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APPENDIX RR-07

**GCRTA Standards
(Contract Document)**

State of Ohio
Department of Transportation
Jolene M. Molitoris, Director

**Innerbelt Bridge
Construction Contract Group 1 (CCG1)**

Revision Date: May 10, 2010



- Addendum No. 4 - Per Executed Agreement

SECTION 01501 - MAINTENANCE OF RAIL TRAFFIC AND RESUMPTION OF REVENUE SERVICE

Part 1 - General

1.1 DESCRIPTION

- A. The work must be carried out on an operating transit system. RTA will maintain revenue service on the affected portion of the line throughout the duration of the contract. The current scheduled regular operating hours and track availability periods are as follows:

<u>Area</u>	<u>Date</u>	<u>Days</u>	<u>Regular Operating Hours</u>	<u>Track Availability Periods</u>
Red Line:	Year Round	Mon. thru Fri. Sat. Sun.	3:10 a.m. to 1:36 a.m. 3:56 a.m. to 1:47 a.m. 3:56 a.m. to 1:48 a.m.	1:37 a.m. to 3:00 a.m.* 1:47 a.m. to 3:27 a.m. 1:48 a.m. to 3:26 a.m. *West of TCC 3:45 a.m.
Blue/Green Lines:	Year Round	Mon. thru Fri. Sat. Sun.	3:59 a.m. to 1:10 a.m. 3:44 a.m. to 1:07 a.m. 4:00 a.m. to 1:05 a.m.	1:10 a.m. to 3:30 a.m. 1:10 a.m. to 3:15 a.m. 1:10 a.m. to 3:30 a.m.
Waterfront Lines:	Year Round	Mon. thru Fri. Mon. thru Fri. Sat. & Sun.	5:59 a.m. to 9:15 a.m. 3:32 p.m. to 7:15 p.m. 9:09 a.m. to 6:46 p.m.	9:30 a.m. to 3:00 p.m. 7:30 p.m. to 5:30 a.m. 7:00 p.m. to 8:30 a.m. Special events see below
E. 55th St. Yards:	Year Round	7 days a week	24 hours a day	None

Generally, operating hours are extended during Special Events on the Red, and Blue/Green Lines for 1-1/2 hours after the conclusion of the event. A special Event is defined as an event that is likely to extend beyond 10:00 p.m. and is expected to draw 10,000 spectators or more to an area located within 1/4 mile of an RTA rail station.

Generally, operating hours are extended during Special Events on the Waterfront Lines for 1-1/2 hours after the conclusion of the event. A special Event here is defined as an event that is likely to occur at any time, and is expected to draw 3,000 spectators or more to an area located within 1/4 mile of an RTA Waterfront Rail Line.

A special event on one line can impact other lines as well. GCRTA reserves the right to restrict or deny track availability when GCRTA deems it necessary to expand the hours of service to accommodate special events.

Generally after the last train exits a proposed work area the Control Center will authorize occupancy for work.

- B. Contractor must not interfere with the normal transit system operations. Work may only be performed by permit as delineated in this section of these specifications.
- C. The Owner retains authority over all rail traffic operations. The Owner shall reserve the right to approve (or reject) the adequacy of the Contractor's protective measures to assure continuity of the Authority operations.

- D. Additional single tracking after 8 p.m. or stopping of train traffic during the above Regular Operating Hours may be permitted. However, it is not guaranteed and the Contractor may not rely on having access to track areas during Regular Operating Hours. When permitted, it may be allowed under the following:
 - 1. The Contractor has justified why the single tracking request is needed.
 - 2. The Contractor has indicated the time frames in the original construction schedule.
- E. The requested occupancy will not be granted and can be revoked, even after being issued, under the following conditions and at GCRTA's discretion:
 - 1. Conflict with Special Events
 - 2. Conflict with the RTA system maintenance and/or emergency work
 - 3. Conflict with other ongoing construction projects
 - 4. When snowfall exceeds or is forecast to exceed 5", when freezing rain is forecast, or when snow trains must be operated
 - 5. When visibility is poor, creating an unsafe working environment for both work crews and GCRTA operations
- F. Any occupancy of the Rail right-of-way requires an approved occupancy permit. Work or occupancy within 10 feet of the centerline of any track requires an approved occupancy permit and generally daytime work hours are only available from 9:30 am to 2:30 pm.

Part 2 - Products

- 2.1 Not Applicable

Part 3 - Execution

3.1 RESTRICTIONS BY GCRTA

- A. The Contractor must receive a permit prior to starting work that may affect GCRTA property and facilities. Each Contractor must submit requests through the Engineering and Project Development (E&PD) Manager for prior Authority approval for occupying the rail right-of-way. These requests will be of the following types:
 - 1. Wayside work - Required for all work performed on the rail right-of-way, not between the tracks and more than 10 feet from the centerline of any track.**
 - 2. Active Track Occupancy Permit - Required for all work performed on the rail right-of-way using hand tools and within 10 feet from the centerline of any track.
 - 3. Track Outage Permit - Required for any single tracking operation where one track is taken out of service.

4. Power Outage Permit - Required for any work on the rail right-of-way that is within 10 feet of the energized catenary conductor wire; however, when power outages are not feasible, the Contractor may proceed with the work based on the Contractor's compliance with all OSHA regulations. These regulations include, but are not limited to, distance relating to qualified and unqualified personnel as defined by OSHA when working around the Authority's 600-volt catenary system.
5. Track Shutdown Permit - Required for any termination of Rail service i.e. complete shutdown of service on track(s). This application must be submitted by 11:00 am Wednesday four weeks before the week of the track(s) shutdown.

