

MIAMI-DADE COUNTY  
PUBLIC WORKS AND WASTE MANAGEMENT DEPARTMENT (PWWM)

ADDENDUM NO. 1  
October 7<sup>th</sup>, 2013

PROJECT: Drainage Improvements - Multiple Sites  
Project No. 20130159-R (MCC 7040 Plan)

BID DUE DATE: October 16<sup>th</sup>, 2013 at 2:00 p.m.

FROM: Miami-Dade County PWWM  
Contracts and Specifications Section  
111 NW First Street, 14<sup>th</sup> Floor  
Miami, FL 33128  
305.375.2930

TO: Prospective Bidders and Interested Parties

This Addendum forms part of the project solicitation documents and will be incorporated into the Contract Documents, as applicable. Insofar as the Original Contract Documents, Drawings and Specifications are inconsistent, this Addendum shall govern. Please acknowledge receipt of this Addendum, at the time of bid submittal to Miami-Dade County, in the space provided on the "Acknowledgement of Addenda Form" provided with the project solicitation documents. Failure to acknowledge receipt of all addenda may be cause for disqualification.

CHANGES TO CONTRACTING REQUIREMENTS:

1. As to the Invitation to Bid
  - a. Change Base Cost Estimate to \$300,170.60
2. As to the Bid Form
  - a. Replace bid form dated 9/26/2013 with attached bid form dated 10/02/2013. A bid item for Maintenance of Traffic has been added
3. Change Bid Due date from Wednesday, October 9, 2013 to Wednesday, October 16, 2013.

CHANGES TO SPECIAL PROVISIONS:

1. Article 2.02, Maintenance of Traffic, delete in it's entirely and replace it with the attached 102-Maintenance of Traffic Article.
2. Article 1.02, Scope of Work, add subparagraph F as follows:
  - F. All Work along NW 53rd Terrace from NW 72nd Avenue to NW 69th Avenue must be performed at night. No additional compensation will be made for night work.

END OF ADDENDUM NO. 1



Frank Aira, P.E., CFM  
Division Manager, PWWM

c: Alfredo Muñoz, P.E., PWWM  
Alex Barrios, PWWM  
Saifuddin Siddiqui, PWWM  
Ultimo de Oliveira, ISD  
Clerk of the Board  
Project File

REVISED BID FORM, ADDENDUM #1

**Bid Form**

PROJECT TITLE: Drainage Improvements for Multiple Sites

PROJECT NO: 20130159-R

IF THIS PROPOSAL IS ACCEPTED, THE UNDERSIGNED AGREES TO COMPLETE ALL WORK UNDER THIS CONTRACT WITHIN ONE HUNDRED FIFTY (150) CALENDAR DAYS AFTER THE EFFECTIVE DATE ESTABLISHED IN THE \*NOTICE TO PROCEED WITH CONTRACT WORK\*.

Item No	Quantity	Unit	Description	Written Unit Amount	Unit Price	Total
102-1A	1.0	L.S.	MAINTENANCE OF TRAFFIC			
102-74-1	7,200.0	EA/DAY	BARRICADES ( TEMPORARY- TYPE I, II, VP & DRUM ).			
102-76A	194.0	EA/DAY	ADVANCE WARNING ARROW PANEL			
104-10-3	200.0	L.F.	Sediment Barrier			
104-18	26.0	EA.	Inlet Protection System			
110-1-1B	1.0	L.S.	CLEARING AND GRUBBING			
120-8A	30.0	S.Y.	RE-GRADE EXISTING SWALE (Where shown specifically on plans, or as directed by the Engineer, outside the scope of drainage trench restoration)			
121-70-2	20.0	C.Y.	FLOWABLE FILL			
125-8	50.0	C.Y.	BACKFILL EXISTING TRENCH WITH SELECT FILL			
<b>pay item 125-8 to be used at the discretion of the Engineer.</b>						
327-7-01	387.0	S.Y.	MILLING EXISTING PAVEMENT- [( 1" Depth) (Up to 5,000 S.Y.)]			
331-72-10A-HMA	570.0	S.Y.	ROADWAY PAVEMENT RESTORATION ( Replace and match existing base thickness and asphalt course with 8" minimum, primed Limerock Base and 1" thick of HMA, Asphalt Work Category 3)			

