDDER's bid.

4. BID GUARANTEE REQUIREMENTS

Submit bid guarantee as a guarantee that:

- a) BIDDER will not withdraw BID for one hundred twenty (120) days after opening of proposals without OWNER's written consent.
- b) If BID is accepted, BIDDER will enter into formal CONTRACT with OWNER, within ten (10) days after receipt of contract documents for execution.
- c) If BID is accepted, BIDDER **will execute required PERFORMANCE BOND and** will obtain required insurance coverage within ten (10) days after receipt of CONTRACT.
- d) CONTRACT between OWNER and CONTRACTOR will be submitted to the CONTRACTOR for signature, then returned to the OWNER for signature.

PERFORMANCE BOND and all certificates of insurance must be submitted by the CONTRACTOR at the same time as he returns the signed CONTRACT to the OWNER.

A bidder's bond or certified cashier's check on a solvent bank located in the State of Tennessee payable to the OWNER in the amount of 5% RETAINAGE of the bid must accompany the BID. Said instrument to remain in effect until (and will be

returned only after) the CONTRACT has been fully executed and secured. The successful BIDDER shall execute a PERFORMANCE BOND in an amount equal to 100% of the contract sum as security for the faithful performance of the CONTRACT and for the payment of labor and material furnished and incorporated into the WORK. The only acceptable form of instrument for this bond is found herein. Bond shall be furnished through an agent domiciled and legally authorized to do business in the State of Tennessee and delivered to the OWNER **not later than ten (10) calendar days after the date shown on written notice from the OWNER**. Surety Company proposed shall be one acceptable to the OWNER.

BIDDER shall be liable to the OWNER for full amount of bid guarantee as representing damage to the OWNER on account of default of BIDDER in any particular thereof if:

- (1) BID is withdrawn within one hundred twenty (120) days after receipt of BIDS without approval of OWNER.
 - (2) BIDDER fails to enter into CONTRACT with OWNER and execute required PERFORMANCE BOND and provide required insurance coverage within ten (10) calendar days subsequent to notice of award of CONTRACT.
- e) The amount of the bid bond is determined based on the line on the Bid form labeled "TOTAL BASE BID". The PERFORMANCE BOND amount will be determined in the same manner.

5. STATE OF TENNESSEE CONTRACTOR REQUIREMENTS

If BID is \$25,000 or over, BIDDER must be licensed contractor in the State of Tennessee as required by Title 62, Chapter 6, Section 119 of the Tennessee Code Annotated. CLASSIFICATIONS FOR THIS PROJECT SHALL BE HRA (a,b,e) or MU (c,d).

Additionally, the BIDDER shall include the name, license number, expiration date thereof, and license classification of the contractor applying to the bid for electrical, plumbing and heating ventilation or air conditioning, on the outside of the envelope containing the BID; otherwise, the BID shall not be opened or considered. In the event the aforementioned classifications are not applicable to the PROJECT, the BIDDER shall indicate not applicable (N/A) on the appropriate line.

MATA must submit all selected BIDS, certifications, etc., to TDOT to be reviewed for compliance in order for MATA to proceed with the next phase of the procurement. This may prolong the approval process for this procurement.

6. SUBCONTRACTORS

If the CONTRACTOR shall sublet any part of this CONTRACT, the CONTRACTOR shall be as fully responsible to the OWNER for the acts or omissions of the subcontractor and of the persons either directly or indirectly employed by his subcontractor as he is for the acts and omissions of persons directly employed by himself.

Within five (5) days after BIDS are opened, the apparent low BIDDER and any other

BIDDER so requested shall submit a list of all subcontractors he expects to use in the WORK. An experience statement with pertinent information as to similar projects and other evidence of qualifications shall be furnished for each named subcontractor, as required by the OWNER. If the OWNER or TPM, after due investigation, has reasonable objection to any proposed subcontractor, he may, before contract execution, request the apparent low BIDDER to submit an acceptable substitute without an increase in his BID. If the apparent low BIDDER declines to make any such substitution, he will not thereby sacrifice his bid security. Any subcontractor so listed and to whom the OWNER or TPM does not make any written objection prior to CONTRACT execution will be deemed acceptable to the OWNER and TPM.

CONTRACTOR shall not be required to employ any subcontractor against whom he has reasonable objection.

The use of subcontractors listed by the BIDDER and accepted by the OWNER prior to CONTRACT execution will be required in the performance of the WORK.

7. BID EXCLUSIONS/QUALIFICATIONS:

Any BID that is qualified in any way or which contains any exclusion will automatically be classified as non-conforming and shall not be given consideration for contract award.

8. ADDENDA

MATA will forward one (1) copy of all addenda to holders of each set of documents. All such addenda will become a part of the contract documents and subject to all conditions contained therein and must be listed on the Bid Form for the BID to be accepted.

9. REQUESTS FOR CLARIFICATION OR APPROVED EQUAL

Requests for clarification or approved equal must be submitted in writing to Ashley Best, Contract Administrator, MATA 1330 Levee Road, Memphis, TN 38108 or email to abest@matatransit.com and must be received **no later than 11:00 a.m., local time Friday, June 9, 2023**, in accordance with the Approved Equals procedures described in the General Contract Provisions. Any unapproved deviations, exceptions, substitutes, alternates, or conditional qualifications contained in a BID may be cause for its rejection. **VERBAL QUESTIONS WILL NOT BE ANSWERED, THUS PREVENTING AN UNFAIR ADVANTAGE TO ANY BIDDER.**

10. TIME OF COMPLETION:

The WORK shall begin immediately upon date indicated on the Notice-to-Proceed and shall be completed in accordance with the following schedule.

WORK shall be **FINALLY COMPLETE** within **184 days**. All time noted above is based on consecutive calendar days (and the time allowed for each bid item is intended to be concurrent with the other bid items). Upon acceptance of this CONTRACT, the CONTRACTOR agrees to pay the OWNER liquidated damages for every calendar day that the WORK remains incomplete beyond the completion date of the Notice-to-Proceed.

Contract time shall include all normal weather conditions, including rain, snow and freezing temperatures. Extensions of time will not be allowed for delays caused by normal inclement weather as recorded by the Memphis Area Office of the National Weather Service. Claims for weather-related time extensions must be supported by National Weather Service climatological data indicating that actual weather conditions were more severe than the five -year average for the same month. Regardless of the severity of the weather conditions actually encountered at site, no time extensions will be granted for workdays on which the CONTRACTOR actually works one-half day or more. No weather-related time extension will be granted for weekends, holidays and other non-workdays. Weather-related time extensions will only be granted to critical path activities.

11. PRE-BID CONFERENCE:

A Pre-Bid Conference will be held at 10:00 a.m. on **Tuesday, May 30, 2023**, at MATA's Trolley Division, 547 N. Main Street, Memphis, TN 38105. All parties interested in bidding on this project are hereby invited and **urged** to attend this meeting. A walkthrough will take place immediately after the pre-bid meeting.

12. FIELD MEASUREMENTS:

The CONTRACTOR shall make his own measurements to verify square footage, dimensions and quantities to complete the PROJECT. The dimensions and areas indicated on the DRAWINGS are for reference only and are not to be considered as the actual dimensions and areas.

13. DISADVANTAGED BUSINESS ENTERPRISE

The following rules apply to Disadvantaged Business Enterprise participation by firms/teams:

- Only certified Disadvantaged Business Enterprises can count toward the goal. Participation by certified "Minority Business Enterprises" (MBE) or certified "Woman Owned Business Enterprises" (WBE) cannot be counted toward the goal. While participation by MBEs and WBEs is encouraged, MATA is governed by the U.S. Department of Transportation program which only recognizes the designation of DBE.
- DBEs must be certified in Tennessee.
- MATA is a member of the Tennessee Unified Certification Program (TN UCP) and accepts Tennessee DBE certifications from the following entities:
 - Memphis Area Transit Authority
 - Tennessee Department of Transportation Unified Certification Program
 - Uniform Certification Agency (managed by the Mid - South Minority Business Council)

A list of firms currently certified in Tennessee can be found at:
www.tdot.state.tn.us/dbedirectinternet/

- Certification in the State of Tennessee must be achieved by the time the proposals are due otherwise the participation of a proposed DBE firm cannot be counted toward the goal. If a proposed DBE firm is not certified at the time the proposals are due and, as a result, the goal is not met, then the proposal will be considered “non-responsive” and rejected unless the good faith efforts have been accepted as satisfactory.
- It is highly recommended that a copy of a current certification of Disadvantaged Business Enterprise issued by the Tennessee Department of Transportation or the Uniform Certification Agency be included with the offer for each DBE firm being proposed.

14. GENERAL DBE INFORMATION

Memphis Area Transit Authority (MATA), a recipient of Federal financial assistance from the Federal Transit Administration, is committed to and has adopted a Disadvantaged Business Enterprise Policy in accordance with Federal Regulations (49 C.F.R. Part 26, as amended) issued by the U.S. Department of Transportation. It is the policy of MATA to ensure nondiscrimination in the award and administration of DOT-assisted contracts and to create a level playing field on which DBEs can compete fairly for contracts and subcontracts relating to its activities.

To this end, MATA has developed procedures to remove barriers to DBE participation in the bidding and award process and to assist DBE firms to develop and compete successfully outside of the DBE program. In connection with the performance of this contract, the Prime CONTRACTOR will cooperate with MATA in meeting these commitments and objectives.

Accordingly, the Prime CONTRACTOR and any subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the performance of this CONTRACT. The Prime CONTRACTOR and subcontractors shall carry out applicable requirements of 49 C.F.R. Part 26 in the award and administration of DOT-assisted contracts. Failure by the Prime CONTRACTOR and any subcontractors to carry out these requirements is a material breach of this CONTRACT, which may result in the termination of this CONTRACT or such other remedy, as MATA deems appropriate.

15. DBE GOAL

A. Annual Overall Goal for DBE Participation

An annual overall goal for DBE participation in OWNER U.S. DOT-assisted contracts is established by MATA’s DBE Officer and approved by MATA’s Board of Commissioners on a fiscal year basis. This goal reflects the availability of ready, willing and able DBE’s that would be expected to participate in OWNER contracts absent effects of discrimination. The goals are calculated as a percentage of the total amount of U.S. DOT funds that the OWNER expects to expend on contracting opportunities during the fiscal year.

B. DBE Goal Applicable to This Contract

MATA has established a 14 % DBE goal for this CONTRACT. However, DBE

participation is encouraged either the capacity of the Prime CONTRACTOR or subcontractor. BIDDERS are required to document their activities in the solicitation and selection of subcontractors to ensure that this process is carried out in a nondiscriminatory manner.

C. Evaluation of DBE Certification Status

MATA shall require that any DBEs listed by BIDDERS for participation in the CONTRACT be certified, as eligible DBEs at the time of Proposal submittal. The DBE Officer shall review the BIDDER's DBE Participation Form to confirm each DBE firm's certification status.

D. Determination of Amount of DBE Participation

Only the work actually performed by a DBE with its own forces will be counted as DBE participation. A DBE may participate as a Prime CONTRACTOR, subcontractor, joint venture partner, or vendor or supplier of materials or services required by the CONTRACT.

A DBE's participation can only be counted if it performs a commercially useful function on the CONTRACT. A DBE performs a commercially useful function when it actually performs, manages and supervises a portion of the work involved. There is a rebuttable presumption that if the DBE is not responsible for at least 30% of the work with its own forces or subcontracts a greater portion of the work than the normal industry standard, it is not performing a commercially useful function. A DBE trucking company performs a commercially useful function if it is responsible for the overall management and supervision of the transportation services involved and uses at least one truck that it owns, insures and operates with its own employees on the contract.

- i. The CONTRACTOR shall count DBE participation according to the following guidelines and in accordance with 49 CFR §26.55:
- ii. DBE Prime CONTRACTOR – Count the entire dollar amount of the work performed or services provided by the DBE's own forces, including the cost of materials and supplies obtained for the work and the reasonable fees and commissions charged for the services. Do not count any work subcontracted to another firm as DBE participation by the DBE Prime CONTRACTOR.
- iii. DBE Subcontractor – Count the entire amount of the work performed or services provided by the DBE's own forces, including the cost of materials and supplies obtained for the work, except for materials and supplies purchased or leased from the Prime CONTRACTOR, and reasonable fees and commissions charged for the services. Do not count any work subcontracted by the DBE Subcontractor to another firm as DBE Participation by said DBE subcontractor. If the work has been subcontracted to another DBE, it will be counted as DBE participation for that other DBE.
- iv. DBE Joint Venture Partner – Count the portion of the work that is performed solely by the DBE's forces or, if the work is not clearly delineated between the DBE and the joint venture partner, count the portion of the work equal to the DBE's percentage ownership interest in the joint venture.

- v. DBE Manufacturer – Count 100% of the costs of materials and supplies obtained from a DBE manufacturer that operates or maintains a factory that produces the materials and supplies on the premises. This applies whether the DBE is a prime contractor or subcontractor.
- vi. DBE Regular Dealer – Count 60% of the costs of materials and supplies obtained from a DBE regular dealer that owns, operates or maintains a store or warehouse in which the materials and supplies are regularly bought, kept in stock and sold or leased to the public in the usual course of business, except regular dealers of bulk items such as petroleum, cement and gravel who own and operate distribution equipment in lieu of maintaining a place of business. This applies whether a DBE is a prime CONTRACTOR or subcontractor.
- vii. Other DBEs – Count the entire amount of fees or commissions charged for assistance in procuring or delivering materials and supplies when purchased from a DBE that is not a manufacturer or regular dealer. Do not count the cost of materials and supplies.
- viii. DBE Trucking Company – Count the entire amount of the transportation services provided by a DBE trucking company that performs the work using trucks it owns, insures and operates with its own employees on the CONTRACT.

Count the entire amount of the transportation service provided by a DBE trucking company that performs the work using trucks it leases from another DBE, including an owner-operator, provided that it is responsible for the overall management and supervision of the service and that it uses at least one truck that it owns, insures and operates with its own employees on the CONTRACT.

Count the entire amount of fees and commissions charged for providing the management and supervision of transportation services using trucks it leases from a non-DBE trucking company, including owner-operator, provided that it is responsible for the overall management and supervision of the service and that it uses at least one truck that it owns, insures and operates with its own employees on the CONTRACT.

SECTION B

SCOPE OF WORK

SCOPE OF WORK

MATA RIVERSIDE @ BEALE ST. BRIDGE REPAIRS		4/7/2023		
		PROJECT PHASE: CONSTRUCTION DOCUMENTSSR		
		PROJECT NUMBER: 22640120		
		ESTIMATED BY: K. JOSEPHSON		
	C.O.M. ITEM NUMBER	ESTIMATED QUANTITY	UNIT	
	Mobilization	01400-01	1	LS
	Traffic Control Devices for Construction Work Zones	01551-5.02	1	LS
	Removal of Obstructions and Structures	02220-3.01	1	LS
	Sheet Piling	02260-01	120	LF
	Ballast Replacement	02720-02	7	TON
(1)	Handrail Replacement	05520-5.01.1	330	LF
(2)	Pile Replacement and FRP Splice	06000.01	46	EA
(3)	Sway Bracing Replacement	06000.02	14	EA
(4)	8"x4" Decking Replacement	06000.03	2,355	LF
(5)	8"x8"x8'-6" No. 2 Southern pine crossties	06000.04	39	EA
(6)	Crossties	06000.05	2,800	EA
(7)	Cleaning and Painting of Steel Span Bearings	07000.01	1	LS
(8)	Lead Paint Testing	07000.02	1	LS
(9)	Sun Kink	7000.03	1	LS
(10)	Lead Paint Abatement	07000.04	1	LS

MATA RIVERFRONT LOOP GRADE CROSSING REPAIRS		4/7/2023		
		PROJECT PHASE: CONSTRUCTION DOCUMENTSSR		
		PROJECT NUMBER: 22640120		
		ESTIMATED BY: K. JOSEPHSON		
	C.O.M. ITEM NUMBER	ESTIMATED QUANTITY	UNIT	
	Mobilization	01400-01	1	LS
	Traffic Control Devices for Construction Work Zones	01551-5.02	1	LS
	Asphaltic Concrete Surface, Mix No. 1, 2" Thickness	02741.01.01	112	SY
	Asphaltic Concrete Surface, Mix No. 3, 4.5" Thickness	02741.01.03	116	SY
	Removal of Asphalt Pavement	202-03.01	118	SY
	Concrete Sidewalk Removal and Replacement	02950-02	270	SF
	Concrete Curb and Gutter Removal and Replacement	02950-04	10	LF

	Concrete Curb Removal and Replacement	02950-07.01	10	LF
(11)	Modular Grade Crossing Surface	04000.01	267	TF
(11)	Replacement Grade Crossing Panels – Union Avenue Crossing	04000.02	1	LS
(11)	Track Reconstruction for Grade Crossing	07000.10	330	TF
	Railroad Flagging	07120.04	30	DAY

- (1) Item number 05520-5.01.1 includes the handrail, base plates, threaded rods, and nuts required for attaching the handrail.
- (2) Item number 06000.01 includes the cutting of rotten piles just below the ground line, replacing of the section above the groundline, and splicing the two together with an FRP sleeve.
- (3) Item number 06000.02 includes the removal and replacement of sway bracing.
- (4) Item number 06000.03 includes 157 pieces of decking at 15' each.
- (5) Item number 06000.04 includes replacement of rail ties along the side of the bridge at the handrail location.
- (6) Item number 06000.05 includes replacement of rotten rail ties on the bridge deck (including removal of rail for access) in order to meet FRA Class 2 standards. It also includes replacement of rail ties along the Riverfront line in order to meet FRA Class 2 standards. The Riverfront line for these plans is defined as starting at the switch north of A.W. Willis Ave. and ending at a) derail north of W Huling Ave., north of switch is accepted track b) across pyramid interlocking, across Front St to N. main St.
- (7) Item Number 07000.01 includes the removal of existing paint present on the steel bridge members and bearings and reapplication.
- (8) Item number 07000.02 includes the testing of the existing paint on the steel bridge members and bearings for lead.
- (9) Item number 07000.03 includes repair for sun kink near Huling Station and associated items.
- (10) Item number 07000.03 includes all measures required to abate and remove lead paint, if it is discovered to be present in the existing paint system.
- (11) See 347250 Modular Grade Crossings Specification for details on this pay item.

**SECTION 34 72 30
THERMITE RAIL WELDING**

PART 1 - GENERAL

1.01 SCOPE OF THIS SECTION

- A. Welding together the ends of contiguous rail by the aluminothermic (“thermite”) rail welding process. The Work includes handling, welding, grinding, testing, inspecting, and incidental Work necessary to provide field welds.

1.02 RELATED SECTIONS

- A. Section 34 72 15 – TRACK CROSSTIE REPLACEMENT
- B. Section 34 72 50 – MODULAR GRADE CROSSINGS

1.03 REFERENCES

- A. American Railway Engineering and Maintenance-of-Way Association (AREMA)
 - 1. AREMA Manual for Railway Engineering, Vol. I, Chapter 4, Part 3, Section 3.13 “Specification for the Quality Assurance of Thermite Welding of Rail”
- B. American Society for Nondestructive Testing (ASNT)
 - 1. ASNT CP-189 Standard for Qualification and Certification of Nondestructive Testing Personnel
- C. ASTM International, (ASTM)
 - 1. ASTM E164 Standard Practice for Contact Ultrasonic Examination of Weldments

1.04 QUALIFICATION OF WELDING CREW

- A. Experience Requirements:
 - 1. Welding Foreman: All welding shall be performed under the direct supervision of a welding foreman with a minimum of:
 - a. Five years documented experience supervising thermite field welding
 - b. Not fewer than 100 thermite welds
 - c. At least three months experience and ten welds using the brand of welding kit to be used on this project.
 - d. Certificate of qualification from thermite welding kit manufacturer that welding foreman is qualified to perform the thermite welding and production QC inspection.
 - 2. Welding Crew: Other members of the welding crew shall be experienced

trackmen with not less than one year of continuous experience in railway track construction. Not more than one member of the welding crew shall have no prior experience in thermite rail welding.

1.05 WELD TESTING

- A. Ultrasonic testing of rail welds shall be undertaken by an independent testing laboratory.
- B. Test Personnel: The technician proposed for ultrasonic testing of rail welds shall be certified in accordance with ASNT procedure SNT TC 1A, Level II or III and shall have at least one year's experience in testing for defects in rail.
- C. Test Equipment
 - 1. Ultrasonic, pulsed echo, instrument normally used for inspection of rails with calibrated decibel gain control of minimum 2 dB increments, operating in the range 1.5 MHz, with CRT screen and scale. Equipment shall be capable of detecting a 3/64 inch discontinuity 6 1/2 inches below top of rail.
 - 2. Calibrated paper tape recording attachments to record accurately the CRT screen display when a non complying weld is located.
 - 3. 2.25 MHz angle beam transducers 1/2" x 1" at 70 degrees and 45 degrees.
 - 4. Suitable high viscosity couplants of good wetting characteristics.
 - 5. Standard IIW calibration blocks of rail steel for primary reference response, and DSC Blocks of rail steel for calibration checks.
- D. Test Procedures
 - 1. Scanning level shall be +20 dB minimum.
 - 2. Scan the rail in a zig zag pattern twisting probe, on one side of the weld only at a rate not exceeding 6 inches per second, so that the full weld is scanned. Each pass will overlap a minimum 10 percent as the scanning is carried out longitudinally to the rail.
 - 3. Calibrate the equipment at the start and end of each day's work, and at least every four hours during examination, and hourly checks with DSC blocks. If any point on the distance amplitude curve has been changed by more than 20 percent, all results since last calibration check shall be void and all welds re examined. If the curve has moved on the sweep line by more than five percent, all non complying welds since last calibration check shall be re examined.
 - 4. When a reflection of greater amplitude than the acceptance criteria is found, scan around the full perimeter of the weld from both sides, to ensure full weld coverage and determination of size, type, and location of discontinuity.
 - 5. Make permanent trace recording of discontinuity indications.
 - 6. Paint the rail web on both sides, across the weld, to denote any weld not conforming to acceptance criteria.

1.06 SUBMITTALS

- A. Welding Crew Qualifications: Submit a written description of welding abilities, including facilities, personnel, and list of similar completed projects, as specified in Article 1.04 of this Section.
- B. Independent Testing Laboratory Qualifications and Procedures: As specified in Article 1.05 of this Section.
- C. Rail Welding Procedure Specification - Detailed procedure covering step-by-step procedures to be employed in making field thermite welds. A complete description of each of the following items and any other essential characteristics shall be included in the procedure.
 - 1. Manufacturer's trade name for welding process.
 - 2. The manufacturer's recommended procedure for welding rail.
 - 3. Methods used for cutting and cleaning of rail ends. Flame cutting of rail ends will not be allowed.
 - 4. Rail end welding gap, tolerances for same, and procedures to maintain rail gap during the welding operation.
 - 5. Method and equipment used for achieving and maintaining rail end alignment during welding.
 - 6. Procedures for placing, securing and sealing prepared molds.
 - 7. Method used for preheating rail ends including time and temperature.
 - 8. Tapping procedure including minimum time required to cool weld under the mold insulation.
 - 9. Method used for removing gates and risers and finishing weld suitable for visual inspection and NDT testing, including a description of special tools and equipment.
- D. Rail Handling Procedures
 - 1. Method of transporting stick rail from existing storage to the welding site.
 - 2. Methods of handling welded rail strings from:
 - a. Welding location to interim storage
 - b. Interim storage to final installation location.
- E. Site plan for layout and welding of rail strings, including consideration of access to the site of work by other concurrent contractors engaged in activities unrelated to track construction.
- F. Not used.
- G. Not used

- H. Welding Record forms as specified in this Section.
- I. Inspection records of each weld for straightness as per AREMA requirements.
- J. Ultrasonic Inspections
 - 1. Ultrasonic inspection procedure, quality control procedures equipment description and calibration methods.
 - 2. Records documenting daily calibration of ultrasonic inspection equipment.
 - 3. Reports, prepared by the independent testing service, documenting the results of non-destructive ultrasonic testing
- K. Contractor-proposed variations from the requirements of this Section. Any such proposals shall describe, in detail, the rationale for the change, the impacts (or benefits) the proposed change would have on the overall work of the project (including work by other contractors on site if applicable), and the benefit to the Owner should the alternative be accepted.

PART 2 - PRODUCTS

2.01 RAIL

- A. Rail to be welded includes both existing 115RE rail in track and Contractor-furnished rail.
- B. Contractor-furnished rail shall be new plain carbon standard strength steel rail and comply fully with the AREMA Manual for Railway Engineering, Chapter 4, Part 2, Section 2.1 Specifications for Steel Rails.
 - 1. Rails used in at-grade road crossings shall be not less than 80 feet long and have no joints or welds either within the crossing surface or within ten feet of the edges of the crossing.
 - 2. Industrial Quality rails will not be accepted.

2.02 THERMITE RAIL WELDING KITS:

- A. Furnish a welding kit that conforms to the requirements of AREMA "Specification for the Quality Assurance of Thermite Welding of Rail" except as modified herein.

2.03 TRACK TOOLS

The following items represent the standard of quality expected for selected tools used in this Work.

- A. Taper Gauge: L. S. Starrett Co.'s Catalog No. 270
- B. Straightedge: Steel, 3 feet long and 14 inches long: L. S. Starrett Co.'s Catalog No. 380-36, or accepted equivalent.
- C. Rail Saw: Racine Railroad Products Inc.'s Model 155, Safetran Systems Corp.'s Rail Whiz III, or accepted equivalent.

- D. Rail Shear: Pandrol
- E. Rail Alignment Beam: Portec, Railway Products Division; Calorite Delachaux; or accepted equivalent.
- F. Ultrasonic Tester: Kroutkramer-Branson, Inc.'s Kroutkramer USM-2 Ultrasonic Flaw Detector, or accepted equivalent.
- G. Rail Profile Grinder for Finishing Rail Profile at Welds: Terrazzo Machine and Supply's Model 23; Modern Track Machinery, Inc.'s Model MP-12; or accepted equivalent.

PART 3 - EXECUTION

3.01 GENERAL

- A. All welding procedures and methods shall conform to the requirements of AREMA "Specification for the Quality Assurance of Thermite Welding of Rail" except as modified herein.

3.02 IDENTIFICATION

- A. General: Mark rails using a high-quality paint stick. Thoroughly clean the surface of the steel prior to paint marking by completely removing any contamination, including loose and adherent rust, using solvents, mechanical tools and hand tools as may be required. Surface preparation shall be such as to assure the paint markings will remain legible for a minimum of twelve months.
- B. Weld Numbering - Mark a sequential two-digit weld number on the field side of the web of the rail immediately adjacent to the weld at the time the weld is made. Welds shall be numbered sequentially in the order in which they are made.

3.03 RAIL PREPARATION

- A. Comply with the recommendations of the weld kit manufacturer.

3.04 WELDING

- A. General Requirements:
 - 1. Weather: Welding shall not be done during periods of precipitation, winds of 25 mph or more, or electrical activity.
 - 2. Other Work: During the setting up and actual welding, other Work which would in any way move, vibrate, or otherwise interfere with the welding outcome shall be prohibited. Necessary precautions shall be taken to prevent disturbing the weld immediately after the pour.
 - 3. Storage of Thermite Welding Materials: Crucibles, molds and thermite mix portions shall be stored in a dry location in order to prevent moisture contamination. Comply with manufacturer's recommendations.
- B. Rail End Preparation:

1. Torch cut rail ends are not acceptable. Rails with existing torch cut ends shall be sawcut a minimum of 3-inches from the nearest face of the torch cut.
 2. Bolt Holes:
 - a. No holes shall be made or included in rail ends to be welded.
 - b. Bolt holes on the ends of the Owner furnished compromise rails, which will be welded to the eastern end of each string, shall be cut off one-half inch beyond the edge of the innermost bolt hole.
 - c. The western end of each rail string will be attached to adjoining special trackwork with bolted joints and shall be drilled for bolting as shown on the Contract Drawings and as specified in Section 34 72 20.10 of these Specifications.
 3. Cutting Rail - The faces of the rail ends shall be cut by using an abrasive rail saw which has been clamped to and aligned at right angles to the rail
 4. The end of rails to be welded shall be cleaned of all grease, oil, dirt, concrete, loose scale, rust, and moisture on all surfaces to a minimum of 6-inches back from the rail ends. Cleaning shall be performed using power and hand tools as necessary to completely remove all contaminants to achieve a clean surface. Needle scalers are suggested to remove concrete and other adherent contamination. Power wire brushes are suggested to achieve a clean surface. Use an oxyacetylene torch at a minimum temperature of 250°F to remove grease, oil, or moisture.
 5. The portion of the rail ends that will be within the thermite mold shall be further cleaned to remove all scale and rust by use of a power grinder with abrasive wheel for not less than 2-inches on each side of the weld mold.
 6. Rail ends shall show no steel defects, dents, or porosity before welding. All burrs and lipped metal that would interfere with the fit of the mold shall be removed. Cleaned surface shall comply with the recommendations of the weld kit manufacturer.
- C. Weld Gap: The minimum and maximum gap shall be in accordance with the recommendations of weld kit manufacturer. The minimum measurement shall be made with a go/no-go gauge made to the specified dimensions for the thermite kit being used. The gap shall be adjusted if outside of the tolerance specified by the weld kit manufacturer.
- D. Sealing the Molds: No mold sealant or luting material shall be introduced into the weld chamber.
- E. Preheating:
1. Check quality of gas used for thermite welding preheating to insure even temperatures are maintained during pre-heating
 2. The rail ends shall be preheated, prior to welding, to a sufficient temperature and for sufficient time, as indicated in the accepted welding procedure, to ensure full fusion of the weld metal to the rail ends without cracking of the rail or weld.

3. The rail temperature shall be checked by the use of tempilsticks, or other means as acceptable to the Engineer.
- F. Post-Weld Cooling: The molds for thermite field welds shall be left in place after tapping for sufficient time to permit complete solidification of the molten metal and proper slow cooling to prevent cracking and provide a complete weld with proper hardness and ductility.

3.05 WELD FINISHING

- A. Weld Shearing – In accordance with the procedure submitted and accepted.
- B. The weld shall be finished with a rail mounted railhead grinder specifically designed for the Work. Hand-held grinders may be used only for:
1. Heavy grinding down to an elevation not less than 1/8 inch above the parent metal surface.
 2. Grinding in the flangeway and other areas inaccessible to the rail-mounted grinder.
- C. Heavy grinding shall be done immediately following welding while the rail is still at an elevated temperature.
- D. Finishing shall conform to the following tolerances:
1. Running surface and gauge side of rail head: Plus 0.020" to minus 0.000" of the parent rail section.
 2. Field side of railhead, the outer edge of the tram, and the floor of the flangeway: Plus or minus 0.050" of parent rail section.
 3. The balance of the rail section shall be finished with a hand-held grinder as required to remove notches, protrusions, gouges, visible cracks and other defects. All grinding shall blend to the parent rail section and shall not overheat the steel.

3.06 WELD ALIGNMENT

- A. During Pre-Welding Setup
1. The ends of the rails to be welded shall be properly gapped and aligned to produce a weld which will conform to the alignment tolerances given below. The rail gap and alignment shall be held by a hydraulic rail puller/expander and alignment jig without change during the complete field welding cycle.
 2. Alignment of rail shall be done on the head and gauge face of the rail.
 - a. Vertical alignment shall provide for a flat running surface. Any difference of height of the rails shall be in the base.
 - b. Horizontal alignment shall be done in such a manner that any differences in the width of heads of rail shall occur on the field side
- B. During Post-Welding Inspection

1. Horizontal offsets shall not exceed 0.040" in the gauge side of the head and 0.125" in the base.
2. Surface Misalignment Tolerance.
 - a. Combined vertical offset and crown camber shall not exceed 0.040" per foot at 60°F.
 - b. Combined vertical offset and dip camber shall not exceed 0.010" per foot at 60°F.
3. Gauge Line Misalignment Tolerance: Combined horizontal offset and horizontal kink shall not exceed 0.040" per foot at 60°F.

3.07 RECORDKEEPING

- A. Welding Numbering – Mark a semi-permanent weld number on the rail immediately adjacent to the weld using a quality paint marker at the time the weld is made. Contractor shall develop an initial weld numbering and number welds sequentially in the order in which they are made. Assign a new sequential number to defective welds which are replaced by adding a letter to the defective weld number (e.g., defective weld 437 would be replaced by 437A).
- B. Welding Record - Prepare a welding record form, as shown in the Appendix to this Section. Completely fill out forms in the field coincident with the actual rail welding. Do not transcribe onto clean sheets back in the office. Authentic record forms are expected to show visual evidence of field use such as dirt, grease, creases, coffee stains, etc. Forms shall bear the names and initials of the field personnel witnessing the welding and the live signature of the person recording the data. Submit pdf scans of the original welding record forms.

3.08 WELD INSPECTION

- A. Each completed weld shall have full penetration and complete fusion and be free of cracks.
- B. Visually inspect all welds at the time of weld finishing. Weld quality, finishing, and alignment shall comply with the standards cited herein.
- C. Ultrasonic Inspection:
 1. Welds to be Tested:
 - a. A minimum of 25% of all rail welds in this Contract, selected at random by the Engineer, shall be inspected by ultrasonic testing after the rail has been laid in its final position in track, and lining, surfacing, thermal adjustment, and anchoring work has been completed.
 - b. In the event that any weld fails ultrasonic testing, two additional welds, selected by the Engineer, shall also be tested at the Contractor's expense.
 2. Ultrasonic testing shall be performed by a qualified independent testing service as specified in Part 1 of this Section.

3. Conduct weld inspection using portable ultrasonic equipment in accordance with the requirements of Paragraph 1.05 C. of this Section.
 - a. Welds showing a response at any level that is identified as a crack or lack of fusion will not be acceptable.
 - b. Welds showing a response that is less than 50 percent of the primary reference level will be acceptable.
 - c. Welds that show a response greater than 50 percent, but that do not exceed the primary reference level, are acceptable provided that the following apply:
 - i. The defects are evaluated as slag or porosity.
 - ii. The largest defect does not exceed 0.180 inch in its largest dimension.
 - iii. The total area of the defect does not exceed 0.010 square inch.
 - iv. The sum of the greatest dimension of defects in a line does not exceed 3/8-inch.

3.09 DEFECTIVE WELDS

- A. Replace welds found defective by ultrasonic or visual inspection.
- C. Cut out defective welds not less than 4-inches from the center of the weld.

3.10 ADJUSTMENT AND CLEANUP

- A. Correct damage caused, clean up the site area, and remove debris resulting from the production, storage, and handling of rail welding activities.

PART 4 – MEASUREMENT & PAYMENT

4.01 GENERAL

- A. The Work of this Section will not be separately measured for payment as its performance is considered to be incidental to related items of Work.

THERMITE RAIL WELDING

RECORD OF THERMITE WELD

WELD NUMBER: _____

DATE: _____

TRACK DESIGNATION: _____

WHICH RAIL? (CIRCLE): NORTH SOUTH EAST WEST

RAIL IDENTITY STATION BACK: _____

RAIL IDENTITY STATION AHEAD: _____

MANUFACTURER OF FIELD WELD KIT: _____

WELD KIT SERIAL NUMBER: _____

WEATHER CONDITIONS: _____

AIR TEMPERATURE: _____

COLD RAIL TEMPERATURE: _____

RAIL GAP (NEAREST 1/16 INCH): _____

PREHEAT RAIL TEMPERATURE: _____

TIME OF WELD IGNITION: _____

NAME(S) & INITIALS OF ENGINEER OR OWNER'S REPRESENTATIVE(S) PRESENT:

NAME & INITIALS OF WELDING FOREMAN PRESENT: _____

NAME AND INITIALS OF WELD KIT MANUFACTURER'S _____

REPRESENTATIVE PRESENT: _____

RECORDER: _____

END OF SECTION 34 72 30

**SECTION 34 72 50
MODULAR GRADE CROSSINGS**

PART 1 – GENERAL

1.1 SUMMARY

- A. The Work of this Section includes:
 - 1. Demolition of existing grade crossing surfaces.
 - 2. Demolition of existing roadway pavements adjacent to existing crossings as may be required or directed to accomplish the Work.
 - 3. Spot repairs to the underlying track structure as may be required.
 - 4. Furnishing and Installing new crossing surfaces as specified herein and in accordance with the crossing manufacturer's recommended procedures.

- B. Only if directed by the Engineer, the Work will also include the following:
 - 1. Demolition of existing track structure beneath existing crossing surfaces.
 - 2. Reconstruction or repair of the track using new materials so as to create a solid foundation for the new crossing surface.

- C. The Work also includes replacement in kind of existing damaged concrete crossing panels at the Union Avenue crossing.

1.2 REFERENCES

- A. American Railway Engineering and Maintenance-of-Way Association (AREMA)
 - 1. Manual for Railway Engineering including but not limited to Chapter 5, Part 8 Highway/Railway Grade Crossings
 - 2. Portfolio of Trackwork Plans

1.3 ACTION/INFORMATIONAL SUBMITTALS

- A. Shop Drawings:
 - 1. Within 30 calendar days after receipt of the Notice to Proceed, submit the type of grade crossing panel system and the manufacturer's literature including drawings and a detailed installation specification. Shop drawings shall include the following:
 - a. Dimensioned and scaled drawings showing the overall layout of each individual crossing.
 - b. Dimensioned and scaled detail drawings for each prefabricated crossing module/panel. Detail drawings shall also show (but not be limited to) the interface with the rails, rail fastenings, crossties, panel joints, and end tapers.
 - c. Drawings, catalogue cuts, product data and installation instructions for all crossing components.

- B. Working Drawings:

1. Include detailed information concerning any modifications necessary to the existing track sections either as shown in the Contract Drawings or noted in the field.

1.4 QUALITY ASSURANCE

A. Qualifications:

1. **Manufacturers Qualifications:** Components of modular grade crossing panels shall be fabricated by manufacturers regularly engaged in the production of such items, as specified.

PART 2 – PRODUCTS

2.1 PERFORMANCE / DESIGN CRITERIA REQUIREMENTS

A. Capacities:

1. Design grade crossing system for the following highway and railway live loadings:
 - a. Highway Live Loading: HS25 with 30 percent impact, in accordance with AASHTO Bridge Design Specifications.
 - b. Rail Live Loading: Cooper E80, in accordance with AREMA Manual, Chapter 8, Part 2, Article 2.2.3, Design Loads

2.2 CROSSING SYSTEM - ADAMS, COURT, and MONROE CROSSINGS

A. General:

1. Grade crossing system shall be full depth 100% rubber modules designed to fit tightly between the rails and resting directly on the underlying cross-ties. Crossing systems with steel reinforced rubber panels supported above the cross-ties on shims are not acceptable.
2. Crossing panels shall be held in place by the weight of the panel and a tight fit between the running rails. Products which are anchored to the underlying cross-ties by lag screws or other fastenings are not desired.
3. Rubber modules shall feature an interlocking tongue and groove design so as to seal the surface against penetration by moisture, debris, and street detritus carried by stormwater.
4. Panels shall provide a high degree of electrical isolation so as to both avoid shunting of signal system track circuits and deter traction power currents from straying from the rails and heading to ground.
5. Rubber modules shall be resistant to extremes weather such as can be expected at the project site, including ultraviolet light, and resistant to common roadway de-icing chemicals.
6. Crossing modules shall have a skid resistant surface suitable for rubber tired and pedestrian traffic. A separate pattern in pedestrian areas can be considered.
7. Crossing modules shall be designed for removal and reinstallation so as to

facilitate periodic inspection and repairs to the underlying track structure.

B. Basis of Design / Standard of Quality

1. Project design was based on the use of HiRail brand rubber grade crossings for use on timber crossties. <https://hirail.com/hirail-rubber-grade-crossing>.
2. Alternative products meeting the requirements of this Section will be permitted only if accepted by the Engineer.

C. Dimensional Properties

1. Panel dimensions shown on the Contract Drawings are for information only. Panels shall be sized to accommodate the track layout and crossing length indicated on the Contract Drawings as well as meet the requirements specified herein.
2. Planar Dimensions of Panels: All crossing products shall be standard items in routine production. Custom products are not required. Crossing modules shall be the Manufacturer's standard design dimensions. If the standard crossing module length does not divide equally into the overall crossing length as shown on the Contract Drawings, the crossing length will be either increased or decreased, as determined by the Engineer, so as to match an integer multiple of the standard module length.
3. Panels shall be designed to match 115RE welded rail sitting on double-shoulder canted tie plates of customary dimensions and fastened with conventional cut spikes and rail anchors.
4. Flangeways shall comply with ADA requirements.

D. Crossing Accessories - Provide the following:

1. Stabilizer Clips to be positioned on crossties at joints between crossing panels to restrain the individual panels from longitudinal movement.
2. Gauge and Field Side End Blocks to be positioned at each end of the crossing as required to restrain the overall crossing from longitudinal movement.
3. Deflector Shields to enclose the ends of the crossing and prevent dragging equipment from snagging on the crossing panels.

2.3 REPLACEMENT CROSSING MODULES - UNION AVENUE CROSSING

- A. General: Crossing products used for repair of the Union Avenue crossing shall be the Omni Improved Concrete system as manufactured by Omni Grade Crossing Systems. <https://omnirail.com/product-page/concrete-crossing-page/>
- B. Provide new replacement field-side concrete panels identical to those currently in track.
- C. The existing Omni rubber RailGuard™ strips adjacent to the damaged concrete panels are believed to be in good condition and not in need of replacement or repair. Should, upon disassembly of the crossing, a closer examination reveal

otherwise, repair or replacement of the RailGuard strips will be addressed under the Changes provisions of the Contract.

2.4 EXPECTED MINIMUM TRACK REPAIR MATERIALS

- A. General: Provide incidental materials as necessary to prepare existing tracks for new crossing panels.
- B. Spike Hole Filler: "Sure Spike" as provided by Railroad Solutions <https://r-sols.com/products-services/sure-spike>, or approved equal.

2.5 PROVISIONAL MATERIALS IF REQUIRED FOR TRACK REPAIR OR RECONSTRUCTION

- A. General: In the event that, upon removal of existing crossing panels, the Engineer determines the underlying track structure requires either repair or reconstruction, the following products shall be used.
- B. Crossties – Seven-Inch Grade timber crossties as specified in Section 34 11 23.16. Lengths shall be as recommended by the crossing surface manufacturer.
- C. Rail – New 115RE rail complying with Section 34 72 30. Rails length shall be as required to avoid rail welds in locations proscribed by this Section.
- D. Tie Plates – New or fit condition relay plates complying with Section 34 72 15.
- E. Spikes – New 6-inch cut spikes complying with Section 34 72 15.
- F. Rail Anchors – New or fit condition relay complying with Section 34 72 15.
- G. Ballast – New complying with Section 34 72 15.
- H. Subballast – Mineral Aggregate Base, Type B, in accordance with TDOT Standard Specifications for Road and Bridge Construction, Section 303
- F. Geotextile - Non-woven geotextile meeting the requirements of TDOT Standard Specifications for Road and Bridge Construction, Section 921.12
- G. Underdrain Pipe - Perforated polyvinyl chloride (PVC), Schedule 40 pipe, with unperforated PVC outlets and matching fittings, in conformance with TDOT Standard Specifications for Road and Bridge Construction, Section 723

PART 3 – EXECUTION

3.1 PREPARATION

- A. All traffic control measures shall be in place and accepted by agencies having jurisdiction prior to commencement of crossing work.