All requests must be submitted in writing to the Director of E&PD no later than 11:00 AM of the preceding Wednesday for consideration by the Director of Service Management or his designate. Due to other ongoing construction and maintenance projects, there is no guarantee that any request will be approved. All requests will be approved or disapproved in writing.

- B. In the event of a reversal by either GCRTA or the Contractor of any Track or Power Outage permit, a good faith effort must be made to notify the other party prior to the scheduled outage. Contractor cancellation of permits for work after 7:45 PM shall be no later than 3:30 pm that day, and any failure to cancel 12 hours prior to the scheduled outage shall result in the Contractor being assessed Liquidated Damages in the amount of \$500 for each occurrence. This cost must be paid directly by the Contractor to GCRTA. Failure to pay will result in rejection of all future outage requests. GCRTA will make a good faith effort to notify the Contractor 12 hours prior to any cancellation. However, it is understood that emergencies may occur which may prevent GCRTA from canceling within this time frame.
 - C. Power outages will not be allowed during the following conditions:
 1. On holidays or during Special Events
 2. **Where weather conditions are such that icing of the catenary may occur (For example: RTA has experienced icing conditions when the temperature is between 25 and 35 degrees Fahrenheit with a chance of precipitation)**
- To confirm if weather conditions might be affecting rail operations, the Contractor may call either the Control Center Supervisor at 216-566-5114 or 216-566-5115 or the Load Dispatcher at 216-566-5135.
- D. Any unexpected effects upon the operations of scheduled/unscheduled train movements shall be immediately called into the Control Center Supervisor at 216-566-5114 or 566-5115.
 - E. The Contractor must receive the proper outage permit prior to lifting of any bridge span, or other such material, over GCRTA tracks. GCRTA Rail personnel shall be present in the area to ensure a safe and clear area after span lift. Demolition work shall stop when trains pass through a demolition area or trains shall be stopped at a safe distance if imminent danger is shown.
 - F. All work over GCRTA tracks shall be done with the overhead power off unless authorized by both District Director-Rail and Director of E&PD or their designates. If any Contractor or Utility requires the de-energization of the overhead power to the Catenary System, a power outage permit must be approved per the above methods.

3.2 RESUMPTION OF REVENUE SERVICE

- A. The track must be returned to the Authority one-half hour before the start of scheduled revenue service at that location. At the completion of the week night shift and at the completion of weekend work, the Contractor is to inspect and subsequently release the work zone back to the Authority for resumption of revenue service. This will require the Contractor to adhere to the following procedures:
1. Prior to release of a work zone, the Contractor is to clear his equipment, manpower and materials from the right-of-way, an area defined as at least 10 feet from the centerline of each track.
 2. The Contractor, along with the Engineer, will inspect the entire work zone to assure that the work completed complies with the requirements of the Authority for the resumption of revenue service within the work zone. The construction, at a minimum, must comply with FRA Class 4 Safety Standards for track or compliance with these construction tolerances.
 3. Other requirements may be imposed by the Authority based on AREA construction tolerances, procedures and/or practices. Imposition of slow orders and other means can be requested by the Contractor in order to assure the resumption of safe revenue operations.
 4. When each item above has been completed, the Engineer shall notify the appropriate Control Center Supervisor of the release of the work zone back to the Authority.
 5. At the completion of each night shift and weekend work, the Contractor must inspect work site and release it to RTA in an aesthetically pleasing manner as determined by the Engineer.
- B. The Contractor must comply with the provisions of these General Requirements as representing an integral part of his legal obligation under this contract.

3.3 TEMPORARY FALSEWORK AND PROTECTIVE STRUCTURES

- A. In order to protect GCRTA traffic (passengers, personnel and property) against harm and damage from falling material and debris during any demolition or construction overhead, the Contractor shall furnish and erect an electrically insulated rigid temporary structure under the spans that are directly over the GCRTA tracks.
- B. The flooring and siding of the temporary structure shall have no cracks or openings through which material particles may fall. As a minimum, one layer of 3/4-inch plywood with lapped joints or an equivalent design shall be placed between the lower flanges of the structural steel beams above the track bed and the shoulders of the GCRTA tracks.
- C. The temporary falsework shall be suitable for attachment of the live catenary wire system, and all signal, power and communication cables. The falsework shall be removed by Contractor when work is completed.
- D. Details of the temporary falsework and protective structures including the proposed temporary under clearances to the GCRTA tracks, shall be prepared by a professional engineer for approval by the GCRTA Director of E&PD prior to starting any demolition or construction work.
- E. This protective work shall be performed at the Contractor's cost.
- F. Before starting the work of erecting the temporary falsework, the Contractor must have a special meeting with the Project Manager for the purpose of developing a plan for making arrangements to move, protect

and reattach the fiber optic cable. Before any such work is started, the Control Center Supervisor will be notified at:

Control Center Supervisor, West	Office Phone	(216) 566-5114
Control Center Supervisor, East	Office Phone	(216) 566-5115