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Item No	Quantity	Unit	Description	Written Unit Amount	Unit Price	Total
331-72-10B-HMA	64.0	S.Y.	INLET PAVEMENT (Includes 6" Limerock Base and 1" thick of HMA, Asphalt Work Category 2)			
334-2-13-1	85.0	TON	Hot Mix Asphalt, Traffic C, SP-9.5			
334-2-13-1A	441.0	S.Y.	Driveway Pavement-Asphalt			
350-1-1A	133.0	S.Y.	Driveway Pavement-Concrete			
400-1-15	10.0	C.Y.	CLASS I CONCRETE [(Miscellaneous) (Collars, pipe plugs,structure plugs etc.) (This item is contingent upon field conditions and may be increased decreased or eliminated by the Engineer)]			
425-1-1	7.0	EA.	SWALE INLET TYPE D-3 (36"Dia. ) (Less than 10 feet deep )			
425-1-2A	2.0	EA.	SWALE INLET TYPE D-3 (36"X36" , less than 10' deep )			
425-1-902	4.0	EA.	SWALE INLET TYPE P-10M (Any dimension, maximum depth 15')			
425-1-905	4.0	EA.	SWALE INLET TYPE J-10M - [(Any dimension)(Maximum 15' deep)]			
425-1-907A	16.0	EA.	POLLUTION RETARDANT BAFFLE (Any type) (Any dimension)			
425-2-41	6.0	EA.	MANHOLE (Type P-7T, Any dimension, maximum 15' deep)			
425-2-72	1.0	EA.	MANHOLE TYPE J-7T-, (Any dimension, maximum 15' deep)			

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Item No	Quantity	Unit	Description	Written Unit Amount	Unit Price	Total
425-79	2.0	EA.	CORE AND TIE TO EXIST. DRAINAGE STRUCTURES. (Any pipe size hole opening )(Including mortar seal)] (This item is contingent upon field conditions and may be increased, decreased or eliminated by the engineer)			
425-82	4.0	EA.	MODIFY STRUCTURE- Cut to enlarge opening as needed in order to accomodate pipe due to utility conflict(s), brick and mortar as needed.			
430-4-8	3,525.0	L.F.	Pipe Video Inspection and Report			
430-94-1-1	4,625.0	L.F.	DESILT PIPE (0 TO 48")			
430-95-2	54.0	EA	Desilting Drainage Structure			
430-171-115	280.0	L.F.	Pipe Culvert 15" Diameter (Round)			
430-171-118	110.0	L.F.	Pipe Culvert 18" Diameter (Round)			
443-70-3-2	1,030.0	L.F.	French Drain (18" diameter pipe, trench depth 10 f bls)			
443-70-3-3	165.0	L.F.	French Drain (18" diameter pipe, trench depth 15 f bls)			
520-1-10	40.0	L.F.	CONCRETE CURB & GUTTER (Type F) (6" Curb, 18" Gutter) (Includes cost of limerock base and subgrade)			
575-2A	4,256.0	S.Y.	SODDING-St Augustine, or match existing, includes watering and maintenance. Contingent item based on field conditions, may be increased, or decreased by the engineer.			
706-1-12	6.0	EA.	REFLECTIVE PAVEMENT MARKERS (class B, mono or bi-directional, all colors)			

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Item No	Quantity	Unit	Description	Written Unit Amount	Unit Price	Total
711-11-123	80.0	L.F.	THERMOPLASTIC (White) (Solid) (12")			
711-11-221	400.0	L.F.	THERMOPLASTIC (Yellow) (Solid) (6")			

**Total:** \_\_\_\_\_

The bidder understands and agrees that the above total is inclusive of all work necessary to complete the job as described in the plans and specifications.

Quantities are established and are included only for the purpose of facilitating the uniform comparison of bids submitted. The County shall not be held responsible if the quantities are not accurate and all computations for compensation shall be based upon the actual work performed, whether greater or less than estimated quantities.

Tax Identification Number: \_\_\_\_\_

D.C. Certificate of competency No: \_\_\_\_\_

Bidder's Name: \_\_\_\_\_

Bidder's telephone Number: \_\_\_\_\_

Bidder's address: \_\_\_\_\_

# Bid Form

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BIDDER ACKNOWLEDGES THAT INCLUDED IN THE VARIOUS ITEMS OF THE PROPOSAL AND IN THE TOTAL BID PRICE ARE COSTS FOR COMPLYING WITH THE FLORIDA TRENCH SAFETY ACT (90-96), LAWS OF FLA. EFFECTIVE OCTOBER 1st, 1990. THE BIDDER FURTHER IDENTIFIES THE COSTS TO BE SUMMARIZED BELOW:

	Trench Safety Measure (Description)	Units of Measure (LF, SY)	Unit (Quantity)	Unit Cost	Extended Cost
A.	_____	_____	_____	_____	_____
B.	_____	_____	_____	_____	_____
C.	_____	_____	_____	_____	_____
D.	_____	_____	_____	_____	_____

FAILURE TO COMPLETE THE ABOVE MAY RESULT IN THE BID BEING DECLARED NON-RESPONSIVE

## MAINTENANCE OF TRAFFIC FOR ADDENDUM #1

### 102 MAINTENANCE OF TRAFFIC (REV. 10-04-2013)

#### A. Description.

##### 1. General:

- a. Maintain, for the duration of the construction period including any temporary suspensions of the Work, all traffic including pedestrian traffic within the limits of the Project starting the day work begins on the Project or the first day Contract time is charged, whichever is earlier.
  - b. Construct and maintain detours.
  - c. Provide facilities for access to residences, businesses, etc., along the Project.
  - d. Furnish, install and maintain traffic control and safety devices during construction. Includes all facilities, devices and operations as required for safety and convenience of the public within the work zone.
  - e. Furnish and install work zone pavement markings for maintenance of traffic (MOT) in construction areas.
  - f. Provide any other special requirements for safe and expeditious movement of traffic specified in the Plans or directed by Engineer.
2. Unless otherwise directed by Engineer or required by the Contract Documents, do not maintain traffic over those portions of the Project where no work is to be accomplished or where construction operations will not affect existing roads including sidewalks.
  3. Do not obstruct or create a hazard to any traffic during the performance of the Work, and repair any damage to existing pavement open to traffic.
  4. Traffic may be detoured only upon approval by the County Engineer. Contractor must submit for review and approval an updated MOT plan prior to closure of any roads.
  5. The Department may temporarily suspend all activities, except traffic, erosion control and such other activities that are necessary for project maintenance and safety, for failure to comply with these provisions.

#### B. Materials.

##### 1. Meet the following requirements:

Bituminous Adhesive	FDOT Section 970
Temporary Retroreflective Pavement Markers	FDOT Section 990
Paint	FDOT Section 971
Removable Tape	FDOT Section 990
Glass Spheres	FDOT Section 971
Temporary Traffic Control Device Materials	FDOT Section 990
Retroreflective and Nonreflective Sheeting for Temporary Traffic Control Devices	FDOT Section 994

2. Temporary Traffic Control Devices: Use only the materials meeting the requirements of FDOT Section 990, FDOT Section 994, FDOT Design Standards and the Manual on Uniform Traffic Control Devices (MUTCD).

3. Detour: Provide all materials for the construction and maintenance of all detours.

4. Commercial Materials for Driveway Maintenance: Provide materials of the type typically used by FDOT for roadway base construction, including reclaimed asphalt pavement material, and having stability and drainage properties that will provide a firm surface under wet conditions.

#### C. Worksite Traffic Supervisor.

1. Provide a worksite traffic supervisor meeting the requirements of Article 105. Provide the worksite traffic supervisor with all equipment and materials needed to set up, take down, maintain traffic control, and handle traffic-related situations.

2. Ensure that the worksite traffic supervisor performs the following duties:

- a. On site direction of all traffic control on the Project.
- b. Is on site during all MOT set up and take down, and performs a drive through inspection immediately after set up.
- c. Is on site during all nighttime operations to ensure proper MOT.
- d. Immediately corrects all safety deficiencies and does not permit minor deficiencies that are not immediate safety hazards to remain uncorrected for more than 24 hours.
- e. Is available on a 24 hour per day basis and present within 45 minutes after notification of an emergency situation and is prepared to positively respond to repair the work zone traffic control or to provide alternate traffic arrangements.
- f. Conducts daily daytime and weekly nighttime inspections of projects with predominately daytime work activities, and daily nighttime and weekly daytime inspections of projects with predominantly nighttime work activities of all traffic control devices, traffic flow, pedestrian, bicyclist, and business accommodations. Advise Engineer and the Project personnel of the schedule of these inspections and give them the opportunity to join in the inspection as is deemed necessary.

3. The Department may disqualify and remove from the Project a worksite traffic supervisor who fails to comply with the provisions of this Article.