3.2 DEMOLITION

- A. Remove existing crossing surface materials using methods which pose no risk of

damage to the underlying ballasted track structure.

- B. Promptly remove existing crossing materials from the site and dispose of legally in accordance with all applicable local, state, and federal regulations. Demolition materials shall be removed from the site the same day as removed.

3.3 EXAMINATION OF EXISTING TRACK STRUCTURE

- A. Jointly with the Engineer inspect the track structure exposed by the removal of the existing crossing surface to determine its suitability for construction of the new crossing surface. Items to be examined include but are not limited to the following.
 - 1. Rails: Factors to be examined include heavy wear, severe corrosion, and the presence of cracks or other visible defects which make them unsuitable for continued use.
 - 2. Tie Plates, Spikes, Rail Anchors: Examine for severe corrosion or other defects which would make them unsuitable for continued use.
 - 3. Ties: Examine for decay, mechanical damage, or other conditions which would make them unsuitable for continued use.
 - 4. Ballast: Examine for fouling or other defects that would impair the ability of the ballast to provide proper support and drainage of the track structure.
- B. Collaborate with the Engineer on a plan for track repairs or reconstruction as indicated.
- C. Final authority for deciding the level of track repairs or reconstruction will rest with the Engineer in consultation with MATA.

3.4 TRACK REPAIR or RECONSTRUCTION

- A. Assuming the final outcome of the inspection described in the previous Article is that the track structure requires repair or reconstruction, execute the adopted plan in accordance with direction from the Engineer.
- B. All track repair or reconstruction work shall be in accordance with AREMA requirements except that, if required, reconstruction of the subballast layer and the underdrain systems, including geotextiles used for soil stabilization and underdrains, shall be in accordance with applicable TDOT requirements.
- C. Track reconstruction shall be within the longitudinal limits determined by the Engineer. The northerly and southerly limits may or may not coincide with the ends of the existing crossing surface.
- D. If rail replacement is indicated, rail shall be replaced to points not less than 10 feet beyond the longitudinal limits of the new crossing surface. Rail welds at the rail replacement limits shall be staggered not less than 8-feet. No rail welds shall be permitted within five feet of that portion of the crossing surface which will routinely see motor vehicle traffic.
- E. If no other track repair is indicated, perform the following at a minimum:

1. Clean the rails, tie plates, spikes and rail anchors with power tool equipment so that the metal surfaces are free of dirt and loose rust to not less than an SSPC SP7 "Brush Off" level.
2. Tops of ties shall be clean of dirt and other contamination.
3. Ballast shall be no higher than ½ inch below the tops of the ties.
4. Any holes in the existing crossties, including but not limited to old spike holes, splits, and other defects shall be filled and sealed against moisture intrusion.
5. Respace crossties as required to provide solid support to the modular grade crossing panels as indicated by the crossing Manufacturer's written installation procedures.
6. Tamp the ballast through the crossing zone as indicated in Section 34 72 15.

3.5 CROSSING SURFACE CONSTRUCTION

- A. Comply strictly with the recommendations of the crossing surface product manufacturer.

3.6 ADJACENT PAVEMENT

- A. Comply with the requirements of other specifications within or referenced by this Contract. Prior to placing adjacent pavement, thoroughly compact the ballast and other coarse aggregate materials adjacent to the outside edges of the crossing surface. Asphaltic pavements adjacent to crossing surfaces shall also be thoroughly and diligently compacted as failure to do so leads to failure of the field side panels of the crossing surface.

PART 4 – MEASUREMENT & PAYMENT

4.1 METHOD OF MEASUREMENT

- A. Grade crossing surface reconstruction at Adams, Court, and Monroe, will be measured by the Track Foot measured along the centerline of track from the northern edge to the southern edge of the rubber crossing surface, acceptably performed.
 1. Stabilizer Clips, End Blocks, Deflector Shields, and associated hardware will not be separately measured as they are considered incidental to the Work.
 2. Demolition of the old crossing surface and examination of the existing track structure will not be separately measured as they are considered incidental to the Work.
 3. Work related to removal and replacement of adjacent paving will not be measured under this Section.
 4. Work related to traffic control will not be measured under this Section.
- B. Repair of the grade crossing surface at Union Avenue will be measured as a Unit,

acceptably performed.

- C. Total Track Reconstruction, if directed by the Engineer, will be measured by the Track-Foot within the longitudinal limits directed.
 - 1. Total Track Reconstruction will include the demolition and removal of the existing track.
 - 2. Reconstruction of the subballast layer and underdrain systems, if required, will be addressed under the Changes provisions of the Contract.
 - 3. Repairs to existing tracks to any level less than Total Track Reconstruction will be negotiated under the Changes provisions of the Contract.
- D. Rail Replacement
 - 1. If directed, Rail Replacement up to points twenty feet beyond the longitudinal limits of the crossing surface will not be separately measured as it is considered incidental to the Work of Total Track Reconstruction.

4.2 BASIS OF PAYMENT

- A. Grade crossing surface reconstruction at Adams, Court, and Monroe, will be paid for at the Contract Unit Price for MODULAR GRADE CROSSING SURFACE
- B. Grade crossing surface repairs at Union Avenue will be paid for at the Contract Lump Sum Price for REPLACEMENT GRADE CROSSING PANELS – UNION AVENUE CROSSING
- C. Total Track Reconstruction, if directed, will be paid for at the Contract Unit Price for TRACK RECONSTRUCTION FOR GRADE CROSSING.

END OF SECTION

SECTION 34 11 23.16
TIMBER CROSSTIES AND SWITCHTIES

PART 1 - GENERAL

1.1 DESCRIPTION - This specification covers the requirements for the manufacture, treatment and delivery of Contractor-furnished timber crossties and switch-ties for use in railway track.

1.2 RELATED WORK

- A. Section 34 72 15 - TRACK CROSSTIE REPLACEMENT
- B. Section 34 72 50 – MODULAR GRADE CROSSINGS

1.3 REFERENCE SPECIFICATION - Timber crossties and switch-ties shall be manufactured and treated in accordance with the Chapter 30 of the AREMA "Manual for Railway Engineering" except as amended by this specification.

1.4 SUBMITTALS - The following information shall be submitted to the Engineer.

- A. Prior to Ordering Ties
 - 1. Name of the tie manufacturer, the name(s) and location(s) of the sawmill, the seasoning yard and the treatment plant.
 - 2. Description of manufacturer's equipment, type, age and present condition. Particular attention shall be made concerning equipment used to artificially season ties, if proposed. Gauges and thermometers on seasoning and treatment equipment shall have been calibrated within six months of the date of seasoning and treatment.
 - 3. Wood species proposed and the quantities of each.
 - 4. Product data for ties to be furnished.
- B. Subsequent to treatment and a minimum of seven days prior to any ties being installed in track, notarized records concerning the seasoning and treatment of ties.

PART 2 – PRODUCTS

2.1 SIZE

- A. Timber crossties for the reconstruction of grade crossings shall be seven-inch grade crossties as defined by the American Railway Engineering & Maintenance of Way Association and shall be of a length recommended by the crossing surface manufacturer.
- B. Timber crossties for spot replacement shall be seven-inch grade crossties as defined by the American Railway Engineering Association and shall be 8'-6" in length.

- C. Timber switch-ties shall be seven-inch grade crossties as defined by the American Railway Engineering Association and shall be of the lengths directed by the Engineer in the field.
- 2.2 ACCEPTABLE WOOD SPECIES - Timber crossties shall be manufactured only from those wood species listed below. Switch-ties shall be oak. Submittals shall indicate the type of woods proposed for this Contract.
- A. Ashes
 - B. Beeches
 - C. Hickory
 - D. Gum
 - E. Oaks
- 2.3 **SEASONING** - Timber crossties and switch-ties shall be well seasoned. Timber ties manufactured from red or white oak shall be dried to an oven dry moisture content of 50% or less prior to preservative treatment. Timber ties manufactured from other allowable wood species shall be dried to an oven dry content of 45% or less prior to preservative treatment. The wood may be air dried, vapor dried, or bouldenized. Submittals shall indicate the type of seasoning to be utilized.
- A. Ties which are to be dried by artificial means shall be seasoned and treated as soon as possible after sawing but in no case more than 30 days later.
 - B. The temperature used for bouldenizing shall be as high as possible but in no case less than 200oF.
 - C. Vapor dried ties shall be transferred from drying cylinders to treatment cylinders as quickly as possible to avoid loss of heat from the seasoned ties.
- 2.4 **INCISING** - Timber crossties and switch-ties shall be incised on all four sides in the pattern specified in the AREMA Manual for Railway Engineering, Chapter 30, TIES; Section 3.6 "Wood Preserving".
- 2.5 **PRESERVATIVE TREATMENT**
- A. Timber crossties and switch-ties shall be dual-treated (creosote and borate).
 - B. The specification / procedure used for dual-treated crossties is considered plant specific. Submit a dual treatment specification developed specifically for the plant proposed to furnish crossties to this. The specification must cover the processing and dual treatment of ties with disodium octaborate tetrahydrate (DOT), or its approved equivalent, followed by overtreatment with creosote.
 - C. General Dual-Treatment Requirements
 - 1. The DOT must meet AWPA Standard P25-10, be an EPA registered pesticide, and have a product label specifying its use in railroad crossties.

2. Creosote shall meet the requirements specified in AWPA Standard P-2.
3. Finished crossties must be treated to a minimum retention of 0.28 pcf DOT or 0.18 pcf Boric Oxide Equivalent (B2 O3).
4. DOT retention by assay shall be determined before overtreatment and after sufficient diffusion period (no sooner than 90 days after DOT treatment). Retention shall be determined using current edition AWPA Method A40 with 20 borings taken from an assay zone from the surface to a depth of 1.5". All borings shall be taken from the 6" or 7" side of the tie. Four charges per month shall be assayed in this manner.
5. Creosote overtreatment retention shall be 6 pcf (or refusal) for all species groups.
6. Sterilization pretreatment is required for dual-treated crossties unless the plant can demonstrate that their borate procedure effectively sterilizes fungi/incipient decay in air-dried crossties.
7. Specification must include QA/QC procedures for both creosote and borate solutions and retentions.
8. Minimum penetration requirements for DOT will be per AWPA T-1 – Section 8C.
9. Spray all dual-treated borings with 2-part curcumin solution to visually check for borate penetration. These should be the same borings used for the visual determination of creosote penetration.
10. Dual-treated crossties shall bear a 1/8" wide by 1/8" deep kerf mark across the top and bottom face of one end positioned approximately 9" from the end.
11. Assay and gauge retentions records shall be maintained and available for review by the Engineer.

2.6 ANTI-SPLITTING DEVICES

- A. Timber crossties and switch-ties shall be equipped with anti-splitting devices of the Steel Nail Plate type regardless of whether or not the wood has shown any tendency to split. Products used shall conform to the AREMA Chapter 30, Article 3.1.6 "Specifications for Devices to Control the Splitting of Wood Ties".

PART 3 - EXECUTION

- 3.1 **HANDLING** - Timber crossties and switch-ties shall be carefully handled to avoid damage in accordance with the AREMA specification "The Handling of Ties From the Tree Into the Track".
- 3.2 **SEASONING AND TREATMENT** - Shall be in accordance with the AREMA Manual, Chapter 3, Part 6 "Wood Preserving" and this specification. The Contractor shall provide

the engineer with 14 days written notice of the date(s) scheduled for artificial seasoning and treatment of ties.

- 3.3 DELIVERY - Timber ties shall be delivered either directly to the point of installation or the Contractor's own storage areas. Timber ties which are not installed in track under this Contract will remain the property of the Contractor and shall be removed from the site.
- 3.4 INSTALLATION - Crossties and switch-ties shall be installed as indicated in Section 34 72 15.

PART 4 - MEASUREMENT AND PAYMENT

4.1 TIMBER CROSSTIES

- A. Furnishing timber crossties as specified herein will not be separately measured for payment as they are considered incidental to the Work of other Sections of the Work.

END OF SECTION

SECTION 34 72 15
TRACK CROSSTIE REPLACEMENT

PART 1 - GENERAL

1.1 DESCRIPTION - The Work of this Section includes the following as shown on the Contract Drawings, as Specified herein, and as otherwise required for the proper and timely completion of the Work of the Contract:

- A. Spot replacement of timber crossties
- B. Out of Face track surfacing including the provision of additional ballast stone as required.
- C. Thermal adjustment of Continuous Welded Rail (CWR)
- D. Anchoring of CWR including removal and replacement of existing anchors as required for crosstie replacement work and the provision of additional anchors as may be required to achieve the anchoring requirements specified in this Section.

1.2 RELATED WORK

- A. Section 34 11 23.16 TIMBER TIES
- B. Section 34 72 30 THERMITE RAIL WELDING

1.3 SUBMITTALS - Submit the following information related to the Work.

- A. Notarized Certificates of Compliance for Contractor furnished materials incorporated in the work.
- B. Detailed information concerning the type, model, age and condition of equipment to be used for the work. Include photographs of the equipment. This submittal is for the information of the Engineer.
- C. Ballast source and test data report.
- D. Detailed procedure for thermally adjusting CWR to a neutral stress temperature. Identify specific locations where the rail will be cut so rail ends can be bypassed.
- E. Complete records of CWR anchoring including all calculations, temperature records and measurements.

1.4 REFERENCE STANDARDS - Track construction work shall be conducted in accordance with the AREMA Manual of Railway Engineering and Portfolio of Trackwork Plans except as those documents may be amended or augmented by these specifications.

PART 2 - PRODUCTS

2.1 OWNER FURNISHED MATERIALS

- A. None.

2.2 CONTRACTOR FURNISHED MATERIALS

- A. Ballast - Type A coarse aggregate crushed stone complying with Part 3 and Part 9 of Tennessee DOT's Standard Specifications for Road and Bridge Construction ver. January 1, 2021.
 - 1. Material: Quarried stone only. Slag, gravel, chert and recycled concrete are not acceptable.
 - 2. Quality: Type 1 as per T-DOT Table 903.24-1 and the following:
 - a. Degradation when tested by the Los Angeles Abrasion Test (ASTM C-535) shall not exceed 30%
 - b. Soundness when tested for Sodium Sulfate for 5 cycles, ASTM C-88, shall not exceed 5%.
 - 2. Gradation: Either AREMA No. 4A or AASHTO No. 3 coarse aggregate.
- B. Crossties shall conform to the requirements of Section 34 11 23.16.
- C. Track Spikes shall be new and comply fully with the AREMA Manual for Railway Engineering, Chapter 5, Part 2, Sections 2.1 *Specifications for Soft Steel Track Spikes* and 2.2 *Design of Track Cut Spike*.
- D. Tie plugs shall conform to the AREMA "Specifications for Tie Plugs".

PART 3 - EXECUTION

3.1 TEMPERATURE LIMITATIONS

- A. Crosstie replacement work shall not be undertaken whenever the temperature of the CWR, as determined using AREMA-approved rail thermometer, is above the neutral temperature of the rail or can be expected to be above the neutral temperature prior to completion of ballasting, surfacing, and rail anchoring of the track.
- B. For purposes of this Article, it shall be assumed the existing CWR was anchored at a neutral temperature not higher than 90 degrees Fahrenheit.

3.2 CROSSTIES TO BE REPLACED

- A. This Contract will replace crossties on a spot basis to break up clusters of defective crossties and restore the track to a state of good repair consistent with operation of MATA's trolley cars.
- B. The bid tabulation stipulates a quantity of crossties to be replaced. The Contractor and the Engineer shall jointly walk the track between the limits of work and

determine which crossties will be replaced. Contractor shall provide paint for marking the crossties selected for replacement. Not all defective ties will necessarily be replaced.

C. Exclusions:

1. The repair work on the timber trestle portions of the Beale Street Bridge requires removal and reconstruction of the track on those portions of the structure. Crossties required for the restoration of the track are not included in the bid quantity of ties to be replaced on a spot basis as they are considered incidental to the bridge repair work.
2. Reconstruction of the roadway/railway grade crossing surfaces at Adams, Monroe and Court may require reconstruction of the underlying track structure. If so, the crossties required for those crossings are not included in the bid quantity of ties to be replaced on a spot basis.
3. This Contract will not replace any switch timber. Replacement of defective switch timber at the Pyramid Interlocking will be performed by others.

3.3 CROSSTIE REMOVAL

- A. Pull spikes from marked ties using standard equipment. All spikes extracted shall become the Contractor's property and shall be promptly collected and removed from the site.
- B. Remove rail anchors located adjacent to crossties to be removed. Collect and store anchors for re-use.
- C. Extract crossties using standard equipment and methods which avoid humping or misaligning the track. Correction of track which is humped or misaligned due to tie replacement activities shall be at the Contractor's sole expense.
- D. Collect and store existing tie plates for re-use.
- E. Extracted crossties will become the Contractor's property and shall, on a daily basis, be collected, removed from the site, and disposed of legally in accordance with all applicable local, state, and federal regulations.
- F. The Contractor is responsible for the security of rail anchors and tie plates salvaged during crosstie replacement operations. Lost or stolen materials shall be replaced in kind at the Contractor's sole expense.

3.4 CROSSTIE INSTALLATION

- A. Insert new ties using AREMA-approved equipment and methods. Crossties shall be handled as indicated in the AREMA "The Handling of Ties from the Tree into the Track". Ties shall be handled carefully and only with approved tie handling devices.
- B. Prevent damage to ties during handling and installation. Any new ties, and existing ties designated to remain in track, which are damaged during crosstie replacement

work shall be removed and replaced with new ties at the Contractor's sole expense.

- C. Examine both ends of each crosstie to determine the position of the heartwood. The presence of gang nail plates will not be accepted as an excuse for non-compliance with this Paragraph. Clearly mark the sapwood side of the tie. Ties shall be inserted in track with the heartwood facing down.
- D. Crossties shall be placed in track, square to the line of the rails and with the west or south end of the tie set 18-1/2 inches from the edge of the base of the rail.
 - 1. Tie spacing shall match the existing average spacing in track except that spacing shall not exceed 22 inches or be less than 17 inches.
 - 2. New crossties shall be placed in track with the heartwood facing down.

3.5 TIE PLATES

- A. Tie plates shall be positioned on the tie such that the outer shoulder has full bearing against the base of the rail.
- B. The plate should be centered on the tie width except that the plate shall be positioned up to 1/2 inch off-center if necessary to avoid spiking into an existing tie split.
- C. Existing tie plates which the Engineer determines to be mechanically damaged, severely corroded, or otherwise unfit for reuse shall be replaced in kind with fit-condition or new tie plates of similar design to those currently found in MATA's track.

3.6 SPIKING

- A. Six-inch spikes shall be used on seven-inch grade crossties or switch-ties.
- B. Each tie plate shall be spiked with not fewer than two rail-holding spikes and one plate holding spike. The positions of spikes shall be as directed by the Engineer based on the punching of the tie plates found in track.
- C. Spikes shall be started and driven vertically and square with the rail. Spikes shall have full bearing against the side of the rail base. Spikes shall not be overdriven; a gap of 1/8 to 3/16 inch shall remain between the underside of the spike head and the top of the rail base.
- D. Track gauge shall be set at time of spiking. Standard gauge shall be 56-1/2 inches plus or minus 1/8 inch.
 - 1. Tangent track and curved track up to and including 5 degrees shall be spiked to standard gauge.

3.7 BALLASTING

- A. Spread sufficient ballast using AREMA-approved equipment to ensure that once

the track has been surfaced, aligned, and regulated, all tie cribs will be full up to but not above the top of tie and a full 12-inch shoulder can be provided.

3.8 OUT-OF-FACE SURFACING AND ALIGNING

- A. Surface and align track out-of-face in all areas of crosstie replacement work.
- B. Rail and tie work, spiking, bolt tightening, and ballast placement shall be complete prior to commencement of surfacing and alignment work.
- C. Existing rail anchors not previously removed during crosstie replacement shall be removed prior to out-of-face surfacing and aligning.
- D. Raising and tamping of track shall be performed with an automatic, vibratory, squeeze type power tamper with sixteen tools, capable of raising both rails simultaneously and maintaining cross-level. The equipment to be used for surfacing operations will be subject to approval by the Engineer. Every tie in the track shall receive not less than two full insertions of the work heads during each pass and shall be tamped from a point 15 inches inside each rail on both sides of the ties to the end of the ties. Tamping shall not be permitted at the center of the tie between the above stated limits; but this center space shall be filled lightly with ballast stone. Both ends of the tie shall be tamped simultaneously and tamping inside and outside of the rail shall be done at the same time.
- D. All ties that are pulled loose during surfacing operations shall be lifted, plugged, re-spiked and re-tamped to provide firm bearing against the rail.
- E. The Contractor shall surface and align the track to the following tolerances

FINAL TRACK CONSTRUCTION TOLERANCES		
CROSS LEVEL & SUPER-ELEVATION VARIATION	VERTICAL ALIGNMENT DEVIATION	HORIZONTAL ALIGNMENT TOTAL DEVIATION
1/8 inch (Note 3)	Deviations from uniform profile on either rail at the mid-ordinate of a 62-foot chord may not exceed 1 inch	Deviation from uniform alignment between any two points less than 62 feet apart on tangent and curved track may not exceed 3/4 Inch

1. Total deviation in vertical and horizontal track alignments are measured between theoretical and actual alignment at any point in track.
2. Variations from theoretical cross level, and superelevation: Do not exceed a delta of 1/4 inch variation per 31 feet of track.
3. Curved track, including diverging sides of turnouts, shall not have any negative superelevation.

- F. Track surfacing shall be accomplished by methods which will prevent undue bending of rail, straining of joints, and damaging rail fastenings. Both rails shall be raised at one time and as nearly uniformly as possible. Each track lift shall be limited to such amount as will not endanger horizontal and vertical stability of track.
- G. All surface sags, such as those immediately off the ends of bridges shall be properly corrected such that the ballasted track maintains the same grade as the bridge for a minimum of 25 feet beyond the abutment and then transitions smoothly to meet established grades.
- H. The run-off at the end of a raise shall not exceed 1/2 inch in 31 feet of track unless otherwise approved by the Engineer.
- I. Superelevation shall conform to the amounts indicated on the Contract Drawings or as directed by the Engineer.
- J. Elevation run off must be at a uniform rate and must extend the full length of the curve spiral. On curves with no spiral, up to one inch of superelevation may be run-off on the tangent. The maximum rate of change of superelevation shall be 1/2 inch in 31 feet of track.
- K. Horizontal alignment of curved track shall be established by the Contractor as described in the AREMA Manual requirements for "String Lining of Curves by the Chord Method" described in Chapter 5, Part 3, Pages 5 through 9.
- L. All computations prepared by the Contractor for alignment of circular curves and spiral run-offs shall be submitted to the Engineer for review and approval prior to commencement of any track realignment under this Section.
- M. All crossties and switch timber shall be tamped tightly to provide good bearing against the base of the rail after the track is raised to true surface. All down ties shall be brought up to the base of rail and machine tamped by the Contractor. The resultant surface and alignment shall be of uniform and smooth quality.
- N. Tamping of track in snow or frozen ballast conditions will not be permitted.
- O. Upon completion of surfacing and lining operations, the track shall have been fully tamped, lined, ballasted and dressed to adequately support and restrain the track under load. Ballast cross section shall conform to the dimensions given on the Contract Drawings.
- P. Tracks shall be given a minimum lift in the range of one to two inches unless otherwise directed by the Engineer. The limits of transitions to existing grades will be determined in the field by the Engineer. In discrete locations where the Engineer determines that a two-inch lift does not bring the track to an acceptable surface, perform an additional pass to raise the track to final grade.

3.9 RAIL THERMAL ADJUSTMENT

- A. Continuous Welded Rail shall be thermally adjusted subsequent to ballasting & surfacing work. Limits of rail thermal adjustment work extend from immediately

south of the A.W. Willis Avenue to the northern edge of the crossing at Huling Avenue with the following exceptions.

1. Bolted joint rail on Open Deck bridges.
 2. At-Grade Crossings for roadways and pedestrian paths.
- B. Comply with the AREMA Manual for Railway Engineering, Chapter 5, Part 5, Sections 5.2 *Laying and Maintenance of Continuous Welded Rail* and 5.3 *Temperature Expansion for Laying Rails*.
- C. Locate rail cuts at locations cited in the accepted procedure required by the Submittals article of this Section. It is expected that there will be a pair of rail cuts in each segment between at-grade roadway crossings.
- D. Once rail has been thermally adjusted, make closure welds in accordance with Section 34 72 30.

3.10 RAIL ANCHORING

- A. Reuse existing rail anchors removed from the MATA track during previous work steps. Any anchors which the Engineer determines to be mechanically damaged, severely corroded, or otherwise unfit for use shall be replaced in kind with fit-condition or new rail anchors of the same make and model as the anchors currently found in track.
- B. Rails shall not be anchored until after the acceptable completion of track surfacing and thermal adjustment work.
- C. Welded rail shall be anchored at a zero thermal stress temperature of 95oF. The rail shall be heated or cooled as necessary to achieve this temperature at the time of anchoring. The rail temperature tolerance shall be 5oF+/- and opposite rail shall be anchored at temperatures within 5oF of each other.
- D. Rail anchors shall be installed by methods and equipment approved by the anchor manufacturer.
- E. Rail anchors shall be installed to satisfy the following criteria:
1. CWR and any jointed rail track or special trackwork within 200 feet of the end of a CWR track shall be fully box anchored on alternate crossties.
 2. Jointed rail within 60 feet of the end of an open floor bridge shall be box anchored on every crosstie.
 3. Except on Open Deck bridges, jointed rails 30 feet or greater in length shall be equipped with not less six anchors per rail.
 6. Anchors shall be installed so as to box anchor ties. Each end of the tie shall be box anchored.
- F. Anchors shall be installed so as to bear solidly against new or good quality older

crossties.

- G. Anchors shall not be placed within six inches of a rail weld or joint bar.
- H. Anchoring Limits – At the conclusion of the work, rails shall have been anchored from the point of switch of the turnout at PYRAMID interlocking, immediately north of A.W. Willis Avenue, to the northern edge of the crossing at Huling Avenue with the following exceptions.
 - 1. Open Deck bridges.
 - 2. At-Grade Crossings for roadways and pedestrian paths.

3.10 BALLAST REGULATION

- A. Upon completion of all other work of this Section, the ballast shall be mechanically regulated to neat lines. Ballast in the tie cribs shall be flush with but not above the top of tie. Ballast shoulders shall extend out level with the top of tie for not less than 12-inches before sloping down to meet the subgrade at a slope not steeper than 2 horizontal to 1 vertical. When ballast regulation is complete, the ballast section shall appear neat and workmanlike.
- B. Excess ballast shall be removed from the site.

PART 4 - MEASUREMENT AND PAYMENT

4.1 CROSSTIE REPLACEMENT

- A. Method of Measurement –
 - 1. Spot crosstie replacement will be measured by the unit “Each” for each crosstie acceptably replaced, including all requirements of this Section.
 - 2. Crossties in grade crossings and on ballasted deck bridges will not be measured under this Section as they are considered to be part of the work of other Sections.
 - 3. Replacements for defective tie plates, if required, will be paid for under the Changes provisions of the Contract.
- B. Basis of Payment
 - 1. Payment will be made at the Contract Unit Price for CROSSTIE REPLACEMENT.

4.2 OUT-OF-FACE SURFACING & ALIGNING

- A. Method of Measurement:
 - 1. Measurement will be by the unit “Track-Foot” for each foot of track acceptably surfaced and aligned including all requirements of this Section.

2. The standard for measurement will be a lift of not more than two inches. Segments of track which the Engineer determines must be raised more than two inches, if any, will be measured for a second pass.
 3. Ballast will not be separately measured for payment as it is considered to be incidental to the Work.
- B. Payment will be at the Contract Unit Price per track foot for the following:
- OUT-OF-FACE SURFACING & ALIGNING UP TO 2 INCH RAISE
OUT-OF-FACE SURFACING – SECOND PASS.

4.3 CWR THERMAL ADJUSTMENT

- A. Method of Measurement:
1. Measurement will be as a single unit, acceptably performed.
 2. Rail anchoring will not be measured separately, as it is considered incidental to the Work except as follows:
 - a. Furnishing either replacements for defective rail anchors, or additional rail anchors as necessary to meet the spacing requirements of this Section, if required, will be paid for under the Changes provisions of the Contract.
 3. Thermite rail welding of bypassed rail ends will not be measured separately as it is considered incidental to the Work.
- B. Payment will be at the Contract Lump Sum Price for CWR THERMAL ADJUSTMENT.

4.4 BALLAST, BALLAST SPREADING, AND BALLAST REGULATION

- A. Furnishing, spreading, and regulation of ballast stone will not be separately measured as they are considered incidental to other Work.

END OF SECTION

SECTION C

REQUIRED FORMS AND CERTIFICATIONS

**MEMPHIS AREA TRANSIT AUTHORITY
ADDENDA ACKNOWLEDGEMENT FORM**

Addenda received (if none received, write "none received")

Addendum No: _____ Date Received: _____

Addendum No: _____ Date Received: _____

Addendum No: _____ Date Received: _____

Addendum No: _____ Date Received: _____

Addendum No: _____ Date Received: _____

Addendum No: _____ Date Received: _____

Addendum No: _____ Date Received: _____

Addendum No: _____ Date Received: _____

Name of individual, partner or corporation: _____

Street Address: _____

City, State and Zip Code: _____

Telephone Number: _____ Fax Number: _____

Printed Name: _____

Authorized Signature: _____

Title: _____

EXHIBIT I
MEMPHIS AREA TRANSIT AUTHORITY
AFFIDAVIT OF NON-COLLUSION

Affidavit of Non-Collusion:

I hereby swear (or affirm) under the penalty of perjury:

- (1) That I am the bidder (if the bidder is an individual), a partner of the bidder (if the bidder is a partnership), or an officer or employee of the proposing corporation with authority to sign on its behalf (if the bidder is a corporation);
- (2) That the attached bid or bids have been arrived at by the bidder independently, and have been submitted without collusion with, and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment, or services described in the invitation for bid, designed to limit independent proposing or competition.
- (3) That the contents of the bid or bids have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the proposal or bids; and
- (4) That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

Signed: _____

Firm Name: _____

Subscribed and sworn to before me this _____ day of _____

Notary Public

My Commission expires _____

Bidder's E.I. Number: _____
(Number used on Employer's Quarterly Federal tax return)

EXHIBIT II

MEMPHIS AREA TRANSIT AUTHORITY

BUY AMERICA CERTIFICATE

(For Contracts of \$150,000 or greater)

The bidder hereby certifies that it will comply with the requirements of Section 165a of the Surface Transportation Assistance Act of 1982 and the regulations in 49 CFR 661.

Date _____

Signature _____

Company _____

Title _____

or

The bidder hereby certifies that it cannot comply with the requirements of Section 165a of Surface Transportation Assistance Act of 1982, but it may qualify for an exception to the requirement pursuant to Section 165b of the Surface Transportation Assistance Act and regulations in 49 CFR 661.7.

Date _____

Signature _____

Company _____

Title _____

EXHIBIT III

MEMPHIS AREA TRANSIT AUTHORITY

CERTIFICATION OF PRIMARY PARTICIPANT (prime Contractor)
REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

The Primary Participant (potential contractor for a major third-party contract), _____ certifies to the best of its knowledge and belief that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three-year period preceding this bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission or any of the offenses enumerated in paragraph (2) of this certification; and
4. Have not within a three-year period preceding this application/bidder had one or more public transactions (Federal, State, or local) terminated for cause or default.

(If the primary participant (potential third-party contractor) is unable to certify to any of the statements in this certification, the participant shall attach an explanation to this certification.)

THE PRIMARY PARTICIPANT (POTENTIAL CONTRACTOR FOR A MAJOR THIRD-PARTY CONTRACT), _____, CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE PROVISIONS OF 31 U.S.C. SECTION 3801 ET. SEQ. ARE APPLICABLE THERETO.

Signature and Title of Authorized Official

EXHIBIT IV

MEMPHIS AREA TRANSIT AUTHORITY

**CERTIFICATION OF LOWER-TIER PARTICIPANTS (subcontractors)
DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

The Lower Tier Participant (potential third-party contractor, or potential subcontractor under a major third-party contract), _____, certifies, by submission of this bid, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(If the Lower Tier Participant, (potential third-party contractor or potential subcontractor under a major third-party contract) is unable to certify to any of the statements in this certification, such participant shall attach an explanation to this bid).

The LOWER-TIER PARTICIPANT, POTENTIAL THIRD-PARTY CONTRACTOR, OR POTENTIAL SUBCONTRACTOR UNDER A MAJOR THIRD-PARTY CONTRACT, _____, CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE PROVISIONS OF 31 U.S.C. SECTIONS 3801 ET. SEQ. ARE APPLICABLE THERETO.

Signature and Title of Authorized Official

EXHIBIT V

MEMPHIS AREA TRANSIT AUTHORITY

CERTIFICATION OF RESTRICTIONS ON LOBBYING

(For Contracts of\$ 100,000 or greater)

I, _____, hereby certify on behalf of _____
Name of Official Name of Contractor

that:

- (1) No Federal appropriated funds have been paid or will be paid on behalf of the undersigned to 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 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.
- (2) If any funds other than Federal appropriate funds have been paid or will be paid to 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 this Federal contract, grant, loan, or cooperative agreement, the CONTRACTOR shall complete and submit Office of Management and Budget Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than\$ 10,000 and not more than\$ 100,000 for each such failure.

Executed this _____ day of _____, _____.

By: _____
Signature of Authorized Official

Title of Authorized Official

**Certification of Utilization of
Disadvantaged Business Enterprises**

The undersigned, as authorized representative of the Bidder, agrees to accept the terms and conditions of Section D and commits to carrying out the DBE contracting arrangements specified in the Schedule of DBE Participation.

Signature _____

Title _____

Date _____

Letter of Intent to Perform as a DBE Contractor or Subcontractor

To: _____
Name of Prime/General Bidder

23-11-2
MATA IFB Number

Address of Prime/General Bidder

City/State/Zip

The undersigned DBE intends to perform work in connection with the above project as (check one):

[] An Individual; [] A Corporation; [] Partnership; [] A Joint Venture

The undersigned DBE is prepared to perform the following described work in connection with the above project (specify in detail the particular work, items or parts thereof to be performed):

at the following price \$ _____. This price equals _____% of the total bid price or contract to be awarded to the prime bidder.

Work or Items by Subcontractor	Projected Commencement Date	Projected Completion Date
_____	_____	_____
_____	_____	_____
_____	_____	_____

DBE Business Name

Signature of Authorized DBE Representative

Certification # / State of Certification

Expiration Date of Certification

Address

Date

City/State/Zip

Phone Number Fax Number

No agreement has been entered into between the above-named Prime Bidder and the DBE subcontractor wherein the above-named DBE subcontractor has promised not to provide subcontracting quotations to other bidders.

Date

Name of Prime or General Bidder

Signature of Authorized Representative

**EXHIBIT VIII
MEMPHIS AREA TRANSIT AUTHORITY
SCHEDULE OF DBE PARTICIPATION**

NAME OF DBE FIRM	ROLE IN PROJECT (P, JV, S)	SERVICES TO BE PERFORMED	% OF TOTAL PROJECT COST
TOTAL			

P = Prime Contractor
 JV = Joint Venture
 S = Subcontractor

NO RESPONSE

* PLEASE EITHER PRINT OR TYPE INFORMATION ON THIS FORM *

TO: Memphis Area Transit Authority (MATA)

Our company is submitting a "NO RESPONSE" on IFB# 23-11-2 for the Riverside at Beale Street Bridge Repair & Riverfront Loop Grade Crossing Repair for the reason indicated below.

- Product or service is not available.
 - Cannot provide required bonds.
 - Other obligations - cannot make deadline.
 - Other (please explain below)
-
-

FROM:

Name of Company: _____

Representative: _____

Address: _____

Phone Number: _____

Signature: _____

- Please keep our name on the Bidder's list for this item.
- Please remove our name from the Bidder's list for this item.

**FAILURE TO RETURN EITHER A BID OR THIS FORM
MAY RESULT IN REMOVAL FROM THE BIDDER'S LIST.**

**MEMPHIS AREA TRANSIT AUTHORITY
BID FORM**

To the Memphis Area Transit Authority

In compliance with your Legal Notice to Bidders for the Riverside at Beale Street Bridge Repair, the undersigned bidder, an organized and existing legal entity under the laws of the State of Tennessee; having examined the DRAWINGS, SPECIFICATIONS and contract form provided hereto, and being fully advised as to the extent and character of the WORK to be performed and the equipment to be furnished, hereby proposes to furnish all labor, tools, materials, plant and equipment necessary for the Riverside at Beale Street Bridge Repair.

The undersigned further proposes to perform all WORK and furnish all equipment in accordance with DRAWINGS and SPECIFICATIONS prepared by the CONSULTANT and contract stipulations thereof, within the time limit specified, for the prices so stated below.

BASE BID:

BID FORM

RIVERSIDE AT BEALE STREET BRIDGE REPAIR & RIVERFRONT LOOP GRADE CROSSING REPAIR

PROPOSAL SUBMITTED BY (COMPANY): _____

SIGNATURE OWNER/OFFICER: _____

DATE: _____

MATA RIVERSIDE @ BEALE ST. BRIDGE REPAIRS		C.O.M. ITEM NUMBER	ESTIMATED QUANTITY	UNIT	UNIT COST	ITEM COST
	Mobilization	01400-01	1	LS		
	Traffic Control Devices for Construction Work Zones	01551-5.02	1	LS		
	Removal of Obstructions and Structures	02220-3.01	1	LS		
	Sheet Piling	02260-01	120	LF		
	Ballast Replacement	02720-02	7	TON		
(1)	Handrail Replacement	05520-5.01.1	330	LF		
(2)	Pile Replacement and FRP Splice	06000.01	46	EA		
(3)	Sway Bracing Replacement	06000.02	14	EA		
(4)	8"x4" Decking Replacement	06000.03	2,355	LF		
(5)	8"x8"x8'-6" No. 2 Southern pine cross ties	06000,04	39	EA		
(6)	Crossties	06000.05	2,800	EA		
(7)	Cleaning and Painting of Steel Span Bearings	07000.01	1	LS		
(8)	Lead Paint Testing	07000.02	1	LS		
(9)	Sun Kink	7000.03	1	LS		
	Sub Total					
	Total					

MATA RIVERFRONT LOOP GRADE CROSSING REPAIRS

		C.O.M. ITEM NUMBER	ESTIMATED QUANTITY	UNIT	UNIT COST	ITEM COST
	Mobilization	01400-01	1	LS		
	Traffic Control Devices for Construction Work Zones	01551-5.02	1	LS		
	Asphaltic Concrete Surface, Mix No. 1, 2" Thickness	02741.01.01	112	SY		
	Asphaltic Concrete Surface, Mix No. 3, 4.5" Thickness	02741.01.03	116	SY		
	Removal of Asphalt Pavement	202-03.01	118	SY		
	Concrete Sidewalk Removal and Replacement	02950-02	270	SF		
	Concrete Curb and Gutter Removal and Replacement	02950-04	10	LF		
	Concrete Curb Removal and Replacement	02950-07.01	10	LF		
(11)	Modular Grade Crossing Surface	04000.01	267	TF		
(11)	Replacement Grade Crossing Panels – Union Avenue Crossing	04000.02	1	LS		
(11)	Track Reconstruction for Grade Crossing	07000.10	330	TF		
	Railroad Flagging	07120.04	30	DAY		

(1) Item number 05520-5.01.1 includes the handrail, base plates, threaded rods, and nuts required for attaching the handrail.

(2) Item number 06000.01 includes the cutting of rotten piles just below the ground line, replacing of the section above the groundline, and splicing the two together with an FRP sleeve.

(3) Item number 06000.02 includes the removal and replacement of sway bracing.

(4) Item number 06000.03 includes 157 pieces of decking at 15' each.

(5) Item number 06000.04 includes replacement of rail ties along the side of the bridge at the handrail location.

(6) Item number 06000.05 includes replacement of rotten rail ties on the bridge deck (including removal of rail for access) in order to meet

FRA Class 2 standards. It also includes replacement of rail ties along the Riverfront line in order to meet FRA Class 2 standards. The

Riverfront line for These plans is defined as starting at the switch north of A.W. Willis Ave. and ending at W Huling Ave.

(7) Item number 07000.01 includes the removal of existing paint present on the steel bridge members and bearings and reapplication.

(8) Item number 07000.02 includes the testing of the existing paint on the steel bridge members and bearings for lead.

(9) Item number 07000.03 includes repair for sun kink near Huling Station and associated items.

(10) Item number 07000.03 includes all measures required to abate and remove lead paint, if it is discovered to be present in the existing paint system.

(11) See 347250 Modular Grade Crossings Specification for details on this pay item.

BIDDER understands that the OWNER reserves the right to reject any or all BIDS and to waive any informalities in bidding.

The BIDDER agrees that his BID shall be good and may not be withdrawn for a period of **ONE HUNDRED TWENTY (120) days** after the scheduled closing time for receiving BIDS.

Upon receipt of written notice of acceptance of this BID, BIDDER will submit the following documents within ten (10) days:

1. Executed formal CONTRACT
2. Executed PERFORMANCE BOND
3. Certificates of insurance coverage

The bid security attached in the sum of five percent (5%) of the BID is to become the property of the OWNER in the event the CONTRACT, PERFORMANCE BOND and insurance certificates are not executed within the time limit set forth, as liquidated damages for the delay and additional expenses to the OWNER caused thereby.

Bidder acknowledges receipt of Addendum(s) Nos. _____

_____ Respectfully submitted:

_____ Contractor's Name

_____ Signature

_____ Printed or Typed Name and Title

_____ Business Address

Seal Required - if bid is by a corporation.