3.4 SPECIAL GCRTA REQUIREMENTS

A. Rules for work performed within ten (10) feet of the GCRTA overhead propulsion power cables:

1. Some of the work contemplated by this agreement may be performed within ten (10) feet of the overhead propulsion power cables (catenary lines) providing 600-volt D.C. power to the GCRTA Rapid Transit.
2. In order to provide continual public transit service to meet the needs of the riding public, the Authority desires to keep to a minimum any power outages that may adversely affect regularly scheduled public transit on the GCRTA Rapid Transit.
3. Overhead propulsion power cables (600-volts D.C.) shall always be considered energized. The Contractor must not assume the power is shut-off until actually confirmed by GCRTA on a daily basis that shutdown has actually been accomplished. **Despite power shut-off, the overhead propulsion cables are always to be considered hot.**
4. All work shall be performed in accordance with rules, regulations, procedures and safe practices of the GCRTA, OSHA and all other governmental agencies having jurisdiction over this project, including, but not limited to, applicable OSHA regulations pertaining to work performed within proximity of energized conductors. (29 CFR)
5. It is the responsibility of the Contractor to know and comply with all governmental regulations pertaining to work performed in proximity to electrical power cables providing 600-volts D.C. (29 CFR)
6. It is the Contractor's responsibility to provide qualified persons who meet all governmental standards, including, but not limited to, OSHA standards that enable them to perform the scope of work within proximity of overhead propulsion power cables providing 600 volts D.C.
7. The Contractor and/or individual employees of the Contractor shall be required to present evidence upon demand that they have been trained and are otherwise properly qualified to perform work required by this agreement in accordance with applicable OSHA regulations or any other governmental regulations or standards required by this agreement.
8. The Contractor shall provide GCRTA with a safety program plan that shall address, in part, the need to perform work within 10 feet of overhead power propulsion lines providing 600-volts D.C.

B. GCRTA aerial lines on GCRTA property may be relocated by GCRTA personnel if required. The Contractor shall use all precautions necessary to see that the lines are not disturbed during the construction stage and shall cooperate with GCRTA in relocation of these lines. The cost of all wire relocation shall be paid for through a Force Account funded by the organization responsible for the project.

- C. No equipment or material shall be suspended or erected above, within 16.0 feet vertically above top of rail or higher based on existing catenary heights, or within 7.5 feet horizontally from the center of the track over which trains are operating, unless otherwise approved by GCRTA's Director of E&PD in advance.
- D. Track ballast must be protected from contamination during demolition and construction. Signal equipment must also be protected. The Contractor must furnish details at least 30 days well in advance of starting the work for approval on how they plan to protect both items.
- E. No excavation, removal of existing pier foundations or constructing new foundations adjacent to GCRTA tracks is permitted without approval of GCRTA. Sheeting may be required to prevent undermining of tracks. If sheeting is required, it is the responsibility of the Contractor to provide and install such sheeting. Proposed sheeting shall be prepared by a Professional Engineer for approval by GCRTA Director of E&PD prior to starting any excavation or demolition work.
- F. If proposed construction is in the vicinity of a rapid station, pedestrian traffic to the GCRTA station shall be maintained at all times by the Contractor. Structurally sound fencing, barricades, and/or shelters shall be provided to protect GCRTA users at the station entrances and platforms. The Contractor shall submit details of the protection system for GCRTA's Director of E&PD's approval before demolition is started.
- G. No construction activity shall take place within GCRTA construction clearance limits while track is active except with flaggers and the proper Outage Permit. During complete shutdown, Contractor is cautioned to the possibility of track utilization by RTA work trains and other service equipment.
- H. No at-grade crossing of GCRTA tracks is permitted by vehicles or equipment, without prior approval of the District Director-Rail or his designate.
- I. The Contractor shall provide, install, erect and maintain suitable lighting and protections for safe and efficient progress and for any work that is to be performed after daylight hours.
- J. Flaggers shall be provided by the Contractor, either through companies who supply certified flaggers (obtain list from GCRTA) or by training and certifying its own employees through GCRTA. For flagging procedures, flagger training, and set-up of work zones, see Section 01502 - Standard Rail Flagging Procedures.
- K. Any violation of GCRTA construction restrictions by the Contractor may result in immediate shutdown of construction activities until the violation is corrected.
- L. These procedures are applicable whenever any personal or equipment of any Contractor are on Authority rail property and/or more specifically, within a distance of 10 feet from the centerline of each track, including any and all work performed over tracks and work being performed on overhead (highway) structures.

Part 4 - Measurement and Payment

4.1 GENERAL

- A. No separate measurement or payment will be made for work required under this section.

END OF SECTION 01501

SECTION 01502 - STANDARD RAIL FLAGGING PROCEDURES

Part 1 - General

1.1 INTRODUCTION

- A. These procedures are applicable whenever any personnel or equipment of any contractor, subcontractor or contractor (hereinafter called Contractor) are on GCRTA Rail Right-of-Way. Special care is required when within an operating envelope around the tracks, the outer limit being a vertical plane located a distance of 10 feet from the center line of each track, including any and all work performed over tracks including work being performed on overhead highway structures.
- B. Contractors are responsible to know and comply with all Rail Operations Rule Book safety rules and procedures, including the following:
 - 1. On-site personnel shall wear safety shoes and reflective safety vests at all times.
 - 2. Before crossing any tracks, STOP, LISTEN and LOOK for trains or vehicles approaching from either direction. Do not cross tracks unless you have time to walk normally, and do not take chances that would make a misstep serious. Do not step on the head of the rail. Never cross the track within switches, which can be operated at any time.
 - 3. Do not walk on tracks except when absolutely necessary. When walking alongside the tracks, face the normal direction of traffic.
 - 4. Consider all tracks as operating tracks and be on the alert for trains operating in either direction on any track at any time.
 - 5. As a train approaches, move to a position of at least 10 feet from the centerline of the track. When standing beside the tracks in a confined space, be sure that you have allowed sufficient space for the train to pass safely without touching your body, clothing, or any other object you may have in your possession.
 - 6. Do not step into the first 20 feet of the track area behind a stopped train. Always maintain a safe distance from the train, which could begin moving in either direction at any time.
 - 7. The overhead wires of the 600-volt catenary system should always be considered as energized. Do not work closer to the wires than allowed under OSHA regulations and other applicable codes and standards.
- C. Personnel deemed as unsuitable by GCRTA shall be removed immediately by the Contractor and will be barred from the GCRTA premises.