#### D. Submittals

##### 1. Traffic Control Plan

- a. Submit at Contractor's own expense a Traffic Control Plan (TCP) for approval by the County when a final TCP was not provided by the County as part of the original Contract Documents. Sequence the Work in a manner that will minimize disruption of vehicular and

## MAINTENANCE OF TRAFFIC FOR ADDENDUM #1

- pedestrian access through and around the Project's construction area(s).
- b. The TCP must detail procedures and protective measures proposed by Contractor to provide for protection and control of traffic affected by the Work consistent with the following applicable standards:
    - 1) The Contract Documents;
    - 2) "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD) and subsequent revisions and addendums, as published by the U.S. Department of Transportation, Federal Highway Administration;
    - 3) The 600 Series indices of the FDOT Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System; and
    - 4) The Miami-Dade County Public Works Manual.
  - c. All references to the respective agencies in the above referenced standards shall be construed to also include more stringent requirements of the jurisdictional municipality as applicable for this Work.
  - d. The TCP must be signed and sealed by a Professional Engineer registered in the state of Florida and shall include proposed locations and time durations of the following, as applicable:
    - 1) Pedestrian and public vehicular traffic routing.
    - 2) Lane and sidewalk closures, other traffic blockage and lane restrictions and reductions anticipated to be caused by construction operations. Show and describe the proposed location, dates, hours and duration of closure, vehicular and pedestrian traffic routing and management, traffic control devices for implementing pedestrian and vehicular movement around the closures, and details of barricades.
    - 3) Location, type and method of shoring to provide lateral support to the side of an excavation or embankment parallel to an open travel-way.
    - 4) Allowable on-street parking within the immediate vicinity of worksite.
    - 5) Access to buildings immediately adjacent to worksite.
    - 6) Driveways blocked by construction operations.
    - 7) Temporary traffic control devices, temporary pavement striping and marking of streets and sidewalks affected by construction
    - 8) Temporary commercial and industrial loading and unloading zones.
    - 9) Construction vehicle reroutes, travel times, staging locations, and number and size of vehicles involved.
  - e. Obtain and submit prior to erection, or otherwise impacting traffic, all required permits from all authorities having jurisdiction, including the Department, if applicable.
2. Alternative Traffic Control Plan.
    - a. Where a TCP is provided by the County with the Contract Documents, Contractor may still propose an alternative TCP to the plan presented in the Contract Documents. Prepare the TCP in conformance with the requirements stipulated in this Specification and in the form outlined in the current version of FDOT's Plans Preparation Manual. Indicate in the plan a TCP for each phase of activities. Have Contractor's Engineer of Record sign and seal the alternative plan. Take responsibility for identifying and assessing any potential impacts to a utility that may be caused by the alternate TCP proposed by Contractor, and notify the Department in writing of any such potential impacts to utilities.
    - b. Engineer's approval of the alternate TCP does not relieve Contractor of sole responsibility for all utility impacts, costs, delays or damages, whether direct or indirect, resulting from Contractor initiated changes in the design or construction activities from those in the original Contract Specifications, Design Plans (including TCPs) or other Contract Documents and which effect a change in utility work different from that shown in the Utility Plans, joint project agreements or utility relocation schedules.
    - c. The Department reserves the right to reject any alternative TCP. Obtain Engineer's written approval before beginning work using an alternate TCP. Engineer's written approval is required for all modifications to the TCP. Engineer will only allow changes to the TCP in an emergency without the proper documentation.
  3. Comprehensive Weekly Report:
    - a. Submit to Engineer a comprehensive weekly report of the daily inspections performed and detailing the condition of all traffic control devices (including pavement markings) being used.
    - b. Include assurances in the report that pedestrians are accommodated with a safe, accessible travel path around work sites separated from mainline traffic in compliance with the Americans with Disabilities Act (ADA) Standards for Transportation Facilities, that existing or detoured bicyclist paths are being maintained satisfactorily throughout the Project limits, and that existing businesses in work areas are being provided with adequate entrances for vehicular and pedestrian traffic during business hours.
    - c. When deficiencies are found, the worksite traffic supervisor is to note such deficiencies and include the proposed or implemented corrective actions, including the date corrected.
    - d. Have the worksite traffic supervisor sign the report and certify that all of the above issues are being handled in accordance with the Contract Documents.
  - E. Traffic Control.
    1. Standards: FDOT Design Standards are the minimum standards for the use in the development of all TCPs. The MUTCD, Part VI is the minimum national standard for traffic control for highway construction, maintenance, and utility operations. Follow the basic principles and minimum standards contained in these documents for the design, application, installation, maintenance, and