EXHIBIT XII
MEMPHIS AREA TRANSIT AUTHORITY
BID BOND
MATA IFB NUMBER 23-11-2

Print Name of Principal

Print Name of Surety

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety above named, are held and firmly bound unto MATA in the full and just sum of five percent (5%) of the total amount bid by the Principal for the project stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

NOW. THEREFORE, the condition of this obligation is: the Principal shall not withdraw its bid within 120 days after the opening of the bids, or within such other time period as may be provided in the Proposal, and if MATA shall award a Contract to the Principal, the Principal shall, within ten (10) days after written notice of the award is received by him, fully execute a Contract on the basis of the terms, conditions and unit prices set forth in his Proposal or bid and provide bonds with good and sufficient surety, as required for the faithful performance of the Contract and for the protection of all persons supplying labor, material, and equipment for the prosecution of the work. In the event the Principal withdraws its bid after bids are opened, or after award of the Contract has been made fails to execute such the Contract and/or such additional documents as may be required and to provide the required bonds within the time-period specified above, then the amount of the Proposal Bond shall be immediately paid to MATA, not as a penalty, but as agreed upon liquidated damages.

IN WITNESS WHEREOF, the Principal has caused these presents to be signed by a duly authorized official and the Surety has caused these presents to be duly signed and sealed by an authorized agent or attorney-in-fact.

Date

(Seal)

Principal (2)

Surety (2)

By: _____

By: _____

General Agent or Attorney-in-Fact

Print Name and Title

Date

Date

(Seal)

*NOTE: The signature and information for Principal (2) and Surety (2) is to be provided when there is a joint venture.

SECTION D

UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES

Utilization of Disadvantaged Business Enterprises

1. Policy and Terms

- a. It is the policy of the Memphis Area Transit Authority (MATA) that Disadvantaged Business Enterprises (DBE) as defined in the United States Department of Transportation (USDOT) Regulation 49 C.F.R. Part 26 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with federal funds.
- b. Refer to Section A, 15 for DBE requirements.
- c. The DBE participation goal shall be expressed as a percentage of the total Contract price. The Bidder may also meet the goal by showing good faith efforts to meet the goal as described in 49 C.F.R. Part 26 and as set forth in Section D. Any evidence of good faith efforts must be submitted with the sealed bid or the bid will be rejected in its entirety.
- d. The DBE participation goal shall apply to the total dollar value of this contract, inclusive of all amendments, modifications, and change orders. The Bidder agrees to make its best efforts to include DBE participation in any contract modification work.
- e. The goal may be met, as further explained in Section D hereof, by the Bidder's status as a DBE, by a joint venture with one or more DBEs, by subcontracting a portion of the work to one or more DBEs, by the purchase of materials used in the performance of the contract from one or more DBEs or by any combination of the above or through a showing of good faith efforts as defined in Section D hereof.
- f. A Bidder who fails to meet the DBE goal and fails to demonstrate sufficient good faith efforts shall not be eligible to be awarded the contract. All documentation of good faith efforts by a Bidder must be included in the envelope or package containing the bid.
- g. MATA prohibits agreements between a Bidder and a DBE in which the DBE promise not to provide subcontracting quotations to other Bidders.

2. Definitions

- a. Disadvantaged Business Enterprise (DBE) means a small business concern (a) which is at least 51% owned by one or more socially and economically disadvantaged individuals, or, in the case of any publicly-owned business, at least 51% of the stock of which is owned by one or more socially and economically disadvantaged individuals; and (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.
- b. "Good Faith Efforts" means efforts to achieve a DBE contract goal as specified in 49 C.F.R., Part 26 and Section D hereof.
- c. "Joint Venture" means an association of two or more businesses to carry out a single business enterprise for profit, and for which purpose they combine their expertise, property, capital, efforts, skill and knowledge. Bidders may develop joint venture agreements as an instrument to provide participation by DBEs in contract work. A joint venture seeking to be credit for DBE participation may be formed among DBE firms or between a DBE firm and non-DBE firm.
- d. "Small Business Concern" means a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto, including Title 13 C.F.R., Part 121, except that a small business concern shall not include any

concern or group of concerns controlled by the small socially and economically disadvantaged individual or individuals which has annual average gross receipts in excess of \$16.6 million over the previous three (3) fiscal years, as such figure may thereafter be adjusted by the Secretary of the DOT.

- e. "Socially and Economically Disadvantaged Individuals" means any individual who is a citizen of the United States (or lawfully admitted permanent residents) and who is in the following groups, the members of which are rebuttably presumed to be socially and economically disadvantaged:
1. "Black Americans" (which includes persons having origins in any of the black racial groups of Africa);
 2. "Hispanic Americans" (which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race);
 3. "Native Americans" (which includes persons who are American Indians, Eskimos, Aleuts, or native Hawaiians);
 4. "Asian-Pacific Americans" (which includes persons whose origins are from Japan, China, Taiwan, Korea, Laos, Cambodia (Kampuchea), the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific (Republic of Palau), and the Commonwealth or the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Juvalu, Nauru, Federated States of Micronesia or Hong Kong; and
 5. "Subcontinent Asian-Indian Americans" which includes persons whose origins are from India, Pakistan, and Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka.
 6. Women.
 7. Any additional groups whose members are designated as socially and economically disadvantaged by the Small Business Administration (SBA) at such time as the SBE designation becomes effective.
- f. "USDOT" or "DOT" refers to the U.S. Department of Transportation.

3. Counting DBE Participation Toward the Contract Goal

The inclusion of any DBE by the Bidder in its bid documents shall not conclusively establish the Bidder's eligibility for full DBE credit for the firms' participation in the contract. The Compliance Officer, DBE Program, will determine the amount of DBE participation credit based upon an analysis of the specific duties, which will be performed by the DBE.

The Bidder may count toward its DBE goal only expenditures to firms which are currently certified by the Uniform Certification Agency or the Tennessee Department of Transportation and which perform a commercially useful function. A firm is considered to perform a commercially useful function when it is responsible for the performance of a distinct element of the work and carries out its responsibilities by actually performing, managing, and supervising the work involved.

To evaluate whether the firm is performing a commercially useful function, the Compliance Officer, DBE Program will evaluate the amount of work subcontracted, industry practices, and other relevant factors. The Compliance Officer, DBE Program reserves the right to deny or limit DBE credit to the Bidder where any DBE is found to be engaged in substantial pass-through activities

with others.

DBE participation shall be counted toward the DBE goal in the contract as follows:

- a. Once a DBE is determined to be eligible in accordance with these rules, the total dollar value of the contract awarded to the DBE may be counted toward the DBE goal except as follows:
- b. A Bidder may count toward its DBE goal that portion of the total dollar value of a contract with an eligible joint venture equal to the distinct, clearly defined portion of the work of the contract that the DBE performs with its own forces.
- c. Consistent with normal industry practices, a DBE may enter into subcontracts. If a DBE prime contractor subcontracts more than thirty percent (30%) or a significantly greater portion of the work of the contract that would be expected on the basis of normal industry practices, the DBE shall be presumed not to be performing a commercially useful function. Evidence may be presented by the Bidder involved to rebut this presumption.
- d. When a DBE subcontracts a part of the work under the contract to another firm, the value of the subcontracted work may only be counted towards the DBE goal if the DBE's subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward the DBE goal.
- e. The Bidder may count one hundred percent (100%) of its expenditures for materials and supplies required under the contract and which are obtained from a DBE manufacturer toward the DBE goal. The Bidder may count sixty percent (60%) of its expenditures for materials and supplies under the contract obtained from a DBE regular dealer towards its DBE goal. The terms "manufacturer" and "regular dealer" are defined in 49 C.F.R. Part 26.55(e)(1)(ii) and (2)(iii).
- f. The Bidder may count towards its DBE goal expenditures to DBEs which are not manufacturers or regular dealers, such as fees or commissions charged for services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies and transportation charges as set forth in 49 C.F.R. Part 26. However, the Compliance Officer, DBE Program must determine the fee or charge to be reasonable and not excessive as compared with fees or charges customarily allowed for similar services.
- g. Bidder must use good business judgment when negotiating with subcontractors and take a DBE's price and capabilities into consideration. The fact that there may be some additional costs involved in finding and using DBE firms is not sufficient reason to fail to meet the DBE goal set forth in the contract, as long as such costs are reasonable.

4. DBE Substitutions

- a. Arbitrary changes by the Contractor of the commitments previously indicated in the Schedule of DBE participation are prohibited. No changes may be made to the DBE firms listed on this schedule after the opening of bids but prior to contract award. Further, after entering into each approved DBE subcontract, the Contractor shall neither terminate the subcontract, nor reduce the scope of the work to be performed by the DBE, nor decrease the price to the DBE, without receiving prior written approval of the Compliance Officer, DBE Program. Such approval is required even if the DBE agrees with the change to the DBE's contract desired by the Contractor.
- b. It may become necessary, at times, to substitute a new subcontractor in order to complete the contract work. The substitution procedure to be followed is:

1. The Contractor must immediately notify the Compliance Officer, DBE Program, in writing, of the proposed substitution of subcontractor. The Contractor's notification must include the specific reasons it intends to reduce the scope of or terminate a DBE subcontract; adequate documentation to support the Contractor's proposed action; and a proposed substitute firm to complete the DBE's portion of work.
2. The following is a non-exclusive list of the types of reasons, which justify substitution: the DBE was found not to be able to perform, or not to be able to perform on time; the DBE's work product was not acceptable; the DBE demands an unreasonable escalation of its price.
3. The following is a non-exclusive list of the types of reason which do not justify substitution: a replacement firm has been recruited by the Contractor to perform the same work under more advantageous terms; performance issues by the DBE were disputed and every reasonable effort to have the dispute resolved or mediated has not been taken; the DBE has requested a reasonable price escalation which may be justified due to unforeseen circumstances (e.g. a change in scope of DBE's work).
4. If the subcontractor to be substituted for the DBE is not a DBE, the Contractor must show adequate good faith efforts as set forth in Section D hereof.
5. The Contractor's request for approval of a substitution must include the name, address, and principal official of the proposed substitute subcontractor and the dollar value and scope of work of the proposed subcontract. If the new subcontractor is a DBE, all DBE affidavits and documents required by the contract shall be attached.
6. MATA will evaluate the submitted documentation and respond within ten (10) business days to the request for approval of a substitution. MATA's response may approve the request, seek more information; request an interview to clarify the problem or reject the proposed DBE substitution, with the reasons for the rejection stated in MATA's response. In the case of an expressed emergency need to receive the necessary decision for the sake of job progress, MATA will respond as soon as practicable.
7. Actual substitution by the Contractor may not be made prior to MATA approval. Once notified of MATA approval, the substitute subcontract must be executed within five (5) business days, and a copy submitted to the Compliance Officer, DBE Program.

5. Good Faith Efforts

In order to be responsive, a Bidder must make good faith efforts to meet the DBE participation goal set forth in the contract. The Bidder must document the good faith efforts it made in that regard. Thus, the Bid submitted to MATA must be accompanied by written documentation prepared by the Bidder evidencing all of its reasonable good faith efforts toward fulfilling the goal. These efforts must be active steps, ones that could reasonably be expected to lead to sufficient DBE participation to meet the contract DBE participation goal. Mere pro forma efforts are not acceptable and will be rejected by the Compliance Officer, DBE Program.

Good Faith Efforts require that the Bidder consider all qualified DBEs, who express an interest in performing work under the contract. This means that the Bidder cannot reject a DBE as unqualified unless the Bidder has sound reasons based on a thorough investigation of the DBE's capabilities. Further, the DBE's standing within its industry, membership in specific groups, organizations or

associations and political or social affiliation; (for example, union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the Contractor's efforts to meet the contract DBE participation goal.

The following are illustrative of factors, which will be considered in judging whether or not the Bidder has made adequate good faith efforts:

- a. Attendance at any pre-bid meetings that were scheduled by MATA to inform DBEs of participation opportunities.
- b. Advertisement in general circulation, trade association, or minority and female-focused media concerning participation opportunities. Adequate time for advertisement and sufficient DBE response will be considered.
- c. Written notification to a reasonable number of specific DBEs that their participation in the contract is solicited in sufficient time to allow them to participate effectively.
- d. Follow-up of initial solicitations of interest by contacting DBEs to determine with certainty if they were interested.
- e. Documentation of efforts to negotiate with DBEs for specific sub-contracts including at a minimum:
 - i. The names, addresses, and telephone numbers of DBEs that were contacted and the date(s) of contract.
 - ii. A description of the information provided to the DBEs regarding the plans and specifications for portions of the work to be performed.
 - iii. A statement explaining why additional agreements with DBEs were not reached.
- f. For each DBE the Bidder contacted but rejected as unqualified, the reason for the Bidder's conclusion. This may include documentation of price comparisons. Receipt of a lower quotation from a non-DBE will not in itself excuse a Bidder's failure to meet the contract goal.
- g. Documentation of efforts made to assist the DBEs contacted that needed assistance in obtaining bonding or insurance required by the Bidder or MATA.
- h. Documentation of efforts to utilize the service of available minority community organizations or other organizations that provides assistance in the recruitment and placement of qualified DBEs.
- i. Documentation that the Bidder selected portions of the work likely to attract DBE participation (including dividing contracts into economically feasible units to facilitate participation).
- j. Evidence that adequate information was provided to interested DBEs about the plans, specifications and requirements of the contract, and that such information was communicated in a timely manner.

Any Bidder which MATA determines to have failed to fulfill the obligations of this section will be deemed non-responsible and will not be eligible for contract award.

MATA will not award a contract to any Bidder who does not meet the contract DBE participation

goal or show good faith efforts to meet the goal. Thus, it is essential that all Bidders submit ALL relevant documentation concerning the DBE goal and/or good faith efforts in the envelope or package containing their sealed bid.

6. Procedure to Determine Bidder Compliance

The Bidder must complete and sign the Letter of Intent to Perform as a DBE. The Letter of Intent must also be signed by any DBEs (prime or subcontractor). A separate Letter of Intent must be included for each DBE included in the bid. It MUST be submitted with the sealed bid. In addition, any documentation evidencing the Bidder's good faith efforts to meet the contract DBE goal must be submitted with the bid. Any bids submitted without a completed and executed Letter of Intent and/or evidence of good faith efforts, if applicable, will be deemed non-responsive and will be rejected by MATA.

a. Letters of Certification

1. A copy of each proposed DBE firm's current Certificate of Certification from the Uniform Certification Agency or the Tennessee Department of Transportation (TDOT) should be attached to the Letter of Intent to Perform as a DBE. A firm which is in the process of certification, or which is not currently certified at the date the proposals are due cannot be counted as a DBE as set forth in 49 CFR Part 26.55.
2. All DBEs are certified to perform work in a specific specialty or specialties. The DBE firm's scope of work set forth on the Letter of Intent and Schedule of DBE Participation must conform to its stated area of specialization.

b. Joint Ventures

1. Where the Bidder proposes to include in its bid a DBE, which is a joint venturer, the Bidder must submit a fully executed copy of the joint venture agreement with its bid. The joint venture agreement must show that the DBE firm will be responsible for a clearly defined portion of the work to be performed, and that the DBE firm's capital contribution, control, management, risks and profits are commensurate with its ownership interest.

Further, the proposed joint venture agreement shall include specific details related to: 1) contributions of capital and equipment; 2) work items to be performed by the DBEs own forces; 3) work items to be performed under the supervision of the DBE; 4) the DBE management, supervisory and operating personnel to be dedicated to the performance of the project; and 5) the authority of each joint venturer to contractually obligate the joint venture and to expend funds.

Failure to submit a copy of the joint venture agreement will cause the firm to be considered by MATA to be non-responsive.

7. Reporting Requirements During the Term of the Contract

- a. The Bidder shall, within five (5) business days of contract award, or prior to any work being performed, execute formal subcontracts or purchase orders with the DBE firms included in the bid. These written agreements shall be made available to the Compliance Officer upon request. All contracts between the Bidder and its subcontractors must contain a prompt payment clause as set forth in Section 8 herein.
- b. During the term of the contract, the Bidder shall submit regular "DBE Subcontractor

Payment Status Reports” in a form acceptable to MATA. The frequency with which these reports are to be submitted will be determined by the Compliance Officer but in no event will reports be required less frequently than quarterly. In the absence of written notice from the Compliance Officer, the Bidder’s first “DBE Subcontractor Payment Status Report” will be due sixty (60) days after the date of contract award, with additional reports due monthly thereafter.

- c. The address for the Compliance Officer, DBE Program, is MATA, Attn: Compliance Officer/DBE Program, 1370 Levee Road, Memphis, TN 38108.

8. Prompt Payment to Subcontractors

- a. Prime Contractors are required to pay all subcontractors, both DBE and non-DBE, for all work which the subcontractor has satisfactorily completed, no later than ten (10) business days after the prime Contractor received payment from MATA.
- b. In addition, all retainage amounts must be returned by the prime Contractor to the subcontractor no later than fourteen (14) business days after the subcontractor has satisfactorily completed its portion of the contract work.
- c. A delay or postponement of payment to the subcontractor requires good cause and prior written approval of the Compliance Officer and the Project Manager.
- d. All prime Contractors are required to include, in each subcontract, a clause requiring the use of appropriate arbitration mechanisms to resolve all payment disputes.
- e. MATA will not reimburse Contractors for work performed unless and until the prime Contractor ensures that the subcontractors are promptly paid for the work they have performed to date as evidenced by the submittal of the “DBE Subcontractor Payment Status Report” with canceled checks/wire transfers as supporting documentation.
- f. MATA will consider failure to comply with these prompt payment requirements a contract violation, which may lead to any remedies permitted under law, including but not limited to, contract debarment.

9. Enforcement

- a. All Bidders are hereby advised that failure to carry out the requirements set forth above shall constitute a material breach of the contract, and after notification by MATA may result in rejection of the bid or bids; termination of the contract; a deduction from the contract funds due or to become due the contractor; or other such remedy as the MATA deems appropriate. Failure to comply with the DBE requirements shall include but not be limited to failure to meet the established goal, failure to submit documentation of good faith efforts; failure to exert a good faith effort (as determined by MATA) to meet any established DBE participation goal; failure to adhere to DBE substitution requirements; and failure to realize the DBE participation.
- b. If awarded the contract, the Bidder acknowledges and agrees that if MATA determines that the Bidder, a DBE or any other firm retained by the Bidder has failed to comply with the DBE Program requirements or federal or state DBE Program regulations, MATA, through its Contracting Officer, shall have the sole authority and discretion to determine the extent of the monetary value to which the DBE contract goals have not been met, and to assess against and withhold monetary damages from the contractor in the full amount of that breach. MATA may impose any other remedies available at law or provided in the contract in the event of a contract breach. The Bidder further understands and agrees that this

clause authorizes MATA, through MATA's Contracting Officer, to determine and fix the extent of the damages caused by a breach of any contractual or regulatory DBE Program requirement and that the damage assessment will be enforced in addition to, and not in lieu of, any other damages or remedy provisions in the contract. By entering into a contract, the Bidder irrevocably agrees to such an assessment of damages for DBE Program purposes and authorizes MATA to make such an assessment of damages against the Bidder and to collect that assessment from any sums due the Bidder under the contract, or any other contract, or by other legal process. The Bidder makes this certification, agreement and authorization on behalf of itself, its subcontractors and suppliers, and the bid bond and contract bond sureties.

- c. The decision of the Contracting Officer shall be final and conclusive unless, within ten (10) days from the receipt, in writing, of such decision, the Bidder mails or otherwise furnishes to the Contracting Officer an appeal, in writing, addressed to the Chief Executive Officer of MATA. The Chief Executive Officer shall review the dispute, related documents and the Contracting Officer's decision. The Chief Executive Officer may consult with MATA's project manager, the Contracting Officer or any other person deemed necessary by the Chief Executive Officer. The decision of the Chief Executive Officer shall be final and conclusive unless, within 10 days from the date of the receipt of such decision, in writing, the Bidder mails or otherwise furnishes to the Contracting Officer an appeal, in writing, addressed to the Board of the Memphis Area Transit Authority. The decision of the Board or its duly authorized representative for the determination of such appeal shall be final and conclusive unless in proceedings initiated by either party for review of such decision in a court of competent jurisdiction, the Court determines the decision to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith or is not supported by substantial evidence. In connection with any appeal proceeding under this section, the Bidder shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, the Bidder shall proceed diligently with the performance of the contract and in accordance with the Contracting Officer's decision.

SECTION E

DAVIS BACON WAGE RATES

SECTION E

DAVIS BACON WAGES

DAVIS BACON PREVAILING WAGE RAES WILL APPLY
CERTIFIED PAYROLL RECORDS MUST BE SUBMITTED WEEKLY

"General Decision Number: TN20230147 01/06/2023

Superseded General Decision Number: TN20220147

State: Tennessee

Construction Type: Highway

Counties: Tennessee Statewide.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.
If the contract was awarded on or between January 1, 2015, and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for

20 Tons), End Loader (3 yd & over), Motor Patrol (finish), Piledriver, Dragline	\$ 19.14
GROUP 1A	
Drill Operator (Caisson)	\$ 25.26
Farm Tractor Operator (Power Broom)	\$ 13.50 **
GROUP 2	
Backhoe/Hydraulic Excavator (less than 3/4 yd), Bulldozer or Push Dozer, End Loader (less than 3 yd), Motor Patrol (rough), Tractor (crawler/ utility), Truck Driver (Heavy Duty, Off Road) Scraper, Shovel, or Trenching Machine	\$ 17.08
GROUP 3	
Asphalt Paver, Concrete Finishing Machine, Concrete Paver, Scale, Spreader (self-propelled), Concrete Grinder, Asphalt Milling Machine, Boring Machine (horizontal).	\$ 17.75
GROUP 4	
Bobcat, Central Mining Plant, Concrete Pump, Concrete Saw, Curb Machine (automatic or manual), Dozer or Loader (stockpile), Drill (piling), Mulcher or Seeder, Rock Drill (truck mounted), Roller (asphalt), Roller (compaction self-propelled), Soil Stabilization Machine, Tractor (boom and hoist), Bituminous Distributor Machine, pump, Track Drill, Striping Machine	\$ 16.48
Heavy Duty Mechanic	\$ 20.33
Light Duty Mechanic	\$ 19.53
Sweeping Machine (Vacuum)	

Operator	\$ 15.56 **
GROUP 5	
Crane (over 20 Tons).	\$ 20.44
TRUCK DRIVER	
2 axles.	\$ 15.36 **
3-4 axles.	\$ 14.86 **
5 or more axles	\$ 16.27

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$16.20) or 13658 (\$12.15). Please see the Note at the top of the wage determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular

rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four-letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union

average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

SECTION 00500

CONTRACT DOCUMENTS

STATE OF TENNESSEE CONTRACT CLAUSES

This procurement IFB 23-11-2 Riverside at Beale Street Bridge Repair & Riverfront Loop Grade Crossing Repair will be funded by Tennessee Department of Transportation (TDOT) and their provisions are as follows:

Conflicts of Interest.

The Grantee warrants that no part of the total Grant Contract Amount shall be paid directly or indirectly to an employee or official of the State of Tennessee as wages, compensation, or gifts in exchange for acting as an officer, agent, employee, subcontractor, or consultant to the Grantee in connection with any work contemplated or performed relative to this Grant Contract

Lobbying.

The Grantee certifies, to the best of its knowledge and belief, that:

- a. No federally appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with 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. If any funds other than federally appropriated funds have been paid or will be paid to 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 this contract, grant, loan, or cooperative agreement, the Grantee shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
- c. The Grantee shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into and is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352

Nondiscrimination.

The Grantee hereby agrees, warrants, and assures that no person shall be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in the performance of this Grant Contract or in the employment practices of the Grantee on the grounds of handicap or disability, age, race, color, religion, sex, national origin, or any other classification protected by federal, Tennessee state constitutional, or statutory law. The Grantee shall, upon

request, show proof of nondiscrimination and shall post in conspicuous places, available to all employees and applicants, notices of nondiscrimination.

Public Accountability.

If the Grantee is subject to Tenn. Code Ann. § 8-4-401 et seq., or if this Grant Contract involves the provision of services to citizens by the Grantee on behalf of the State, the Grantee agrees to establish a system through which recipients of services may present grievances about the operation of the service program. The Grantee shall also display in a prominent place, located near the passageway through which the public enters in order to receive Grant supported services, a sign at least eleven inches (11") in height and seventeen inches (17") in width stating:

NOTICE: THIS AGENCY IS A RECIPIENT OF TAXPAYER FUNDING. IF YOU OBSERVE AN AGENCY DIRECTOR OR EMPLOYEE ENGAGING IN ANY ACTIVITY WHICH YOU CONSIDER TO BE ILLEGAL, IMPROPER, OR WASTEFUL, PLEASE CALL THE STATE COMPTROLLER'S TOLL-FREE HOTLINE: 1-800-232-5454.

The sign shall be on the form prescribed by the Comptroller of the Treasury. The Grantor State Agency shall obtain copies of the sign from the Comptroller of the Treasury, and upon request from the Grantee, provide Grantee with any necessary signs.

Public Notice.

All notices, informational pamphlets, press releases, research reports, signs, and similar public notices prepared and released by the Grantee in relation to this Grant Contract shall include the statement, "This project is funded under a grant contract with the State of Tennessee, Department of Transportation." All notices by the Grantee in relation to this Grant Contract shall be approved by the State.

Records.

The Grantee and any approved subcontractor shall maintain documentation for all charges under this Grant Contract. The books, records, and documents of the Grantee and any approved subcontractor, insofar as they relate to work performed or money received under this Grant Contract, shall be maintained in accordance with applicable Tennessee law. In no case shall the records be maintained for a period of less than five (5) full years from the date of the final payment. The Grantee's records shall be subject to audit at any reasonable time and upon reasonable notice by the Grantor State Agency, the Comptroller of the Treasury, or their duly appointed representatives.

The records shall be maintained in accordance with Governmental Accounting Standards Board (GASB) Accounting Standards or the Financial Accounting Standards Board (FASB) Accounting Standards Codification, as applicable, and any related AICPA Industry Audit and Accounting guides.

In addition, documentation of grant applications, budgets, reports, awards, and expenditures will be maintained in accordance with U.S. Office of Management and Budget's Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.

Grant expenditures shall be made in accordance with local government purchasing policies and procedures and purchasing procedures for local governments authorized under state law.

The Grantee shall also comply with any recordkeeping and reporting requirements prescribed by the Tennessee Comptroller of the Treasury.

The Grantee shall establish a system of internal controls that utilize the COSO Internal Control - Integrated Framework model as the basic foundation for the internal control system. The Grantee shall incorporate any additional Comptroller of the Treasury directives into its internal control system.

Any other required records or reports which are not contemplated in the above standards shall follow the format designated by the head of the Grantor State Agency, the Central Procurement Office, or the Commissioner of Finance and Administration of the State of Tennessee.

Environmental Tobacco Smoke.

Pursuant to the provisions of the federal "Pro-Children Act of 1994" and the "Children's Act for Clean Indoor Air of 1995," Tenn Code Ann. §§39-17-1601 through 1606, the Grantee shall prohibit smoking of tobacco products within any indoor premises in which services are provided to individuals under the age of eighteen (18) years. The Grantee shall post "no smoking" signs in appropriate, permanent sites within such premises. This prohibition shall be applicable during all hours, not just the hours in which children are present. Violators of the prohibition may be subject to civil penalties and fines. This prohibition shall apply to and be made part of any subcontract related to this Grant Contract." +

(If the Federal Debarment and Suspension option is included in procurement documents, then this state Debarment and Suspension clause is not needed.)

Debarment and Suspension.

The Grantee certifies, to the best of its knowledge and believe, that the Selected Offeror:

- a. is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department or agency;
- b. has not within a three (3) year period preceding this Grant Contract been convicted of, or had a civil judgment rendered against them from commission of fraud, or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or grant under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;
- c. is not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses detailed in section b. of this certification; and
- d. has not within a three (3) year period preceding this Grant Contract had one or more public transactions (federal, state, or local) terminated for cause or default.

The Grantee will provide immediate written notice to the State if at any time it learns that there

was an earlier failure to disclose information or that due to changed circumstances, the Selected Offeror is excluded or disqualified, or presently falls under any of the prohibitions of sections a-d.

**MEMPHIS AREA TRANSIT AUTHORITY
SUPPLY AND SERVICE CONTRACT**

CONTRACTOR: _____

CONTRACT NO:

CONTRACT DATE: _____

CONTRACT FOR: _____

CONTRACT PRICE: NOT TO EXCEED _____

PERFORMANCE PERIOD: WORK MUST BE COMPLETED WITHIN _____ DAYS AFTER
ISSUANCE OF NOTICE TO PROCEED

THIS CONTRACT made and entered into at Memphis, Tennessee on the above date by and between MEMPHIS AREA TRANSIT AUTHORITY (hereinafter called "the AUTHORITY"), party of the First Part, a public transportation system and transit authority organized and existing under and by virtue of the laws of the State of Tennessee and of the City of Memphis, Tennessee, a municipal corporation and the above-named CONTRACTOR, party of the Second Part.

The AUTHORITY, pursuant to law, has solicited and received quotes, BIDS or proposals for furnishing the supplies and services herein described, and has heretofore accepted the quote, BID or proposal submitted by the CONTRACTOR. In consideration of the covenants contained herein, the sufficiency of which is hereby acknowledged, the CONTRACTOR agrees to perform this CONTRACT in strict accordance with standards and specifications of the AUTHORITY upon which quotes, BIDS or proposals were invited and the conditions set forth herein.

The following documents are incorporated herein and made a part of this CONTRACT:

1. IFB #_____, including any and all Addenda and General Contract Provisions
2. The BID dated _____, 2023 by _____ and subsequent negotiations and correspondence
3. Unit Prices for the Base Bid

PAYMENT TERMS: Net 30 days after approval of an acceptable invoice.

Contractor

ATTEST: _____

BY: _____

TITLE: _____

MEMPHIS AREA TRANSIT AUTHORITY

BY: _____

TITLE: _____

PERFORMANCE BOND

STATE OF TENNESSEE (----- COUNTY) KNOW ALL MEN BY THESE PRESENT, THAT:

We _____ (Herein called the "Contractor") of -----County, _____ a (Partnership or Corporation) organized and existing under and by virtue of the Laws of the State of _____ as principal, and _____, as surety, do hereby acknowledge ourselves indebted and firmly bound and held unto the Memphis Area Transit Authority (Hereinafter called the "Owner"), a corporation existing under and by virtue of the laws of Tennessee, for the use and benefit of those entitled thereto, in the sum of \$ _____ (Dollars) for the payment of which well and truly to be made, in lawful money of the United States we do hereby bind ourselves, successors, assigns, heirs, and personal representatives.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS, The Owner has engaged the said Contractor, for the sum of _____ (Dollars) as more fully appears in a written agreement or contract bearing date of _____. A copy of which said agreement or contract is by reference hereby made a part hereof, and it is the desire of the said Owner that the said Contractor shall assume all undertaking under said agreement or contract, and shall assure and protect all laborers and furnishers of material on said work as provided by Chapter 182 of the Acts of the General Assembly of Tennessee of 1899, .and any and all amendments thereto, including without being limited to Chapter 121 of the Public Acts of 1923, and Chapter 121 of the Public Acts of 1925, all of which were codified, as required by Tennessee Code Annotated Sections 12-417 through 12-424, as amended, and also independently of said statutes.

NOW, THEREFORE, if the said Contractor shall fully and faithfully perform all undertakings and obligations under the said agreement or contract hereinbefore referred to and shall fully indemnify and save harmless the said Owner from all costs and damage whatsoever which it may suffer by reason of any failure on the part of said Contractor so to do, and shall fully reimburse and repay the said Owner any and all outlay and expense which it may incur in making good any such default, and shall fully pay for all of the labor, materials, and work used by said Contractor any immediate or remote Contractor or Furnisher of material under him in the performance of said Contract, in lawful money of the United States, as the same shall become due, then this obligation or bond shall be null and void, otherwise to remain in full force and effect.

AND, for value received, it is hereby stipulated and agreed that no change, extension of time, alteration to the terms of the said agreement or contract or to the work to be performed thereunder or the specifications accompany the same shall in anywise affect the obligations under this obligation or bond, and notice is hereby waived of any such change, extension of the time, alteration or addition to the terms of the agreement or contract or to the work or to the specifications.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and said surety has hereunto cause to be affixed its corporate signature and seal, by its duly authorized officers, on this

_____ day of _____, 20 _____

Company Name

President

ATTEST: _____
Corporate Secretary

SURETY: _____

BY: _____
Attorney in fact

APPROVED: _____
Chief Executive Officer
Memphis Area Transit Authority

COUNTERSIGNED:
BY: _____
Tennessee Agent

APPROVED: _____
Legal Counsel
Memphis Area Transit Authority

SECTION 00700

GENERAL PROVISIONS FOR CONSTRUCTION

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1. Non-Collusion - The BIDDER guarantees that the BID submitted is not a product of collusion with any other BIDDER and no effort has been made to fix the Bid price of any BIDDER or to fix any overhead, profit, or cost element of any Bid price. An Affidavit of Non-Collusion, as per attached format, must be signed and submitted with BID. (Exhibit I)
2. Time of Completion - The WORK shall begin immediately upon date indicated on the Notice-to-Proceed and shall be completed in accordance with the following schedule:

All WORK under this CONTRACT shall be completed within **35 calendar** days from the date on Notice-to-Proceed.

3. Third Party Beneficiary - It is specifically agreed between the parties executing the CONTRACT that it is not intended by any of the provisions of any part of the CONTRACT to create the public or any member thereof a third-party beneficiary or to authorize anyone not a party to the CONTRACT to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the CONTRACT.

4. Approved Equal -

- a. In all cases, materials must be furnished as specified. Where brand names or specific items are used in the specifications, consider the term "or approved equal" to follow.
- b. Any unapproved deviations, exceptions, substitutions, alternates, or conditional qualifications contained in a BID may be cause for its rejection.
- c. If a potential BIDDER feels that his product is an equal to the product specified, he must submit a written request to MATA.
- d. Requests for approved equals, clarification of specifications, and protest of specifications must be received by the TPM, IN WRITING, NO LATER THAN: **FRIDAY, JUNE 9, 2023, AT 11:00 A.M. LOCAL TIME TO ALLOW ANALYSIS OF THE REQUEST.** Any request for an approved equal or protest of the specifications must be fully supported with catalog information, specifications, and illustrations or other pertinent information as evidence that the substitute offer is equal to or better than the specifications' requirement. Where an approved equal is requested, the CONTRACTOR must demonstrate the quality of his product to the AUTHORITY and must furnish sufficient information to enable the AUTHORITY to determine whether the CONTRACTOR's product is or is not equal to that specified. Such requests shall be emailed to abest@matatransit.com or fax (901) 272-2912.
- e. The Technical Project Manager replies to requests under paragraph (d) above will be issued at least fourteen (14) days before the date scheduled for Bid opening.
- f. A notice of approved equals shall be furnished to all parties receiving specifications so that all BIDDERS may prepare their BID accordingly.
- g. Appeal from the decisions of MATA to approve or disapprove approved equal status shall be submitted in writing to the Chief Executive Officer, MATA, 1370 Levee Road, Memphis, TN 38108, not later than five (5) days from the date of MATA's decision. The appeal shall, at a minimum, identify the decision in

question, specify all reasons why the appealing party disagrees with the decision, and shall include all facts and justification, including technical information, in support of its position. The Chief Executive Officer may request additional information from the appealing party, and information or a response from the BIDDERS which shall likewise be submitted in writing to the Chief Executive Officer not later than ten (10) days from the date of MATA's request. So far as practicable, appeals will be decided upon the basis of the written appeal, information and written response submitted by the appealing party and other BIDDERS; all parties are urged to make written submissions as complete as possible. Failure of any party to timely respond to a request for information may be deemed by MATA that such party does not desire to participate in the proceeding, does not contest the matter, or does not desire to submit a response; and, in such event, the appeal will proceed and will not be delayed due to the lack of a response. Upon receipt and review of written submissions and any independent investigation deemed appropriate by MATA, the Chief Executive Officer shall either (a) render a decision which shall be final and advise all interested parties of same in writing, or (b) at the sole election of the Chief Executive Officer, conduct an informal hearing at which the interested participating parties will be afforded an opportunity to present their respective positions and facts, documents, justification, and technical information in support thereof. Parties may, but are not required to, be represented by counsel at the informal hearing, which will not be subject to formal rules of evidence or procedure. Following the informal hearing, the Chief Executive Officer shall render a decision, which shall be final and advise all interested parties thereof in writing.

- h. Changes in the specifications will be made by written addendum by MATA and will be forwarded to all persons and firms to whom Bid documents have been furnished.

5. Bid Withdrawal -

- a. Each and every BIDDER who submits his BID specifically waives any right to withdraw it except as hereinafter provided. BIDDERS will be given permission to withdraw any BID after it has been deposited with MATA, provided any BIDDER makes its request by telephone, telegraph, or in writing, twenty-four (24) hours before the time Bids are due. Requests pertaining to withdrawals by telephone or telegraph must be confirmed in writing by the BIDDER and must reach the Office of the Chief Executive Officer of MATA not later than one (1) hour prior to the time fixed for submission of BIDs.
- b. No BIDDER may withdraw his BID within one hundred twenty (120) days after the date BIDs are due.

6. Bid Rejection - MATA reserves the right to waive any minor BID informalities or irregularities received which do not go to the heart of the BID or prejudice other BIDDERS, or to reject, for good and compelling reasons, any and all BIDs submitted. Conditional BIDs, or those, which take exception to the specifications, may be considered non-responsive and may be rejected.

7. Taxes, Permits and Licenses -

- a. Tax Exemption. MATA is exempt from payment of all Federal, State, and local

taxes in connection with the project. **This exemption cannot be delegated. Taxes which the CONTRACTOR must pay shall be included in Bid prices. Invoices presented to MATA shall not be marked up for taxes.** MATA will provide necessary tax exemption certificate to BIDDER, if requested.

- b. Permits. The CONTRACTOR shall secure and pay for all permits in effect at the time of the execution of this CONTRACT. CONTRACTOR shall be responsible for all inspections required by the City or County in conjunction with the issuance of said permits in effect at the time of execution of this CONTRACT. CONTRACTOR shall secure and pay for all governmental fees, licenses and other permits necessary for the lawful and proper execution and completion of the WORK in effect at the time of execution of this CONTRACT.
- c. Licenses. All BIDDERS must be licensed contractors as required by Title 62, Chapter 6, of the Tennessee Code Annotated. BIDDER's license number, expiration date and that part of the classification applying to the BID must appear on the envelope containing the BID, otherwise the BID will not be opened. Additionally, the BIDDER shall include the name, license number, expiration date thereof, and license classification of the contractor applying to the BID for electrical, plumbing or heating, ventilation or air conditioning, on the outside of the envelope containing the BID; otherwise, the BID shall not be opened or considered. In the event the aforementioned classifications are not applicable to the project, the BIDDER shall indicate not applicable (NA) on the appropriate line.

8. Bid Evaluation -

- a. Consideration will be given to BIDDER's previous experience, price, financial responsibility of BIDDER, responsiveness to these specifications, including level of participation of DBEs.
- b. BIDDERS may be required to submit duplicate sworn statements of their financial responsibility, technical qualifications, and performance record before a CONTRACT can be awarded to them.
- c. MATA reserves the right to award BIDs singularly or collectively on any of the BID items.
- d. The CONTRACT shall be awarded to the lowest and best bidder.

9. Bid Form - BIDs must be submitted on the form provided. Each item should be listed separately on the form. BIDs submitted in any other form may be considered non-responsive and may be rejected. BIDs may be submitted on any or all items in this Bid request.

10. Protest Procedures - Protests may be made by prospective BIDDERS whose direct economic interest would be affected by the award of a CONTRACT, or by failure to award a CONTRACT. MATA will consider all protests requested in a timely manner regarding the award of a CONTRACT, whether submitted before or after an award. All protests are to be submitted in writing to the Contracting Officer, Memphis Area Transit Authority, 1370 Levee Road, Memphis, TN 38108. Protest submissions should be concise, logically arranged, and clearly state the grounds for the protest. Protests must include at least the

following information:

1. Name, address, and telephone number of protestor.
2. Identification of the solicitation or Contract Number.
3. A detailed statement of the legal and factual grounds of protest, including copies of relevant documents.
4. A statement as to what relief is requested.

Protests must be submitted to MATA in accordance with these procedures and time requirements. Protests must be complete and contain all issues that the protestor believes relevant.

- a. Bid protests alleging restrictive specifications or improprieties which are apparent prior to Bid closing time or receipt of BIDs must be submitted in writing to the Contracting Officer and must be received seven (7) days prior to Bid closing time or receipt of BIDs. If the written protest is not received by the time specified, BIDs may be received, and award may be made in the normal manner unless the Contracting Officer determines that remedial action is required. Oral protests not followed up by a written protest will be disregarded. The Contracting Officer may request additional information from the appealing party and information or a response from other BIDDERS, which shall likewise be submitted in writing to the Contracting Officer not later than ten (10) days from the date of MATA's request. So far as practicable, appeals will be decided upon the basis of the written appeal, information, and written response submitted by the appealing party and other BIDDERS; all parties are urged to make written submissions as complete as possible. Failure of any party to timely respond to a request for information may be deemed by MATA that such party does not desire to participate in the proceeding, does not contest the matter, or does not desire to submit a response; and, in such event, the protest will proceed and will not be delayed due to the lack of a response. Upon receipt and review of written submissions and any independent investigation deemed appropriate by MATA, the Contracting Officer shall either (a) render a decision, or (b) at the sole election of the Contracting Officer, conduct an informal hearing at which the interested participating parties will be afforded an opportunity to present their respective positions and facts, documents, justification, and technical information in support thereof. Parties may, but are not required to, be represented by counsel at the informal hearing, which will not subject to formal rules or evidence or procedures. Following the informal hearing, the Contracting Officer shall render a decision, which shall be final and advise all interested parties thereof in writing but no later than ten (10) days from the date of the informal hearing.
- b. Bid protest against the making of an award by the MATA Board must be submitted in writing to the Contracting Officer and received by the Contracting Officer within seven (7) days of the award by the MATA Board. The process for resolving protests listed above in Section (a) will be followed for any protest received under this section.

Notice of the protest and the basis therefore will be given to all prospective BIDDERS. In addition, when a protest against the making of an award by the MATA Board is received and it is determined to withhold the award pending disposition of the protest, the BIDDERS whose BIDs might become eligible for award shall be

requested before expiration of the time for acceptance, to extend or withdraw the BID.

Where a written protest against the making of an award is received in the time specified, award will not be made prior to seven (7) days after resolution of the protest unless MATA determines that:

1. The item(s) to be procured or service to be performed is urgently required.
2. Delivery or performance will be unduly delayed by failure to make award promptly; or,
3. Failure to make award will otherwise cause undue harm to MATA or the Federal Government.

- c. Protests made after CONTRACT award shall be received no later than seven (7) calendar days afterwards. Protests received after award will be reviewed by the Contracting Officer and MATA's General Counsel.