1.2 RESPONSIBILITY

- A. Contractor is responsible for compliance with all elements of these procedures, including all training, drug testing, certification and re-certification.
- B. Contractors are responsible for all employee wages associated with the training, certification, re-certification and use as Flaggers.
- C. GCRTA will not be responsible for "no shows," late arrivals or delays to Contractor due to the failure to comply with the current Rail Operations Rule Book, or the certification and use of Flaggers.

- D. A Work Zone and/or Single Tracking request may be denied or revoked for failure of the Contractor to comply with these requirements.
- E. Failure of the Contractor to have qualified Flaggers will be grounds for the Authority to have the Contractor cease operations until such personnel are available. Claims for lost wages and productivity will not be honored.

Part 2 - Products

2.1 REQUIRED EQUIPMENT

- A. The required equipment listed below shall be provided by the Contractor to the Flaggers at the beginning of each shift of work. The Contractor will remain responsible for ensuring that all work tools and equipment are available to each Flagger.
- B. Clothing worn by the Flaggers shall be compatible with the weather conditions. Shorts, tennis shoes and other inappropriate clothing will not be allowed. Clothing shall not be loose fitting; safety boots with steel arch shank and toes are required for Flaggers and must be worn at all times. In accordance with OSHA 1910.136, safety shoes must comply with "ANSI Z41-1991, American National Standard for Personal Protection-Protective Footwear" and carry an Electrical Hazard (EH) Rating. Shoes that comply with these requirements will have "ANSI Z41" and "EH" printed on the label inside each shoe.
- C. Whereas Flaggers are Contractor's employees, GCRTA retains certain jurisdiction over flag personnel. Flaggers must be trained and certified by GCRTA. No persons shall perform flag duties unless so qualified. The Contractor has all other jurisdiction, including wages, employment benefits, and day-to-day supervision.
- D. Each Flagger must carry the following prescribed and Authority approved materials and equipment as listed below. The Contractor shall provide this material and equipment. The Contractor shall have spare expendable materials such as air canisters and flashlight batteries available at all times.
 - 1. A GCRTA approved, blaze-orange, reflective safety vest and safety shoes **MUST BE WORN AT ALL TIMES WHILE ON DUTY.**
 - 2. Flags - One red and one yellow. Flag shall be a minimum of 17" square on a 24" wood handle.
 - 3. Flashlight - For night, tunnel and underground operations. Flashlight shall be powered by a minimum of two "D" cells and be clearly visible from a minimum distance of 500 feet.
 - 4. Whistle
 - 5. Air horn with spare full canister. Note: Air horn can only be used when temperatures are above +20 degrees F. The horn shall be equal to Falcon Commander4 (Branchburg, NJ) with Falcon MRN 422 canister.
 - 6. Signs - One orange "W" and one green "R" (Resume), both made with reflective material. Each sign shall be placed in a clearly visible position (to the train operator) and should be within eight feet of the centerline of the track the Flagger is protecting. Signs shall be a minimum of twelve inches wide and eleven inches high on 1/2" plywood or aluminum highway sign stock. "W" letter shall be a minimum of six inches in height. Letter "R" shall be a minimum of six inches high. If highway cones are used for mounting, they shall be safety orange, twenty-four inches in height, with a heavy base plate with a minimum size of fourteen inches square.

In windy conditions, a more secure mounting may be required. (See diagrams 01502-C1 through 01502-C10 inclusive for additional information)

7. Note pad and pen.
 8. Hardhat to be worn at all times.
- E. Prior to the start of flagging operations, the Contractor must inspect and replace all defective, lost or stolen equipment. A daily check of all flagging materials and devices must be performed by the Contractor. A checklist shall be maintained and signed by the Contractor for inspection by GCRTA or its designated Representatives of the devices and a test of each to ensure they are working.

Part 3 - Execution

3.1 WORK ZONES

- A. A Work Zone is a section of track protected by the use of warning signs and one or more Flaggers through which trains operate (see diagram, 01502-C1 through 01502-C10). It provides protection for work crews, passengers, trains, equipment, tools and property. Any work performed by a Contractor on or within 10 feet of GCRTA tracks must utilize a Work Zone and accompanying Flagger(s). If right-of-way occupancy will be outside of the 10-foot envelope of each track, but encroachment of equipment, materials or workers is possible, then one or more Flag Person will still be required.
- B. GCRTA may, at its own discretion, require additional Flaggers if specific situations warrant the additional Flaggers (such as poor visibility, extremely loud equipment, around curves, etc.) The cost of additional Flaggers will be borne by the Contractor.
- C. Contractors must follow contractual and the current Rail Operations Rule Book provisions for requesting a Work Zone on or adjacent to the tracks. They must report their location and Work Zone limits to the Control Center Supervisor (CCS) for permission to set up the Work Zone.
- D. Only the Control Center Supervisor may authorize the Contractor to set up a Work Zone.

3.2 PREPARING FOR THE WORK ZONE

- A. The Contractor shall contact the East or West (as appropriate) Control Center Supervisor (CCS) daily before the start of work to inform the Control Center Supervisor of the work location, the nature of the work to be done and any other pertinent information. The Control Center can be reached at 216-566-5114 or 216-566-5115. In the event the Control Center Supervisor cannot be contacted, the Load Dispatcher may be called at 216-566-5135. Work Zones within the Central Rail Storage Facility contact Yard Control at 216-566-3900.
- B. The Contractor must have an approved Rail Right-of-Way Occupancy Permit before the Work Zone is set up. The Control Center Supervisor (CCS) will announce a Slow Order on the radio before the Work Zone is set up. An announcement is made by the CCS to all Operators that the Work Zone is established in a specific area. The Contractor is responsible for ensuring that the Work Zone is set up properly.
- C. The Contractor will be responsible for obtaining, removing and maintaining all the required signs for the Work Zone. Each Contractor will be responsible for providing transport of their Flaggers to each work site.
- D. The Contractor shall designate a person who shall be in responsible charge of its flagging operation (herein after referred to as the Flagging Supervisor). A Flagging Supervisor can only flag in the case of an emergency or to relieve a Flagger for a short period of time.