## MAINTENANCE OF TRAFFIC FOR ADDENDUM #1

- removal of all traffic control devices, warning devices and barriers which are necessary to protect the public and workers from hazards within the Project limits.
2. Maintenance of Roadway Surfaces: Maintain all lanes that are being used for the MOT, including those on detours and temporary facilities, under all weather conditions. Keep the lanes reasonably free of dust, potholes and rutting. Provide the lanes with the drainage facilities necessary to maintain a smooth riding surface under all weather conditions.
  3. Number of Traffic Lanes:
    - a. Maintain one lane of traffic in each direction.
    - b. Maintain two lanes of traffic in each direction at existing four (or more) lane cross roads, where necessary to avoid undue traffic congestion.
    - c. Construct each lane used for MOT at least as wide as the traffic lanes existing in the area before commencement of construction.
    - d. Do not allow traffic control and warning devices to encroach on lanes used for MOT.
    - e. Engineer may allow Contractor to restrict traffic to one-way operation for short periods of time provided that Contractor employs adequate means of traffic control and does not unreasonably delay traffic. When a construction activity requires restricting traffic to one-way operations, locate the flaggers within view of each other when possible. When visual contact between flaggers is not possible, equip them with 2-way radios, official, or pilot vehicles, or use traffic signals.
  4. Crossings and Intersections: Provide and maintain adequate accommodations for intersecting and crossing traffic. Do not block or unduly restrict any road or street crossing the Project unless approved by Engineer. Before beginning any construction, provide Engineer the names and phone numbers of persons that can be contacted when signal operation malfunctions.
  5. Access for Residences and Businesses: Provide continuous access to all residences and all places of business.
  6. Protection of the Work from Injury by Traffic: Where traffic would be injurious to a base, surface course, or structure constructed as a part of the work, maintain all traffic outside the limits of such areas until the potential for injury no longer exists.
  7. Flagger: Provide trained flaggers in accordance with Article 105.
  8. Conflicting Pavement Markings:
    - a. Where the lane use or where normal vehicle or pedestrian paths are altered during construction, remove all pavement markings (paint, tape, thermoplastic, raised pavement markers, etc.) that will conflict with the adjusted vehicle or pedestrian paths. Use of paint to cover conflicting pavement markings is prohibited. Remove conflicting pavement markings using a method that will not damage the surface texture of the pavement and which will eliminate the previous marking pattern regardless of weather and light conditions.
    - b. Remove all pavement markings that will be in conflict with "next phase of operation" vehicle pedestrian paths as described above, before opening to vehicle traffic or use by pedestrians.
    - c. Cost for removing conflicting pavement markings (paint, tape, thermoplastic, raised pavement markers, etc.) to be included in the Project costs for Maintenance of Traffic (General).
  9. Vehicle and Equipment Visibility:
    - a. Equip all pickups and automobiles used on the Project with a minimum of one Class 2 amber or white warning light that meets the Society of Automotive Engineers Recommended Practice SAE J595, dated November 1, 2008, or SAE J845, dated December 1, 2007, and incorporated herein by reference. Existing lights that meet SAE J845, dated March, 1992, or SAE J1318, dated April, 1986, may be used to its end of service life. Lights should be unobstructed by ancillary vehicle equipment such as ladders, racks or booms. If the light is obstructed, additional lights will be required. The lights shall be operating when a vehicle is in a work area where a potential hazard exists, when operating the vehicle at less than the average speed for the facility while performing work activities, making frequent stops or called for in the Plans or FDOT Design Standards.
    - b. Equip all other vehicles and equipment with a minimum of 4 square feet of retroreflective sheeting or flashing lights.
    - c. To avoid distraction to motorists, do not operate the lights on the vehicles or equipment when the vehicles are outside the clear zone or behind a barrier.
  10. No Waiver of Liability: Conduct operations in such a manner that no undue hazard results due to the requirements of this Article. The procedures and policies described herein in no way acts as a waiver of any terms of the liability of Contractor or his surety.
- F. Detours.
1. General: Construct and maintain detour facilities wherever it becomes necessary to divert traffic from any existing roadway or bridge, or wherever construction operations block the flow of traffic.
  2. Construction: Plan, construct, and maintain detours for the safe passage of traffic in all conditions of weather. Provide the detour with all facilities necessary to meet this requirement. Where pedestrian facilities are detoured, blocked or closed during the work, provide safe alternate accessible routes through or around the work zone meeting the requirements of the ADA Standards for Transportation Facilities.
  3. Construction Methods: Select and use construction methods and materials that provide a stable and safe detour facility. Construct the detour facility to have sufficient durability to remain in good condition, supplemented by maintenance, for the entire period that the detour is required.
  4. Removal of Detours: Remove detours when they are no longer needed and before the Contract is completed. Take ownership of all materials from the detour and

## MAINTENANCE OF TRAFFIC FOR ADDENDUM #1

dispose of them, except for the materials on loan from the Department with the stipulation that they are returned.