In instances where the award has been made, the CONTRACTOR shall be furnished with the notice of the protest and the basis, therefore. If the CONTRACTOR has not executed the CONTRACT as of the date the protest is received by MATA, the execution of the CONTRACT will not be made prior to seven (7) days after resolution of the protest unless MATA determines that:

1. The item(s) to be procured or service to be performed is urgently required.
2. Delivery or performance will be unduly delayed by failure to make award promptly; or,
3. Failure to make award will otherwise cause undue harm to MATA or the Federal Government.

The process for resolving protests listed above in Section (a) will be followed for any protest received under this section.

- d. Appeals and requests for reconsideration of the determination of the Contracting Officer of protests under (a), (b) and (c) must be submitted to the Chief Executive Officer and received within seven (7) days after the date of the written determination by the Contracting Officer. The Chief Executive Officer may request additional information from the appealing party and information or a response from other BIDDERS, which shall likewise be submitted in writing to the Chief Executive Officer no later than ten (10) days from the date of MATA's request. So far as practicable, appeals will be decided upon the basis of the written appeal, information, and written response submitted by the appealing party and other BIDDERS; all parties are urged to make written submissions as complete as possible. Failure of any party to timely respond to a request for information may be deemed by MATA that such party does not desire to participate in the proceeding, does not contest the matter, or does not desire to submit a response; and, in such event, the appeal will proceed and will not be delayed due to the lack of a response. Upon receipt and review of written submissions and any independent investigation deemed appropriate by MATA, the Chief Executive Officer shall either (a) render a decision, or (b) at the sole election of the Chief Executive Officer, conduct an informal hearing at which the interested participating parties will be afforded an opportunity to present their respective positions and facts, documents, justification,

and technical information in support thereof. Parties may, but are not required to, be represented by counsel at the informal hearing, which will not be subject to formal rules of evidence or procedures. Following the informal hearing, the Chief Executive Officer shall render a decision, which shall be final and advise all interested parties thereof in writing but no later than ten (10) days from the date of the informal hearing.

- e. Under certain limited circumstances, an interested party may protest to the Federal Transit Administration (FTA) the award of a CONTRACT pursuant to an FTA grant. FTA's review of any protest will be limited to:
 - 1. Alleged failure of MATA to have written protest procedures or alleged failure to follow such procedures.
 - 2. Alleged violations of a specific Federal requirement that provides an applicable complaint procedure which shall be submitted and processed in accordance with that Federal regulation.
 - f. Protestors shall file a protest with FTA not later than five (5) working days after a final decision of MATA's Chief Executive Officer is rendered under the MATA protest procedure. In instances where the protestor alleges that MATA failed to make a final determination on the protest, the protestor shall file a complaint with FTA not later than five (5) Federal working days after the protestor knew or should have known of MATA's failure to render a final determination on the protest.
 - g. Submission of Protest to FTA
 - 1. Protests shall be filed with the appropriate FTA Regional Office with a Concurrent copy to MATA.
 - 2. The protest filed with FTA shall:
 - (i) Include the name and address of the protestor.
 - (ii) Identify MATA project number and the number of the Contract Solicitation.
 - (iii) Contain a statement of the grounds for the protest and any supporting documentation. This should detail the alleged failure to follow protest procedures or the alleged failure to have procedures and be fully supported to the extent possible.
 - (iv) Include a copy of the local protest filed with MATA and a copy of the MATA decision, if any.
11. Correspondence - The BIDDER is required to show on all correspondence with MATA and FTA, the following: **IFB No. 23-11-2** Communication with MATA should be forwarded directly to Ashley Best, Contract Administrator with MATA, 1330 Levee Road, Memphis, TN 38108.
12. Miscellaneous -
- a. CONTRACTOR warrants that it has not been paid any bonus or commission for the purpose of obtaining this CONTRACT.

- b. Except as otherwise set forth herein, this CONTRACT shall be governed and construed in accordance with the laws of the State of Tennessee. All actions, whether sounding in contract or in tort, relating to the validity, construction, interpretation, and enforcement of this CONTRACT shall be instituted and litigated in the courts of the State of Tennessee located in Shelby County, Tennessee, and in no other. In accordance herewith, the parties to this CONTRACT submit to the jurisdiction of the courts of the State of Tennessee, located in Shelby County, Tennessee.
- c. The failure of MATA at any time to insist upon a strict performance of any terms, conditions, and covenants herein shall not be deemed a waiver of any subsequent breach or default of the terms, conditions, and covenants herein contained.
- d. CONTRACTOR shall not assign any interest or obligation in this CONTRACT, and CONTRACTOR shall not transfer any interest in the same (whether by assignment or novation), without the prior written consent of MATA.
- e. Any proposed change or modification of this CONTRACT shall be submitted in writing to MATA for its prior approval. All changes shall be by written agreement of MATA and CONTRACTOR.
- f. The CONTRACTOR acknowledges that MATA is managed and operated by Mid-South Transportation Management, Inc. (MTM). The CONTRACTOR shall cooperate with and abide by the instructions of MATA and MTM personnel.
- g. Waiver. No consent or waiver, express or implied, by the AUTHORITY to or of any breach or default by the CONTRACTOR in the performance of any of its obligations shall be deemed or construed to be a consent or waiver to or of any other breach or default. Failure on the part of the AUTHORITY to complain of any act or failure to act of the CONTRACTOR or to declare the CONTRACTOR in default, irrespective of how long such failure continues, shall not constitute a waiver of the rights of the AUTHORITY.
- h. Counterparts. This CONTRACT may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same agreement.
- i. Article and Section Headings. Article and Section headings contained in this CONTRACT are for ease of reference only and shall not affect the interpretation or meaning of this CONTRACT.
- j. Parties in Interest. This CONTRACT shall inure to the benefit of and be binding upon the parties and their respective successors, assigns and legal representatives.
- k. Assignment. This CONTRACT shall not be assigned, delegated or transferred in whole or in part by the CONTRACTOR (whether by assignment or novation) nor shall the CONTRACTOR assign any monies due or to become due to it without the prior written consent of the AUTHORITY.
- l. Governing Law. Except as otherwise set forth herein, this CONTRACT shall be

governed and construed in accordance with the laws of the State of Tennessee. All actions whether sounding in contract or in tort, relating to the validity, construction, interpretation, and enforcement of this CONTRACT shall be instituted and litigated in the courts of the State of Tennessee located in Shelby County, Tennessee, and in no other. In accordance herewith the parties to this CONTRACT submit to the jurisdiction of the courts of the State of Tennessee, located in Shelby County, Tennessee.

- m. Severability. If any one or more of the provisions contained in this CONTRACT shall for any reason be held invalid, illegal, unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision of this CONTRACT, but it shall be construed as if such invalid, illegal or unenforceable provision had never been contained in it.
- n. Time. Time is of the essence to this CONTRACT.
- o. Notices. All notices, requests, consents and other communications under this CONTRACT shall be in writing and shall be deemed to have been duly given if hand- delivered or mailed by certified or registered mail, return receipt requested, postage prepaid:

(1) If to the AUTHORITY, addressed to:

Monica Brodie, Contracting Officer
MATA
1370 Levee Road
Memphis, TN 38108

(2) If to the CONTRACTOR, addressed to:

Name:
Company:
Address:
City/State/Zip:

The AUTHORITY or the CONTRACTOR may at any time change the addresses to which copies of notices must be mailed by sending written notice to the other of such change in the manner provided.

- p. Project Management Oversight. In the event the FTA Administrator deems this Project to be a "major project" or determines that either FTA or the AUTHORITY would benefit from the FTA project management oversight program, the CONTRACTOR shall develop and prepare a project management plan sufficient for the AUTHORITY to submit to FTA and shall take all action reasonably necessary to ensure the AUTHORITY's full and timely compliance with the regulations found at 49 C.F.R. Part 633, as amended.

13. Extent of Agreement –

- a. The BID submitted by the CONTRACTOR is incorporated herein by reference as fully set forth verbatim herein. In the event of conflict between this CONTRACT

and BID, the provisions of this CONTRACT shall control.

- b. The CONTRACTOR acknowledges that Federal Laws, regulations, policies, and related administrative practices applicable to the Project on the date the CONTRACT is signed may be modified from time to time. The CONTRACTOR agrees that the most recent of such Federal requirements will govern the administration of the Project at any given time, except if FTA issues a written determination otherwise. Specifically, new Federal Laws, regulations, policies and administrative practices may be promulgated after the dates that MATA executed the FTA Grant Agreement, and may, by their terms, apply to that Grant Agreement and this CONTRACT. Federal requirements may change, and the changed requirements will apply to the Project and the CONTRACT as required, unless the Federal Government determines otherwise.
- c. This CONTRACT, except as set forth in the preceding paragraphs, represents the entire and negotiations, statements, instructions, and representations or agreements, whether written or oral. This CONTRACT may not be modified, amended, or assigned except by integrated Agreement between MATA and the CONTRACTOR, and supersedes all prior written agreement duly signed by both parties.
- d. At the election of MATA, the invalidity or illegality of any provisions of this CONTRACT, other than arising from the fiscal inability of MATA to pay the compensation due to the CONTRACTOR as same becomes due, as determined by a court of last resort of competent jurisdiction, shall not affect the validity of the remainder of this CONTRACT, and this CONTRACT shall remain in full force and effect as if such illegal or invalid provisions were not contained herein.
- e. Exhibits. All Exhibits described in this CONTRACT shall be deemed to be incorporated and made a part of this CONTRACT, except that if there is any inconsistency between this CONTRACT and the provisions of any Exhibit, the provisions of this CONTRACT shall control to the extent of the inconsistency.

14. Compliance With Applicable Law -

In the performance of its obligations pursuant to this CONTRACT, CONTRACTOR shall comply with all applicable provisions of Federal, State, and local law in any manner effecting the conduct of the WORK and all prohibitive orders and instructions issued by the State and Federal Government regarding fortifications, military, and naval establishments and other areas.

15. Audit and Inspection -

- a. The CONTRACTOR shall maintain records, and the Contracting Officer, the U.S. Department of Transportation, the Tennessee Department of Transportation and the Comptroller General of the United States or any of their duly authorized representatives shall, until the expiration of three years after final payment under this CONTRACT, have access to and the right to inspect all Project WORK and materials, and to examine any directly pertinent books, documents, papers, records and accounts of the CONTRACTOR, involving transactions related to this CONTRACT, for the purpose of making audit, examination, excerpts and

transcriptions.

- b. The CONTRACTOR further agrees to include in all his subcontracts hereunder a provision to the effect that the subcontractor agrees that the Contracting Officer, the U.S. Department of Transportation, the Tennessee Department of Transportation and the Comptroller General of the United States or any of their duly authorized representatives shall, until the expiration of three years after final payment under the CONTRACT, have access to and the right to inspect all Project WORK and materials, and to examine any directly pertinent books, documents, papers, records and accounts of such subcontractor, involving transactions related to the subcontract, for the purpose of making audit, examination, excerpts and transcriptions.
- c. The CONTRACTOR shall maintain documentation for all charges against MATA under this CONTRACT. The books, records, and documents of the CONTRACTOR, insofar as they relate to work performed or money received under the CONTRACT, shall be maintained in conformity with generally accepted accounting principles for a period three (3) full years from the date of final payment, and shall be subject to audit, at any reasonable time upon reasonable notice, by MATA, the State of Tennessee or the Comptroller of the Treasury or their duly appointed representatives, or a licensed independent public accountant. Further, the records shall be maintained for a period not less than that recommended in the Uniform Manual for Development Districts of Tennessee, published by the Comptroller of the Treasury, State of Tennessee, but not less than three (3) years from the date of final payment.
- d. In the event MATA is audited by any Federal or State agency, CONTRACTOR shall provide whatever records, information, and assistance as MATA may reasonably require.
- e. The CONTRACTOR shall provide information and assistance requested by MATA for progress reports required of MATA by Federal or State Government, or agencies.

16. Interests of Federal and State Governmental Officials –

- a. No member of or delegate to the Congress of the United States shall be admitted to any share or part of this CONTRACT, or to any benefit arising therefrom.
- b. No part of the proceeds hereof shall be paid directly or indirectly to any officer or employee of the State of Tennessee as wages, compensation or gifts in exchange for acting as officer, agent, employee, subcontractor, or consultant to MATA in connection with any work contemplated or performed relative to this CONTRACT.
- c. No payments to Officers or Employees of City or County. The CONTRACTOR warrants that no part of the funds provided by the City, County and State shall be paid directly or indirectly to any officer or employee of the City, County or State as wages, compensation or gifts in exchange for acting as officer, agent, employee, subcontractor or consultant to either the CONTRACTOR or other entity in connection with any work contemplated or performed relative to this CONTRACT.

17. Environmental Requirements –

- a. **Environmental Protection.** The CONTRACTOR agrees to 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; FTA 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. **Air Quality.** The CONTRACTOR agrees to comply with all applicable regulations, standards, or orders implementing the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. as follows:
 1. The CONTRACTOR agrees to comply with applicable requirements of U.S. Environmental Protection Agency (EPA) regulations, “Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act”, 40 C.F.R. Part 51, Subpart T; and “Determining Conformity of Federal Actions to State or Federal Implementation Plans,” 40 C.F.R. Part 93. To support the requisite air quality conformity finding for the Project, the CONTRACTOR agrees to implement each air quality mitigation and control measure incorporated in the Project. The CONTRACTOR agrees that any Project identified in an applicable State Implementation Plan (SIP) as a Transportation Control Measure will be wholly consistent with the design concept and scope of the Project described in the SIP.
 2. U.S. EPA also imposes requirements implementing the Clean Air Act, as amended, that may apply to transit operators, particularly operators of large transit bus fleets. Thus, the CONTRACTOR should be aware that the following U.E. EPA regulations may apply to its Project: “Control of Air Pollution from Motor-Vehicles and Motor-Vehicle Engines”, 40 C.F.R. Part 85; “Control of Air Pollution from New and In-Use Motor Vehicles and New and In-Use Motor Vehicle Engines: Certification and Test Procedures,” 40 C.F.R. Part 86; and “Fuel Economy of Motor Vehicles,” 40 C.F.R. Part 600.
 3. The CONTRACTOR agrees to comply with the notification of violating facilities provisions of Executive Order No. 11738, “Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants, or Loans,” 42 U.S.C. § 7606 note.
- c. **Clean Water.** 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. Among other things:
 1. The CONTRACTOR agrees to protect underground sources of drinking water consistent with the provisions of the Safe Drinking Water Act of 1974, as amended, 42 U.S.C. §§ 300h et seq.

2. The CONTRACTOR agrees to comply with the notification of violating facilities provisions of Executive Order No. 11738, "Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants, or Loans", 42 U.S.C. § 7606 note.
- d. Use of Public Lands. The CONTRACTOR agrees that no publicly owned land from a park, recreation area, or wildlife or waterfowl refuge of national, State, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof, or any land from a historic site of national, State, or local significance may be used for the Project unless the FTA makes the specific findings required by 49 U.S.C. § 303.
- e. Wild and Scenic Rivers. The CONTRACTOR agrees to comply with the Wild and Scenic Rivers Act of 1968, as amended, 16 U.S.C. §§ 1271 et seq. relating to protecting components of the national wild and scenic rivers system.
- f. Coastal Zone Management. The CONTRACTOR agrees to assure Project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972, as amended, 16 U.S.C. §§ 1451 et seq.
- g. Wetlands. The CONTRACTOR agrees to comply with the protections for wetlands in accordance with Executive Order No. 11990, as amended, "Protection of Wetlands," 42 U.S.C. § 4321 note.
- h. Floodplains. The CONTRACTOR agrees to comply with the flood hazards protections in floodplains in accordance with Executive Order No. 11988, as amended, "Floodplain Management" 42 U.S.C. § 4321 note.
- i. Endangered Species. The CONTRACTOR agrees to comply with the protections for endangered species of the Endangered Species Act of 1973, as amended, 16 U.S.C. §§ 1531 et seq.
- j. Historic Preservation. The CONTRACTOR agrees to facilitate compliance with Federal historic and archaeological preservation requirements of section 106 of the National Historic Preservation Act, as amended, 16 U.S.C. § 470f; Executive Order No. 11593, "Protection and Enhancement of the Cultural Environment," 16 U.S.C. § 470 note; and the Archaeological and Historic Preservation Act of 1974, as amended, 16 U.S.C. §§ 469a-l et seq. as follows:
 1. In accordance with Advisory Council on Historic Preservation regulations, "Protection of Historic and Cultural Properties," 36 C.F.R. Part 800, MATA agrees to consult with the State Historic Preservation Officer concerning investigations to identify properties and resources included in or eligible for inclusion in the National Register of Historic Places that may be affected by the Project and agrees to notify FTA of any such properties that will be affected.
 2. The CONTRACTOR agrees to comply with all Federal requirements to avoid or mitigate adverse effects on those historic properties.
- k. Environmental Justice. The CONTRACTOR agrees to comply with the policies of

Executive Order No. 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 42 U.S.C. § 4321 note.

- I. Mitigation of Adverse Environmental Effects. Should the Project cause or result in adverse environmental effects, the CONTRACTOR agrees to take all reasonable steps to minimize those effects as required by 49 U.S.C. § 5324(b), and any other applicable Federal laws and regulations, including 23 C.F.R. Part 771 and 49 C.F.R. Part 622. The CONTRACTOR agrees to implement all environmental mitigation measures that may be identified as commitments in applicable environmental documents (such as environmental assessments, environmental impact statements, memoranda of agreement, and documents required by 49 U.S.C. § 303) and agrees to comply with any conditions the Federal Government might impose in a finding of no significant impact or a record of decision. The CONTRACTOR agrees that those mitigation measures are incorporated by reference and made part of the CONTRACT. As soon as the Federal Government and the CONTRACTOR reach agreement on any deferred mitigation measures, the CONTRACTOR agrees that those measures will then be incorporated by reference and made part of the CONTRACT. The CONTRACTOR agrees that any mitigation measures agreed upon by MATA and the Federal Government may not be modified or withdrawn without the express written approval of the Federal Government.

18. Energy Conservation - The CONTRACTOR shall comply with mandatory energy efficiency 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 (42 U.S.C. 6321)

19. Patent Rights – Not applicable to this procurement.

20. Rights in Data – Not applicable to this procurement.

21. Vendor Responsibility - It is the intent of these specifications to provide for goods of first quality and the workmanship must be the best obtainable in the various trades. The design of the goods, which the manufacturer proposes to furnish, must be of substantial and durable construction in all respects. No advantage shall be taken by the BIDDER or manufacturer in the omission of any part or detail, which goes to make the product complete and ready for installation and use.

The vendor shall assume responsibility for all materials used in the Bid item whether the vendor manufactures the same or purchased ready-made from a source outside the vendor's company.

22. Delivery - Delivery shall be in accordance with technical specifications.

23. Project Schedule – CONTRACTOR shall prepare a CPM schedule as described in Section 01311.

24. Preference for United States Products and Services - To the extent applicable, the CONTRACTOR agrees to comply with the following U.S. preference requirements:
 - a. Buy America. The CONTRACTOR agrees to comply with 49 U.S.C. § 5323(j), FTA

regulations, "Buy America Requirements," 49 C.F.R. Part 661, and implementing guidance FTA may issue. A Buy America certificate (Exhibit II), as per attached format, must be completed and submitted with the BID or the BID will be considered non-responsive.

A waiver from the Buy America provision may be sought by MATA if grounds for the waiver exist. Section 165a of the Surface Transportation Assistance Act of 1982 permits FTA's participation in this CONTRACT only if iron, steel and manufactured products used in the CONTRACT are produced in the United States. This applies to procurements of \$ 100,000 and over.

b. Cargo Preference—Use of United States-Flag Vessels. The CONTRACTOR agrees to comply with U.S. Maritime Administration regulations, "Cargo Preference—U.S.- Flag Vessels," 46 C.F.R. Part 381, to the extent those regulations apply to the Project. Specifically, the CONTRACTOR agrees:

1. To utilize privately owned United States-Flag Commercial vessels to ship at least 50% of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, materials, or commodities pursuant to this section, to the extent such vessels are available at fair and reasonable rates to United States-Flag Commercial vessels.

2. To furnish within thirty (30) days following the date of loading for shipments originating within the United States, or within thirty (30) working days following the date of loading for shipment 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 paragraph one above to MATA (through the prime CONTRACTOR in the case of subcontractor Bills-of-Lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, 400 Seventh Street, S.W., Washington, DC 20590, marked with appropriate identification of the project.

c. Fly America. The CONTRACTOR understands and agrees that the Federal Government will not participate in the costs of international air transportation of any persons involved in or property acquired for the Project unless that air transportation is provided by U.S.-flag air carriers to the extent service by U.S.-flag air carriers is available, consistent with the requirements of the International Air Transportation Fair Competitive Practices Act of 1974, as amended, 49 U.S.C. § 40118, and U.S. General Services Administration (U.S. GSA) regulations "Use of United States Flag Air Carriers," 41 C.F.R. §§ 301.131 through 301.143.

25. Debarment, Suspension, and Other Related Matters - Unless otherwise permitted by law, any person that is debarred, suspended, or voluntarily excluded may not take part in federally covered transaction, either as participant or a principal, during the period of debarment, suspension, or voluntary exclusion. Accordingly, neither FTA nor its recipients may enter into any transaction with such debarred, suspended, or voluntarily excluded persons during such period.

The CONTRACTOR shall refrain from awarding any subcontractor of any amount (at any tier) to a debarred or suspended subcontractor, and to obtain a similar certification from any third-party subcontractor (at any tier) seeking a contract exceeding \$ 100,000.00.

A certification process has been established by 49 CFR, Part 29 as a means to ensure that debarred, suspended, or voluntarily excluded persons do not participate in a federally assisted project. The CONTRACTOR agrees to obtain certifications on debarment and suspension from its subcontractors and otherwise comply with U.S. DOT regulations, "Government Debarment and Suspension (Non-procurement) and Government-wide Requirements for a Drug-free Workplace (Grants)," 49 C.F.R. Part 29. Each CONTRACTOR or subcontractor must provide to MATA a signed certification in compliance with 49 CFR, Part 29 as part of this CONTRACT. (Exhibit III)

ON CONSTRUCTION CONTRACTS ONLY, BIDDERS ARE NOT REQUIRED TO SUBMIT DEBARMENT CERTIFICATIONS FOR LOWER-TIER CONTRACTORS (SUBCONTRACTORS) AT THE TIME OF BID SUBMISSION. THE APPARENT LOW BIDDER WILL BE PERMITTED TO SUBMIT TO MATA THESE LOWER-TIER CONTRACTOR DEBARMENT FORMS WITHIN 48 HOURS OF NOTIFICATION OF BEING THE APPARENT LOW BIDDER. DEBARMENT FORMS FOR THE PRIME CONTRACTOR, HOWEVER, MUST BE SUBMITTED WITH THE BID.

26. Prohibited Interests - No member, officer, or employee of MATA or the City of Memphis during his or her tenure or one year thereafter shall have interests, direct, or indirect in this CONTRACT or the proceeds thereof, or if a conflict, real or apparent, as defined in MATA's Code of Ethics, would be involved.

27. Termination of Contract -

a. MATA may terminate this CONTRACT without cause by giving fifteen (15) days written notice to the CONTRACTOR thereof and specifying the effective date of termination.

If the CONTRACT is terminated by MATA as provided herein, the CONTRACTOR will be paid for its satisfactory services completed through the date of termination specified by MATA.

b. If, through any cause, the CONTRACTOR shall fail to fulfill in timely and proper manner its obligations under this CONTRACT, or shall violate any of the covenants, agreements, or stipulations of this CONTRACT, MATA shall thereupon have the right to terminate this CONTRACT by giving written notice to the CONTRACTOR for such termination and specifying the effective date of such termination. In the event of termination, the CONTRACTOR shall be entitled to just and equitable compensation for any satisfactory work through the date of termination specified by the MATA.

c. In the event of default by the CONTRACTOR, MATA shall be entitled to all of its reasonable expenses, and its costs to include, but not limited to its reasonable attorney's fees incurred by reason of such default.

d. In addition to the foregoing, MATA reserves the right to cancel any services or portion of services to be provided hereunder upon written notice to the CONTRACTOR specifying the canceled services and the effective date of such cancellation. In the event of such cancellation, the CONTRACTOR shall be compensated for satisfactory work completed and, further, the compensation due to the CONTRACTOR hereunder shall be reduced accordingly effective said

cancellation date.

28. Employment of Contractor - MATA hereby agrees to engage the CONTRACTOR and the CONTRACTOR hereby agrees to perform the services hereafter set forth in connection with the project.
29. Interest of the Contractor - The CONTRACTOR covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of services required to be performed under this CONTRACT. The CONTRACTOR further covenants that in the performance of this CONTRACT no person having any such interest shall be employed.
30. Independent Contractor - The CONTRACTOR is at all times an independent contractor and in no wise shall be deemed to be in joint venture, partnership, or other relationship with MATA.
31. Indemnification - The CONTRACTOR shall indemnify, save, defend, and hold MATA, the City of Memphis, TN, Mid-South Transportation Management, Inc., and RATP Dev , their officers, agents and employees free from all losses, damages, claims, and expenses, including but not limited to attorneys' fees in any wise arising out of, occurring in connection with or resulting from the actions and omissions of the CONTRACTOR, its employees, agents, or contractors in the performance of its work hereunder, regardless of whether or not such loss, damage, claim or expense is caused in part by a party indemnified hereunder.
 - a. Indemnification of the Contractor. By executing this CONTRACT, the CONTRACTOR assumes the entire responsibility and liability for any and all claims, damage or injury of any kind or nature (including death) to all persons, whether employees of the CONTRACTOR or otherwise, and to all property including, but not limited to, the replacement cost and loss of use of property, caused by, resulting from, arising out of, or occurring in connection with, or resulting from the performance of the work by the CONTRACTOR, its agents, servants, employees, or subcontractors or anyone directly or indirectly employed by any of them for whose acts any of them may be liable.
 - b. If any claim is made against the AUTHORITY or any other party indemnified hereunder for any damage, injury, death, or loss, whether such claim is based upon the CONTRACTOR's or its agents', servants', employees' or subcontractors' (including any contractors or subcontractors employed by the AUTHORITY and whose performance and work is subject to the supervision and control of CONTRACTOR) alleged active or passive negligence or participation in the wrong, or upon any alleged breach of any statutory duty or obligation or alleged breach of any other duty or obligation on the part of the CONTRACTOR, its agents, servants, employees or subcontractors, or in any other instance for which the CONTRACTOR has assumed responsibility in this CONTRACT, the CONTRACTOR shall indemnify, defend and hold harmless the AUTHORITY, its officers, directors, agents, servants, staff and employees (and any other party indemnified hereunder) from and against any and all loss, expense, judgment, damage or injury (including attorney's fees and expenses) that the AUTHORITY or its officers, directors, agents, servants, staff or employees (and any other party indemnified hereunder) may sustain as the result of any such claim or breach. The

CONTRACTOR shall assume on behalf of the AUTHORITY, its officers, directors, agents, staff, servants and employees (and any other party indemnified hereunder) the defense of any action at law or in equity which may be brought against any of them on any such claim or breach by retaining counsel approved by the AUTHORITY, and shall pay on behalf of any of them the amount of any judgment with any costs or expenses incurred by any of them in connection with such claim or breach.

- c. Labor Indemnity. The CONTRACTOR shall indemnify, defend and hold harmless the AUTHORITY from any and all administrative and judicial actions (including reasonable attorney's fees related to any such action) incurred by the AUTHORITY in connection with any labor related activity arising from the performance of the WORK of the CONTRACTOR. As used in this CONTRACT, "labor related activity" includes, but is not limited to, strikes, walk-outs, informational or organizational or organization picketing, use of placards, distribution of hand-outs, leaflets in or in the vicinity of any facility where the AUTHORITY conducts business. The AUTHORITY shall advise the CONTRACTOR if any labor related activity occurs and the CONTRACTOR shall arrange, at its expense, for the legal representation necessary to protect the AUTHORITY with counsel approved by the AUTHORITY.

32. Cost Analysis - MATA reserves the right to conduct a cost or price analysis for any purchase. MATA may be required to perform a cost analysis when competition is lacking for any purchase. Sole source procurements or procurements which result in a single BID being received will be subject to a cost analysis which will include the appropriate verification of cost data, the evaluation of specific elements of costs and the projection of the data to determine the effect on Bid prices. MATA may require a pre-award audit, and potential contractors shall be prepared to submit data relevant to the proposed work which will allow MATA to sufficiently determine that the proposed price is fair, reasonable, and in accordance with Federal, State, and local regulations. Procurements resulting in a single BID will be treated as a negotiated procurement and MATA reserves the right to negotiate with the single BIDDER to achieve a fair and reasonable price. If both parties cannot agree upon a negotiated price, MATA reserves the right to reject the single BID.

Contract change orders or modifications will be subject to a cost analysis.

33. False or Fraudulent Statements or Claims - The CONTRACTOR acknowledges and agrees that:

- a. The Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. §§ 3801 et seq. and U.S. Department of Transportation (DOT) regulations "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its activities in connection with the Project. Accordingly, by executing the CONTRACT, the CONTRACTOR certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, or it may make in connection with the Project covered by the CONTRACT. In addition to other penalties that may apply, the CONTRACTOR also acknowledges that if it makes a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986, as amended, on the CONTRACTOR to the extent the Federal Government deems appropriate.

- b. If it makes a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government in connection with an urbanized area

formula project financed with Federal assistance authorized by 49 U.S.C. § 5307, the Government reserves the right to impose on the CONTRACTOR the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1), to the extent the Federal Government deems appropriate.

34. No Contingency Fees - The CONTRACTOR shall warrant that no person or selling agency has been employed or retained to solicit or secure this CONTRACT upon an agreement or understanding for a commission, percentage, bonus brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the CONTRACTOR for the purpose of securing business, for the breach or violation of which warranty MATA shall have the right to annul said CONTRACT without liability or, in its discretion, to deduct from the Contract price or consideration the full amount of such commission, percentage, brokerage or contingent fee.
35. Copeland "Anti-Kickback" Act, as amended - The CONTRACTOR shall comply with the Copeland "Anti-Kickback" Act, 18 U.S.C. 874 and 40 U.S.C. 276c, and U.S. Department of Labor (DOL) regulations, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in part by Loans or Grants from the United States", 29 C.F.R. Part 3. In addition to other requirements that may apply:
 - a. The CONTRACTOR will not induce, 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 that employee is otherwise entitled.
 - b. MATA agrees to report every suspected or reported violation of the Copeland "Anti-Kickback" Act or its Federal implementing regulations to FTA.
36. Excluded Facilities - The CONTRACTOR shall comply with the provisions of 40 CFR Part 15 which prohibits the use of facilities included on the EPA list of violating facilities.
37. Identical Bids - In the unlikely event that identical BIDs are received, a toss of a coin will be used to determine the successful bidder.
38. Bid Bond - As security for the acceptance of the CONTRACT, each BID shall be accompanied by a BIDDER's bond (bonding company must be acceptable to MATA) or certified cashier's check in the amount of five percent (5%) drawn payable to the purchaser. Such Bid deposits of all BIDDERS will be held by purchaser until all BIDs submitted shall have been evaluated, and the BIDs have either been rejected in whole or in part, or the award of the CONTRACT or Contracts has been made. The Bid deposit of the successful BIDDER will be held until the CONTRACT is duly executed and the CONTRACTOR has provided the necessary Performance Bond required. Bid deposits will be returned to the unsuccessful BIDDERS upon the award of the CONTRACT. If the successful BIDDER to whom the CONTRACT shall have been awarded fails or refuses to execute the CONTRACT within ten (10) days after the award of the CONTRACT, the amount of the Bid deposit shall be forfeited to and retained by the AUTHORITY as liquidated damages for such neglect or refusal, and the AUTHORITY may proceed to award the CONTRACT with another company. The bonding company must have a local office, and the name, address and phone number of the local agent must be shown.
39. Performance Bond - The successful BIDDER shall furnish a Payment and Performance Bond in an amount equal to one hundred percent (100%) of the sum as security for the

faithful performance of this CONTRACT. Form of instrument shall be standard City of Memphis form, a copy of which is attached (Section 00500). Bond shall be furnished through an agent domiciled and legally authorized to do business in the State of Tennessee and delivered to the AUTHORITY no later than the date of execution of the CONTRACT. Surety company shall be one acceptable to MATA with a local office, and the name, address and phone number of the local agent must be shown.

40. Lobbying - Federal regulations require MATA to include certifications from contractors. Accordingly, the CONTRACTOR must sign the attached certification. (Exhibit IV) By executing this CONTRACT, the CONTRACTOR certifies to the best of its knowledge and belief that:
- a. No Federal appropriated funds have been paid or will be paid on behalf of the undersigned to 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 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. If any funds other than Federal appropriate funds have been paid or will be paid to 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 this Federal contract, grant, loan, or cooperative agreement, the CONTRACTOR shall complete and submit Office of Management and Budget Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
 - c. The CONTRACTOR shall insert the language of this certification in all subcontracts and require that all subcontractors at any tier shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$ 10,000 and not more than \$ 100,000 for each such failure. This applies to procurements of \$ 100,000 or more.

41. Equal Employment Opportunity -

- A. Nondiscrimination. Pursuant to Department of Labor regulations at 41 C.F.R. 60-1.4 (b) and 60-1.4 (c):
- (1) The CONTRACTOR agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in Department of Labor regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor, "41 C.F.R. Chapter 60, that is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, cooperative

agreement, contract, loan, insurance, or guarantee, or undertaken pursuant to a Federal program involving the grant, cooperative agreement, contract, loan, insurance, or guarantee, the following equal opportunity clause:

- (2) Prime Contracts: Each Federal contracting agency is required include the Equal Opportunity (EO) clause found at 41 CFR 60-1.4(a), and the Affirmative Action (AA) clauses found at 41 CFR 60-250.4 and 60-741.4 in all nonexempt construction contracts.
- (3) Omission of contract clauses from contract: The EO/AA clauses may be expressly included in the contracts or incorporated by reference (41 CFR 60-1.4(d), 60-250.22 and 60-741.22). The clauses are, however, a part of the construction contracts even if they are not physically incorporated in the contract document (41 CFR 60-1.4(e), 41 CFR 60-4.9, 41 CFR 60-250.23 and 41 CFR 60-741.23).

- (4) Segregated Facilities:

General. In order to comply with his obligations under the equal opportunity clause, a prime CONTRACTOR or Sub-Contractor must insure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, or national origin cannot result. He may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. His obligation extends further to insuring that his employees are not assigned to perform their services at any location, under his control, where the facilities are segregated. This obligation extends to all contracts containing the equal opportunity clause regardless of the amount of the contract. The term "facilities" as used in this section means waiting rooms, work areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees.

Certification by prime CONTRACTORS and Sub-Contractors. Prior to the award or any nonexempt government contract of subcontract or federally assisted construction contract or subcontract, each agency or applicant shall require the prospective prime CONTRACTOR and each prime CONTRACTOR and subcontractor to submit a certification, in the form approved by the Director, that the prospective prime CONTRACTOR or subcontractor does not and will not maintain any facilities he provides for his employees in a segregated facilities are maintained; and that he will obtain a similar certification in the form approved by the Director, prior to the award of any nonexempt sub-contract.

- (5) The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, creed, age, sex, disability or national origin. The CONTRACTOR will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, creed, age, sex, disability or national origin. Such action shall include, but not be limited to the

following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

- (6) The CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, state that all qualified applicants will receive consideration for employment without regard to race, color, creed, age, sex, disability or national origin.
- (7) The CONTRACTOR will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or worker's representatives of the CONTRACTOR's commitments under this section 202 of Executive Order 11246 of September 24, 1965, as amended by Executive Order 11375 and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (8) The CONTRACTOR will comply with all provisions of Executive Order 11246 of September 24, 1965, as amended by Executive Order 11375 and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (9) The CONTRACTOR will furnish all information and reports required by Executive Order 11246 of September 24, 1965, as amended by Executive Order 11375 and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Federal Transit Administration, (FTA) and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (10) In the event of the CONTRACTOR's noncompliance with the non-discrimination clauses of this CONTRACT or with any of the said rules, regulations or orders, this CONTRACT may be canceled, terminated, or suspended in whole or in part and the CONTRACTOR may be declared ineligible for further Governments or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, as amended, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, as amended, or by the rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.
- (11) The CONTRACTOR will include the portion of the sentence immediately proceeding paragraph (a) the provisions of paragraphs (5) through (11) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, as amended

by Executive Order 11375 so that such provisions shall be binding upon each subcontractor or vendor. The CONTRACTOR will take such action with respect to any subcontract or purchase order as the Secretary of Labor or FTA may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event a CONTRACTOR becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Secretary of Labor or FTA, the CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

(12) The CONTRACTOR shall refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, as amended, with any contractor debarred from, or who has not demonstrated eligibility for Government contracts pursuant to the Executive Order.

B. The CONTRACTOR shall incorporate the above clauses (5-12) in each of its subcontracts, and further shall ensure that each of its non-exempt subcontractors does likewise.

42. Labor Provisions -

A. Construction Contracts. Pursuant to Department of Labor regulations, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction (Also Labor Standards Provisions Applicable to Non-construction Contracts Subject to the Contract Work Hours and Safety Standards Act)," 29 C.F.R. Part 5, the following provisions shall be incorporated in each construction contract of \$ 2,000 or more let by the Recipient in carrying out the Project.

(1) Minimum Wages

a. All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act, 29 C.F.R., Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at the time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached here to and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 C.F.R. § 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs that cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the

appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided at 29 C.F.R. § 5.5 (a) (4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 C.F.R. section 5.5 (a) (1) (ii) and the Davis-Bacon Poster WH-1321) shall be posted at all times by the CONTRACTOR and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. The Contracting Officer shall require that any class of laborers or mechanics that is not listed in the wage determination and that is to be employed under the contract shall be classified in conformance with the wage determination. The Contracting Officer shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (ii) The classification is utilized in the area by the construction industry; and
- (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Contracting Officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the Contracting Officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within the 30-day period that additional time is necessary.

In the event the CONTRACTOR, the laborers or mechanics to be employed in the classification or their representatives, and the Contracting Officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the Contracting Officer shall refer the questions, including the views of all interested parties and the recommendation of the Contracting Officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the Contracting Officer or will notify the Contracting Officer within

the 30-day period that additional time is necessary.

The wage rate (including fringe benefits where appropriate) determined pursuant to 29 C.F.R. § 5.5 (a) (1) (v) (B) or 29 C.F.R. § 5.5 (a) (1)(v) (C), shall be paid to all workers performing work in the classification under this CONTRACT from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the CONTRACT for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the CONTRACTOR shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the CONTRACTOR does not make payments to a trustee or other third person, the CONTRACTOR may consider as part of the wages of any laborer or mechanic the amount of any cost reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the CONTRACTOR, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the CONTRACTOR to set aside in a separate account asset for the meeting of obligations under the plan or program.

(2) Withholding. The Federal Transit Administration (FTA) 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 the CONTRACTOR, under this agreement or any other federal contract with the same recipient or any other federally assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the CONTRACTOR or any subcontractor the full amount of wages required by the CONTRACT. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the Construction or Development of the FTA Assisted Project), all or part of the wages required by the CONTRACT, FTA may, after written notice to the CONTRACTOR, sponsor, applicant, or OWNER, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and Basic Records

a. Payrolls and basic records relating thereto shall be maintained by the CONTRACTOR during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security

number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b) (2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 C.F.R. § 5.5 (a) (1) (iv) that the wages of any laborer or mechanic include the amount of any cost reasonably anticipated in providing benefits under a plan or program described in section 1 (b) (2)(B) of the Davis-Bacon Act, the CONTRACTOR shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. CONTRACTORS employing apprentices or trainees, under approved programs, shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registrations of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. The CONTRACTOR shall submit weekly for each week in which any contract work is performed a copy of all payrolls to FTA if FTA is a party to the CONTRACT; but if FTA is not such a party, the CONTRACTOR will submit the payrolls to the applicant, sponsor or OWNER, as the case may be, for transmission to FTA. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 C.F.R. § 5.5 (a)(3)(i). This information may be submitted in any form desired. Optional form WH-347 is available for this purpose and may be purchased from the superintendent of documents (Federal Stock No. 029-005-00014- 1), U.S. Government Printing Office, Washington, D.C. 20402. The prime CONTRACTOR is responsible for the submission of copies of payrolls by all subcontractors.

c. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the CONTRACTOR or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the CONTRACT and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be maintained under 29 C.F.R. § 5.5 (a)(3)(i) and that such information is correct and complete.

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the CONTRACT during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth at 29 C.F.R. Part 3.

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents

for the classification of work performed, as specified in the applicable wage determination incorporated into the CONTRACT.

d. The weekly submission of a properly executed certification set forth on the reverse side of optional form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by 29 C.F.R. § 5.5 (a) (3) (ii) (B).

e. The falsification of any of the above certifications may subject the CONTRACTOR or subcontractor to civil or criminal prosecution under 18 U.S.C. §1001 and 31 U.S.C. § 231.

f. The CONTRACTOR or subcontractor shall make the records required under 29 C.F.R. § 5.5 (a) (3) (i) available for inspection, copying, or transcription by authorized representatives of FTA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the CONTRACTOR or subcontractor fails to submit the required records or make them available, FTA may, after written notice to the CONTRACTOR, sponsor, applicant, or OWNER, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or make such records available may be grounds for debarment action pursuant to 29 C.F.R. § 5.12.

(4) Apprentices and Trainees

a. Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a state apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the CONTRACTOR as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a CONTRACTOR is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the CONTRACTOR's or subcontractor's registered program shall be observed. Every apprentice

must be paid at not less than the rate specified in registered program for the apprentice's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a state apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the CONTRACTOR will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees. Except as provided in 29 C.F.R. § 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination that provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the employment and training administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the CONTRACTOR will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal Employment Opportunity. The utilization of apprentices, trainees, and journeymen under 29 C.F.R. Part 5 shall be in conformity with the Equal Employment Opportunity requirements of Executive Order no. 11246, as amended, and 29 C.F.R. Part 30.