- E. The Flagging Supervisor shall ensure the proper placement of the signs and Flagger(s) as required and as shown on work zone diagrams.
- F. The Flagging Supervisor must send a Flagger sufficient distance ahead against traffic to act as a lookout while the Work Zone is being set up.
- G. The Contractor is responsible for having Flaggers at the project site and will specify when meal and other breaks are to be taken. Flaggers are NOT PERMITTED UNDER ANY CIRCUMSTANCES to leave their assignment without a replacement. Leaving a Work Zone without flag protection may result in serious injury and in project shutdown.
- H. If a Flagger leaves the Work Zone without a replacement, the workers must immediately leave the right-of-way, close the Work Zone, and advise the CCS immediately by telephone or radio.
- I. The Contractor is responsible to ensure that the Flagger has all required equipment in serviceable condition and that the Flagger and all other work crew members are wearing approved hardhats, safety vests, and other required personal protective equipment. Failure to comply will be cause for project shutdown.
- J. The Flagging Supervisor will adjust the Work Zone dimensions or number of Flaggers whenever necessary to ensure adequate visibility of the Flagger to both the train operators and work crew. In certain locations, clear visibility from the orange warning, "W" sign to the work area may not be available due to curves or obstructions. In these cases, additional Flaggers are required. The Contractor will position the Flagger at locations so that the first Flagger has clear sight of the orange warning sign, and the second Flagger is between the first Flagger and the work crew and has clear sight of both the first Flagger and the work crew. The second Flagger's duty will then be to relay (repeat) signals given by the first Flagger to and from the work crew. In all cases, a minimum 200-foot distance from the first Flagger to the Work Zone will be maintained.
- K. When visibility is less than 1,000 feet (due to fog or other conditions), the Contractor shall close the Work Zone, vacate the right-of-way, and report clear to the CCS in accordance with the requirements in the GCRTA Rail Operating Rule Book.
- L. When setting up the Work Zone, position the Flagging Supervisor at the work site. The Flagger will then test the whistle and air horn. If the work crew cannot easily hear the whistle, the air horn shall be used along with the whistle. Test of whistle and air horn must be documented on Checklist, per section 2.1E.
- M. After the Contractor has set up the approved Work Zone, the Flagger should stand, if possible, approximately 3 to 4 feet to the side of the outer rail of the track, continually watching for oncoming trains.
- N. The use of personal radios, cell phones and/or headphones, or similar devices, is prohibited while performing flagging duties.
- O. Signals are to be given by the use of flags when outside during daylight hours. Always give signals at right angle to the track while facing the oncoming train and standing between three and four feet from the outer rail. Flags of prescribed color must be used. The flag signals are:
 - 1. Stop – move the red flag back and forth in a horizontal motion at waist level.
 - 2. Proceed – swing the yellow flag up and down in a vertical motion, with the flag away from the Flagger's body.

- P. A flashlight is used in place of the flags during hours of darkness, when the Flagger's location is in a tunnel or other similar dark area, and when daylight signals cannot be plainly seen. The procedures are the same as flag signals, with the exception being that the movement of the light indicates the signal given.
- Q. In the case of single tracking, a Flagger must be positioned at each end of the Work Zone facing the direction of oncoming traffic. Work Zone shall be signed for both directions.
- R. Any time the Work Zone is to be vacated for more than 20 minutes, the Work Zone is to be removed (see Part 3.4).

3.3 HOW A WORK ZONE FUNCTIONS

A. Single Track Work Zone

1. Crew Leader calls Control Center Supervisor requesting a Single Track Work Zone, giving the Control Center Supervisor starting and ending points using crossover locations.
2. After Control Center Supervisor grants permission and makes the announcement of the slow order on the radio, the Crew Leader will send a flag person 1,000 feet in each direction to act as lookouts while the Work Zone is being set up.
3. On the track used by trains, set up the 15 MPH Speed Zone signs 200 feet in advance of the Work Zone in both directions. Refer to figures 25 and 26.
4. Set up orange W-signs 500 feet in advance of speed signs on the track used by trains. Refer to figures 25 and 26.
5. Install portable trip stops adjacent to the W-signs on the track not used by trains (track out of service). Refer to figures 25 and 26.
 - a. When the trip stop is on an active track, an additional flag person shall be provided to operate the trip stop. When it is confirmed that the route is lined for the train, the trip stop will be lowered. Once the train has cleared the portable trip stop, the flag person shall restore the portable trip stop to the "up" position.
6. Set up green R-signs 200 feet beyond the exiting ends of the Work Zone on the track used by trains. Refer to figures 25 and 26.
7. Station a flag person at each speed sign, in a position of safety and visibility, adjacent to the track to control all approaching train movements on any track.
8. Crew Leader will notify Control Center Supervisor after the Work Zone setup is completed.
 - a. Curvature or grade restricts visibility; additional flag person(s) are required. (See diagrams 01502-C2, 01502-C4, and 01502-C6)
9. When a train is approaching the Work Zone, the flag person shall display the red flag and sound horn to notify the work crew of approaching train.
 - a. If the operator does not show any signs of recognizing the signal, the flag person will alert the work crew immediately using a continuous blast of the whistle, air horn or any other method.