5. Detours Over Existing Roads and Streets: When the Department specifies that traffic be detoured over roads or streets outside the Project area, do not maintain such roads or streets. However, maintain all signs and other devices placed for the purpose of the detour.
6. Operation of Existing Movable Bridges: The Department will maintain and operate existing moveable bridges that are to be removed by Contractor until such time as they are closed to traffic. During this period, make immediate repairs of any damage to such structures caused by use or operations related to the work at no expense to the Department, but do not provide routine repairs or maintenance. In the event that use or operations result in damage to a bridge requiring repairs, give such repairs top priority to any equipment, material, or labor available.

### G. Traffic Control Officer.

1. Provide uniformed law enforcement officers, including marked law enforcement vehicles, to assist in controlling and directing traffic in the work zone as required by Engineer and when the following types of work is necessary on projects:
  - a. Directing traffic/overriding the signal in a signalized intersection.
  - b. When FDOT Design Standards, Index No. 655 Traffic Pacing for overhead work is called for in the Plans or approved by Engineer.
  - c. When pulling conductor/cable above an open traffic lane on limited access facilities, when called for in the Plans or approved by Engineer.
  - d. When FDOT Design Standards, Index No. 625 Temporary Road Closure 5 Minutes or Less is used.

### H. Driveway Maintenance.

1. General: Ensure that each residence and business has safe, stable, and reasonable access.
2. Construction Methods:
  - a. Place, level, manipulate, compact, and maintain the material, to the extent appropriate for the intended use.
  - b. As permanent driveway construction is accomplished at a particular location, Contractor may salvage and reuse previously placed materials that are suitable for reuse on other driveways.

### I. Temporary Traffic Control Devices.

1. Installation and Maintenance:
  - a. Install and maintain temporary traffic control devices as detailed in the Plans, Index 600 of the FDOT Design Standards and when applicable, in accordance with the approved vendor drawings, as provided on FDOT's Qualified Products List (QPL) or FDOT's Approved Products List (APL) and the TSSQPL. Erect

the required temporary traffic control devices to prevent any hazardous conditions and in conjunction with any necessary traffic re-routing to protect the traveling public, workers, and to safeguard the work area. Use only those devices that are on the FDOT QPL or the FDOT APL and the TSSQPL. Immediately remove or cover any devices that do not apply to existing conditions.

- b. All temporary traffic control devices must meet the requirements of National Cooperative Highway Research Program Report 350 (NCHRP 350) or the Manual for Assessing Safety Hardware 2009 (MASH) and current FHWA directives.
  - c. For devices requiring field assembly or special site preparation, vendor drawings shall include all field assembly details and technical information necessary for proper application and installation and must be signed and sealed by a Professional Engineer registered in the State of Florida.
  - d. Ensure that the FDOT QPL or APL number is permanently marked on the device at a readily visible location. Sheeting used on devices is exempt from this marking requirement.
  - e. Notify Engineer of any scheduled operation which will affect traffic patterns or safety sufficiently in advance of commencing such operation to permit his review of the plan for the proposed installation of temporary traffic control devices.
  - f. Ensure an employee is assigned the responsibility of maintaining the position and condition of all temporary traffic control devices throughout the duration of the Contract. Keep Engineer advised at all times of the identification and means of contacting this employee on a 24 hour basis.
  - g. Keep temporary traffic control devices in the correct position, properly directed, clearly visible and clean, at all times. Ensure that all traffic control devices meet acceptable standards as outlined in American Traffic Safety Services Association (ATSSA) "Quality Guidelines for Temporary Traffic Control Devices and Features". Immediately repair, replace or clean damaged, defaced or dirty devices.
2. Work Zone Signs:
    - a. Provide signs in accordance with the Plans and Design Standards. Meet the requirements of FDOT 700-2.5 (Sign Retroreflective Sheeting) and FDOT 990-8 (Work Zone Signs). Use only approved systems, which includes sign support posts or stands and attachment hardware (nuts, bolts, clamps, brackets, braces, etc.), meeting the vendor requirements specified on the FDOT QPL drawings.
    - b. Attach the sign to the sign support using hardware meeting the manufacturer's recommendations and as specified in the FDOT Design Standards.
    - c. Provide Federal Highway Administration's (FHWA) accepted sign substrate for use with accepted sign stands on the National Highway System (NHS) under the provisions of the NCHRP Report 350 "Recommended Procedures for the Safety Performance Evaluation of Highway Features."
  3. Business Signs: Provide and place signs in accordance with the Plans and FDOT Design Standards, Index No.