- (5) Compliance with Copeland Act Requirements. The CONTRACTOR shall comply with the requirements of 29 C.F.R. Part 3, which are incorporated herein by reference.
- (6) Contract Termination; Debarment. A breach of the contract clauses in 29 C.F.R. § 5.5 may be grounds for termination of the CONTRACT, and for debarment as a contractor and a subcontractor as provided in 29 C.F.R. § 5.12.
- (7) Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and related acts contained in 29 C.F.R. Parts 1, 3, and 5 are incorporated herein by reference.
- (8) Disputes Concerning Labor Standards. Disputes arising out of the labor standards provisions of this CONTRACT shall not be subject to the general disputes clause of this CONTRACT. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 C.F.R. parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the CONTRACTOR (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.
- (9) Certification of Eligibility.
- a. By entering into this agreement or a third-party contract financed under this agreement, the CONTRACTOR certifies that neither it (nor he nor she) nor any person or firm that has an interest in the contractor's firm is a person or firm ineligible to be awarded government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 C.F.R. § 5.12 (a)(1).
- b. No part of this CONTRACT shall be subcontracted to any person or firm ineligible for award of a government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 C.F.R. § 5.12 (a)(1).
- c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. § 1001.
- (10) 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 work week in which he or she is employed on such work to work in excess of forty hours in such work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such work week.
- (11) Violation; Liability for Unpaid Wages; Liquidated Damages. In the event of any violation of the requirements of 29 C.F.R. § 5.5 (b)(1), 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 U.S. (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 29 C.F.R. § 5.5 (b)(1) in the sum of\$ 10 for each calendar day on which such individual was required or permitted to work in excess of the standard work week of forty hours without payment of the overtime wages required by 29 C.F.R. § 5.5 (b) (1).

(12) Withholding for Unpaid Wages and Liquidated Damages. FTA or the AUTHORITY 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 at 29 C.F.R.§ 5.5 (b)(2).

(13) Subcontracts. The CONTRACTOR or subcontractor shall insert in any subcontracts the clauses set forth in Section 42A1 through A13 of this agreement and also a clause regarding 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 Section 42A1 through A12 of this agreement.

43. Seismic Requirements - The CONTRACTOR agrees to comply with U.S. DOT regulations, "Seismic Safety," 49 C.F.R. Part 41, and any implementing guidance FTA may issue.

44. Contract Security - The CONTRACTOR agrees to follow the requirements of 49 C.F.R. § 18.36 (h) or 49 C.F.R. 19.48 (c), as applicable, and Federal (FTA) guidelines with regard to bid guarantees and bonding requirements.

45. Safety Standards - Pursuant to Section 107 of the Contract Work Hours and Safety Standards Act and Department of Labor regulations, "Safety and Health Regulations for Construction," 29 C.F.R. § 1926, no laborer or mechanic working on a construction contract shall be required to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous.

Contract Work Hours and Safety Standards Act, as amended. The CONTRACTOR agrees to comply and assures compliance with section 102 and 107 of the Contract Work Hours and Safety Standards Act, as amended, 40 U.S.C. Section 327 through 333; and implementing U.S. DOL regulations, "Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction (also Labor Standards Provisions Applicable to Non-construction Contracts Subject to the Contract Work Hours and Safety Standards Act)," 29 C.F.R. Part 5; and U.S. DOL regulations, "Safety and Health Regulations for Construction, " 29 C.F.R. Part 1926. In addition to other requirements that may apply:

a. In accordance with section 102 of the Contract Work Hours and Safety Standards

Act, as amended, 40 U.S. C. Section 327 through 332, the CONTRACTOR agrees and assures that, for the Project, the wages of every mechanic and laborer will be computed on the basis of a standard work week of 40 hours, and that each worker will be compensated for work exceeding the standard work week at a rate of not less than 1.5 times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The CONTRACTOR agrees that determination pertaining to these requirements will be made in accordance with applicable U.S. DOL regulations, "Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction (also Labor Standards Provisions Applicable to Non-construction Contracts Subject to the Contract Work Hours and Safety Standards Act)," 29 C.F.R. Part 5.

- b. In accordance with section 107 of the Contract Work Hours and Safety Standards Act, as amended, 40 U.S.C. Section 333, the CONTRACTOR agrees and assures that no laborer or mechanic working on a construction contract shall be required to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to his or her health and safety, as determined in accordance with U.S. DOL regulations, "Safety and Health Regulations for Construction," 29 C.F.R. Part 1926.
- c. The requirements of this Section do not apply to a third-party contract for the purchase of supplies, materials, or articles ordinarily available on the open market.

46. Insurance -

- A. Contractor to Maintain Insurance. The CONTRACTOR shall purchase and maintain in a company or companies licensed to do business in the State of Tennessee such insurance as will protect him from claims set forth below which may arise out of or result from the CONTRACTOR's operations under the CONTRACT, whether such operations be by himself or by any Subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable:
 - (1) Claims under worker's compensation, disability benefit and other similar employee benefit acts. The CONTRACTOR shall provide Worker's Compensation coverage in accordance with the Statutory Requirements of the State of Tennessee and shall require all subcontractors to do likewise. The AUTHORITY and the City of Memphis shall not be responsible for any Independent CONTRACTOR's payments under worker's compensation or other insurance premiums;
 - (2) claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;
 - (3) claims for damages because of bodily injury, sickness, or disease, or death of any person other than his employees;
 - (4) claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the CONTRACTOR, or (2) by any other person;

- (5) claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- (6) claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle;
- (7) Liability insurance shall include all major divisions of coverage and be on a comprehensive basis including:
 - a. Premises--Operations (including Explosion, Collapse, Underground coverage, X-C-U as applicable)
 - b. Independent Contractor's Protective
 - c. Products and Completed Operations
 - d. Personal injury Liability with Employment Exclusion deleted.
 - e. Contractual--including specified provision for the Contractor's obligations
 - f. Owned, non-owned and hired motor vehicles
 - g. Broad Form Property Damage including Completed Operations.
 - h. Umbrella Excess Liability.

B. Amount of Insurance. The insurance required by Section 47(A) shall be written for not less than the following, or greater if required by law:

- (1) Worker's Compensation—Statutory: Employer's Liability: \$ 500,000
- (2) Comprehensive general liability, including:

Premises-Operations
 Independent Contractor's Protective
 Product and Completed Operations Broad Form Property Damage
 Contractual Liability Endorsement

Combined single limits for bodily injury and property damage;

\$ 1,000,000 Each occurrence
 \$ 2,000,000 General aggregate

- (3) Property damage liability insurance shall provide X, C, or U coverage.
 Contractual Liability:

\$ 1,000,000 Each occurrence Combined Single Limit
 \$ 2,000,000 General aggregate

- (4) Personal Injury, with Employment Exclusion deleted:

\$ 1,000,000 Each occurrence

- (5) Comprehensive Automobile Liability:

Combined single limits for bodily injury and property damage:

\$ 1,000,000 Each occurrence

(6) Umbrella Excess Liability:

\$ 5,000,000 over primary insurance

(7) Railroad Protective Liability:

(Not required for this CONTRACT)

- C. Contractual Liability Coverage. The insurance required by Section 47(A) shall include contractual liability insurance applicable to the CONTRACTOR's obligations under Section 32.
- D. Proof of Coverage. Certificates of Insurance acceptable to the Authority shall be filed with the Authority prior to commencement of the WORK and approved by the Authority and the City of Memphis. The CONTRACTOR shall not allow any subcontractors to commence work on its subcontract until all similar insurance required of the subcontractors has been so obtained and approved. These Certificates shall each contain a provision that it will not be subject to cancellation, termination or change except after thirty (30) days prior to written notice to the Authority and the City of Memphis and that not less than thirty (30) days' notice of non-renewal will be provided to the Authority and the City of Memphis by certified mail. One copy of the Certificates herein required shall be furnished for each copy of the CONTRACT. The Certificate shall specifically set forth evidence of all coverage required by Sections 47(A), (B) and (C). The CONTRACTOR shall furnish to the Authority and the City of Memphis copies of any endorsements that are subsequently issued amending coverage or limits.
- E. Additional Insureds. The CONTRACTOR shall cause the Authority, the City of Memphis, Shelby County Government, Mid-South Transportation Management, Inc., and RATP Dev, their respective officers, directors, staffs and employees, to be named on each of the CONTRACTOR's certificates of insurance as additional named insureds.
- F. Contractor's Insurance Primary. Any coverage applicable to OWNER under CONTRACTOR's insurance policies shall be primary and non-contributing with any insurance maintained by OWNER in its own name and on its own behalf. Copies of endorsements to CONTRACTOR's policies shall be provided to OWNER.
- G. The Right of the Authority to Maintain Insurance. In the event the CONTRACTOR fails to furnish and maintain the required insurance or to furnish certificates of insurance, the Authority shall have the right, at its option, to terminate this CONTRACT or to take out and maintain such insurance and hold the CONTRACTOR liable for the cost. Compliance by the CONTRACTOR with the requirements of this Section 47 shall in no way relieve the CONTRACTOR from liability by it under any provision of this CONTRACT or the Contract Documents.
- H. Property Insurance. CONTRACTOR shall, at its own expense, procure and maintain for the duration of the project:

- (1) Builder's Risk Insurance.
Coverage provided by this policy shall be written:
- a. to apply to Authority, CONTRACTOR, subcontractors and materialmen as insureds as their interests may appear at time of loss;
 - b. to require a mutual waiver of subrogation clause whereby the Authority and CONTRACTOR waive any and all rights of recovery against one another for damages resulting from loss insured pursuant to this Section;
 - c. to authorize CONTRACTOR to adjust and settle any and all claims on behalf of all involved insureds; and

This insurance shall be for a Limit of Liability for any one occurrence of \$ 750,000 subject to deductible amounts acceptable to CONTRACTOR.

- (2) Insurance for Project Property While Outside the United States and Canada. If any project property is in transit or is located outside the continental United States or Canada for any reason, CONTRACTOR shall arrange to insure such property for its full replacement value.

- I. (1) The CONTRACTOR shall be responsible from the time of signing this CONTRACT or from the beginning of the first work, whichever shall be earlier, for all injury or damage of any kind to persons or property resulting from this work.
- (2) Hold Harmless - In addition to the liability imposed upon the CONTRACTOR on account of bodily injury (including death) or property damage suffered through the CONTRACTOR's negligence, which liability is not impaired or otherwise affected hereby, the CONTRACTOR assumes the obligation to protect, defend, indemnify and hold the Authority, the City of Memphis, Shelby County Government, Mid-South Transportation Management, Inc., RATP Dev, their respective officers, directors, staffs and employees free and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional fees, or other expenses or liabilities of any kind and character in connection with or arising directly or indirectly out of this CONTRACT and/or the performance hereof by act or omission of the CONTRACTOR or subcontractor, or anyone either (1) directly or indirectly employed or (2) under the supervision of any of them in the prosecution of the work included in this CONTRACT.
- (3) Premium and Reporting Responsibilities - CONTRACTOR is responsible for the payment of all insurance policy premiums, and all policies shall be endorsed to provide that there will be no recourse against the Authority or the City of Memphis for payment of premium. The CONTRACTOR is also responsible for all reporting to the insurer required by such policies.

- J. Insurance Coverages - The following coverages are to be included in the foregoing

CONTRACT. Any exclusions from these coverages shall be noted on the Certificate of Insurance provided to the Authority:

General Liability CONTRACTOR's General Liability form including Broad Form General Liability Extension Endorsement or its equivalent (including Premises and Operations; Independent CONTRACTOR's Protective; Products and Completed Operations; Broad Form Property Damage; Fire Legal Liability; Personal and Advertising Liability; Explosion, Collapse, and Underground Coverage and naming the City of Memphis as Additional Insured:

- \$ 2,000,000 General Aggregate
- \$ 1,000,000 Products - Completed/Operations
- \$ 1,000,000 Personal and Advertising Injury
- \$ 1,000,000 Each Occurrence
- \$ 50,000 Fire Damage (Any one fire)
- \$ 5,000 Medical Expense (Any one person)

Property Insurance. CONTRACTOR shall be responsible for maintaining any and all property insurance on their own equipment.

CONTRACTOR is required to provide copies of the insurance policies upon request.

47. Personal Liability of Public Officials -

In carrying out any of the Contract provisions or in exercising any power or authority granted to him by this CONTRACT, there shall be no liability upon the PROJECT MANAGER, his/her authorized representatives, or any officials of the OWNER, or Mid-South Transportation Management, Inc. (MTM), of the City of Memphis, TN (City), or RATP Dev either personally or as an official of the OWNER or of MTM. It is understood that in such matters they act solely as agents any representatives of the OWNER or of MTM.

48. No Waiver of Legal Rights -

- a. Upon completion of the WORK, the OWNER will expeditiously make final inspection and notify the CONTRACTOR of final acceptance. Such final acceptance, however, shall not preclude or estop the OWNER from correcting any measurement, estimate, or certificate made before or after completion of the WORK, nor shall the OWNER be precluded or estopped from recovering from the CONTRACTOR or his/her surety, or both, such overpayment as may be sustained, or by failure on the part of the CONTRACTOR to fulfill his/her obligations under the CONTRACT. A waiver on the part of the OWNER of any breach of any part of the CONTRACT shall not be held to be a waiver of any other or subsequent breach.
- b. The CONTRACTOR, without prejudice to the terms of the CONTRACT, shall be liable to the OWNER for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the OWNER's rights under any warranty or guaranty.

49. Title VI of the Civil Rights Act of 1964 - The CONTRACTOR will comply and will assure the compliance by subcontractors under this Project with all the requirements imposed by Title VI of the Civil Rights Act of 1964 (49 U.S.C. Section 2000d), the Regulations of DOT issued thereunder, 40 C.F.R. Part 21 and the assurances by MATA pursuant thereto.
50. Access Requirements for Persons with Disabilities - The CONTRACTOR agrees to comply with the requirements of 49 U.S.C. § 5301(d) which expresses the Federal policy that the elderly and persons with disabilities have the same right as other persons to use mass transportation service and facilities, and that special efforts shall be made in planning and designing those services and facilities to implement those policies. The CONTRACTOR also 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 handicaps, and with the Americans with Disabilities Act of 1990 (ADA), as amended, 42U.S.C. §§ 12101 et seq., which requires the provision of accessible facilities and services, and with the following Federal regulations, including any amendments thereto:
 - a. U.S. DOT regulations, "Transportation Services for Individuals with Disabilities (ADA),"49 C.F.R. Part 37;
 - b. U.S. DOT regulations "Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance,"49 C.F.R. Part 27;
 - c. Joint U.S. Architectural and Transportation Barriers Compliance Board/U.S. DOT regulations, "Americans with Disabilities (ADA) Accessibility Specifications for Transportation Vehicles,"36 C.F.R. Part 1192 and 49 C.F.R. Part 38;
 - d. U.S. Department of Justice (DOJ) regulations, "Nondiscrimination on the Basis of Disability in State and Local Government Services,"28 C.F.R. Part 35;
 - e. U.S. DOJ regulations, "Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities,"28C.F.R. Part 36;
 - f. U.S. General Services Administration (GSA) regulations, "Accommodations for the Physically Handicapped,"41 C.F.R. Subpart 101-19;
 - g. U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act,"29 C.F.R. Par 1630;
 - h. U.S. Federal Communications Commission regulations, "Telecommunications Relay Services and Related Customer Premises Equipment for the Hearing and Speech Disabled,"47 C.F.R. Part 64, Subpart F; and
 - i. FTA regulations, "Transportation for Elderly and Handicapped Persons,"49 C.F.R. Part 609; and
 - j. Any implementing requirements FTA may issue.

51. Liquidated Damages -

In the event of delay in the completion of delivery beyond the CONTRACT delivery date, MATA shall assess as liquidated damages and not penalties at seven hundred and fifty dollars (\$ 750.00) per calendar day for undelivered or incomplete materials or unfinished services required by this CONTRACT.

MATA will deduct and retain out of any money due or becoming due hereunder the amount of liquidated damages, and in case those amounts are less than the amounts of liquidated damages, the CONTRACTOR shall be liable to pay the difference upon demand.

If the CONTRACTOR is delayed in the progress or completion of the WORK by any act or neglect of MATA or an employee of MATA, or by a separate contractor employed by MATA, or by changes ordered, or by labor disputes not caused by or resulting from actions attributable to the CONTRACTOR, then the times fixed for completion of the WORK shall be extended for a period equivalent to the actual time lost by reason of such causes. No time extensions will be issued unless the CONTRACTOR provides notice in writing of a request for time extension to MATA before the last day of each calendar month for all delays occurring within said calendar month. At the end of each month the CONTRACTOR shall provide to MATA a narrative explaining the facts and circumstances surrounding each continuing alleged excusable delay event together with all supporting documentation that the CONTRACTOR relies upon to support each of its time extension requests.

52. Warranties -

The CONTRACTOR shall warrant that the equipment furnished under this CONTRACT and CONTRACTOR's work is free from error and defects in material and workmanship for twelve months from date of installation and acceptance by MATA and will work under normal use and service according to these specifications. Any equipment that fails to meet this warranty shall be promptly corrected or replaced at the CONTRACTOR's sole cost and expense.

When warranty repairs are required, MATA and the CONTRACTOR's representative shall agree within five days after notification on the most appropriate course for the repairs and the exact scope of the repairs to be performed under the warranty. If no agreement is obtained within the five-day period, MATA reserves the right to commence the repairs and deduct the cost from any remaining amounts due the CONTRACTOR, or, if the final payment on the CONTRACT has been made, bill the CONTRACTOR for the costs, including any attorneys' fees and/or court costs incurred by MATA in an effort to collect costs due MATA.

53. Pricing - The price to be quoted in any BID submitted shall include all labor, materials, tools, equipment, and other costs necessary to fully complete the project in accordance with the specifications. Anything omitted from such specifications which is clearly necessary for the completion of the item and its appurtenances shall be considered a portion of such Bid item although not directly specified or called for in these specifications. All material shall be new and in no case will used, reconditioned, or obsolete material be accepted unless otherwise specified. BIDDER should note discounts, if any. Freight charges must be included in Bid price.

54. Terms of Payment – Payment for specified work shall be made within 30 days of

acceptance by MATA and in accordance with any other payment terms stated in the IFB.

55. Acceptance of Material - If the item is not acceptable; MATA will furnish a letter of non-acceptance detailing the deficiencies within thirty (30) days after delivery. Acceptance of delivery of an item shall not release the CONTRACTOR from liability for faulty workmanship or materials appearing even after final payment has been made.
56. Contract Subletting - No CONTRACT may be assigned, sublet, or transferred without the written consent of MATA.
57. References – If requested by MATA, BIDDER shall provide at least three (3) references for projects similar to that described in this Invitation for Bid. The following must be provided: company name, address and telephone number, fax number, a contact person, and the dates of the CONTRACT. The references given should be on contracts within a twelve (12) month period prior to the Bid due date. BIDDER shall comply with this request within 3 days of receipt of request from MATA.
58. Federal Changes - The CONTRACTOR shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Agreement Form FTA Master Agreement between MATA and FTA, as they may be amended or promulgated from time to time during the term of this CONTRACT. The CONTRACTOR's failure to so comply shall constitute a material breach of this CONTRACT.
59. Recycled Products - The CONTRACTOR agrees to comply with all the requirements of Section 6002 of 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.
60. No Government Obligation -
 - a. MATA and the 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 MATA, CONTRACTOR, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.
 - b. The CONTRACTOR agrees to include the above clause in each subcontract. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.
61. Incorporation of Federal Transit Administration (FTA) Terms - The preceding provisions includes, in part, certain Standard Terms and Conditions required by DOT, whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by DOT, as set forth in FTA Master Agreement, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The CONTRACTOR shall not perform any act, fail to perform any act, or refuse to comply with

any MATA requests, which would cause MATA to be in violation of the FTA terms and conditions.

62. Disputes, Breaches, Defaults or Other Litigation - Except as otherwise provided in this CONTRACT, any dispute concerning a question of fact arising under this CONTRACT which is not disposed of by agreement shall be decided by the Contracting Officer, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the CONTRACTOR. The Contracting Officer may consult with the Construction Manager if one has been appointed for this project. The decision of the Contracting Officer shall be final and conclusive unless, within ten (10) days from the receipt of such copy, the CONTRACTOR mails or otherwise furnishes to the Contracting Officer a written appeal addressed to the Chief Executive Officer of MATA. The Chief Executive Officer shall review the dispute, related documents and the Contracting Officer's Final Decision. The Chief Executive Officer may consult with the Construction Manager and the Contracting Officer. The decision of the Chief Executive Officer shall be final and conclusive unless, within 10 days from the date of the receipt of such copy, the CONTRACTOR mails or otherwise furnishes to the Contracting Officer a written appeal addressed to the Board of the Memphis Area Transit Authority. The decision of the Board or its duly authorized representative for the determination of such appeals shall be final and conclusive unless in proceedings initiated by either party for review of such decision in a court of competent jurisdiction, the Court determines the decision to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith or is not supported by substantial evidence. In connection with any appeal proceeding under this Article, the CONTRACTOR shall be afforded an opportunity to be heard and to offer evidence in support of his appeal. Pending final decision of a dispute hereunder, the CONTRACTOR shall proceed diligently with the performance of the CONTRACT and in accordance with the Contracting Officer's or Chief Executive Officer's decision.

This Section 63 does not preclude consideration of questions of law in connection with decisions provided for in the paragraph above. Nothing in this CONTRACT, however, shall be construed as making final the decisions of the Board or its representative on a question of law.

63. Prompt Payment. The prime CONTRACTOR agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 10 days from the receipt of each payment the prime CONTRACTOR receives from MATA. The prime CONTRACTOR agrees further to return retainage payments to each subcontractor within ten (10) days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of MATA. This clause applies to both DBE and non-DBE subcontractors. If the prime CONTRACTOR determines the work to be unsatisfactory, it must notify MATA's Contracting Officer, Project Director and DBE Liaison Officer immediately, in writing, and state the reasons. Failure to comply with this requirement will be construed to be a breach of contract and subject to contract termination. At MATA's request, the CONTRACTOR shall supply copies of said payments.

END OF SECTION 00700

SECTION 00800

SUPPLEMENTAL CONDITIONS FOR CONSTRUCTION

INDEX OF SECTION 00800

- 10. DEFINITION OF TERMS
- 20. SCOPE OF WORK
- 30. CONTROL OF WORK
- 40. CONTROL OF MATERIALS
- 50. PROSECUTION AND PROGRESS
- 60. MEASUREMENT AND PAYMENT

SECTION 10 DEFINITION OF TERMS

Whenever the following terms are used in these specifications, in the contract, in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be interpreted as follows:

- 10.1 AASHTO. The American Association of State Highway and Transportation Officials, the successor association to AASHO.
- 10.2 ADVERTISEMENT. A public announcement, as required by federal, state and local law, inviting bids for work to be performed and materials to be furnished. Also, an Invitation for Bid (IFB).
- 10.3 ASTM. The American Society for Testing and Materials.
- 10.4 AUTHORITY. The Memphis Area Transit Authority, a public transportation system and transit authority organized and existing under and by virtue of Tennessee Code Annotated 7-56-101, et seq., and Memphis City Code 2-336, et seq.
- 10.5 AWARD. The acceptance, by the OWNER, of the successful BIDDER's proposal.
- 10.6 BID. The written offer of the BIDDER (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the DRAWINGS and SPECIFICATIONS.
- 10.7 BID GUARANTY. The security furnished with a bid to guarantee that the bidder will enter into a contract if his/her proposal is accepted by the OWNER.
- 10.8 BIDDER. Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a bid for the work contemplated.
- 10.9 CALENDAR DAY. Every day shown on the calendar.
- 10.10 CHANGE ORDER. A written order to the CONTRACTOR executed by the OWNER and the CONTRACTOR, covering changes in the contract documents, and establishing the basis of payment and contract time adjustment, if any, for the work affected by such changes. The work, covered by a change order, shall be within the scope of the contract.
- 10.11 CONSULTANT. The Architect-Engineer consultants for the Authority. For this project, the Consultants are the City of Memphis Division of Engineering.
- 10.12 CONTRACT. The written agreement covering the WORK to be performed. The awarded contract shall include but is not limited to: The ADVERTISEMENT; The Contract Form; The BID; The PERFORMANCE BOND; The PAYMENT BOND; any required insurance certificates; The SPECIFICATIONS; The DRAWINGS, and any addenda issued to bidders.
- 10.13 CONTRACT CHANGE DIRECTIVE. A written directive to CONTRACTOR issued on or after the Effective Date of the CONTRACT, recommended by the PROJECT MANAGER,

ordering an addition, deletion, or revision in the WORK signed by, the PROJECT MANAGER, and/or the CONTRACTING OFFICER.

- 10.14 CONTRACTING OFFICER. The official overseeing this Contract on behalf of the AUTHORITY, and any other employee who is a properly designated Contracting Officer. The term includes, except as otherwise provided in this Contract, the authorized representative of a Contracting Officer acting within the limits of formally delegated authority.
- 10.15 CONTRACT ITEM (PAY ITEM). A specific unit of work for which a price is provided in the Contract.
- 10.16 CONTRACT TIME. The number of calendar days or working days, stated in the proposal, allowed for completion of the Contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the Contract shall be completed by that date.
- 10.17 CONTRACTOR. The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.
- 10.18 DRAWINGS. The official drawings or exact reproductions which show the location, character, dimensions and details and the work to be done and which are to be considered as a part of the Contract, supplementary to the specifications.
- 10.19 EQUIPMENT. All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the WORK.
- 10.20 EXTRA WORK. An item of work not provided for in the awarded contract as previously modified by CHANGE ORDER or SUPPLEMENTAL AGREEMENT, but which is found by the PROJECT MANAGER to be necessary to complete the WORK within the intended scope of the Contract as previously modified. See Changes Article.
- 10.21 FEDERAL SPECIFICATIONS. The Federal Specifications, Standards, supplements, amendments, and indices thereto prepared and issued by the Federal Government.
- 10.22 FEDERAL TRANSIT ADMINISTRATION (FTA). An operating administration of the United States Department of Transportation. FTA is providing substantial financial assistance as to the PROJECT and as to the CONTRACT. Certain FTA requirements contained in or referred to in the CONTRACT are applicable to the CONTRACTOR.
- 10.23 INSPECTOR. An authorized representative of the TPM assigned to make all necessary inspections and/or tests of the work performed or being performed, or of the materials furnished or being furnished by the CONTRACTOR.
- 10.24 INTENTION OF TERMS. Whenever, in these SPECIFICATIONS or on the DRAWINGS, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," "shall," or words of the like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the CONSULTANT or the TPM is

intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the CONSULTANT or the TPM, subject in each case to the final determination of the OWNER.

Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.

- 10.25 LABORATORY. The official testing laboratories of the OWNER or such other laboratories as may be designated by the OWNER or CONSULTANT.
- 10.26 MAJOR AND MINOR CONTRACT ITEMS. A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20 percent of the total amount of the award contract. All other items shall be considered minor Contract items.
- 10.27 MATERIALS. Any substance specified for use in the construction of the Contract WORK.
- 10.28 NOTICE TO PROCEED. A written notice to the CONTRACTOR to begin the actual Contract WORK on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.
- 10.29 OWNER (AUTHORITY). The term OWNER shall mean the party of the first part or the contracting agency signatory to the CONTRACT.
- 10.30 PAVEMENT. The combined surface course, base course, and subbase course, if any, considered as a single unit.
- 10.31 PAYMENT BOND. The approved form of security furnished by the CONTRACTOR and his/her surety as a guaranty that he will pay in full all bills and accounts for materials and labor used in the construction of the WORK.
- 10.32 PERFORMANCE BOND. The approved form of security furnished by the CONTRACTOR and his/her surety as a guaranty that the CONTRACTOR will complete the work in accordance with the terms of the CONTRACT.
- 10.33 PROJECT. The agreed scope of work.
- 10.34 PROJECT MANAGER. The PROJECT MANAGER is the individual representing the OWNER's Contracting Officer's Technical Representative (COTR) for this project.
- 10.35 RAIL OPERATIONS MANAGERS AND SUPERVISORS. CONTRACTOR shall comply with all orders and requirements issued by AUTHORITY Rail Operations Managers and Supervisors. This includes all AUTHORITY staff and individuals with rail management duties and oversight such as the Assistant General Manager of Operations, Director of Rail Operations, Manager of Rail Operations, Manager of Rail Maintenance, Rail Maintenance Supervisor, Trolley Foreman, Security Manager, Senior Manager of Training & Safety, Road Supervisors, or other staff designated by the Chief Executive Officer.
- 10.36 TECHNICAL PROJECT MANAGER (TPM). The individual, partnership, firm, joint venture,

or corporation duly authorized by the OWNER (sponsor) to be responsible for engineering supervision of the contract WORK and acting directly or through an authorized representative. The TECHNICAL PROJECT MANAGER for this PROJECT is Karl Johnson with Memphis Area Transit Authority Trolley Division.

- 10.37 SUPERINTENDENT. The CONTRACTOR's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the TPM, and who shall supervise and direct the construction.
- 10.38 SPECIFICATIONS. A part of the CONTRACT containing the written directions and requirements for completing the contract WORK. Standards for specifying materials or testing which are cited in the contract SPECIFICATIONS by reference shall have the same force and effect as if included in the contract physically.
- 10.39 SUBGRADE. The soil which forms the pavement foundation.
- 10.40 SUBSTANTIAL COMPLETION. The time at which the WORK (or a specified part thereof) has progressed to the point where, in the opinion of the TPM, the WORK (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the WORK (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the WORK refer to SUBSTANTIAL COMPLETION thereof.
- 10.41 SUPPLEMENTAL AGREEMENT. A written agreement between the CONTRACTOR and the OWNER covering: (1) work that would increase or decrease the total amount of the awarded CONTRACT, or any MAJOR CONTRACT ITEM, by more than 25 percent, such increased or decreased work being within the scope of the originally awarded CONTRACT; or (2) work that is not within the scope of the originally awarded CONTRACT.
- 10.42 SURETY. The corporation, partnership, or individual, other than the CONTRACTOR, executing PAYMENT or PERFORMANCE BONDS which are furnished to the OWNER by the CONTRACTOR.
- 10.43 WORK. The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the CONTRACTOR's performance of all duties and obligations imposed by the CONTRACT, DRAWINGS, and SPECIFICATIONS.

SECTION 20 SCOPE OF WORK

20.1 CONTRACT DOCUMENTS.

20.1.1 Intent of the Contract documents:

a. The intent of the Contract Documents is to prescribe the construction and completion of the WORK. Where the Contract DRAWINGS and SPECIFICATIONS describe portions of the WORK in general terms, but not in complete detail, the best general practice shall be followed, and only new materials and workmanship of best standard quality shall be used. Unless otherwise specified, the CONTRACTOR shall furnish all labor, materials, tools, equipment and incidentals which are necessary to complete the WORK in a proper, substantial and worker-like way.

b. Throughout the SPECIFICATIONS, requirements have been specified for Contract performance. Each such Contract item is mandatory and shall be performed by the CONTRACTOR.

c. Reference to any article or paragraph within the SPECIFICATIONS shall imply reference to all subparagraphs thereunder.

20.1.2 Elements of the Contract Documents:

a. The Contract Documents: The Executed CONTRACT, the Contract DRAWINGS, General Provisions, Special Provisions, the Contract SPECIFICATIONS, all Addenda, all CHANGE ORDERS, all CONTRACT CHANGE DIRECTIVES and all SUPPLEMENTAL AGREEMENTS.

b. Contract DRAWINGS: The official drawings or exact reproductions which show the location, character, dimensions and details and the work to be done and which are to be considered as a part of the Contract, supplementary to the specifications.

c. General Provisions: Compilation of contractual and legal requirements. In case of variance between the General Provisions, the Special Conditions and/or the Technical Provisions, the General Provisions shall take precedence.

d. Special Provisions, General Requirements, and Technical Provisions: Project requirements and technical specifications which include materials and construction requirements.

e. Addendum (Amendment): A document which is added to the original bidding documents during the bidding period to clarify, revise, add to or delete from the original documents or previous addenda.

f. CHANGE ORDER: A written order to the CONTRACTOR executed by the OWNER and the CONTRACTOR, covering changes in the contract documents, and establishing the basis of payment and contract time adjustment, if any, for the work affected by such changes. The work, covered by a CHANGE ORDER, shall be within the scope of the CONTRACT.

g. **CONTRACT CHANGE DIRECTIVE:** A written directive to CONTRACTOR issued on or after the Effective Date of the CONTRACT, recommended by the TPM, ordering an addition, deletion, or revision in the WORK signed by the TPM, the PROJECT MANAGER, and/or the CONTRACTING OFFICER.

h. **SUPPLEMENTAL AGREEMENT:** A written agreement between the CONTRACTOR and the OWNER covering: (1) work that would increase or decrease the total amount of the awarded CONTRACT, or any MAJOR CONTRACT ITEM, by more than 25 percent, such increased or decreased work being within the scope of the originally awarded CONTRACT; or (2) work that is not within the scope of the originally awarded CONTRACT.

20.1.3 SPECIFICATION and DRAWINGS:

a. The CONTRACTOR shall keep on the work a copy of the DRAWINGS and SPECIFICATIONS and shall at all times give the TPM and the PROJECT MANAGER access thereto.

b. **Omissions:** Anything mentioned in the SPECIFICATIONS and not shown on the DRAWINGS or shown on the DRAWINGS and not mentioned in the SPECIFICATIONS, shall be of like effect as if shown or mentioned in both.

c. **Discrepancies:**

- (1) In case of discrepancy between DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern.
- (2) In case of discrepancy in the figures, in the DRAWINGS or in the SPECIFICATIONS, the matter shall be promptly submitted to the TPM who shall promptly make a determination in writing.
- (3) Any adjustment by the CONTRACTOR without such a determination shall be at his own risk and expense.

d. The CONTRACTING OFFICER shall furnish from time to time such detail drawings and other information as he may consider necessary unless otherwise provided.

20.2 CHANGES.

a. The CONTRACTING OFFICER may, at any time, without notice to the sureties, by written order designated or indicated to be a CHANGE ORDER, make any change in the work within the general scope of the CONTRACT including, but not limited to, changes:

- (1) In the SPECIFICATIONS, including DRAWINGS and designs;
- (2) In the method or manner of performance of the WORK;
- (3) In the AUTHORITY-furnished facilities, equipment, materials, services, or site; or
- (4) Directing acceleration in the performance of work.

b. Any other written order, including direction, instruction, interpretation or determination from the CONTRACTING OFFICER, which causes any such change, shall be treated as a CHANGE ORDER under this Article, provided that the CONTRACTOR gives the CONTRACTING OFFICER written notice stating the date, circumstances and source of the order and that the CONTRACTOR regards the order as a CHANGE ORDER.

c. Except as herein provided, no order, statement or conduct of the CONTRACTING OFFICER shall be treated as a change under this Article or entitle the CONTRACTOR to an equitable adjustment hereunder.

d. If any change under this Article causes an increase or decrease in the CONTRACTOR's cost of, or the time required for, the performance of any part of the WORK under this CONTRACT, whether or not a change by any order, an equitable adjustment shall be made and the CONTRACT modified in writing accordingly; provided, however, that except for claims based on defective SPECIFICATIONS, no claim for any change under Paragraph b. above shall be allowed for any costs incurred more than 20 days before the CONTRACTOR gives written notice as therein required, and provided further, that in the case of defective SPECIFICATIONS for which the AUTHORITY is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the CONTRACTOR in attempting to comply with such defective SPECIFICATIONS.

e. If the CONTRACTOR intends to assert a claim for an equitable adjustment under this Article, he must, within 30 days after receipt of a written CHANGE ORDER under Paragraph a. above or the furnishing of a written notice under Paragraph b. above, submit to the CONTRACTING OFFICER a written statement setting forth the general nature and monetary extent of such claim, unless this period is extended by the AUTHORITY. The statement of claim hereunder may be included in the notice under b. above.

f. No claim by the CONTRACTOR for an equitable adjustment hereunder shall be allowed if asserted after final payment under this CONTRACT.

20.3 DIFFERING SITE CONDITIONS.

a. The CONTRACTOR shall promptly, and before such conditions are disturbed, notify the TPM in writing of the following:

- (1) Subsurface or latent physical conditions at the site differing materially from those indicated in this CONTRACT.
- (2) Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this CONTRACT.

The TPM will promptly cause the investigation of the conditions, and if it is found that such conditions do materially so differ and cause an increase or decrease in the CONTRACTOR's cost of, or the time required for, performance of any part of the work under this CONTRACT, whether or not changed as a result of such conditions, an equitable adjustment shall be made, and the CONTRACT modified in writing accordingly.

b. No claim of the CONTRACTOR under this Article shall be allowed unless the CONTRACTOR has given the notice required in Paragraph a. above; provided, however, the time

prescribed therefor may be extended by CONTRACTING OFFICER.

c. No claim by the CONTRACTOR for an equitable adjustment hereunder shall be allowed if asserted after final payment under this CONTRACT.

20.4 VALUE ENGINEERING INCENTIVE.

a. This Article applies to those Value Engineering Change Proposals (VECPs) which are initiated and developed by the CONTRACTOR to change the DRAWINGS, SPECIFICATIONS or other requirements of this CONTRACT. In order to be accepted under this Article each VECP shall:

- (1) Be identified by the CONTRACTOR at the time of submittal to the CONTRACTING OFFICER as submitted pursuant to this Article;
- (2) Require a change to this CONTRACT.
- (3) Decrease the Contract price and possibly the performance period; and
- (4) Maintain the item's required functions such as service life, reliability, economy of operation, ease of maintenance and necessary standardized features and appearance, and not require an unacceptable extension of CONTRACT TIME.
- (5) Be reviewed and approved by the CONSULTANT and/or the TPM.

b. Any VECP the CONTRACTOR submits shall be in sufficient detail to clearly define the proposed change including:

- (1) A description of the difference between the existing and the proposed Contract requirements, and the comparative advantages and disadvantages of each;
- (2) Contract requirements recommended to be changed if the proposal is accepted;
- (3) A detailed estimate of the amount of the net savings, as defined in Paragraph d. that will result from acceptance of the proposal;
- (4) A prediction of any effects the proposed change would have on costs of maintenance and operation; and
- (5) A statement of the time by which the proposal must be accepted so as to obtain the maximum price reduction, noting any effect upon the Contract completion time.

c. (1) The CONTRACTING OFFICER may accept or reject part or all of any VECP by giving the CONTRACTOR written notice thereof. Until such notice is issued, the CONTRACTOR shall remain obligated to perform in accordance with the terms of the CONTRACT. VECPs will be processed expeditiously; however, the AUTHORITY shall not be liable for any delay in acting upon any proposal submitted pursuant to this Article. The decision

of the CONTRACTING OFFICER as to acceptance of any such proposal shall be final and shall not be subject to the DISPUTES Article of this CONTRACT.

- (2) The CONTRACTOR has the right to withdraw part or all of any VECP at any time prior to acceptance by the CONTRACTING OFFICER. Such withdrawal shall be made in writing to the CONTRACTING OFFICER. Each VECP submitted by the CONTRACTOR shall remain valid for a period of 60 days from date submitted, unless extended by mutual agreement. If the CONTRACTOR desires to withdraw the proposal prior to the expiration of this period, he shall be liable for the cost incurred by the AUTHORITY in reviewing the proposal.

d. When a VECP submitted pursuant to this Article is accepted:

- (1) An equitable adjustment in the Contract price and in any other affected provisions of the CONTRACT shall be made and the CONTRACT modified in accordance with this Article and the CHANGES or other applicable Articles of this Contract.
- (2) The net savings resulting from the change shall be shared between the CONTRACTOR and the AUTHORITY on the basis of 50 percent for the CONTRACTOR and 50 percent for the AUTHORITY. Net savings shall be determined by deducting from the estimated gross savings, the CONTRACTOR's costs of developing and implementing the proposal, including any amount attributable to a sub-contractor, and the estimated amount of increased costs to the AUTHORITY resulting from the change, such as implementation, inspection, related items and AUTHORITY-furnished property. Estimated gross savings shall include CONTRACTOR's labor, material, equipment, overhead, profit and bond. The Contract price shall be reduced by the sum of the AUTHORITY's costs and share of the net savings.
- (3) The CONTRACTOR is entitled to share in instant Contract savings only, to the full extent provided for in this Article. For purposes of sharing under Paragraph d. (1) above, the term 'instant contract' shall not include any SUPPLEMENTAL AGREEMENTS to or other modifications of this CONTRACT, executed subsequent to acceptance of the particular VECP, by which the AUTHORITY increases the quantity of any item or adds any item.

e. The CONTRACTOR will use his best efforts to include Value Engineering arrangements in any subcontracts, which in his judgment, appears to offer sufficient value engineering potential.

f. A VECP identical to one submitted under any other contract, by this or any other contractor, may also be submitted under this CONTRACT.

g. The CONTRACTOR may restrict the AUTHORITY's right to use any VECP data by marking it with the following statement:

"This data, furnished pursuant to the VALUE ENGINEERING Article of this CONTRACT,

shall not be duplicated, used or disclosed, in whole or in part, for any purpose except to evaluate the VECP, unless the proposal is accepted by the AUTHORITY. This restriction does not limit the AUTHORITY's right to use information contained in this data if it is or has been obtained, or is otherwise available, from the CONTRACTOR or from other source, without limitations. When this proposal is accepted by the AUTHORITY, the AUTHORITY shall have the right to duplicate, use and disclose any data in any manner and for any purpose whatsoever, and have others do so whether under this or any other AUTHORITY contract."

20.5 VARIATIONS IN ESTIMATED QUANTITIES.

a. The OWNER reserves and shall have the right to make such alterations in the WORK as may be necessary or desirable to complete the work originally intended in an acceptable manner. Unless otherwise specified herein, the TPM shall be and is hereby authorized to make such alterations in the WORK as may increase or decrease the originally awarded contract quantities, provided that the aggregate of such alterations does not change the total cost or the total cost of any MAJOR CONTRACT ITEM by more than 25 percent (total cost being based on the unit prices and estimated quantities in the awarded contract). Alterations which do not exceed the 25 percent limitation shall not invalidate the CONTRACT nor release the surety, and the CONTRACTOR agrees to accept payment for such alterations as if the altered work had been a part of the original CONTRACT. These alterations which are for work within the general scope of the CONTRACT shall be covered by "CHANGE ORDERS" issued by the TPM. CHANGE ORDERS for altered work shall include extensions of Contract time where, in the TPM's opinion, such extensions are commensurate with the amount and difficulty of added work and the added work is on the identified critical completion path for the CONTRACT.

20.6 OMITTED ITEMS.

a. The TPM may, in the OWNER's best interest, omit from the WORK any contract item, except MAJOR CONTRACT ITEMS. MAJOR CONTRACT ITEMS May be omitted by a SUPPLEMENTAL AGREEMENT. Such omission of contract items shall not invalidate any other contract provision or requirement.