10. After train has come to a complete stop and work crew has cleared right-of-way, the flag person will display yellow flag, allowing train to proceed through Work Zone at Restricted Speed.
 11. When the train has passed the R-sign, operator may return to normal operation.
- A1. Removal of a Single Track Work Zone
1. The Crew Leader ensures that all equipment, tools and materials are removed from the work area.
 2. Workers shall clear the work area.
 3. Trackside signs will be removed by a worker with a flag person providing protection and notification of approaching trains.
 4. Once all workers, signs and flag personnel are clear of the track to a safe location, the Crew Leader will contact the Control Center Supervisor to inform him that the Single Track Work Zone has been removed and the track is clear.
 5. The Control Center Supervisor will acknowledge the Crew Leader and make a radio announcement that the Single Track Work Zone is removed and the track is clear.
- B. One-Track Work Zone
1. Crew Leader calls Control Center Supervisor requesting a One-Track Work Zone, giving the Control Center Supervisor starting and ending points using catenary numbers.
 2. After permission is given by the Control Center Supervisor and after the announcement has been made of the slow order on the radio, Crew Leader will send a flag person in each direction, 1,000 feet each, to act as lookouts while the Work Zone is being set up.
 3. Set up the 15 MPH Speed Zone signs 200 feet in approach to the Work Zone in both directions. See figures 27 and 28.
 4. Set up orange W-signs 500 feet of the approach in both directions.
 5. Set up green R-signs 200 feet past the Work Zone in both directions.
 6. Station a flag person at the speed sign on the track to be worked on.
 7. After the Work Zone setup is completed, notify Control Center Supervisor that work will commence.
 8. When a train is on approach, flag person shall display the red flag and sound horn to notify the work crew of an approaching train. See figures 27 and 28.
 9. The crew is to clear the right-of-way.
 - a. If the operator does not show any signs of recognizing the signal, the flag person will alert the work crew immediately using a continuous blast of the whistle, the air horn or any other method.
 10. After train has come to a complete stop and work crew has cleared right-of-way, the flag person will display yellow flag, allowing train to proceed through Work Zone at Restricted Speed.
 11. When the train has passed the R-sign, operator may return to normal operation.

B1. Removal of a One-Track Work Zone

1. The Crew Leader ensures that all equipment, tools and materials are removed from the work area.
2. Workers shall clear the work area.
3. Trackside signs will be removed by a worker with a flag person providing protection and notification of approaching trains.
4. Once all workers, signs and flag personnel are clear of the track to a safe location, the Crew Leader will contact the Control Center Supervisor to inform him that the One-Track Work Zone has been removed and the track is clear.
5. The Control Center Supervisor will acknowledge the Crew Leader and make a radio announcement that the One-Track Work Zone has been removed and the track is clear.

C. Two-Track Work Zone

1. Crew Leader calls Control Center Supervisor requesting a Two-Track Work Zone, giving the Control Center Supervisor starting and ending points using catenary numbers.
2. After Control Center Supervisor grants permission and makes the announcement of the Slow Order on the radio, the Crew Leader will send a flag person 1,000 feet in each direction to act as lookouts while the work zone is being set up.
3. Set up the 15 MPH Speed Zone signs 200 feet in approach of the Work Zone in both directions. Refer to figures 29 and 30.
4. Set up orange W-signs 500 feet of the approach in both directions. Refer to figures 29 and 30.
5. Set up green R-signs 200 feet past the Work Zone in both directions. Refer to figures 29 and 30.
6. Station a flag person at each speed sign, in a position of safety and visibility, adjacent to the track to signal all approaching train movements on any track.
7. Crew Leader will notify Control Center Supervisor after the Work Zone setup is completed.
 - a. When curvature or grade restricts visibility, additional flag person(s) are required. (See figure 30, SOP #1502)
8. When the train is on approach, flag person shall display the red flag and sound horn to notify the work crew of approaching train.
9. The crew is to clear the right-of-way.
 - a. If the operator does not show any signs of recognizing the signal, the flag person will alert the work crew immediately using a continuous blast of the whistle, air horn or any other method.
10. After the train has come to a complete stop and work crew has cleared right-of-way, flag person will display yellow flag, allowing train to proceed through Work Zone at Restricted Speed.
11. When the train has passed the R-sign, operator may return to normal operation.

C1. Removal of a Two-Track Work Zone

1. The Crew Leader ensures that all equipment, tools and materials are removed from the work area.
2. Workers shall clear the work area.
3. Trackside signs will be removed by a worker with a flag person providing protection and notification of approaching trains.
4. Once all workers, signs and flag personnel are clear of the track to a safe location, the Crew Leader will contact the Control Center Supervisor to inform him that the Two-Track Work Zone has been removed and the tracks are clear.
5. The Control Center Supervisor will acknowledge the Crew Leader and make a radio announcement that the Two-Track Work Zone is removed and the tracks are clear.

3.5 WORKERS NOT GOVERNED BY WORK ZONES (SLOW ORDERS)

- A. Under special conditions, when a Work Zone is not required as approved by the Engineer in advance, and work is to be performed on or within 10 feet of the track, the following Slow Order procedures will apply:
1. The Flagging Supervisor will be responsible for the group following these procedures and requirements.
 2. All workers must wear an approved safety vest and other required personal protective equipment.
 3. The work should always move towards approaching traffic.
 4. The Contractor will notify the East or West Control Center Supervisor (CCS) of the location and limits, the work being performed, and any other pertinent information regarding work activities. The Contractor must have the approval of the Control Center Supervisor and will wait until a Slow Order has been announced before the work can begin. Extra caution is required when depending solely on Slow Order notification without Work Zone signs.
 5. Facing approaching trains; a Flagger will be positioned 200 feet ahead of the work limits. This Flagger must have all required equipment in serviceable condition. Because there are no Work Zone signs, use of the air horn/whistle is extremely important.
 6. As work may progress along the track, the Flagger must remain 200 feet ahead of the work limits at all times.
 7. As the train approaches, follow the procedures listed in section 3.3 A, B, & C.
 8. Trains will slow to 15 mph **only** on the track protected with a Flagger, when passing the Flagger and moving through the work limits of the Slow Order.
 9. When the work at the Slow Order is completed, the Contractor will notify the Control Center Supervisor that the track is clear through the limits of the Slow Order and the Slow Order can be cancelled.
 10. The Control Center Supervisor will acknowledge this and make an announcement to all trains that the Slow Order is cancelled.