## MAINTENANCE OF TRAFFIC FOR ADDENDUM #1

- 600 series. Furnish signs having retroreflective sheeting meeting the requirements of FDOT Section 990.
4. High Intensity Flashing Lights: Furnish Type B lights in accordance with the Plans and FDOT Design Standards.
  5. Warning/Channelizing Devices: Furnish warning/channelizing devices in accordance with the Plans and Design Standards.
    - a. Retroreflective Collars for Traffic Cones: Use collars for traffic cones listed on the FDOT QPL that meet the requirements of FDOT Section 990. Use cone collars at night designed to properly fit the taper of the cone when installed. Place the upper 6 inch collar a uniform 3-1/2 inches distance from the top of the cone and the lower 4 inch collar a uniform 2 inches distance below the bottom of the upper 6 inch collar. Ensure that the collars are capable of being removed for temporary use or attached permanently to the cone in accordance with the manufacturer's recommendations. Provide a white sheeting having a smooth outer surface and that has the property of a retroreflector over its entire surface.
    - b. Barrier Wall (Temporary): Furnish, install, maintain, remove and relocate a temporary barrier wall in accordance with the Plans. Ensure that temporary concrete barrier wall for use on roadway sections, complies with FDOT Design Standards, Index Nos. 412, 415 or 414 as specified in the Plans. Ensure that temporary concrete barrier wall for use on bridge and wall sections, complies with FDOT Design Standards, Index No 414 as specified in the Plans.
    - c. Ensure that temporary water filled barrier wall used on roadway sections meets the NCHRP Report 350 criteria or the MASH and is listed on the FDOT QPL. Barriers meeting the requirements of FDOT Design Standards, Index Nos. 412, 415 or temporary water filled barriers on the FDOT QPL will not be accepted as an alternate to barriers meeting the requirements of FDOT Design Standards, Index No. 414.
    - d. Glare Screen (Temporary): Use temporary glare screens listed on the FDOT QPL that meet the requirements of FDOT Section 990. Furnish, install, maintain, remove and relocate glare screen systems in conjunction with temporary barrier wall at locations identified in the Plans.
    - e. Ensure the anchorage of the glare screen to the barrier is capable of safely resisting an equivalent tensile load of 600 pounds per foot of glare screen, with a requirement to use a minimum of three fasteners per barrier section.
    - f. When glare screen is utilized on temporary barrier wall, warning lights will not be required.
  6. Temporary Crash Cushion (Redirective/Gating): Furnish, install, maintain and subsequently remove temporary crash cushions in accordance with the details and notes shown in the Plans, the Design Standards, and requirements of the pre-approved alternatives listed on the FDOT QPL. Maintain the crash cushions until their authorized removal. Repair all attachment scars to permanent structures and pavements after crash cushion removal. Make necessary repairs due to defective material, work, or Contractor operations at no cost to the Department. Restore crash cushions damaged by the traveling public within 24 hours after notification as authorized by Engineer.
  7. Guardrail (Temporary): Furnish guardrail (temporary) in accordance with the Plans and Design Standards. Meet the requirements of Article 536.
  8. Arrow Board: Furnish arrow boards that meet the requirements of FDOT Section 990 as required by the Plans and Design Standards to advise approaching traffic of lane closures or shoulder work. Type B arrow boards may be used on low to intermediate speed (0 mph to 50 mph) facilities or for maintenance or moving operations on any speed facility. Type C arrow boards shall be used for all other operations on high-speed (50 mph and greater) facilities and may be substituted for Type B arrow boards on any speed facility.
  9. Portable Changeable Message Sign (PCMS):
    - a. Furnish PCMSs that meet the requirements of FDOT Section 990 as required by the Plans and FDOT Design Standards to supplement other temporary traffic control devices used in work zones.
    - b. A truck mounted PCMS may be used as a stand-alone MOT device only when used for accident or incident management situations as defined in the MUTCD and is listed on the FDOT APL.
  10. Portable Regulatory Signs (PRS):
    - a. Furnish PRSs that meet the requirements of FDOT Section 990 as required by the Plans and FDOT Design Standards.
    - b. Activate portable regulatory signs only during active work activities and deactivate when no work is being performed.
  11. Radar Speed Display Unit (RSDU):
    - a. Furnish RSDUs that meet the requirements of FDOT Section 990 as required by the Plans and FDOT Design Standards to inform motorists of the posted speed and their actual speed.
    - b. Activate the radar speed display unit only during active work activities and deactivate when no work is being performed.
  12. Temporary Signalization and Maintenance:
    - a. Provide temporary signalization and maintenance at existing, temporary, and new intersections including but not limited to the following:
      - 1) Installation of temporary poles and span wire assemblies as shown in the Plans,
      - 2) Temporary portable traffic signals as shown in the Plans,
      - 3) Adding or shifting signal heads,
      - 4) Trouble calls,
      - 5) Maintaining intersection and coordination timing and preemption devices.
    - b. Restore any loss of operation within 12 hours after notification.