20.7 CLAIMS FOR ADJUSTMENT AND DISPUTES.

a. Except as otherwise provided in this CONTRACT, any dispute concerning a question of fact arising under this CONTRACT which is not disposed of by agreement shall be decided by the CONTRACTING OFFICER, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the CONTRACTOR. The CONTRACTING OFFICER may consult with the PROJECT MANAGER and/or the TPM. The decision of the CONTRACTING OFFICER shall be final and conclusive unless, within 10 days from the receipt of such copy, the CONTRACTOR mails or otherwise furnishes to the CONTRACTING OFFICER a written appeal addressed to the Chief Executive Officer of MATA. The Chief Executive Officer shall review the dispute, any related documents and the CONTRACTING OFFICER's Final Decision. The Chief Executive Officer may consult with the TPM, the PROJECT MANAGER and/or the CONTRACTING OFFICER. The decision of the Chief Executive Officer shall be final and conclusive unless, within 10 days from the date of the receipt of such copy, the CONTRACTOR mails or otherwise furnishes to the CONTRACTING OFFICER a written appeal addressed to the MATA Board of Commissioners. The decision of the Board or its duly authorized representative for the determination of such appeals shall be final and conclusive unless in proceedings initiated by either party for review of such decision in a court of competent jurisdiction, the Court determines the decision to have been fraudulent, capricious, arbitrary, or so grossly erroneous as

necessarily to imply bad faith or is not supported by substantial evidence. In connection with any appeal proceeding under this Article, the CONTRACTOR shall be afforded an opportunity to be heard and to offer evidence in support of his appeal. Pending final decision of a dispute hereunder, the CONTRACTOR shall proceed diligently with the performance of the CONTRACT and in accordance with the CONTRACTING OFFICER's or Chief Executive Officer's decision.

b. This DISPUTES Article does not preclude consideration of questions of law in connection with decisions provided for in Paragraph a. above. Nothing in this CONTRACT, however, shall be construed as making final the decisions of the Board or its representative on a question of law.

20.8 MAINTENANCE OF TRAFFIC.

a. When the CONTRACT requires the maintenance of vehicular traffic on an existing road, street, or highway during the CONTRACTOR's performance of work that is otherwise provided for in the Contract, DRAWINGS, and SPECIFICATIONS, the CONTRACTOR shall keep such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The CONTRACTOR shall furnish, erect, and maintain barricades, warning signs, flagmen, and other traffic control devices in reasonable conformity with the manual of Uniform Traffic Control Devices for Streets and Highways (published by the United States Government Printing Office), unless otherwise specified herein. The CONTRACTOR shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways. Unless otherwise specified herein, the CONTRACTOR will not be required to furnish snow removal for such existing road, street, or highway.

b. The CONTRACTOR shall make his/her own estimate of all labor, materials, equipment, and incidentals necessary for providing the maintenance of vehicular traffic as specified in this subsection.

c. The cost of maintaining the vehicular traffic specified in this subsection shall not be measured or paid for directly but shall be included in the various contract items.

20.9 BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS.

a. The CONTRACTOR shall furnish, erect, and maintain all barricades, warning signs, and markings for hazards necessary to protect the public and the WORK. When used during periods of darkness, such barricades, warning signs, and hazard markings shall be suitably illuminated.

b. For vehicular and pedestrian traffic, the CONTRACTOR shall furnish, erect, and maintain suitable barricades, warning signs, lights and other traffic control devices.

c. The CONTRACTOR shall furnish, erect, and maintain suitable markings and associated lighting of open trenches, excavations, temporary stockpiles, and his/her parked construction equipment that may be hazardous to the operation of emergency fire-rescue or maintenance vehicles.

d. The CONTRACTOR shall identify each motorized vehicle or piece of construction equipment.

e. The CONTRACTOR shall furnish and erect all barricades, warning signs, and markings for hazards prior to commencing work which requires such erection and shall maintain the barricades, warning signs, and markings for hazards until their dismantling is approved by the TPM.

20.10 REMOVAL OF EXISTING STRUCTURES.

a. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the CONTRACTOR, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the WORK or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly but shall be included in the various contract items.

b. Should the CONTRACTOR encounter an existing structure (above or below ground) in the WORK for which the disposition is not indicated on the DRAWINGS, the TPM shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be in accordance with the CONTRACT article 0800-20.03 titled DIFFERING SITE CONDITIONS.

c. Except as provided in the subsection titled RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK of this section, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the WORK) shall be utilized in the WORK as otherwise provided for in the CONTRACT and shall remain the property of the OWNER when so utilized in the WORK.

20.11 RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK.

a. Should the CONTRACTOR encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the CONTRACT to be either embankment or waste, he may at his/her option either:

- (1) Use such material in another contract item, providing such use is approved by the TPM and is in conformance with the Contract SPECIFICATIONS applicable to such use; or,
- (2) Remove such material from the site, upon written approval of the TPM; or
- (3) Use such material for his/her own temporary construction on site; or,
- (4) Use such material as intended by the terms of the CONTRACT.

Should the CONTRACTOR wish to exercise option (1), (2), or (3), he shall request the TPM's approval in advance of such use.

b. Should the TPM approve the CONTRACTOR's request to exercise option (1), (2), or (3), the CONTRACTOR shall be paid for the excavation or removal of such material at the applicable Contract price. The CONTRACTOR shall replace, at his/her own expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use

in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the Contract WORK. The CONTRACTOR shall not be charged for his/her use of such material so used in the WORK or removed from the site.

c. Should the TPM approve the CONTRACTOR's exercise of option (1), the CONTRACTOR shall be paid, at the applicable Contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

d. It is understood and agreed that the CONTRACTOR shall make no claim for delays by reason of his/her exercise of option (1), (2), or (3).

e. The CONTRACTOR shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the WORK, except where such excavation or removal is provided for in the Contract, DRAWINGS, or SPECIFICATIONS.

20.12 FINAL CLEANING UP.

a. Upon completion of the WORK and before acceptance and final payment will be made, the CONTRACTOR shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. He shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily unless the CONTRACTOR has obtained the written permission of such property owner.

20.13 RESTORATION OF SURFACES DISTURBED BY OTHERS.

a. The OWNER reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the OWNER, such authorized work (by others) is indicated in the CONTRACT, DRAWINGS, and SPECIFICATIONS.

b. Except as provided for in the CONTRACT, DRAWINGS, and SPECIFICATIONS, the CONTRACTOR shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the WORK without the written permission of the TPM.

c. Should the owner of public or private utility service, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the WORK, the CONTRACTOR shall cooperate with such owners by arranging and performing the WORK in this CONTRACT so as to facilitate such construction, reconstruction or maintenance by others. When ordered as extra work by the TPM, the CONTRACTOR shall make all necessary repairs to the WORK which are due to such authorized work by others, unless otherwise provided for in the CONTRACT, DRAWINGS, and SPECIFICATIONS. It is understood and agreed that the CONTRACTOR shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

SECTION 30 CONTROL OF WORK

30.1 AUTHORITY OF THE TPM.

a. Authority of the TPM shall be formally delegated by the OWNER, and generally the TPM shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work. He shall decide all questions which may arise as to the interpretation of the SPECIFICATIONS or DRAWINGS relating to the WORK, the fulfillment of the CONTRACT on the part of the CONTRACTOR, and the rights of different contractors on the project. The TPM shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for under the contract.

30.2 CONFORMITY WITH DRAWINGS AND SPECIFICATIONS.

a. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the CONTRACT, DRAWINGS, and SPECIFICATIONS.

b. If the TPM finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the DRAWINGS and SPECIFICATIONS but that the portion of the WORK affected will, in his/her opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the OWNER, he will advise the OWNER of his/her determination that the affected WORK be accepted and remain in place. In this event, the TPM will document his/her determination and recommend to the OWNER a basis of acceptance which will provide for an adjustment in the Contract price for the affected portion of the WORK. The TPM's determination and recommended Contract price adjustments will be based on good engineering judgment and such tests or retests of the affected WORK as are, in his/her opinion, needed. Changes in the Contract price shall be covered by Contract modifications (CHANGE ORDER or SUPPLEMENTAL AGREEMENT) as applicable.

c. If the TPM finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the DRAWINGS and SPECIFICATIONS and have resulted in an unacceptable finished product, the affected WORK or materials shall be removed and replaced or otherwise corrected by and at the expense of the CONTRACTOR in accordance with the TPM's written orders.

d. For the purpose of this subsection, the term "reasonably close conformity" shall not be construed as waiving the CONTRACTOR's responsibility to complete the WORK in accordance with the CONTRACT, DRAWINGS, and SPECIFICATIONS. The term shall not be construed as waiving the TPM 's right to insist on strict compliance with the requirements of the CONTRACT, DRAWINGS, and SPECIFICATIONS during the CONTRACTOR's prosecution of the WORK, when, in the TPM's opinion, such compliance is essential to provide an acceptable finished portion of the WORK.

e. For the purpose of this subsection, the term "reasonably close conformity" is also intended to provide the TPM with the authority to use good engineering judgment in his/her determinations as to acceptance of work that is not in strict conformity but will provide a finished product equal to or better than that intended by the requirements of the CONTRACT,

DRAWINGS, and SPECIFICATIONS.

30.3 COORDINATION OF CONTRACT, DRAWINGS, AND SPECIFICATIONS.

a. The CONTRACT, DRAWINGS, and SPECIFICATIONS, and all referenced standards cited are essential parts of the CONTRACT requirements. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical SPECIFICATIONS shall govern over contract general provisions, DRAWINGS, and cited standards for materials or testing; contract general provisions shall govern over DRAWINGS and cited standards for materials or testing; DRAWINGS shall govern over cited standards for materials or testing.

b. The CONTRACTOR shall not take advantage of any apparent error or omission on the DRAWINGS or SPECIFICATIONS. In the event the CONTRACTOR discovers any apparent error or discrepancy, he shall immediately call upon the TPM for his/her interpretation and decision, and such decision shall be final.

30.4 OPENING SECTIONS OF THE WORK TO TRAFFIC.

a. Should it be necessary for the CONTRACTOR to complete portions of the Contract WORK for the beneficial occupancy of the OWNER prior to completion of the entire CONTRACT, such "phasing" of the work shall be specified herein and indicated on the DRAWINGS. When so specified, the CONTRACTOR shall complete such portions of the WORK on or before the date specified or as otherwise specified. The CONTRACTOR shall make his/her own estimate of the difficulties involved in arranging his/her work to permit such beneficial occupancy by the OWNER. Upon completion of any "phasing" of the work specified herein and indicated on the DRAWINGS, such portion shall be accepted by the OWNER in accordance with the subsection titled PARTIAL ACCEPTANCE in this Section.

b. No portion of the WORK may be opened by the CONTRACTOR for public use until ordered by the TPM in writing. Should it become necessary to open a portion of the WORK to public traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the TPM, such portion of the WORK is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the WORK and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the CONTRACT. Any damage to the portion of the WORK so opened that is not attributable to traffic which is permitted by the OWNER shall be repaired by the CONTRACTOR at his/her expense.

c. The CONTRACTOR shall make his/her own estimate of the inherent difficulties involved in completing the WORK under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract WORK.

30.5 COOPERATION OF CONTRACTOR.

a. The CONTRACTOR will be supplied with an electronic copy of the DRAWINGS and SPECIFICATIONS. He shall have available on the work at all times one hard copy each of the DRAWINGS and SPECIFICATIONS.

b. The CONTRACTOR shall give constant attention to the WORK to facilitate the progress thereof, and he shall cooperate with the TPM and his/her inspectors and with other contractors in every way possible. The TPM shall allocate the work and designate the sequence of construction in case of controversy between contractors. The CONTRACTOR shall have a competent superintendent on the work at all times who is fully authorized as his/her agent on the WORK. The superintendent shall be capable of reading and thoroughly understanding the DRAWINGS and SPECIFICATIONS and shall receive and fulfill instructions from the TPM or his/her authorized representative.

30.6 COOPERATION BETWEEN CONTRACTORS.

a. The OWNER reserves the right to contract for and perform other or additional work on or near the WORK covered by this CONTRACT.

b. The CONTRACTOR shall conduct his/her work in accordance with the Phasing Plan relating to this PROJECT, and further so as not to unduly disrupt or inconvenience merchants adjacent to and in the vicinity of the WORK, vehicular traffic and pedestrian traffic. The CONTRACTOR shall conduct his/her work so as not to interfere with or hinder the progress or completion of the work being performed by other contractors. Contractors working on the same project shall cooperate with each other as directed.

c. Each contractor involved shall assume all liability, financial or otherwise, in connection with his/her contract and shall protect and save harmless the OWNER from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced by him because of the presence and operations of other contractors working within the limits of the same project.

d. The CONTRACTOR shall arrange his/her work and shall place and dispose of the materials being used so as not to interfere with the operations of the other contractors within the limits of the same project. The CONTRACTOR shall join his/her work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

30.7 CONSTRUCTION LAYOUT AND STAKES.

a. Horizontal and vertical control data is shown in the Contract Documents. The CONTRACTOR must establish all layout required for the construction of the WORK. Such stakes and markings as the TPM and/or the CONSULTANT may set for either his/her own or the CONTRACTOR's guidance shall be preserved by the CONTRACTOR. In case of negligence on the part of the CONTRACTOR, or his/her employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing the same may be deducted from subsequent estimates due the CONTRACTOR at the discretion of the TPM.

30.8 AUTOMATICALLY CONTROLLED EQUIPMENT.

a. Whenever batching or mixing plant equipment is required to be operated automatically under the CONTRACT and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for a period 48 hours following the breakdown or malfunction, provided this method of operations will product results which conform to all other requirements of the CONTRACT.

30.9 AUTHORITY AND DUTIES OF INSPECTORS.

a. The OWNER through the TPM and/or the CONSULTANT reserves the right and shall be at liberty to inspect all materials and workmanship at any time during the manufacturing or fabrication process and shall have the right to reject all materials and workmanship which do not conform to the SPECIFICATIONS, provided however, the OWNER is under no duty to make such inspections and if such inspection is made, the CONTRACTOR shall not be relieved of any obligations to furnish materials and workmanship strictly in accordance with SPECIFICATIONS.

b. If the Contract Documents, the written instructions of the OWNER, or its TPM, laws, ordinances, rules or regulations, or any public authority require any of the WORK to be specifically tested or inspected, the CONTRACTOR shall give the TPM timely notice of its readiness for inspection and testing, and if the test or inspection is performed by an authority other than the OWNER, of the date set for such test or inspection. Inspections by the OWNER shall be promptly made and, where practicable, at the source of supply. After notice by the CONTRACTOR to the TPM herein if any of the WORK is covered up contrary to the direction of the TPM or any necessary authority, it shall be uncovered for examination, if required by the TPM or such other authority, at the sole expense of the CONTRACTOR.

c. Re-examination of questioned WORK that has been previously inspected by the OWNER may be ordered by the TPM and, if so ordered, the questioned Work shall be uncovered by the CONTRACTOR. If such WORK is found to be in compliance with Contract Documents, the OWNER shall pay the actual cost of the re-examination. If such WORK is found not to be in compliance with the Contract Documents, the CONTRACTOR shall bear the costs of the re-examination.

30.10 INSPECTION OF THE WORK.

a. All materials and each part or detail of the WORK shall be subject to inspection by the TPM. The TPM shall be allowed access to all parts of the WORK and shall be furnished with such information and assistance by the CONTRACTOR as is required to make a complete and detailed inspection.

b. If the TPM requests it, the CONTRACTOR, at any time before acceptance of the WORK, shall remove or uncover such portions of the finished WORK as may be directed. After examination, the CONTRACTOR shall restore said portions of the WORK to the standard required by the SPECIFICATIONS. Should the WORK thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the WORK so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the CONTRACTOR's expense.

c. Any work done or materials used without supervision or inspection by an authorized representative of the OWNER may be ordered removed and replaced at the CONTRACTOR's expense unless the OWNER's representative failed to inspect after having been given reasonable notice in writing that the work was to be performed.

d. Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) OWNER, authorized representatives of the owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the CONTRACT and shall in no way interfere with the

rights of the parties to this CONTRACT.

30.11 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK.

a. All WORK which does not conform to the requirements of the CONTRACT, DRAWINGS, and SPECIFICATIONS will be considered unacceptable, unless otherwise determined acceptable by the TPM as provided in the subsection titled CONFORMITY WITH DRAWINGS AND SPECIFICATIONS of this section.

b. Unacceptable WORK, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the WORK, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of the subsection titled CONTRACTOR'S RESPONSIBILITY FOR WORK of this section.

c. Work done contrary to the instructions of the TPM, work done beyond the lines shown on the DRAWINGS or as given, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the CONTRACT. Work so done may be ordered removed or replaced at the CONTRACTOR's expense.

d. Upon failure on the part of the CONTRACTOR to comply forthwith with any order of the TPM made under the provisions of this subsection, the TPM will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the costs (incurred by the OWNER) from any monies due or to become due the CONTRACTOR.

30.12 LOAD RESTRICTIONS.

a. The CONTRACTOR shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the WORK. A special permit will not relieve the CONTRACTOR of liability for damage which may result from the moving of material or equipment.

b. The operation of equipment of such weight or so loaded as to cause damage to structures or existing basements or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The CONTRACTOR shall be responsible for all damage done by his/her hauling equipment and shall correct such damage at his/her own expense.

30.13 MAINTENANCE DURING CONSTRUCTION.

a. The CONTRACTOR shall maintain the WORK during construction and until the WORK is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the WORK is maintained in satisfactory condition at all times.

b. In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the CONTRACTOR shall maintain the previous course or subgrade during all construction operations.

c. All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the CONTRACTOR will not be paid an additional amount for such work.

30.14 FAILURE TO MAINTAIN THE WORK.

a. Should the CONTRACTOR at any time fail to maintain the WORK as provided in the subsection titled MAINTENANCE DURING CONSTRUCTION of this section, the TPM shall immediately notify the CONTRACTOR of such noncompliance. Such notification shall specify a reasonable time within which the CONTRACTOR shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

b. Should the CONTRACTOR fail to respond to the TPM's notification, the TPM may suspend any work necessary for the OWNER to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the OWNER shall be deducted from monies due or to become due the CONTRACTOR.

30.15 CONTRACTOR'S RESPONSIBILITY FOR WORK.

a. Until the PROJECT MANAGER's final written acceptance of the entire completed WORK, excepting only those portions of the WORK accepted in accordance with the subsection titled PARTIAL ACCEPTANCE in this Section, the CONTRACTOR shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the WORK. The CONTRACTOR shall rebuild, repair, restore, and make good all injuries or damages to any portion of the WORK occasioned by any of the above causes before FINAL ACCEPTANCE and shall bear the expense thereof except damage to the WORK due to unforeseeable causes beyond the control of and without the fault or negligence of the CONTRACTOR, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

b. If the WORK is suspended for any cause whatever, the CONTRACTOR shall be responsible for the WORK and shall take such precautions necessary to prevent damage to the WORK. The CONTRACTOR shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at his/her expense. During such period of suspension of WORK, the CONTRACTOR shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seedings, and soddings furnished under his/her CONTRACT, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

c. The TPM shall not be responsible for the methods and means employed by the CONTRACTOR in the performance of the CONTRACTOR's work. The TPM shall have no responsibility for the safety of workers and others who may be injured during the course of the CONTRACTOR's work.

30.16 CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS.

a. As provided in the subsection titled RESTORATION OR SURFACES DISTURBED BY OTHERS of this section, the CONTRACTOR shall cooperate with the owner of any public or

private utility service, or a utility service of another government agency that may be authorized by the OWNER to construct, reconstruct or maintain such utility services or facilities during the progress of the WORK. In addition, the CONTRACTOR shall control his/her operations to prevent the unscheduled interruption of such utility services and facilities.

b. To the extent that such public or private utility services, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the DRAWINGS.

It is understood and agreed that the OWNER does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the DRAWINGS or encountered in the WORK. Any inaccuracy or omission in such information shall not relieve the CONTRACTOR of his/her responsibility to protect such existing features from damage or unscheduled interruption of service.

c. It is further understood and agreed that the CONTRACTOR shall, upon execution of the CONTRACT, notify the owners of all utility services or other facilities of his/her plan of operations. Such notification shall be in writing addressed to THE PERSON TO CONTACT as provided by the TPM. A copy of each notification shall be given to the TPM.

d. In addition to the general written notification hereinbefore provided, it shall be the responsibility of the CONTRACTOR to keep such individual owners advised of changes in his/her plan of operations that would affect such owners.

e. Prior to commencing the work in the general vicinity of an existing utility service or facility, the CONTRACTOR shall again notify each such owner of his/her plan of operation. If, in the CONTRACTOR's opinion, the owner's assistance is needed to locate the utility service or facility or the presence of a representative of the owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's PERSON TO CONTACT no later than two normal business days prior to the CONTRACTOR's commencement of operations in such general vicinity. The CONTRACTOR shall furnish a written summary of the notification to the TPM.

f. The CONTRACTOR's failure to give the two days' notice hereinabove provided shall be cause for the TPM to suspend the CONTRACTOR's operations in the general vicinity of a utility service or facility.

g. Where the outside limits of an underground utility service have been located and staked on the ground, the CONTRACTOR shall be required to use excavation methods acceptable to the TPM, including hand excavation, within three feet (90 cm) of such outside limits at such points as may be required to ensure protection from damage due to the CONTRACTOR's operations.

h. Should the CONTRACTOR damage or interrupt the operation of a utility service or facility by accident or otherwise, he shall immediately notify the proper authority and the TPM and shall take all reasonable measures to prevent further damage or interruption of service. The CONTRACTOR, in such events, shall cooperate continuously with the utility service or facility owner and the TPM until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

i. The CONTRACTOR shall bear all costs of damage and restoration of service to

any utility service or facility due to his/her operations whether or not due to negligence or accident. The contract OWNER reserves the right to deduct such costs from any monies due or which may become due the CONTRACTOR or his/her surety.

30.17 SANITARY, HEALTH, AND SAFETY PROVISIONS.

a. The CONTRACTOR shall provide and maintain in a neat, sanitary condition such accommodations for the use of his/her employees as may be necessary to comply with the requirements of the state and local Board of Health, or of other bodies or tribunals having jurisdiction.

b. Attention is directed to Federal, state and local laws, rules and regulations concerning construction safety and health standards. The CONTRACTOR shall not require any worker to work in surroundings or under conditions which are unsanitary, hazardous, or dangerous to his/her health or safety.

30.18 PUBLIC CONVENIENCE AND SAFETY.

a. The CONTRACTOR shall control his/her operations and those of his/her subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

b. The CONTRACTOR shall maintain the free and unobstructed movement of pedestrian and vehicular traffic with respect to his/her own operations and those of his/her subcontractors and all suppliers in accordance with the subsection titled MAINTENANCE OF TRAFFIC of Section 20 hereinbefore specified and shall limit such operations for the convenience and safety of the public.

30.19 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE.

a. The CONTRACTOR shall be responsible for the preservation of all public and private property and shall protect carefully from disturbance or damage all land monuments and property markers until the TPM has witnessed or otherwise referenced their location and shall not move them until directed.

b. The CONTRACTOR shall be responsible for all damage or injury to property of any character, during the prosecution of the WORK, resulting from any act, omission, neglect, or misconduct in his/her manner or method of executing the WORK, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been totally completed and finally accepted.

c. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work by the CONTRACTOR, or in consequence of the non-execution thereof, the CONTRACTOR shall restore, at his/her own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the CONTRACTOR shall make good such damage or injury in an acceptable manner.

30.20 PARTIAL ACCEPTANCE.

a. If at any time during the prosecution of the PROJECT the CONTRACTOR

substantially completes a usable unit or portion of the WORK, the occupancy of which will benefit the OWNER, he may request the TPM to make final inspection of that unit. If the TPM finds upon inspection that the unit has been satisfactorily completed in compliance with the CONTRACT, he may accept it as being completed, and the CONTRACTOR may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the OWNER shall not void or alter any provision of the CONTRACT.

30.21 FINAL ACCEPTANCE.

a. Upon due notice from the CONTRACTOR of presumptive completion of the entire PROJECT, the TPM and OWNER will make an inspection. If all construction provided for and contemplated by the CONTRACT is found to be completed in accordance with the CONTRACT, DRAWINGS, and SPECIFICATIONS, such inspection shall constitute the final inspection. The TPM shall notify the CONTRACTOR in writing of final acceptance as of the date of the final inspection.

b. If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the TPM will give the CONTRACTOR the necessary instructions for correction of same and the CONTRACTOR shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the TPM will make the final acceptance and notify the CONTRACTOR in writing of this acceptance as of the date of final inspection.

**SECTION 50
PROSECUTION AND PROGRESS**

50.1 SUBCONTRACTS - DEFINITION.

a. As used in the Contract Documents, a "Subcontractor" is a person or organization that has a contract with the CONTRACTOR to perform any portion of the WORK, including but not limited to, design or engineering, or to furnish any equipment or materials to the Project.

b. As used in the Contract Documents, a "Sub-Subcontractor" is a person or organization that has a direct or indirect contract with the Subcontractor to perform any portion of the work, including but not limited to design or engineering, or to furnish any equipment or materials to the Project.

c. As set forth in the Contract Documents, any and all responsibility of the CONTRACTOR for the coordination, scheduling, performance, price and work of its subcontractors shall be deemed to include the responsibility for the coordination, scheduling, performance, price and work of those entities having direct contracts with the OWNER pursuant to this CONTRACT and who are performing any portion of the WORK.

50.2 SUBCONTRACTORS.

a. No Contractual Relationship with the AUTHORITY. Nothing contained in the Contract Documents or otherwise, including but not limited to the pre-award review process set forth in the Contract Documents, shall create any contractual relationship between the OWNER and any Subcontractor or Sub-Subcontractor, and no subcontract or sub-subcontract shall relieve the CONTRACTOR of its responsibilities and obligations should any subcontractor or sub-subcontractor fail to perform its work in a satisfactory manner. The CONTRACTOR agrees to be as fully responsible to the AUTHORITY for the acts and omissions of its subcontractors and their sub-subcontractors and of persons either directly or indirectly employed by them as it is for the acts and omissions of persons directly employed by it.

b. Subcontract Terms. All portions of the WORK performed by a Subcontractor or Sub-Subcontractor shall be pursuant to an appropriate written agreement between the CONTRACTOR and the Subcontractor (and where appropriate between Subcontractors and Sub-Subcontractors) which shall contain provisions that:

- (1) preserve and protect the rights of the AUTHORITY under the Contract Documents with respect to the portion of the WORK to be performed under the Subcontract (or Sub-Subcontract) so that the sub-contracting will not prejudice such rights;
- (2) require that such work be performed in accordance with the requirements of the Contract Documents;
- (3) require submission to the CONTRACTOR of written applications for payment under each subcontract to which the CONTRACTOR is a party;
- (4) require that all requests for extension of time or otherwise with respect to subcontracted portions of the work shall be submitted to the CONTRACTOR (via any Subcontractor or Sub-Subcontractor where appropriate) in sufficient time so that the CONTRACTOR may comply in the manner provided in the Contract

Documents for like requests by the CONTRACTOR upon the OWNER; and

- (5) obligate each Subcontractor or Sub-Subcontractor specifically to consent to the provisions entitled EQUAL EMPLOYMENT OPPORTUNITY; DAVIS-BACON ACT; CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION; APPRENTICES AND TRAINEES; PAYROLLS AND BASIC RECORDS; COMPLIANCE WITH COPELAND ANTI-KICKBACK ACT REGULATIONS; WITHHOLDING OF FUNDS; SUBCONTRACTS; CONTRACT TERMINATION - DEBARMENT; PROGRESS SCHEDULE; EXTENSION OF SUBSTANTIAL OR FINAL COMPLETION DATE; LIMITATION OF DAMAGES; RIGHT TO AUDIT; and TERMINATION WITHOUT CAUSE.

50.3 PROJECT MANAGEMENT AND SUPERINTENDENCE BY CONTRACTOR.

a. The CONTRACTOR shall provide project management and personal superintendence to the work. The CONTRACTOR shall employ a full-time project manager satisfactory to the CONTRACTING OFFICER, who shall have the authority to act for the CONTRACTOR in all matters relating to the performance of the work, including but not limited to, control and supervision of site employees, schedule control, and contract administration. The CONTRACTOR shall also employ a competent foreman or superintendent, satisfactory to the CONTRACTING OFFICER, to provide specialized assistance to the project manager. The project manager and superintendent are to be separate employees present on the work full-time during progress of the CONTRACT.

50.4 NOTICE TO PROCEED.

a. The Notice to Proceed shall state the date on which it is expected the CONTRACTOR will begin the construction and from which date contract time will be charged. The CONTRACTOR shall begin the work to be performed under the contract within 10 days of the date set by the TPM in the written notice to proceed, but in any event, the CONTRACTOR shall notify the TPM at least 24 hours in advance of the time actual construction operations will begin.

50.5 PROSECUTION AND PROGRESS.

a. Unless otherwise specified, the CONTRACTOR shall submit his/her baseline schedule for the TPM's approval within 10 working days after the effective date of the Notice to Proceed. The CONTRACTOR's progress schedule, when approved by the TPM, may be used to establish major construction operations and to check on the progress of the work. The CONTRACTOR shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the DRAWINGS and SPECIFICATIONS within the time set forth in the proposal.

b. If the CONTRACTOR falls significantly behind the submitted schedule, the CONTRACTOR shall, upon the TPM's request, submit a revised schedule for completion of the work within the Contract time and modify his/her operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the prosecution of the work be discontinued for any reason, the CONTRACTOR shall notify the TPM at least 24 hours in advance of resuming operations.

- c. The CONTRACTOR shall not commence any actual construction prior to the date

on which the Notice to Proceed is issued by the TPM.

50.6 CHARACTER OF WORKERS, METHODS, AND EQUIPMENT.

a. The CONTRACTOR shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the CONTRACT, DRAWINGS, and SPECIFICATIONS.

b. All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily and shall have applicable licenses.

c. All equipment which is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall be such that no injury to previously completed work, adjacent property, existing facilities will result from its use.

d. When the methods and equipment to be used by the CONTRACTOR in accomplishing the work are not prescribed in the CONTRACT, the CONTRACTOR is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the CONTRACT, DRAWINGS, and SPECIFICATIONS.

e. When the Contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the TPM. If the CONTRACTOR desires to use a method or type of equipment other than that specified in the CONTRACT, he may request approval from the TPM to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and the reasons for desiring to make the change. If approval is given, it will be on the condition that the CONTRACTOR will be fully responsible for producing work in conformity with CONTRACT requirements. If, after trial use of the substituted methods or equipment, the TPM determines that the work produced does not meet CONTRACT requirements, the CONTRACTOR shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The TPM will forward the revised decision in writing to the CONTRACTOR. The CONTRACTOR shall remove any deficient work and replace it with work of specified quality or take such other corrective action as the TPM may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this subsection.

50.7 TEMPORARY SUSPENSION OF THE WORK.

a. The TPM shall have the authority to suspend the work wholly, or in part, for such period or periods as he may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for the prosecution of the work, or for such time as is necessary due to the failure on the part of the CONTRACTOR to carry out orders given or perform any or all provisions of the CONTRACT.

b. In the event that the CONTRACTOR is ordered by the TPM, in writing, to suspend work for some unforeseen cause not otherwise provided for in the CONTRACT and over which the CONTRACTOR has no control, the CONTRACTOR may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated

profits. The period of shutdown shall be computed from the effective date of the TPM's order to suspend work to the effective date of the TPM's order to resume the Work. Claims for such compensation shall be filed with the TPM within the time period stated in the TPM's order to resume work. The CONTRACTOR shall submit with his/her claim information substantiating the amount shown on the claim. The TPM will forward the CONTRACTOR's claim to the OWNER for consideration in accordance with local laws or ordinances. No provision of this Article shall be construed as entitling the CONTRACTOR to compensation for delays due to inclement weather, for suspensions made at the request of the CONTRACTOR, strikes, or for any other delay provided for in the CONTRACT, DRAWINGS, and SPECIFICATIONS.

c. If it should become necessary to suspend work for an indefinite period, the CONTRACTOR shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. He shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work.

50.8 EXTENSION OF SUBSTANTIAL OR FINAL COMPLETION DATE.

a. The SUBSTANTIAL or FINAL COMPLETION dates shall be extended only for such number of calendar days that the work is actually delayed by a casualty, a CHANGE ORDER, a default by the AUTHORITY or Force Majeure which is defined as follows: an act or neglect of the AUTHORITY or by any separate contractor employed by the AUTHORITY to perform work outside the scope of this CONTRACT, labor disputes, fire, unusual delay in transportation, or any causes beyond the reasonable control of CONTRACTOR (herein "Excusable Delays"). No extensions to the SUBSTANTIAL COMPLETION date shall be granted due to the negligence or fault of the CONTRACTOR or its Subcontractors, (including any contractors or subcontractors employed by the AUTHORITY and whose performance and work is subject to the supervision and control of CONTRACTOR). Inclement weather (normal precipitation and normal temperature variance) will not be considered cause for extension of the SUBSTANTIAL COMPLETION date. However, abnormal precipitation or abnormal temperature variance as defined in subsection (c) hereof will be considered as a cause for extension of the SUBSTANTIAL COMPLETION date.

b. In order to obtain an extension of the SUBSTANTIAL COMPLETION date due to an Excusable Delay, the CONTRACTOR in each instance shall give written notice to the TPM within ten (10) days after the occurrence of each Excusable Delay, and upon the failure of the CONTRACTOR to do so, it's right, if any, to an extension will be considered waived. The parties agree that in the event of a continuing delay one (1) notice, so long as said notice identifies the delay to be continuing, shall be sufficient. The AUTHORITY shall render a written decision which shall be made in good faith and shall be conclusive upon the parties, granting or refusing the request of the CONTRACTOR for an extension within a reasonable time after receipt of the request for a time extension.

c. Determination of the number of days allowable for unusually severe weather shall be as follows:

- (1) Extra time is allowable for unusually severe weather. The term unusually severe weather is defined to be that weather beyond the expected norm. In order to determine the number of days of the time extension to be allowed for unusually severe weather, the U.S. Weather Bureau's Local Climatological Data reports shall be used. The reports shall be from the U.S. Weather Station closest to the construction site.

The reports to be used are [a] monthly "Local Climatological Data" and [b] annual "Local Climatological Data with Comparative Data." All requests for time extensions based on unusually severe weather shall include two copies of these reports for all months and years covering the construction time from the beginning date to the date of the request, not just the months involved in the delay.

- (2) For purposes of determining the number of days allowable, a comparison shall be made of the precipitation figure in the "Current Year" tabulation and the "Normals" tabulation of the annual Comparative Data report. A time extension shall be granted for the number of days that the precipitation in the current year exceeded the norm as defined by the U.S. Weather Bureau's Local Climatological Data reports. A time extension for unusually severe weather, as defined herein will only be granted when the work being performed at the time of the unusually severe weather is materially affected by the unusually severe weather.

50.9 FAILURE TO COMPLETE ON TIME.

a. For each calendar day or working day, as specified in the CONTRACT, that any work remains uncompleted after the Contract time (including all extensions and adjustments as provided in the subsection titled EXTENSIONS OF SUBSTANTIAL OR FINAL COMPLETION DATE of this Section) the sum specified in the CONTRACT and proposal as liquidated damages will be deducted from any money due or to become due the CONTRACTOR or his/her surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages that will be incurred by the OWNER should the CONTRACTOR fail to complete the work in the time provided in his/her Contract.

b. Permitting the CONTRACTOR to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the OWNER of any of its rights under the Contract.

50.10 DEFAULT AND TERMINATION OF CONTRACT.

a. The CONTRACTOR shall be considered in default of his/her CONTRACT and such default will be considered as cause for the OWNER to terminate the CONTRACT for any of the following reasons if the CONTRACTOR:

- (1) Fails to begin the Work under the CONTRACT within 15 days after date of "Notice to Proceed," or
- (2) Fails to perform the WORK or fails to provide sufficient workers, equipment or materials to assure completion of WORK in accordance with the terms of the CONTRACT, or
- (3) Performs the WORK unsuitably or neglects or refuses to remove materials or to perform anew such WORK as may be rejected as unacceptable and unsuitable, or
- (4) Discontinues the performance of the WORK for 15 days, or

- (5) Fails to resume WORK which has been discontinued within 10 days after notice to do so, or
- (6) Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- (7) Allows any final judgment to stand against him unsatisfied for a period of 10 days, or
- (8) Makes an assignment for the benefit of creditors, or
- (9) For any other cause whatsoever, fails to carry on the work in an acceptable manner, or
- (10) Fails to pay Subcontractors promptly for work performed.
- (11) Any other material breach of the CONTRACT.

b. Should the PROJECT MANAGER consider the CONTRACTOR in default of the CONTRACT for any reason hereinbefore, he shall immediately give written notice to the CONTRACTOR and the CONTRACTOR's surety as to the reasons for considering the CONTRACTOR in default and the OWNER's intentions to terminate the Contract.

c. If the CONTRACTOR or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the OWNER will, upon written notification from the PROJECT MANAGER of the facts of such delay, neglect, or default and the CONTRACTOR's failure to comply with such notice, have full power and authority without violating the CONTRACT, to take the prosecution of the WORK out of the hands of the CONTRACTOR. The OWNER may appropriate or use any or all materials and equipment that have been mobilized for use in the WORK and are acceptable and may enter into an agreement for the completion of said CONTRACT according to the terms and provisions thereof or use such other methods as in the opinion of the PROJECT MANAGER will be required for the completion of said CONTRACT in an acceptable manner.

d. All costs and charges incurred by the OWNER, together with the cost of completing the WORK under CONTRACT, will be deducted from any monies due or which may become due the CONTRACTOR. If such expense exceeds the sum which would have been payable under the CONTRACT, then the CONTRACTOR and the surety shall be liable and shall pay to the OWNER the amount of such excess.

50.11 ASSIGNMENT OF SUBCONTRACTS.

a. In the event of termination by the AUTHORITY pursuant to this Article 50, the AUTHORITY may require the CONTRACTOR promptly to assign to it all of some subcontracts, materials, tools, equipment to be installed under this CONTRACT, or rental agreements, and any other commitments which the AUTHORITY, in its sole discretion, chooses to take by assignment. In such event, the CONTRACTOR shall promptly execute and deliver to the AUTHORITY written assignments of such commitments.

50.12 WARRANTIES OF THE CONTRACTOR.

a. **Warranty of Title.** The CONTRACTOR warrants and guarantees that title to all WORK, materials and equipment covered by an Application and Certificate for Payment, whether incorporated in the WORK or not, will pass to the AUTHORITY upon the receipt of payment by the CONTRACTOR, free and clear of all liens, claims, security interests or encumbrances (herein "Liens") and that none of the WORK, materials or equipment covered by an Application and Certificate for Payment will have been part of the WORK or furnishing materials and equipment for the WORK, subject to an agreement under which a Lien is retained by the seller or supplier.

b. **Special Warranties.** When special guarantees or warranties are required by the Contract Documents for specific parts of the WORK, the CONTRACTOR shall procure copies of such guarantees or warranties, countersign them, and submit them to the AUTHORITY in triplicate. Delivery of such guarantees or warranties will not relieve the CONTRACTOR from any obligations assumed under any provision of this CONTRACT or the Contract Documents.

c. **Assignment of Warranties.** The CONTRACTOR hereby assigns to the AUTHORITY any and all existing assignable warranties, service life policies and patent indemnities of manufacturers of materials, equipment or items incorporated in the WORK. Upon the request of the AUTHORITY, the CONTRACTOR shall provide the AUTHORITY with assistance in enforcing the rights of the AUTHORITY arising under such warranties, service life policies and patent indemnities. At the request of the AUTHORITY, the CONTRACTOR shall give notice (with copies to the AUTHORITY) to any such manufacturers of the assignment of such warranties, service life policies and patent indemnities.

d. **General Warranty and Correction of Work.**

- (1) In addition to any special guarantees or warranties, contained in the Contract Documents, the CONTRACTOR warrants to the AUTHORITY that all materials and equipment furnished in performance of the WORK will be new unless otherwise specified, that all WORK will be of good quality, free from material faults and defects and in conformance with the Contract Documents, and that all plans, architectural drawings, engineering drawings and specifications prepared or furnished by CONTRACTOR shall be free from material faults or defects and shall provide for a complete and operational PROJECT as defined in the Contract Documents. All work, including, but not limited to design and engineering work, not so conforming to these standards shall be considered defective.
- (2) The CONTRACTOR shall promptly correct all defective work to the standards of this CONTRACT and the Contract Documents whether observed before or after the SUBSTANTIAL COMPLETION date and whether or not fabricated, installed or completed. The CONTRACTOR shall bear all costs of correcting such defective work.
- (3) Warranties shall commence on the date(s) of SUBSTANTIAL COMPLETION. If, within one (1) year after the SUBSTANTIAL COMPLETION date or within such longer period of time as may be prescribed by law in effect at the time this CONTRACT is executed or by the terms of any applicable special guarantee or warranty required by the

Contract Documents, any of the WORK is found to be defective and not in accordance with the Contract Documents, the CONTRACTOR shall correct it promptly after receipt of a written notice from the AUTHORITY to do so.

- (4) All defective or non-conforming WORK shall be removed from the site of the WORK if necessary, and the WORK shall be corrected to comply with the Contract Documents without cost to the AUTHORITY. The CONTRACTOR also shall bear the cost of making good all work of other contractors destroyed or damaged by removal or correction of the defective WORK of CONTRACTOR.
- (5) CONTRACTOR will pay all costs for additional WORK required to correct faulty materials or workmanship within guaranteed period, including all WORK damaged or new WORK created, as a result of defective WORK. Nothing herein intends or implies that guarantee shall apply to WORK which has been abused, neglected or otherwise damaged by the AUTHORITY or its successor in interest. In case CONTRACTOR fails to do so-ordered corrective work, the AUTHORITY may have the work done and charge cost thereof against retainage as provided for in the CONTRACT; and if said retainage shall be insufficient to pay such cost, the CONTRACTOR and his/her sureties agree to pay to the AUTHORITY the cost of such Work.
- (6) In addition to the foregoing warranty, a warranty period of one (1) year shall apply to workmanship under the same terms and conditions as the original warranty, to any WORK, supplied in correction of the defective Work under warranty or the property of the AUTHORITY pursuant to the provisions of this Section 50 and the CONTRACTOR shall assign to the AUTHORITY any warranties, including extended warranties, as to materials or designs furnished in the performance of such correction of defective WORK. For each item of defective WORK corrected hereunder by CONTRACTOR, such warranty period shall commence on the date the corrective WORK is finally accepted by the OWNER.