3.6 SPECIAL PROCEDURES

- A. Any orders, instructions or procedures that are found to be confusing, contradictory, unsafe, or difficult to follow must be brought to the attention of the Flagging Supervisor. Any object waved violently by anyone on or near the tracks must be treated as a signal to stop.
- B. In any instance where a train operator does not comply with the provisions governing Work Zones, Slow Orders, and especially flag or flashlight signals, the Flagger should note that train's car number, block number, direction, time and location this information must be recorded and reported immediately to the Engineer and the CCS.
- C. During all signaling procedures, whether stationary or moving, always avoid working or traveling in the median area between the eastbound and westbound tracks. This area, commonly known as the "devil strip," is extremely dangerous. Under certain circumstances, i.e., two trains passing, there is no way to escape and, in many cases, insufficient space for a person to occupy. If work or travel in the devil strip is required; an individual should be extremely alert to approaching trains and/or work equipment on any track in any direction, as in many cases there is insufficient space between two trains for a person to occupy. The sound and/or distraction of one train can easily drown out the sound of or distract attention from the other approaching train.
- D. Walking or standing between or directly on the rails is to be avoided at all times.
- E. Special precaution is to be taken where GCRTA right-of-way is bound by other railroads' tracks adjacent to the GCRTA right-of-way.

3.7 FLAGGER TRAINING AND CERTIFICATION

- A. Each Contractor is required to hire its own employees and/or temporaries to perform the duties of Flaggers. These employees shall be given a training session on flagging techniques and procedures by the GCRTA. These training sessions shall be supplemented with actual in-field training. The training sessions will be 8 hours total per person. The Contractor shall follow the procedures explained in the attached "Program A" and "Program B" for Certification and Recertification.
- B. Each employee is to bring his own equipment to the training sessions. All alcohol and drug testing results must be completed and accepted by GCRTA prior to the first class.
- C. Training classes are conducted periodically by the GCRTA, as needed, to maintain the availability of sufficient flagging personnel. Contractors should contact the GCRTA regarding the availability of classes.
- D. Additionally, all Contractors should have their superintendents, foremen, and other supervisory field personnel trained in flagging procedures and the current GCRTA Rail Operations Rule Book prior to the beginning of construction, and Supervision certified on the Flagging Procedures.
- E. Only trained personnel of the Contractor will be certified for the prescribed time period and issued a GCRTA Flagger certification card. Flagging Supervisors will have their cards annotated by the GCRTA to show they are "Supervisors".
- F. Certification cards, valid for twelve months, will be issued by the Training Department to each Flagger who successfully completes GCRTA Flagging Training. The certification card will also serve as verification of identity and contain the following: Name, ID number, date of expiration, and signature of training supervisor.

- G. All Flaggers are required, when flagging, to carry the GCRTA Flagger certification card and a driver's license or state issued identification card.
- H. The GCRTA will retain a certified flagging personnel list. Flaggers must be recertified annually before their certification expires.

3.10 DRUG AND ALCOHOL TESTING

- A. All flagging personnel must submit to and pass a drug screen performed by a laboratory that is certified by Health and Human Services (HHS) under the National Laboratory Certification Program prior to an offer of employment for this service.
- B. The Contractor must certify at least one week before the start of training that the Flaggers are drug-free and fit for work. All costs associated with the testing will be the Contractor's responsibility.
- C. The Contractor shall use appropriate selection criteria and candidate screening per 49 CFR Part 40 specifically §40.25 before employing person to performing flagging services.
- D. The Contractor will ensure that all Flaggers meet all U.S. Department of Transportation and Federal Transit Administration regulations including criminal record check and satisfactory completion of a periodic drug/alcohol screen.
- E. In addition to pre-employment drug screening, such tests shall be conducted for Flaggers as defined in 49 CFR Part 655 under the following circumstances:
 - 1. Through the random selection testing process.
 - 2. As soon as practical following involvement in any accident as defined by §655.44 where his/her actions, in-actions or activities may have contributed to the accident or cannot be discounted as contributing to the accident.
 - 3. At any time when there is reasonable suspicion of an employee drug/alcohol use as follows:
 - a. When a supervisor or company official has reasonable suspicion based on personal, observable and articulable, abnormal behavior by an employee, including appearance, behavior, speech, or breath odor, which objectively indicates drug or alcohol impairment.;
 - b. Direct observation of an employee for drug use or possession by any supervisor;
- F. If the Contractor has a "second chance" policy, testing must also be performed prior to return to work after rehabilitation and also follow up testing as described by the Substance Abuse Professional.
- G. If there is evidence that an on-duty Flagger is under the influence of drugs and/or alcohol, the Flagger will be removed immediately from service and the Engineer and/or GCRTA Transit Police summoned.
- H. The Contractor shall provide GCRTA with a copy of their written Substance Abuse Policy which complies with the Department of Transportation Regulation 49 CFR Part 40 "*Procedures for Transportation Workplace Drug and Alcohol Testing Programs*" and 49 CFR Part 655 "*Prevention of Alcohol Misuse and Prohibited Drug Use in Transit Operations*".
- I. The Contractor shall provide GCRTA's Medical Services Department with a monthly report of the number of tests conducted in each of the above categories and the results. All testing shall be conducted pursuant to applicable Federal and State requirements, including but not limited to those set forth in 49 CFR Part 40.