**SECTION 60
MEASUREMENT AND PAYMENT**

60.1 MEASUREMENT OF QUANTITIES.

a. All WORK completed under the CONTRACT will be measured by the TPM, or his/her authorized representatives, using United States Customary Units of Measurement or the International System of Units.

b. The method of measurement and computations to be used in determination of quantities of material furnished and Work performed under the CONTRACT` will be those methods generally recognized as conforming to good engineering practice.

c. Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of nine square feet (0.8 square meter) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the DRAWINGS or ordered in writing by the TPM`.

d. Structures will be measured according to neat lines shown on the DRAWINGS or as altered to fit field conditions.

e. Unless otherwise specified, all CONTRACT items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

f. In computing volumes of excavation, the average end area method or other acceptable methods will be used.

g. The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inches.

h. The term ``lump sum" when used as an item of payment will mean complete payment for the work described in the CONTRACT.

i. When a complete structure or structural unit (in effect, ``lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

j. Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the Work. Special equipment ordered by the TPM in connection with force account work will be measured as agreed in the CHANGE ORDER or SUPPLEMENTAL AGREEMENT authorizing such force account work as provided in the subsection 0800-60.09 titled PAYMENT FOR FORCE ACCOUNT WORK of this section.

k. When the estimated quantities for a specific portion of the WORK are designated as the pay quantities in the CONTRACT, they shall be the final quantities for which payment for such specific portion of the WORK will be made, unless the dimensions of said portions of the WORK shown on the DRAWINGS are revised by the TPM. If revised dimensions result in an increase or decrease in the quantities of such WORK, the final quantities for payment will be

revised in the amount represented by the authorized changes in the dimensions.

60.2 SCOPE OF PAYMENT.

a. The CONTRACTOR shall receive and accept compensation provided for in the CONTRACT as full payment for furnishing all materials, for performing all WORK under the CONTRACT in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the WORK or the prosecution thereof, subject to the provisions of the subsection titled NO WAIVER OF LEGAL RIGHTS of Section 00700.

b. When the "basis of payment" subsection of a Technical SPECIFICATIONS requires that the Contract Price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other CONTRACT item which may appear elsewhere in the CONTRACT, DRAWINGS, and SPECIFICATIONS.

60.3 PARTIAL PAYMENTS.

a. Partial payments will be made at least once each month as the work progresses. Said payments will be based only upon written estimates prepared by the CONTRACTOR, and agreed to by the TPM, of the value of the WORK performed and materials complete in place in accordance with the CONTRACT, DRAWINGS, and SPECIFICATIONS. Such partial payments may also include the delivered actual Cost of those materials stockpiled and stored in accordance with the subsection titled PAYMENT FOR MATERIALS ON HAND of this Section. Such partial payments may not include requests for payment of amounts that the CONTRACTOR does not intend to pay to a Subcontractor or Vendor. The CONTRACTOR agrees that title to all work covered by the Application for Payment will pass to the OWNER no later than the date of payment.

b. From the total of the amount determined to be payable on a partial payment, five percent of such total amount will be deducted and deposited into an interest-bearing escrow account until the final payment is made or until there is written agreement among the parties to reduce the retainage. The balance (95 percent) of the amount payable, less all previous payments, shall be certified for payment. The OWNER agrees to pay 30 days after the presentation of an Acceptable Application for Payment to the PROJECT MANAGER.

c. The CONTRACTOR agrees to pay all Subcontractors promptly after receipt of payment from the OWNER for such WORK that was included in the Application for Payment in accordance with the agreement between the CONTRACTOR and Subcontractors. The CONTRACTOR further agrees to include the prompt pay requirement in its agreement with Subcontractors for lower tier Subcontractors.

d. When not less than 95 percent of the work has been completed, the PROJECT MANAGER may, at his/her discretion and with the consent of the surety, prepare an estimate from which will be retained an amount not less than twice the Contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the CONTRACTOR.

e. It is understood and agreed that the CONTRACTOR shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved CHANGE ORDER or SUPPLEMENTAL AGREEMENTS, except when such excess quantities have been determined by the TPM to be a part of the final

quantity for the item of WORK in question.

f. No partial payment shall bind the OWNER to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in the subsection titled ACCEPTANCE AND FINAL PAYMENT of this Section.

60.4 PAYMENT FOR MATERIALS ON HAND.

a. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the WORK, provided that such materials meet the requirements of the CONTRACT, DRAWINGS, and SPECIFICATIONS and are delivered to acceptable sites on the property or at other sites in the vicinity that are acceptable to the OWNER. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

- (1) The material has been stored or stockpiled in a manner acceptable to the TPM at or on an approved site.
- (2) The CONTRACTOR has furnished the TPM with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
- (3) The CONTRACTOR has furnished the TPM with acceptable evidence that the material stored or stockpiled has been manufactured in the United States in accordance with the Buy America Certificate signed by the CONTRACTOR in his/her bid and, if required, proper documentation for material stored or stockpiled which was purchased from another country and for which the AUTHORITY received a Buy America waiver. For such materials purchased requiring shipment by water or air, the CONTRACTOR shall provide evidence of compliance with the Cargo Preference and Fly America regulations in the General Contract Provisions.
- (4) The CONTRACTOR has furnished the TPM with satisfactory evidence that the material and transportation costs have been paid.
- (5) The CONTRACTOR has furnished the OWNER legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled.
- (6) The CONTRACTOR has furnished the OWNER evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the WORK.

b. It is understood and agreed that the transfer of title and the OWNER's payment for such stored or stockpiled materials shall in no way relieve the CONTRACTOR of his/her responsibility for furnishing and placing such materials in accordance with the requirements of the CONTRACT, DRAWINGS, and SPECIFICATIONS.

c. In no case will the amount of partial payments for materials on hand exceed the Contract Price for such materials or the Contract Price for the contract item in which the material is intended to be used.

d. No partial payment will be made for stored or stockpiled living or perishable plant materials.

e. The CONTRACTOR shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.

60.5 CONTRACT MODIFICATIONS - REQUIREMENTS FOR PROPOSALS.

a. The CONTRACTOR, in connection with any proposal he makes for a Contract modification, shall furnish a price breakdown, itemized as required by the TPM. Unless otherwise directed, the breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment,

subcontract and overhead costs, as well as profit, and shall cover all WORK involved in the modification, whether such WORK was deleted, added or changed. Any amount claimed for subcontracts shall be supported by a similar price breakdown. In addition, if the proposal includes a time extension, a justification therefor shall also be furnished. The proposal, together with the price breakdown and time extension justification shall be furnished by the date specified by the TPM.

b. CHANGE ORDERS: When the CONTRACTING OFFICER or the Authorized Representative directs a change in accordance with the General Provisions and the Progress Schedule requirements of the PROGRESS SCHEDULES Article of the Special Conditions, the CONTRACTOR shall identify in his proposal the network activities that precede and follow the CHANGE ORDER work activities. If the CHANGE ORDER work activities are performed concurrently with existing network activities, those concurrent network activities shall be identified. If the CHANGE ORDER work activities restrain network activities, those restraints shall be identified.

60.6 CHANGE ORDER / CHANGE DIRECTIVE PROCEDURES.

a. Increases in the Scope: The increase in the Contract Price attributable to a CHANGE ORDER / CHANGE DIRECTIVE performed by the CONTRACTOR or any of its subcontractors shall not exceed the sum of the following:

- (1) The actual labor cost to perform the CHANGE ORDER / CHANGE DIRECTIVE, including insurance and taxes,
- (2) The actual unit cost of materials used in performing the CHANGE ORDER / CHANGE DIRECTIVE, including sales taxes.
- (3) The actual cost for additional bond (CHANGE ORDER / CHANGE DIRECTIVE only), and
- (4) For CHANGE ORDER / CHANGE DIRECTIVE, the total percent of overhead and profit (OH&P), shall not exceed the following:
 - a. CHANGE ORDER / CHANGE DIRECTIVE involving CONTRACTOR's work only: The CONTRACTOR shall be entitled to a 10% OH&P mark-up.

- b. CHANGE ORDER / CHANGE DIRECTIVE involving subcontractor and CONTRACTOR work: The firm(s) doing the work shall be entitled to a 10% OH&P mark-up. The CONTRACTOR shall be entitled to a 5% OH&P Mark-up on the subcontractor's work.
- c. CHANGE ORDER / CHANGE DIRECTIVE involving multiple (two or more) tiers of subcontractors: The firm(s) doing the work shall be entitled to a 10% OH&P mark-up. One 5% OH&P subcontractor mark-up shall be allowed. The CONTRACTOR shall be entitled to a 5% OH&P mark-up on the subcontractor's work.

b. Decreases in the Scope: The decrease in the Contract Price attributable to a CHANGE ORDER / CHANGE DIRECTIVE deleting a portion of the Scope of Work shall equal the sum of the following:

- (1) The actual labor cost that the CONTRACTOR would have incurred to perform the WORK deleted in the CHANGE ORDER / CHANGE DIRECTIVE including the cost of overhead, profit, general conditions, insurance and taxes,
- (2) The actual unit cost of materials, supplies, products, equipment and rental equipment that the CONTRACTOR would have used in performing the WORK deleted in the CHANGE ORDER / CHANGE DIRECTIVE, including sales taxes,
- (3) The actual cost of Subcontractors and Sub-subcontractors that the CONTRACTOR would have incurred in performing the WORK deleted in the CHANGE ORDER / CHANGE DIRECTIVE, including overhead, profit, general conditions, insurance and taxes, and
- (4) The actual credit for the cost associated with the lower limits required for the bonds including Subcontractor and Sub-subcontractor bonds, if applicable, as a result of the reduction in the Scope of the Work.

60.7 COMPENSATION FOR ALTERED QUANTITIES.

a. When the accepted quantities of work vary from the quantities in the proposal, the CONTRACTOR shall accept as payment in full, so far as Contract items are concerned, payment at the original Contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in the subsection titled VARIATION IN QUANTITIES of Section 20 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the CONTRACTOR which results directly from such alterations or indirectly from his/her unbalanced allocation of overhead and profit among the Contract items, or from any other cause.

60.8 PAYMENT FOR OMITTED ITEMS.

a. As specified in the subsection titled OMITTED ITEMS of Section 20, the TPM shall have the right to omit from the WORK (order nonperformance) any contract item, except major contract items, in the best interest of the OWNER.

b. Should the TPM omit or order nonperformance of a contract item or portion of such item from the WORK, the CONTRACTOR shall accept payment in full at the Contract prices for any work actually completed and acceptable prior to the TPM's order to omit or non-perform such contract item as prescribed in the VARIATION IN QUANTITIES Article in Section 20.

c. Acceptable materials ordered by the CONTRACTOR or delivered on the WORK prior to the date of the TPM's order will be paid for at the actual cost to the CONTRACTOR and shall thereupon become the property of the OWNER.

d. In addition to the reimbursement hereinbefore provided, the CONTRACTOR shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the TPM's order. Such additional costs incurred by the CONTRACTOR must be directly related to the deleted contract item and shall be supported by certified statements by the CONTRACTOR as to the nature and the amount of such costs.

60.9 CHANGE ORDER / CHANGE DIRECTIVE CARRIED OUT BY FORCE ACCOUNT.

a. When the CHANGE ORDER / CHANGE DIRECTIVE authorizing additional work requires that it be done by force account, such force account shall be measured and paid for based on expended labor, equipment, and materials plus the Contractual allowances for overhead and profit. The provisions of the Article titled CHANGE ORDER / CHANGE DIRECTIVE PROCEDURES will apply for overhead and profit.

b. Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.

c. Comparison of Record. The CONTRACTOR and the TPM shall compare records of the cost of force account work at the end of each day. Agreement shall be indicated by signature of the CONTRACTOR and the TPM or their duly authorized representatives.

d. Statement. No payment will be made for work performed on a force account basis until the CONTRACTOR has furnished the TPM with duplicate itemized statements of the cost of such force account work detailed as follows:

- (1) Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman.
- (2) Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
- (3) Quantities of materials, prices, and extensions.
- (4) Transportation of materials.
- (5) Cost of property damage, liability and worker's compensation insurance premiums, unemployment insurance contributions, and social security tax.

e. Statements shall be accompanied and supported by a receipted invoice for all materials used and transportation charges; however, if materials used on the force account work are not specifically purchased for such work but are taken from the CONTRACTOR's stock, then in lieu of the invoices the CONTRACTOR shall furnish an affidavit certifying that such materials

were taken from his/her stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the CONTRACTOR.

60.10 ACCEPTANCE AND FINAL PAYMENT.

a. When the Contract Work has been accepted in accordance with the requirements of the subsection titled FINAL ACCEPTANCE of Section 30, the TPM will prepare the final estimate of the items of WORK actually performed. The CONTRACTOR shall approve the TPM's final estimate or advise the TPM of his/her objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the CONTRACT as amended by CHANGE ORDER or SUPPLEMENTAL AGREEMENT. The CONTRACTOR and the TPM shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the CONTRACTOR's receipt of the TPM's final estimate. If, after such 30-day period, a dispute still exists, the CONTRACTOR may approve the TPM's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the OWNER as a claim in accordance with the subsection titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 20.

b. After the CONTRACTOR has approved, or approved under protest, the TPM's final estimate, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the CONTRACTOR less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

c. If the CONTRACTOR has filed a claim for additional compensation under the provisions of the subsection titled CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 20 or under the provisions of this subsection, such claims will be considered by the OWNER in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the CONTRACTOR will be paid pursuant to a supplemental final estimate.

END OF SUPPLEMENTAL CONDITIONS FOR CONSTRUCTION

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SPECIAL CONDITIONS

1. SCOPE OF THE CONTRACT:

- A. The work required under this CONTRACT includes furnishing and paying for all necessary materials, labor, tools, equipment, and other items and construction improvements of the project complete in every detail, ready for the OWNER's beneficial use as specified herein and/or indicated on the contract DRAWINGS. The WORK shall consist of, but is not limited to, the following items:
 - 1. East Madison Avenue Track Repairs as specified in the Contract Documents
- B. Terms and definitions defined in Paragraph 1 of the General Provisions are applicable to these Special Conditions.

2. MODIFICATIONS AND ADDITIONS TO TECHNICAL SPECIFICATIONS:

- A. All item numbers and work shall be in accordance with the City of Memphis Standard Construction Specifications & Tennessee Department of Transportation Specifications and all current addendums; unless otherwise noted. This section of the Special Conditions lists any modifications or additions to the City of Memphis Standard Construction Specifications and/or Tennessee Department of Transportation Specifications.
- B. In the event of conflict between the technical SPECIFICATIONS, Construction DRAWINGS, the General Provisions or Special Conditions contained herein, and/or product manufacturer's specifications the more stringent shall apply. However, all conflicts shall be brought to the attention of the TPM for approval.
- C. The cost of all required material inspections and testing, including, but not limited to earthwork and concrete testing, shall be paid for by the CONTRACTOR.

3. ADA CURB RAMP INSTALLATION PROGRAM, CURB RAMP GROUP 46 MATA/FTA STATE STANDARDS AND SPECIFICATIONS

- A. This contract shall consist of removal and replacement of concrete sidewalk, granite curbs and/or concrete curb and gutter and installation of curb ramps in existing conditions at various locations within the Memphis City Limits as directed by the City Engineer.
- B. All materials, construction methods and workmanship used in curb ramp installation shall conform to the more stringent of the "City of Memphis Standard Construction Specifications or TDOT Standard Construction Specifications".
- C. Relocation of obstructions within the construction work zones shall be incidental to Payment Item No. 4, 5 or 6, "Curb Ramp (Existing Conditions)".
- D. Contractor shall install and maintain traffic control devices including, but not limited to signs, warning barrels and flashers as specified in the MANUAL ON UNIFORM TRAFFIC CONTROL DIVICES (MUTCD) Part VI Standards and Guides for Traffic

Controls for Street and Highway Construction, Maintenance, Utility and Incident Management Operations. Part VI of the Manual on Uniform Traffic Control Devices as required by the City Engineer to assure the safety of the public in the work zones. Traffic considerations at some location will restrict the work hours to the time period 9:00 AM to 4:00 PM as directed by the City Engineer.

- E. Existing base material and asphalt pavement disturbed during construction is to be trimmed to a smooth, straight joint and replaced with Asphaltic Concrete Base (Black Base). Black Base shall be surfaced with 1 ½" Asphaltic Concrete A.C.S. Hot Mix (PG 64-22) Grading E conforming to the existing cross slope of the street. Payment for the Black Base in the work zone to be incidental to Payment Item No. 4, 5 or 6, "Curb Ramp (Existing Conditions)". Payment for replacing asphalt overlay in the gutter area work zone is to be charged to Payment Item No. 3 "Asphaltic Concrete A.C.S. Hot Mix (PG 64-22) GRADING E". If A.C.S. Hot Mix (PG 64-22) Grading E" is used in place of Black Base beyond the gutter line then the payment shall be the same as Black Base.
- F. Granite curb stones affected by the ramp installation, unless otherwise specified, shall be removed and taken to Collins Yard. Payment for the removal of granite curbs will be incidental to Payment Item No. 4, 5 or 6, "Curb Ramp (Existing Conditions)
- G. Curb ramps are to be located as shown on the plans, or as directed by the City Engineer. The Curb Ramp is removal and replacement complete. For bidding purposes; A Perpendicular curb ramp's "Payment Area Square Footage" will be measured as defined on Drawing RP-H-4 and is generally considered to be a 10' R.O.W. A Parallel curb ramp or a Modified Parallel curb ramp's "Payment Area Square Footage" will be measured as defined on Drawing RP-H-5 and is generally considered to be a 5' R.O.W. A Straight Curb Ramp "Payment Area Square Footage" will be measured as the ramp and landing and is generally considered to be a 5' R.O.W. Curb and Gutter, Coping Wall, Asphalt and Sidewalk will be paid under their respective pay item number(s). The cost of brick pavers complete in place shall be incidental to Payment Item No. 6, "Curb Ramp (Existing Conditions)".
- H. Curb ramp throats shall be made flush with the original gutter grade (no lip) or as directed by the City Engineer or his designee.
- I. If the gutter has an asphalt overlay, the ramp lip shall be built to match existing conditions as directed by the City Engineer or his designee.
- J. Care shall be taken to assure a uniform grade on the ramp, free of sags and short grade changes. Side slopes shall be free of sags and short grade changes.
- K. Surface texture of the ramp shall be ADAAG compliant truncated domes using brick pavers with raised detectable warning surface treatment. The ramp area shall be forty-eight (48) inches minimum width and a nominal sixty (60) inches depth, with a minimum of thirty (30) inches in depth where applicable. The minimum depth for detectable warnings shall be twenty-four (24) inches (back of curb 24 inches behind back of curb). The minimum width of walkway between the top of ramp and back of sidewalk should be thirty-six (36) inches. Surface texture of the

side slopes shall be that obtained by coarse brooming transverse to the slope. The side slopes shall have grooves struck parallel to the ramp spaced six (6) inch intervals. All grooves shall be straight. This provision shall only apply to radius where the existing curb ramps are being repaired, replaced or installed to match existing curb ramps. All other installations shall be UFAS compliant.

- L. Ramp color shall have color contrast with the adjoining surfaces, either light-on-dark, or dark-on-light, 28 Code of Federal Regulations Chapter 1 Part 3, Appendix A Sub-Part 4.29.
- M. When ramps have to be adjusted with asphalt to match the existing street asphalt grade, the Contractor shall complete the ramp, including asphalt adjustments to the ramp and street pavement disturbed during the construction process, within two (2) weeks after the ramp is poured and deemed compliant by applicable regulations.
- N. The length of the side slopes shall be determined by a 1:12 (8.3%) maximum slope and the height of the curb. The Ramp Slope shall be 1:12 (8.3%) Max. The Landing shall have a cross slope in all directions of 1:50 (2% Max). Sidewalk shall have a cross slope of 1:50 (2%) maximum.
- O. The curb ramp will not be considered complete and will not be submitted for payment until the entire curb ramps is completed and any required asphalt has been installed/completed and accepted by Inspections.
- P. The curb ramp shall conform to the more stringent of City of Memphis Standard Construction Specifications, UFAS, ADAAG and TDOT Standard Construction Specifications and/or the North Carolina Accessibility Code.
- Q. All curbs and sidewalks shall be saw cut for the removal of material for the construction of curb ramps. Sidewalk removal at the nearest joint shall be saw cut. Sidewalk covering the signal pole foundation shall be saw clean on all four sides of the base plate (max. 2" form plate). No chisels will be allowed on the existing surfaces. The full curb and gutter shall be removed in the ramp area; payment is made under pay Item 9 Combined Curb and Gutter.
- R. Signposts that are within the affected curb ramp area shall be removed by the Contractor and relocated to the proper location prior to the placement of concrete.
- S. Coping walls will pay by the Cubic Yard. Payment for coping walls to be made under Payment Item No. 7, "Concrete for Coping Walls".
- T. Manholes, traffic signal pull boxes, streetlight pull boxes will be adjusted by the Contractor with close supervision by the proper authority to ensure that no damage is done to conduit or wiring. Gas and water value boxes, utility and street lighting poles and fire hydrants will be adjusted by Memphis Light Gas and Water Division or the contractor.
- U. When a utility pole, street signpost, fire hydrant, meter or value box remains in the work limits each item will be blocked out with wood forms and one-half inch thick expansion joint material. The wood form will be removed and concrete shall be

poured in the block-out to complete the work.

- V. Time Warner Communications cable vaults will be adjusted by their designee. Telephone cable boxes will be adjusted by their designee. Any communications vault or equipment encountered in the ramp area will be adjusted by the owner or authorized designee.
- W. Before work is commenced in an historic district, proper documentation from the Memphis Landmarks Commission shall be in the possession of the City Engineer or his designee.
- X. Whenever tile street names are encountered, they should remain in the same location but, they will be brought to the same grade as the new sidewalk or side slope of the ramp. Name tiles shall not be placed in the ramp. In an effort to preserve the historic values within a neighborhood, the Contractor shall not in any way remove or destroy these letter tiles.
- Y. "Uniformed Police Officer", Budget Line Item # 19; Contractor shall provide full time security at the job site as coordinated with the Special Events Program, City of Memphis Police Department, Lt. Wright or Sgt. Young, phone (901) 274-8154. A total of eight (8) hours of security shall be provided by an off-duty Memphis Police Officer familiar with the area. Each officer shall provide security for a minimum four (4) hour shift each for a total of eight (8) hours at a rate as determined by the Special Events Program. The contractor shall familiarize themselves with the amount of notice required, payment periods and all rules and regulations of the Special Events Program. The location of the curb ramps requiring "On Site Security" and number of days shall be pre-approved by the Manger of Construction Inspections and/or the Supervisor of the Curb Ramp Program.
- Z. Modifying Traffic Signal Foundation(s). The City of Memphis Traffic Signal Department must be notified and approve the modifications prior to any foundation disturbance. If a new or existing curb ramp is to be installed or replaced adjacent to an existing signal pole, the foundation must be modified by saw cutting the foundation on all four sides. The saw cut should be as vertical as possible and as close to the pole base plate as possible. The saw cut should typically be from 5" to 7" deep. Jack- hammering shall not take place until after the saw cut has been completed thru the width of the foundation on all four sides. The top of foundation shall be free of dirt and debris before the concrete curb ramp is replaced. The Quantity 1 L.S. is for each signal foundation modified and is paid under Item # 5; 1 L.S. Concrete Repair (TSF 6").
- AA. General Information: the "Settlement Agreement" between the Department of Justice and the City of Memphis allows the city to construction curb ramps under U.F.A.S, which does not require truncated domes. Therefore, the vast majority of locations do not have domes. Domes are used where the city is matching existing locations or repairing existing radius.

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RIVERSIDE AT BEALE ST. BRIDGE SUBSTRUCTURE REPAIRS

FOR

MEMPHIS AREA TRANSIT AUTHORITY
1370 LEVEE ROAD
MEMPHIS, TN 38108

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SSR Smith
Seckman
Reid, Inc.
2650 Thousand Oaks BLVD. - Suite 4200
Memphis, Tennessee 38118
Phone: (901) 683-3900 Fax: (901) 683-3990



APRIL 2023

GENERAL NOTES

EXISTING CONDITIONS:

CONFORMANCE OF EXISTING CONDITIONS TO THE DRAWINGS HAS NOT BEEN VERIFIED BY SSR. ALL CONDITIONS ASSOCIATED WITH ANY AREA SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO PROCEEDING WITH THE WORK IN THAT AREA. NOTIFY ENGINEER OF ANY CONDITIONS OR DIMENSIONS VARY.

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SITE SETBACKS, EASEMENTS AND DIMENSIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

ALL EXISTING (E) CONDITION DOCUMENTATION IS TAKEN FROM (E) CONSTRUCTION DOCUMENTS. (E) CONDITIONS, INCLUDING ELEVATIONS, MAY VARY FROM THOSE PRESENTED IN THESE DOCUMENTS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE JOB SITE BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCY TO THE ENGINEER.

THE CONTRACTOR SHALL CONFORM TO ALL CITY OF MEMPHIS AND MEMPHIS AREA TRANSIT AUTHORITY EDDPS AND STANDARDS.

ANY DAMAGE REMOVED DURING CONSTRUCTION SHALL BE REINSTALLED AFTER CONSTRUCTION IS COMPLETE. SIGNS INSTALLATION MUST MEET THE CURRENT CITY OF MEMPHIS STANDARD CONSTRUCTION STANDARDS, MARKING AREA TRANSIT AUTHORITY STANDARDS, OR CITY STANDARDS.

CONTRACTOR SHALL KEEP THE WORK AREA AS CLEAN AS POSSIBLE DURING THE CONSTRUCTION PERIOD AND CLEAN THE WORK AREAS DAILY. THE CONTRACTOR MUST HAVE WRITTEN APPROVAL FROM THE PROJECT ENGINEER, THE OWNER, AND MATA BEFORE ANY CHANGES IN DESIGN IS MADE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE UTILITY COMPANIES WHICH MAINTAIN A UTILITY LINE WITHIN THE BOUNDARIES OF THE PROJECT PRIOR TO THE INITIATION OF ANY CONSTRUCTION ON THE PROJECT OR IN THE STREETS BORDERING THE PROJECT PRIOR TO THE INITIATION OF ANY CONSTRUCTION ON THE PROJECT OR IN THE STREETS BORDERING THE PROJECT. THE CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN CONSTRUCTION PERMITS, WHETHER SHOWN ON THE CONSTRUCTION PLANS OR NOT. DURING THE WORK ON THE PROJECT, DAMAGE BY THE CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED OR REPLACED IN KIND AT NO ADDITIONAL COST TO THE OWNER. THE ACCIDENTAL DISCONNECTION OF ANY UTILITY SERVICE SHALL BE IMMEDIATELY RESTORED AT NO ADDITIONAL COST TO THE OWNER. BEFORE EXCAVATIONS ARE BEGUN, THE TENNESSEE ONE-CALL SYSTEM (800) 351-1111 SHOULD BE CONTACTED FOR VERIFICATION OF ALL UTILITY TYPES AND FOR LOCATIONS. NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE TENNESSEE ONE-CALL SYSTEM. THEREFORE, THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITY COMPANIES AS WELL AS THE TENNESSEE ONE-CALL SYSTEM.

A MINIMUM OF 24 HOURS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY OF MEMPHIS CONSTRUCTION INSPECTION OFFICE AT (901) 625-2962.

THE CONTRACTOR SHALL NOTIFY WITH REPRESENTATIVES BRANK KAUSER AND EARL JOHNSON (901) 577-9659 PRIOR ANY WORK THAT WILL INVOLVE OR IMPACT THE TRUCK, TRAMWAY OPERATIONS, TROLLEY STATIONS, OR THE CATENARY OVERHEAD SYSTEM.

THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES INTENDED TO REMAIN IN SERVICE. ANY EXISTING UTILITY OR UNDERGROUND STRUCTURE TO REMAIN, WHETHER SHOWN ON THE PLANS OR NOT, WHICH IS DAMAGED BY THE CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED OR REPLACED IN KIND AT NO ADDITIONAL COST TO THE OWNER. THE ACCIDENTAL DISCONNECTION OF ANY UTILITY SERVICE SHALL BE IMMEDIATELY RESTORED AT NO ADDITIONAL COST TO THE OWNER.

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE UTILITY COMPANIES WHICH MAINTAIN A UTILITY LINE WITHIN THE BOUNDARIES OF THE PROJECT PRIOR TO INITIATION OF ANY CONSTRUCTION ON THE PROJECT OR IN THE STREETS BORDERING THE PROJECT. THE CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN CONSTRUCTION PERMITS, WHETHER SHOWN ON THE CONSTRUCTION PLANS OR NOT. DURING THE WORK ON THE PROJECT, DAMAGE BY THE CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED OR REPLACED IN KIND AT NO ADDITIONAL COST TO THE OWNER. THE ACCIDENTAL DISCONNECTION OF ANY UTILITY SERVICE SHALL BE IMMEDIATELY RESTORED AT NO ADDITIONAL COST TO THE OWNER. BEFORE EXCAVATIONS ARE BEGUN, THE TENNESSEE ONE-CALL SYSTEM (800) 351-1111 SHOULD BE CONTACTED FOR VERIFICATION OF ALL UTILITY TYPES AND FOR LOCATIONS. NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE TENNESSEE ONE-CALL SYSTEM. THEREFORE, THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITY COMPANIES AS WELL AS THE TENNESSEE ONE-CALL SYSTEM.

GENERAL CONSTRUCTION NOTES:

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES.

CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND ADEQUATE WORKING CONDITIONS THROUGHOUT THE DURATION OF CONSTRUCTION OF THE PROPOSED SITE.

ALL NEWLY CUT OR FILLED AREAS, LACKING ADEQUATE VEGETATION, SHALL BE SEEDING, MULCHED, FERTILIZED AND/OR SODED AS REQUIRED TO EFFECTIVELY CONTROL SOIL EROSION.

THE ACCIDENTAL DISCONNECTION OF ANY UTILITY SERVICE SHALL BE IMMEDIATELY RESTORED AT NO ADDITIONAL COST TO THE OWNER. BEFORE EXCAVATIONS ARE BEGUN, THE TENNESSEE ONE-CALL SYSTEM (800) 351-1111 SHOULD BE CONTACTED FOR VERIFICATION OF ALL UTILITY TYPES AND FOR LOCATIONS. NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE TENNESSEE ONE-CALL SYSTEM. THEREFORE, THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITY COMPANIES AS WELL AS THE TENNESSEE ONE-CALL SYSTEM.

ALL CONSTRUCTION MATERIALS AND PROCEDURES SHALL MEET OR EXCEED THE REQUIREMENTS OF THE MEMPHIS AREA TRANSIT AUTHORITY CONSTRUCTION SPECIFICATION.

CONTRACTOR IS RESPONSIBLE FOR REPAIR AND REPLACEMENT OF ANY DAMAGED UTILITIES.

CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

THE CONTRACTOR AT NO TIME SHALL ENGAGE OR CAUSE DISRUPTIONS TO TRAFFIC FLOW ON ADJACENT STREETS RIGHT-OF-WAY WITHOUT SECURING THE PROPER PERMITS PRIOR TO COMMENCING DEMOLITION OR CONSTRUCTION OPERATIONS.

ALL TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION SHALL MEET THE STANDARD PRESCRIBED IN THE MUTCD.

THE APPROPRIATE TRAFFIC CONTROL SHALL BE INSTALLED AT THE INCEPTION OF EACH STAGE OF CONSTRUCTION AND SHALL BE PROPERLY MAINTAINED AND/OR OPERATED DURING THE TIME SUCH SPECIAL CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS THEY ARE NEEDED AND SHALL BE IMMEDIATELY REMOVED THEREAFTER.

THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC CONTROL ON REVERDE AVE. AND BEALE ST. AT ALL TIMES WHEN NEITHER SUBCONTRACTORS ARE WORKING IN THESE STREETS.

CONTRACTOR SHALL USE FLEXIBLE DUMPS WITH TYPE "C" WARNING LIGHTS TO SEPARATE TRAFFIC FROM THE CONSTRUCTION AREA.

CONTRACTOR SHALL BE REQUIRED TO NOTIFY THE CITY OF MEMPHIS CONSTRUCTION INSPECTION DEPARTMENT (901) 663-4641 AND TRAFFIC ENGINEERING DEPARTMENT (901) 676-6700 A MINIMUM OF 24 HOURS PRIOR TO COMMENCING CONSTRUCTION OR IMPLEMENTING A TEMPORARY TRAFFIC CONTROL PLAN. ALL TRAFFIC CONTROL DEVICES MUST BE IN PLACE BEFORE CONSTRUCTION ACTIVITY BEGINS.

SIZES OF ALL SIGNS SHALL COMPLY WITH THE MUTCD.

ANY CLOSURE OF THE RIGHT OF WAY SHALL BE TIME LIMITED TO ACTIVE DEMOLITION OR CONSTRUCTION. CONTINUOUS UNANNOUNCED CLOSURE OF THE RIGHT OF WAY SHALL NOT BE ALLOWED FOR THE DURATION OF THE PROJECT. IF THIS IS THE CASE, THE CONTRACTOR SHALL PROVIDE AN ADDITIONAL TRAFFIC CONTROL PLAN WITH THE TIME NEEDED PER PHASE TO COMPLETE EACH PORTION OF THE WORK. TIME LIMITS WILL BEGIN ON THE DAY OF CLOSURE AND WILL BE MONITORED BY THE ENGINEERING CONSTRUCTION INSPECTORS (901) 696-2462 ON THE JOB.

CONTRACTOR MUST ENSURE HE OBTAINS THE NECESSARY PERMITS FROM MATA 14 ONE WEEK PRIOR TO COMMENCEMENT OF WORK.

CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING WITH MATA IN ORDER TO OBTAIN THE ROADWAY WORKER PROTECTION TRAINING.

CONTRACTOR MUST ALWAYS HAVE THE RED SAFETY IDENTIFICATION CARD ON HAND WHEN WHILE HE/SHE IS ON MATA PROPERTY.

GENERAL STRUCTURAL REPAIR NOTES:

CONTRACTOR IS TO NOTIFY THE ENGINEER OF ANY STRUCTURAL DEFICIENCY FOR WHICH THERE IS NOT A REPAIR INDICATED IN THESE PLANS.

CONTRACTOR IS TO FOLLOW THE REPAIR PRODUCT APPLICATION INSTRUCTIONS AND PREPARE THE EXISTING SURFACE IN ACCORDANCE WITH THE PRODUCT REQUIREMENT EVEN IF THIS REQUIRES AN ADDITIONAL PRODUCT OR ADDITIONAL SURFACE PREPARATION.

PRODUCT SUBSTITUTION REQUESTS WILL ONLY BE REVIEWED DURING THE BIDDING PHASE OF THE PROJECT. ANY PRODUCT SUBSTITUTION THAT WAS NOT APPROVED PRIOR TO THE BIDDING WILL NOT BE REVIEWED OR ACCEPTED UNLESS ORIGINALLY SPECIFIED PRODUCTS ARE NOT REASONABLY AVAILABLE FROM PRODUCT MANUFACTURER.

CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL MEET OR EXCEED THE REQUIREMENTS OF THE MEMPHIS AREA TRANSIT AUTHORITY CONSTRUCTION SPECIFICATION.

IF, DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR FINDS ANY DISCREPANCIES OR CONFLICTS BETWEEN THE PROPOSED SITE

IMPROVEMENTS INDICATED ON THE PLANS AND THE PHYSICAL CONDITIONS OF THE SITE, OR ANY ERRORS OR OMISSIONS WITHIN THE PLANS OR IN THE SITE LAYOUT AS PROVIDED BY THE ENGINEER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IMMEDIATELY NOTIFY THE ENGINEER. UNTIL AUTHORIZED TO PROCEED, ANY WORK PERFORMED BY THE CONTRACTOR AFTER SUCH A DISCOVERY WILL BE AT THE CONTRACTOR'S SOLE RISK AND EXPENSE.

CONTRACTOR SHALL AT ALL TIMES EMPLOY ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES TO PREVENT DAMAGE TO THE PROPERTY, ADJACENT PROPERTIES, PUBLIC RIGHTS-OF-WAY, AND FINANCE PUBLIC OR PRIVATE SYSTEMS, INCLUDING BUT NOT LIMITED TO THOSE INDICATED ON THE PLANS.

REPLACE AND DESIGN IN FIELD AS NOTED.

BALLAST TO BE REMOVED AND REAGED.

EXISTING ON TRACK AND BALLAST TO BE PROTECTED BY CONTRACTOR.

CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH MATA AND ON ABOUT CONSTRUCTION ACTIVITIES, WORK HOURS, AND SAFETY REQUIREMENTS PRIOR TO CONSTRUCTION.

CONTRACTOR MUST HAVE WRITTEN APPROVAL FROM MATA AND ON ONE WEEK PRIOR TO CONSTRUCTION.

IF "T" SHEETS WERE NOT PRODUCED BY SSR AND SSR ASSUMES NO RESPONSIBILITY FOR THE INFORMATION HEREIN. QUESTIONS ABOUT INFORMATION ON "T" SHEETS SHOULD BE DIRECTED TO MR. SHAN CHEN AT (601) 893-2945.

PAINTING NOTES

IT IS A POSSIBILITY THE BRIDGE WAS ORIGINALLY PAINTED WITH MATERIALS CONTAINING LEAD AND/OR CHROMIUM AND THE CONTRACTOR IS REQUIRED TO PROCEED ACCORDINGLY TO TAKE ALL MANDATORY SAFEGUARDS PRESCRIBED BY STATE AND FEDERAL LAW FOR BOTH WORKER PROTECTION AND HAZARDOUS MATERIALS DISPOSAL.

SEE T.O.D. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION EDITION 603.13 REGARDING THE PRIMING AND PAINTING OF EXISTING STEEL. SYSTEM B FROM TABLE 603.06-2 IN T.O.D. STANDARD SPECIFICATIONS.

CLEANING AND PAINTING: ALL AREAS OF RUST INSIDE STEEL CURBS AND PER SUPPORT DIAPHRAGMS SHALL BE HAND TOoled AND MEDIA BLAST CLEANED AND PAINTED. BLAST CLEANING SHALL BE IN ACCORDANCE WITH SECTION 603.06 (2), PAINT SHALL BE SYSTEM B IN ACCORDANCE WITH SUB SECTION 603.06. 2899 SPECIFICATIONS 603 AND 610 OF THE STANDARD SPECIFICATIONS.

ALL PRODUCTS USED IN THIS COATING SYSTEM, INCLUDING THINNERS, MUST BE SUPPLIED BY THE MANUFACTURER.

PAINTING STRUCTURAL STEEL: ALL SURFACES OF STRUCTURAL STEEL MEMBERS MUST BE PAINTED. HOWEVER, THE FAYING SURFACES OF FIELD SPLICES, THE TOP OF THE TOP FLANGE, SURFACES EMBEDDED IN CONCRETE, AND BEARING AREAS SHALL RECEIVE ONLY 1 MIL THICKNESS OF SHOP COAT. BOLTED FAYING SURFACES FOR THIS PROJECT ARE DESIGN FOR A CLASS B SURFACE. (SEE AASHTO TABLE 10.32.3c). THE CONTRACTOR SHALL INSURE THE FAYING SURFACES ARE PREPARED TO PROVIDE A SHOP COEFFICIENT AT LEAST EQUAL TO THAT REQUIRED FOR THIS CLASS. THE FAYING SURFACES ARE TO BE PAINTED, AS NOTED ABOVE, AND THE CONTRACTOR SHALL SUPPLY A PAINT MANUFACTURER'S CERTIFICATION THAT THE PAINT TO BE USED WILL PROVIDE THE REQUIRED RESISTANCE AT THE PROPOSED THICKNESS WHEN TESTED IN ACCORDANCE WITH AASHTO 10.32.3.2.

PAINT: INORGANIC ZINC WITH URETHANE FINISH - (GREEN) TOP COAT CONFORMING TO FEDERAL STANDARD 598, (4086).



2650 Thousand Oaks Boulevard,
Suite 2200
Memphis, TN 38118
(901) 683-9900
FAX: (901) 683-3990
www.ssr-inc.com



No.	Date	Description
1	4/7/2023	NOTE

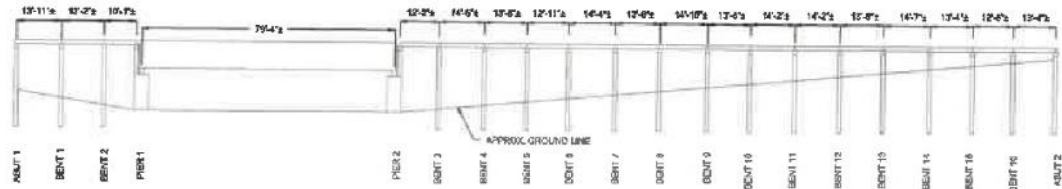
RIVERSIDE AT BEALE
ST. BRIDGE
SUBSTRUCTURE REPAIRS

GENERAL NOTES

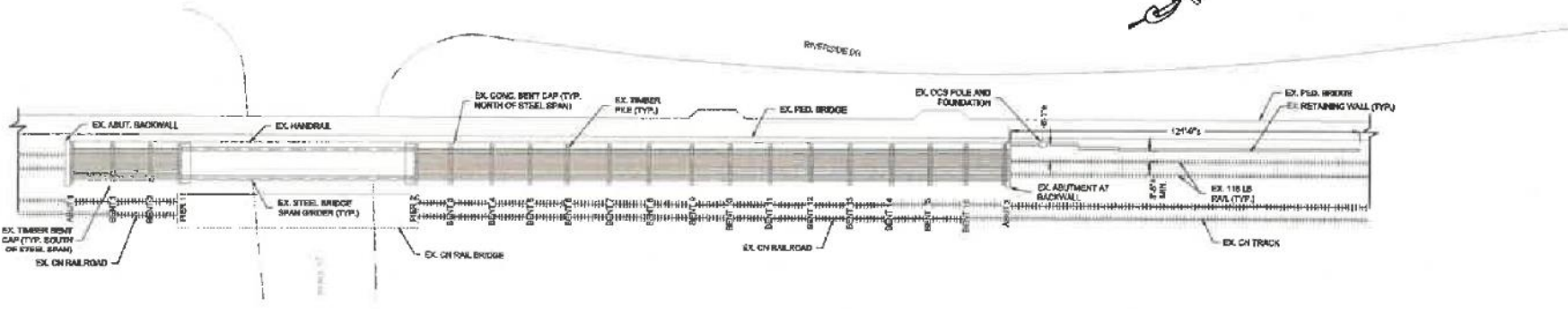
DRAWN BY: K.A.J.
DESIGNED BY: K.A.J.
CHECKED BY: K.E.H.
QA/QC BY: I.C.E.