- J. The Contractor shall complete the annual Management Information System (MIS) report per Federal Transit Administration (FTA) Regulation 49 CFR Part 655 and provide the report to GCRTA's Medical Services Department prior to March 10th of each year of the contract.
- K. The Contractor will provide GCRTA's Medical Services Department with verification of employee and supervisor training in Substance Abuse and policy distribution in accordance to 49 CFR 655, as well as identifying a drug and alcohol program manager.
- L. The Contractor will be subject to record audits for compliance with the Substance Abuse regulations. Drug and alcohol test results will be maintained in a confidential, separate file and retained according to the record keeping guidelines as outlined in §655.71. Failure to comply with DOT and/or FTA Substance Abuse regulations could result in the delay of payment for services or the termination of the contract.

Part 4 - Measurement and Payment

4.1 GENERAL

- A. No separate measurement or payment will be made for work required under this section.

END OF SECTION 01502

FLAGGER TRAINING AND CERTIFICATION

PROGRAM A - INITIAL CERTIFICATION

New Flaggers:

1. The Contractor will be associated with a collection site that can perform DOT drug collections. All drug specimens will be sent to a laboratory that is certified under the Department of Health and Human Services (HHS) by the Substance Abuse and Mental Health Services Administration (SAMHSA). The contractor will retain the services of a Medical Review Officer who will review all drug test results.
2. At the Contractor's expense, all new Flaggers will be sent for DOT pre-employment drug testing. The Contractor will receive all test results and will maintain records per DOT Regulation 49 CFR Part 40. All new Flaggers must have negative drug test results to be eligible for Flagger training.
3. A Drug and Alcohol Eligibility List form will be faxed to GCRTA's Occupational Health Department at (216) 771-4490 listing the following information: (Form attached)
 - a. The full name of the candidate
 - b. An identification number (either Social Security number or Driver's License number)
 - c. Date of the drug test
 - d. Results of the test
 - e. The Project number, Project name and name of GCRTA's Project Manager
 - f. The name of the company representative responsible for the Drug & Alcohol Program
 - g. The signature of the company representative and date of GCRTA notification
 - h. On the form check the appropriate initial certification or recertification box.
4. GCRTA's Occupational Health Department will communicate with the Project Manager to provide the necessary information to proceed.
5. Contractor shall send a notarized letter to the GCRTA Project Manager or Director of Project Development & Engineering, Fax No. (216) 771-4424, requesting training for the Flaggers. The request must contain the following information:
 - a. A list of the eligible candidates. Any Contractor who issues a false list of candidates may be deemed non-responsive for future GCRTA Projects.
 - b. A preferred training date and an alternate date.
 - c. A minimum of one week should be allowed for Training to schedule.
6. The Project Manager or Director of Project Development & Engineering will contact the Training Department for a schedule. The Contractor will be advised of the scheduled date and location of training within four business days of his request.
7. A maximum of three (3) Flaggers can be trained at any one GCRTA Flagger training session.
8. The training will last 8 hours and includes both classroom and field on-the-job training.
9. The trainees must show up for the training session at the proper time. Tardiness will not be permitted. Tardy students will be released at the discretion of the Training Supervisor.
10. Trainees must come to class with appropriate equipment for both classroom and field training. These include: Work safety shoes, air horn, whistle, red and yellow flags, flashlights or lantern, orange reflective vest, hard hat and rain gear.

11. After the classroom and field training, the successful candidates shall be certified by the GCRTA Training Supervisor and issued an ID card.
12. The Training Supervisor will also issue a letter to the Contractor with a copy to the Project Manager and the Director of Project Development & Engineering indicating the names of certified Flaggers and the expiration date of the certification.
13. The Flagger must carry the ID card together with an Ohio ID or driver's license whenever he/she is on GCRTA property performing his/her flagging duties.
14. GCRTA certification is valid for a period of 12 months. After this period, the Flagger must be recertified.
15. The GCRTA certification does not warrant a free bus or train ride to the Flagger.
16. There will be periodic/random checks on the performance and physical conditions of the Flaggers by GCRTA staff and/or their agents.
17. Any Flaggers who are found to violate the flagging rules outlined in the Flagging Procedures will be removed from the project, and/or their agent(s).
18. A Flagger discharged for violation of the rules (maximum of two violations) will be barred from GCRTA projects and denied future certifications. All such violations must be reported to the Director of Project Development & Engineering in writing.

PROGRAM B - RECERTIFICATION

Recertification:

1. A Flagger must be re-certified every twelve months.

Procedure for Recertification:

1. As prerequisites for recertification, follow steps in Program A-2 (with modifications as noted below), A-3 and A-5 above. Check the recertification box on the Drug and Alcohol Eligibility List Form. A two (2) hour classroom training for recertification is offered by the GCRTA Training Department.
2. The Contractor will provide a Drug and Alcohol Eligibility List form as noted in A-3 showing evidence of DOT random drug/alcohol testing within the last 30 days or the Flagger will be sent for DOT pre-employment testing. The report will be sent to GCRTA's Occupational Health Department at least one week before the recertification training class is attended.
3. The candidate for recertification must be equipped as in Program A above.
4. Candidates who successfully complete the two (2) hour classroom training will be recertified and can be deployed immediately. Recertification is valid for a period of 12 consecutive months.
5. Program A - Paragraphs 13 through 17 also apply.
6. Candidates with more than 12 months of inactivity must go through Program A above.