JOB NO.: 22840120
PHASE: CD
DATE: 07/01/2022

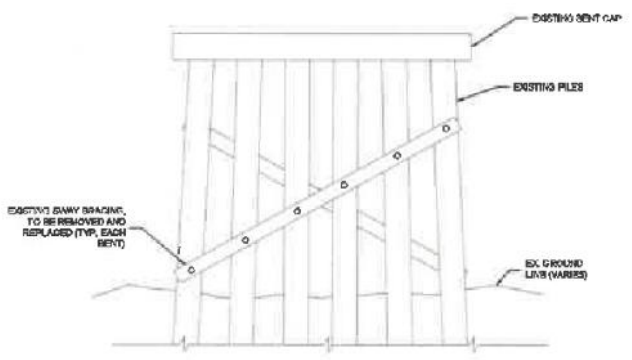
DRAWING NO:
S0.1



ELEVATION 1
1"=20'-0"



PLAN 2
1"=20'-0"



TYPICAL BENT ELEVATION 3
1"=20'-0"

GENERAL SCOPE OF WORK

1. REMOVE AND REPLACE RAILROAD TIES FOR THE LENGTH OF THE BRIDGES AND RIVERFRONT LINE IN ORDER TO MEET FRA CLASS 2 MINIMUM REQUIREMENTS. ESTIMATED QUANTITY = 280L.
2. REPAIR EXISTING PILES IN POOR CONDITION WITH BRUCE AS SHOWN IN DETAIL 151.2.
3. REPLACE EXISTING DAWY BRACING AT BENTS.
4. REPLACE EXISTING HANDRAIL WITH OSHA COMPLIANT RAIL.
5. REPAIR STEEL SPAN AND BRIDGE.
6. REPAIR GUM ROSE ON MATA RIVERSIDE LINE NEAR BEALE STATION.

NOTES

1. CONTRACTOR TO COORDINATE WITH OH TO ENSURE CONSTRUCTION ACTIVITY DOES NOT IMPACT OPERATIONS OF ADJACENT RAILROAD.
2. CONTRACTOR TO REMOVE AND STORE RAIL DURING CONSTRUCTION AT HIS ADDITIONAL COSTS TO THE OWNER.
3. CONTRACTOR MUST SUBMIT A SEQUENCE OF CONSTRUCTION PLAN TO MATA AND EOK FOR REVIEW AND APPROVAL ONE MONTH PRIOR TO CONSTRUCTION.



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Suite 3200
Memphis, TN 38119
(901) 683-3900
FAX: (901) 683-3900
www.ssr-inc.com



No.	Date	Description

RIVERSIDE AT BEALE ST. BRIDGE SUBSTRUCTURE REPAIRS

EXISTING BRIDGE LAYOUT

DRAWN BY: K.A.J.
DESIGNED BY: K.A.J.
CHECKED BY: K.E.H.
QA/QC BY: I.C.E.

JOB NO. 22040120 DRAWING NO. S1.0
PHASE CD
DATE: 07/01/2022

SSR Smith
Seckman
Reid, Inc.
2650 Thomas Dale Boulevard,
Suite 3200
Memphis, TN 38118
(901) 683-9900
FAX: (901) 683-7590
www.ssr-inc.com



No.	Date	Description

**RIVERSIDE AT BEALE
ST. BRIDGE
SUBSTRUCTURE REPAIRS**

**BRIDGE REPAIR
PLAN**

DRAWN BY: K.A.J.
DESIGNED BY: K.A.J.
CHECKED BY: K.E.H.
QA/QC BY: J.C.E.

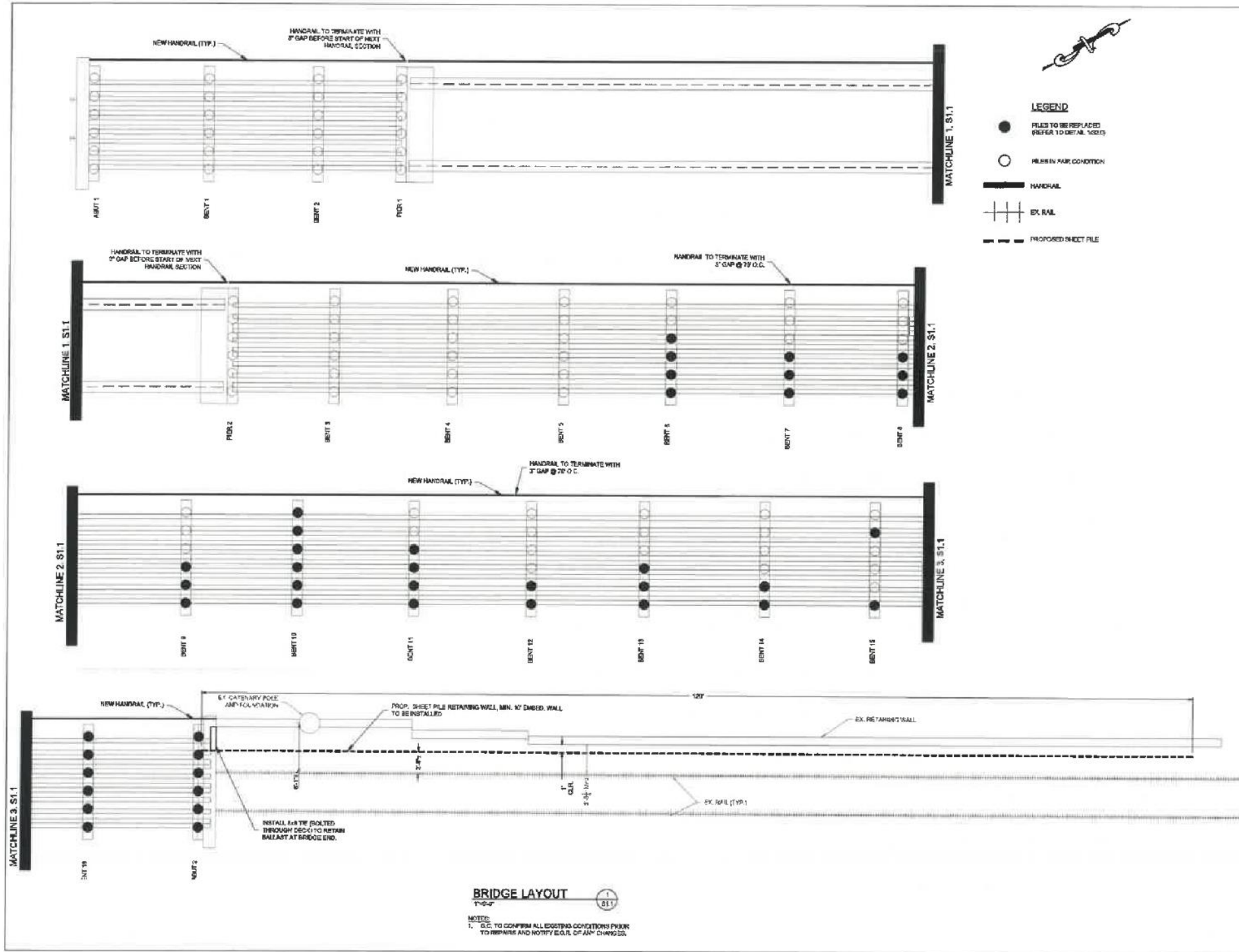
JOB NO.: 22549120
PHASE: CD
DATE: 07/01/2022

DRAWING NO.:
S1.1



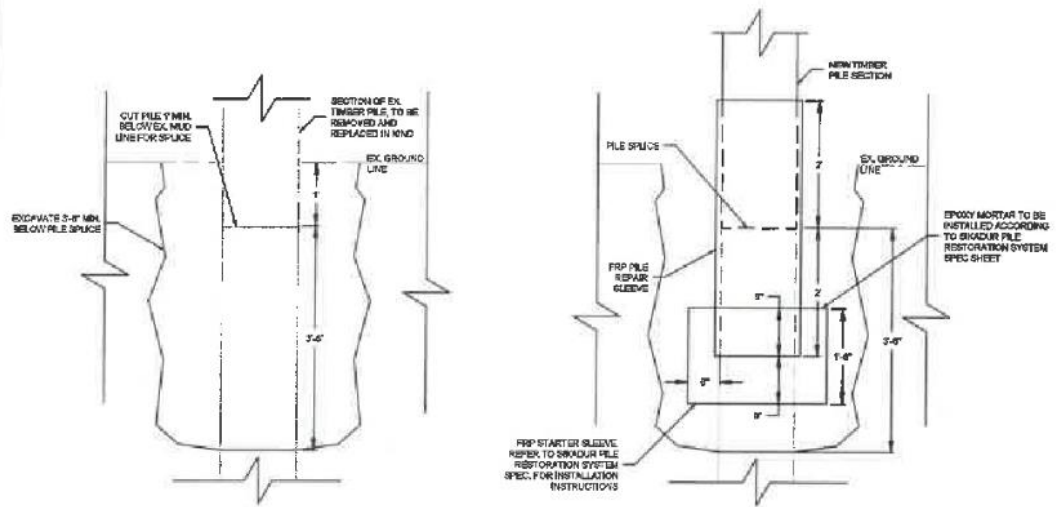
LEGEND

- FILES TO BE REPLACED (REFER TO DETAIL 10020)
- FILES IN FAIR CONDITION
- HANDRAIL
- EX. RAIL
- - - PROPOSED INDECT FILE



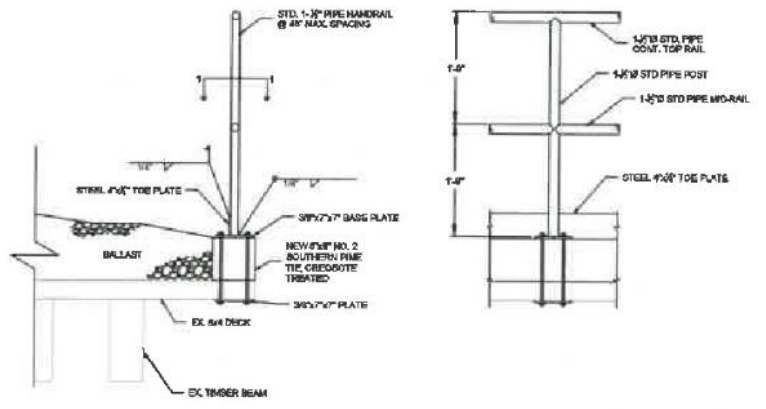
BRIDGE LAYOUT
1
S1.1

NOTES:
1. O.C. TO CONFIRM ALL EXISTING CONDITIONS PRIOR TO REPAIRS AND NOTIFY E.O.R. OF ANY CHANGES.



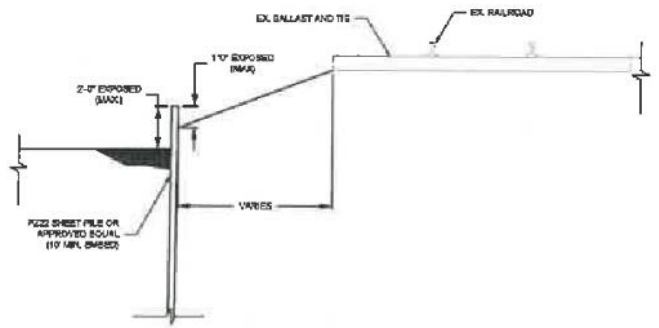
TIMBER PILE SPLICE DETAIL 1
1/4" x 1/4"

- NOTE:**
1. CONTRACTOR SHOULD UTILIZE SIKKOUR PILE RESTORATION SYSTEM OR APPROVED EQUAL.
 2. CONTRACTOR SHOULD COORDINATE FRP SPLICE DETAIL AND INSTALLATION WITH MANUFACTURER.
 3. EXISTING TIMBER PILE SHOULD BE CLEANED AND PREPARED THOROUGHLY TO ACHIEVE A LATENCY AND CORROSION-FREE, SOUND SURFACE BY BLAST CLEANING, WIRE BRUSHING, OR OTHER EQUIVALENT MECHANICAL MEANS. PILE SURFACE SHOULD BE DRY, FREE AND DRY PRIOR TO PRIMING AND INSTALLATION.
 4. CONTRACTOR MUST ENSURE THEY MEET ALL MANUFACTURER INSTALLATION AND MATERIAL REQUIREMENTS.

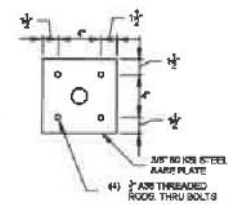


HANDRAIL DETAIL 2
1/4" x 1/4"

- NOTE:**
1. ALL STEEL SHALL BE HOT DIPPED GALVANIZED
 2. ALTERNATIVE PREPARED HANDRAIL SYSTEMS ARE SUBJECT TO APPROVAL BY THE ENGINEER AND NHTA.



SHEET PILE DETAIL 3
1/4" x 1/4"



SECTION 1-1 4
1/4" x 1/4"

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No.	Date	Description

**RIVERSIDE AT BEALE
ST. BRIDGE
SUBSTRUCTURE REPAIRS**

**BRIDGE REPAIR
DETAILS**

DRAWN BY: K.A.J.
DESIGNED BY: K.A.J.
CHECKED BY: K.E.H.
QA/QC BY: I.C.E.

JOB NO. 22640120 DRAWING NO.
PHASE CD S1.2
DATE: 07/01/2022

GENERAL NOTES

EXISTING CONDITIONS NOTES:

CONFORMANCE OF EXISTING CONDITIONS TO THE DRAWINGS HAS NOT BEEN VERIFIED. ALL CONDITIONS ASSOCIATED WITH ANY AREA SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO PROCEEDING WITH THE WORK IN THAT AREA. NOTIFY ENGINEER IF CONDITIONS OR DIMENSIONS VARY.

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SITE SETBACKS, EASEMENTS AND DIMENSIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

ANY SIGNAGE REMOVED DURING CONSTRUCTION SHALL BE REINSTALLED AFTER CONSTRUCTION IS COMPLETE. SIGNS INSTALLATION MUST MEET THE CURRENT CITY OF MEMPHIS STANDARD CONSTRUCTION STANDARDS, MEMPHIS AREA TRANSIT AUTHORITY STANDARDS, OR CN STANDARDS.

CONTRACTOR SHALL KEEP THE WORK AREA AS CLEAN AS POSSIBLE DURING THE CONSTRUCTION PERIOD AND CLEAN THE WORK AREAS DAILY.

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE UTILITY COMPANIES WHICH MAINTAIN A UTILITY LINE WITHIN THE BOUNDARIES OF THE PROJECT PRIOR TO INITIATION OF ANY CONSTRUCTION ON THE PROJECT OR IN THE STREETS BORDERING THE PROJECT. THE CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN CONSTRUCTION PARAMETERS, WHETHER SHOWN ON THE CONSTRUCTION PLANS OR NOT, DURING THE WORK ON THE PROJECT. DAMAGE BY THE CONTRACTORS OPERATIONS, SHALL BE REPAIRED OR REPLACED IN KIND AT NO ADDITIONAL COST TO THE OWNER. THE ACCIDENTAL DISCONNECTION OF ANY UTILITY SERVICE SHALL BE IMMEDIATELY RESTORED AT NO ADDITIONAL COST TO THE OWNER. BEFORE EXCAVATIONS ARE BEGUN, THE TENNESSEE ONE-CALL SYSTEM (800) 351-1111 SHOULD BE CONTACTED FOR VERIFICATION OF ALL UTILITY TYPES AND FOR LOCATIONS. NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE TENNESSEE ONE-CALL SYSTEM, THEREFORE, THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITY COMPANIES AS WELL AS THE TENNESSEE ONE-CALL SYSTEM.

CONSTRUCTION NOTES:

THE CONTRACTOR SHALL NOTIFY MATA REPRESENTATIVES PRIOR TO ANY WORK THAT WILL INVOLVE OR IMPACT THE TRACK, TROLLEY OPERATIONS, TROLLEY STATIONS, OR THE OVERHEAD CATENARY SYSTEM.

A MINIMUM OF 24-HOURS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY OF MEMPHIS CONSTRUCTION INSPECTION OFFICE AT (901) 636-2462.

THE CONTRACTOR MUST HAVE WRITTEN APPROVAL FROM THE PROJECT ENGINEER, THE OWNER, AND MATA BEFORE ANY CHANGE IN DESIGN IS MADE.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES.

CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND ADEQUATE WORKING CONDITIONS THROUGHOUT THE DURATION OF CONSTRUCTION OF THE PROPOSED SITE.

ALL NEWLY CUT OR FILLED AREAS, LACKING ADEQUATE VEGETATION, SHALL BE SEEDED, MULCHED, FERTILIZED AND/OR SODDED AS REQUIRED TO EFFECTIVELY CONTROL SOIL EROSION.

ALL CONSTRUCTION MATERIALS AND PROCEDURES SHALL MEET OR EXCEED THE REQUIREMENTS OF THE MEMPHIS AREA TRANSIT AUTHORITY CONSTRUCTION SPECIFICATION.

CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

THE CONTRACTOR AT NO TIME SHALL ENCR OACH UPON OR CAUSE DISRUPTIONS TO TRAFFIC FLOW ON ADJACENT STREETS RIGHT-OF-WAY WITHOUT SECURING THE PROPER PERMITS PRIOR TO COMMENCING DEMOLITION OR CONSTRUCTION OPERATIONS.

ALL TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION SHALL MEET THE STANDARD PRESCRIBED IN THE MUTCD.

THE APPROPRIATE TRAFFIC CONTROL SHALL BE INSTALLED AT THE INCEPTION OF EACH STAGE OF CONSTRUCTION AND SHALL BE PROPERLY MAINTAINED AND/OR OPERATED DURING THE TIME SUCH SPECIAL CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS THEY ARE NEEDED AND SHALL BE IMMEDIATELY REMOVED THEREAFTER.

THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC CONTROL ON WHERE NECESSARY AT ALL TIMES WHEN HIS/HER SUBCONTRACTORS ARE WORKING IN THESE STREETS.

CONTRACTOR SHALL USE FLEXIBLE DRUMS WITH TYPE "C" WARNING LIGHTS TO SEPARATE TRAFFIC FROM THE CONSTRUCTION AREA.

CONTRACTOR SHALL BE REQUIRED TO NOTIFY THE CITY OF MEMPHIS CONSTRUCTION INSPECTION DEPARTMENT (901.363.2462) AND TRAFFIC ENGINEERING DEPARTMENT (901.576.6710) A MINIMUM OF 24 HOURS PRIOR TO COMMENCING CONSTRUCTION OR IMPLEMENTING A TEMPORARY TRAFFIC CONTROL PLAN. ALL TRAFFIC CONTROL DEVICES MUST BE IN PLACE BEFORE CONSTRUCTION ACTIVITY BEGINS.

SIZES OF ALL SIGNS SHALL COMPLY WITH THE MUTCD.

ANY CLOSURE OF THE RIGHT OF WAY SHALL BE TIME LIMITED TO ACTIVE DEMOLITION OR CONSTRUCTION. CONTINUOUS UNWARRANTED CLOSURE OF THE RIGHT OF WAY SHALL NOT BE ALLOWED FOR THE DURATION OF THE PROJECT. IF THIS IS THE CASE, THE CONTRACTOR SHALL PROVIDE AN ADDITIONAL TRAFFIC CONTROL PLAN WITH THE TIME NEEDED PER PHASE TO COMPLETE THAT PORTION OF THE WORK. TIME LIMITS WILL BEGIN ON THE DAY OF CLOSURE AND WILL BE MONITORED BY THE ENGINEERING CONSTRUCTION INSPECTORS (901.636.2462) ON THE JOB.

CONTRACTOR MUST ENSURE HE OBTAINS THE NECESSARY PERMITS FROM MATA (1) ONE WEEK PRIOR TO COMMENCEMENT OF WORK.

CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING WITH MATA IN ORDER TO OBTAIN THE ROADWAY WORKER PROTECTION TRAINING.

CONTRACTOR MUST ALWAYS HAVE THE ROW SAFETY IDENTIFICATION CARD ON HIM/HER WHILE HE/SHE IS ON MATA PROPERTY.

GRADE CROSSING REPAIR NOTES:

CONTRACTOR IS TO NOTIFY THE ENGINEER OF ANY DEFICIENCY FOR WHICH THERE IS NOT A REPAIR INDICATED IN THESE PLANS.

CONTRACTOR IS TO FOLLOW THE REPAIR PRODUCT APPLICATION INSTRUCTIONS AND PREPARE THE EXISTING SITE CONDITIONS IN ACCORDANCE WITH THE PRODUCT REQUIREMENT EVEN IF THIS REQUIRES AN ADDITIONAL PRODUCT OR ADDITIONAL EXISTING SITE PREPARATION.

PRODUCT SUBSTITUTION REQUESTS WILL ONLY BE REVIEWED DURING THE BIDDING PHASE OF THE PROJECT. ANY PRODUCT SUBSTITUTION THAT WAS NOT APPROVED PRIOR TO THE BID DATE WILL NOT BE REVIEWED OR ACCEPTED UNLESS ORIGINALLY SPECIFIED PRODUCTS ARE NOT REASONABLY AVAILABLE FROM PRODUCT MANUFACTURER.

IF, DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR FINDS ANY CONFLICTS BETWEEN THE PROPOSED SITE IMPROVEMENTS INDICATED ON THE PLANS AND THE PHYSICAL CONDITIONS OF THE SITE, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IMMEDIATELY NOTIFY THE ENGINEER. UNTIL AUTHORIZED TO PROCEED, ANY WORK PERFORMED BY THE CONTRACTOR AFTER SUCH DISCOVERY WILL BE AT THE CONTRACTOR'S SOLE RISK AND EXPENSE.

CONTRACTOR SHALL AT ALL TIMES EMPLOY ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES TO PREVENT DAMAGE TO THE PROPERTY, ADJACENT PROPERTIES, PUBLIC RIGHTS-OF-WAY, AND DRAINAGE (PUBLIC OR PRIVATE) SYSTEMS, INCLUDING BUT NOT LIMITED TO THOSE INDICATED ON THE PLANS.

IT IS ANTICIPATED THAT THE GRADE CROSSING REPAIR WORK WILL ENCR OACH INTO THE FOUL ZONE OF CN RAILROAD'S ACTIVE TRACK WHICH IS 30 FEET MEASURED FROM THE CENTERLINE OF TRACK AS PER FRA REGULATION 49 CFR 224. THEREFORE, THE CONTRACTOR WILL NEED TO COORDINATE WITH CN TO OBTAIN RAILROAD FLAGGING SERVICES TO PERFORM ANY WORK WITHIN THE FOUL ZONE.

CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH MATA AND CN ABOUT CONSTRUCTION ACTIVITIES, WORK HOURS, AND SAFETY REQUIREMENTS PRIOR TO CONSTRUCTION.

CONTRACTOR MUST HAVE WRITTEN APPROVAL FROM MATA AND CN ONE WEEK PRIOR TO CONSTRUCTION.

STANDARD SPECIFICATIONS TO BE USED FOR GRADE CROSSING REPAIRS

CITY OF MEMPHIS

SECTION 01551 - TRAFFIC CONTROL FOR CONSTRUCTION WORK ZONES

SECTION 02741 - FLEXIBLE PAVEMENT - ASPHALTIC CONCRETE

SECTION 02950 - REMOVAL AND REPLACEMENT OF PAVEMENTS AND INCIDENTALS

TDOT

SECTION 202 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS, 202.06 REMOVAL OF PAVEMENT, SIDEWALKS, AND CURBS CONSTRUCTED OF PORTLAND CEMENT CONCRETE



THESE REPAIR DRAWINGS WERE DEVELOPED WITH LIMITED EXISTING SURVEY INFORMATION AND THEREFORE WILL NOT BE SIGNED AND SEALED BY A LICENSED ENGINEER. THESE DRAWINGS ARE INTENDED TO PROVIDE GUIDANCE FOR THE CONTRACTOR TO COMPLETE THE REPAIRS.

No.	Date	Description
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No.	Date	Description

RIVERFRONT LOOP AT-GRADE CROSSING REPAIRS

GENERAL NOTES

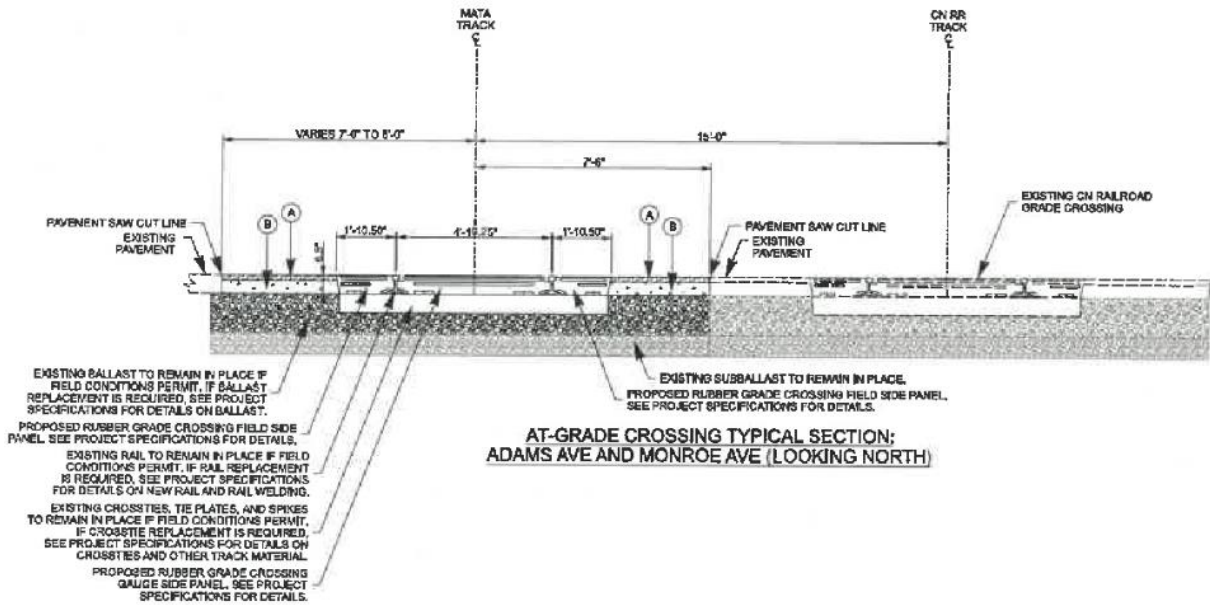
DRAWN BY: SBNK
 DESIGNED BY: SBNK
 CHECKED BY: LGL
 U.A.D.C. BY: GFC

JOB NO: 30601140.009
 PHASE: CD
 DATE: 04/04/2023

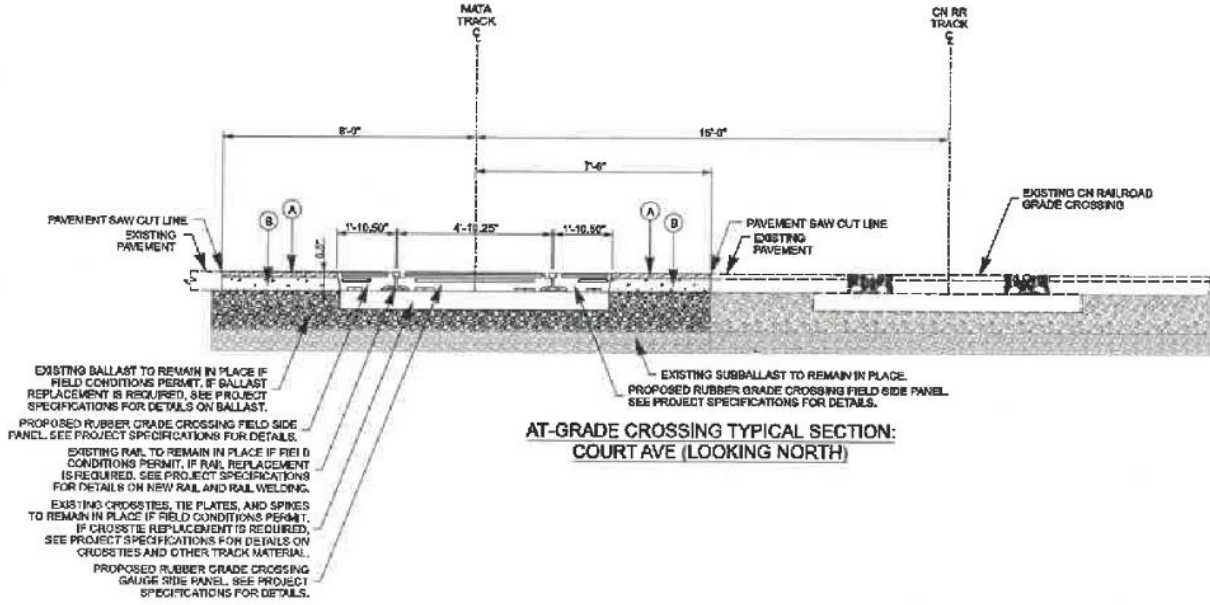
DRAWING NO:
T0.1



THIS REPAIR DRAWING WAS DEVELOPED WITH LIMITED EXISTING SURVEY INFORMATION AND THEREFORE WILL NOT BE GRADED AND SEALED BY A LICENSED ENGINEER. THESE DRAWINGS ARE INTENDED TO PROVIDE CLEARANCE FOR THE CONTRACTOR TO COMPLETE THE REPAIRS.



**AT-GRADE CROSSING TYPICAL SECTION:
ADAMS AVE AND MONROE AVE (LOOKING NORTH)**



**AT-GRADE CROSSING TYPICAL SECTION:
COURT AVE (LOOKING NORTH)**

PROPOSED PAVEMENT DETAILS

- (A) MATCH EX. SURFACE COURSE. ASPHALTIC CONCRETE SURFACE, MIX NO. 1, 2" THICKNESS.
- (B) MATCH EX. BINDER COURSE. ASPHALTIC CONCRETE BINDER, MIX NO. 3, 4.5" THICKNESS.

No.	Date	Description

**RIVERFRONT LOOP
AT-GRADE
CROSSING REPAIRS**

TYPICAL SECTIONS

DRAWN BY: MNC
DESIGNED BY: MNC
CHECKED BY: SAK
QA/QC BY: GC

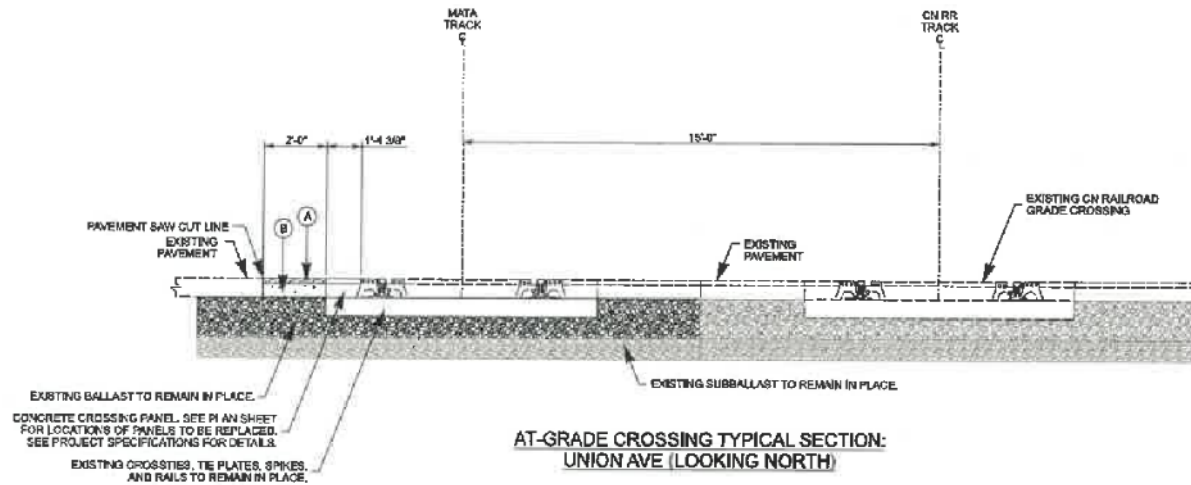
JOB NO.: 3050140309
PHASE: 03
DATE: 04/04/23

DRAWING NO.:
T1.1

SCALE: NOT TO SCALE



THESE REPAIR DRAWINGS WERE DEVELOPED WITH LIMITED EXISTING SURVEY INFORMATION AND THEREFORE WILL NOT BE SIGNED AND SEALED BY A LICENSED ENGINEER. THESE DRAWINGS ARE INTENDED TO PROVIDE GUIDANCE FOR THE CONTRACTOR TO COMPLETE THE REPAIRS.



**AT-GRADE CROSSING TYPICAL SECTION:
UNION AVE (LOOKING NORTH)**

PROPOSED PAVEMENT DETAILS

- Ⓐ MATCH EX. SURFACE COURSE, ASPHALTIC CONCRETE SURFACE, MIX NO. 1, 2" THICKNESS.
- Ⓑ MATCH EX. BINDER COURSE, ASPHALTIC CONCRETE BINDER, MIX NO. 3, 4.5" THICKNESS.

No.	Date	Description

**RIVERFRONT LOOP
AT-GRADE
CROSSING REPAIRS**

TYPICAL SECTIONS

DRAWN BY: WMC
DESIGNED BY: WMC
CHECKED BY: SMK
QA/QC BY: GC

JOB NO.: 0007143009
PHASE: CD
DATE: 04/04/23

DRAWING NO:
T1.2

SCALE: NOT TO SCALE



THESE REPAIR DRAWINGS WERE DEVELOPED WITH LIMITED EXISTING SURVEY INFORMATION AND THEREFORE WILL NOT BE FINISHED AND SEALED BY A LICENSED ENGINEER. THESE DRAWINGS ARE INTENDED TO PROVIDE GUIDANCE FOR THE CONTRACTOR TO COMPLETE THE REPAIRS.

No. Date Description

No.	Date	Description

RIVERFRONT LOOP AT-GRADE CROSSING REPAIRS

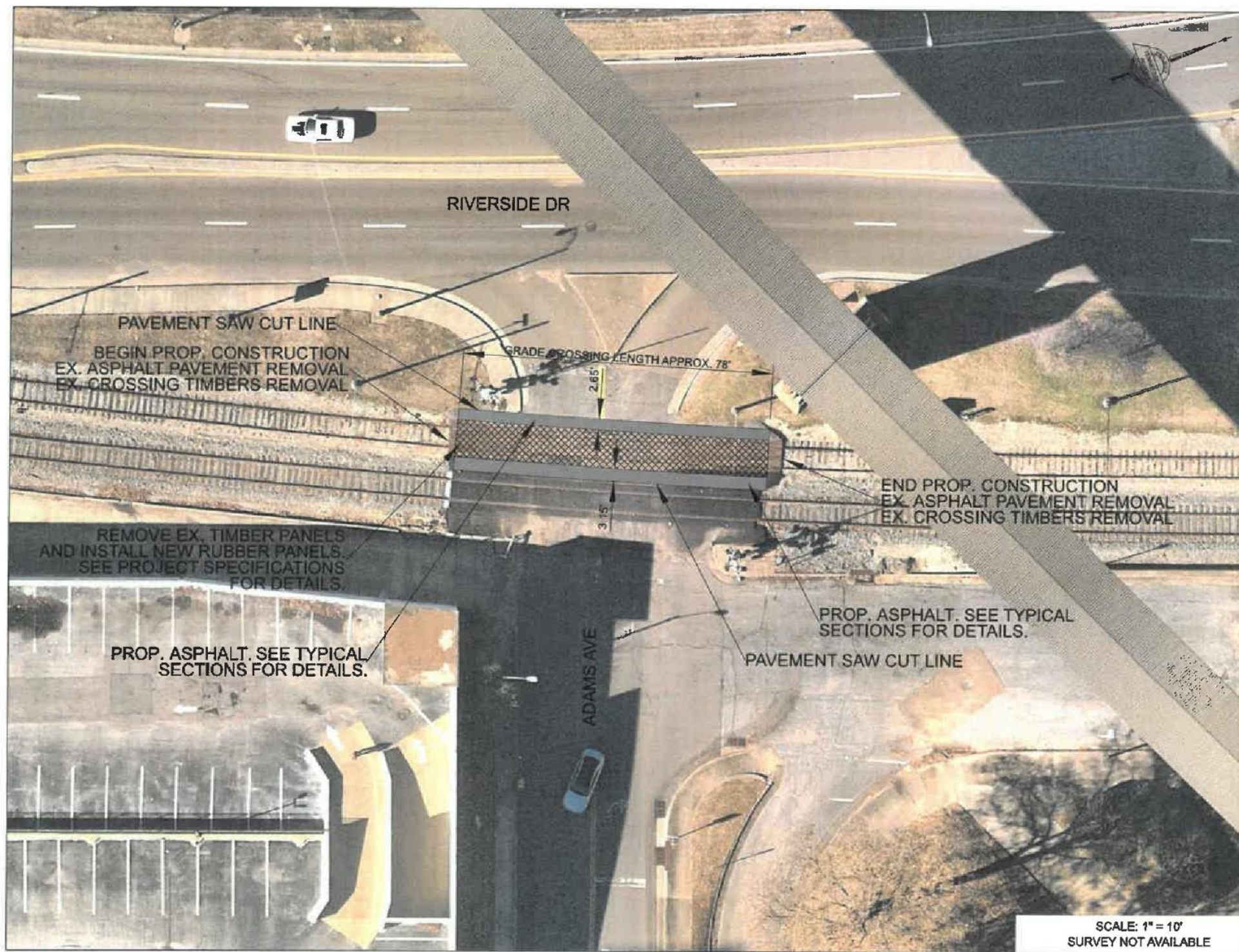
GRADE CROSSING PLAN
ADAMS AVE

DRAWN BY: KCF
DESIGNED BY: KCF
CHECKED BY: SHK
CALC. BY: GC

JOB NO.: 20021142.029
PHASE: CD
DATE: 04/04/23

DRAWING NO.:
T2.1

SCALE: 1" = 10'
SURVEY NOT AVAILABLE





THESE REPAIR DRAWINGS WERE DEVELOPED WITH LIMITED EXISTING SURVEY INFORMATION AND THEREFORE WILL NOT BE SIGNED AND SEALED BY A LICENSED ENGINEER. THESE DRAWINGS ARE INTENDED TO PROVIDE GUIDANCE FOR THE CONTRACTOR TO COMPLETE THE REPAIRS.

No.	Date	Description

No.	Date	Description

RIVERFRONT LOOP AT-GRADE CROSSING REPAIRS

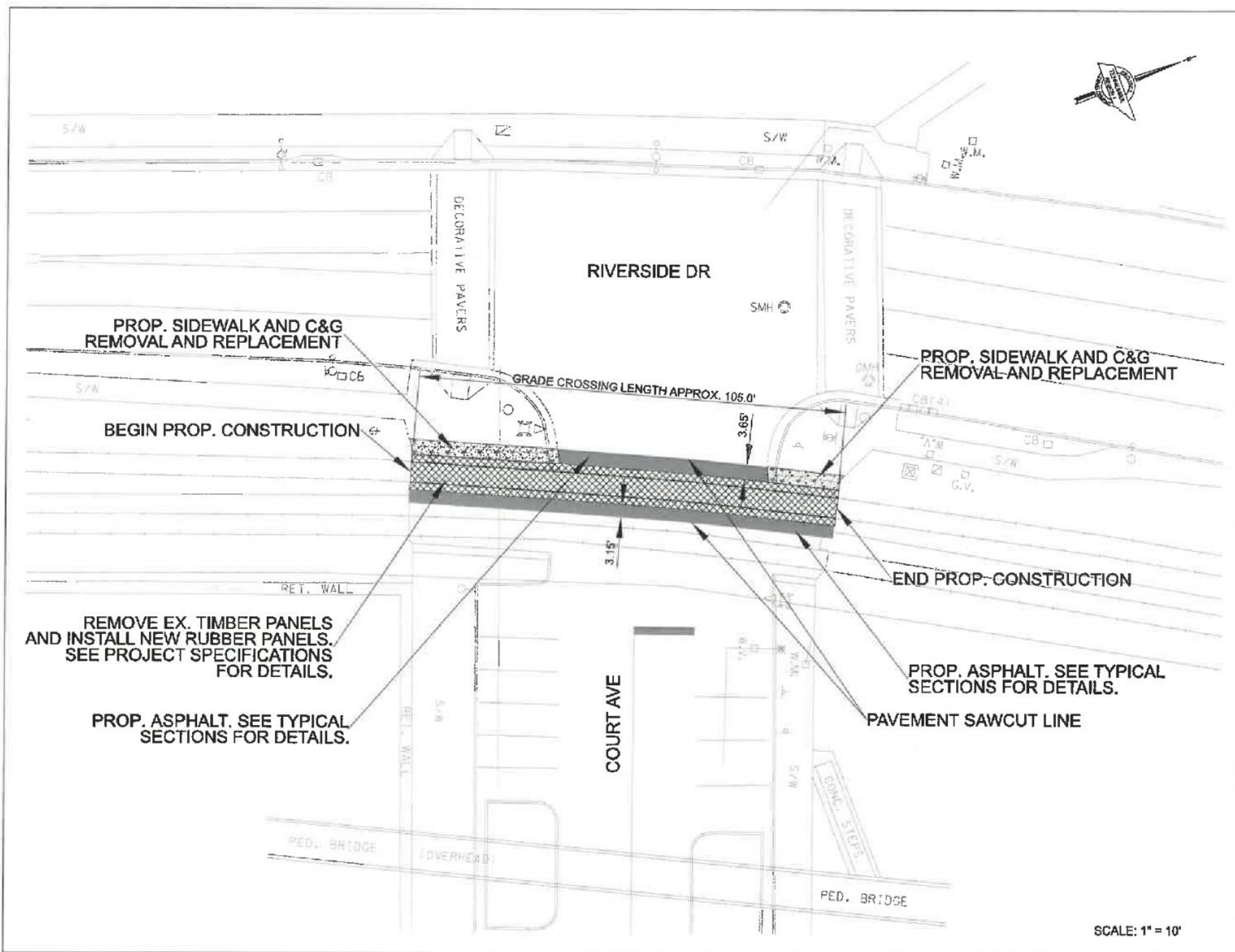
GRADE CROSSING PLAN
COURT AVE

DRAWN BY: MWC
DESIGNED BY: MRC
CHECKED BY: SMK
QA/QC BY: GC

JOB NO.: 3890140-009
PAGE: CD
DATE: 06/04/23

DRAWING NO.: T2.2

SCALE: 1" = 10'





THESE REPAIR DRAWINGS WERE DEVELOPED WITH LIMITED EXISTING SURVEY INFORMATION AND THEREFORE WILL NOT BE SIGNED AND SEALED BY A LICENSED ENGINEER. THESE DRAWINGS ARE INTENDED TO PROVIDE GUIDANCE FOR THE CONTRACTOR TO COMPLETE THE REPAIRS.

No. Date Description

No.	Date	Description

RIVERFRONT LOOP AT-GRADE CROSSING REPAIRS

GRADE CROSSING PLAN
MONROE AVE

DRAWN BY: MHC
DESIGNED BY: MHC
CHECKED BY: DMK
O.A.D.C. BY: GC

JOB NO.: 3250140.009
PHASE: CD
DATE: 04/04/23

DRAWING NO.:
T2.3

SCALE: 1" = 10'