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- c. Provide traffic signal equipment that meets the requirements of the FDOT Design Standards and Article 603 of these Specifications. Engineer may approve used signal equipment if it is in acceptable condition. Replacement components for traffic signal cabinet assemblies will be provided by the maintaining agency.
13. Temporary Traffic Detection and Maintenance: Provide temporary traffic detection and maintenance at existing, temporary, and new signalized intersections. Provide temporary traffic detection equipment listed on the FDOT APL. Restore any loss of detection within 12 hours. Ensure 90% accuracy per signal phase, measured at the initial installation and after any lane shifts, by comparing sample data collected from the detection system with ground truth data collected by human observation. Collect the sample and ground truth data for a minimum of five minutes during a peak and five minutes during an off-peak period with a minimum three detections for each signal phase. Perform the test in the presence of Engineer.
14. Truck Mounted Attenuators and Trailer Mounted Attenuators:
- a. Furnish, install and maintain only those attenuators that meet the requirements of NCHRP 350 or the MASH.
  - b. Use truck mounted attenuators or trailer mounted attenuators, when called for in the FDOT Design Standards. Use attenuators listed on the FDOT QPL.
  - c. When attenuators are called for, use either a truck mounted attenuator or a trailer mounted attenuator system designed and installed in accordance with the manufacturers recommendations.
  - d. Equip the attenuator cartridge with lights and reflectors in compliance with applicable Florida motor vehicle laws, including turn signals, dual tail lights, and brake lights.
  - e. Ensure that lights are visible in both the raised and lowered positions if the unit is capable of being raised.
  - f. Ensure that the complete unit is painted DOT yellow (Fed. Std. 595 b, No. 13538). Stripe the rear facing of the cartridge in the operating position with the alternating 6 inch white and 6 inch safety orange 45 degree striping to form an inverted "V" at the center of the unit and slope down and toward the outside of the unit, in both directions from the center. In the raised position, place at least the same square footage of striping on the bottom of the cartridge as placed on the rear facing cartridge in the open position. Use Type III retroreflectorized sheeting for striping.
  - g. Attenuators will not be paid for separately. Include the cost of the truck with either a truck mounted attenuator or a trailer mounted attenuator under Maintenance of Traffic (General). Payment includes all costs, including furnishing, maintaining and removal when no longer required, and all materials, labor, tools, equipment and incidentals required for attenuator maintenance.
15. Temporary Raised Rumble Strip Sets:
- a. When called for in the Plans, furnish, install, maintain, remove, and reinstall temporary raised rumble strip sets.
- b. Install the temporary raised rumble strip sets per the manufacturer's recommendations and in accordance with FDOT Design Standards, Index No. 600.
  - c. The temporary raised rumble strip may be either a removable polymer striping tape or a molded engineered polymer material.
16. Automated Flagger Assistance Devices (AFAD):
- a. Furnish, install, maintain, remove and relocate AFADs in accordance with the Plans and Design Standards. Position AFADs where they are clearly visible to oncoming traffic and out of the lane of traffic. The devices may be operated either by a single flagger at one end of the traffic control zone, from a central location, or by a separate flagger near each device's location.
  - b. AFADs may be either a remotely controlled Stop/Slow AFAD mounted on either a trailer or a movable cart system, or a remotely controlled Red/Yellow Lens AFAD.
  - c. AFADs will not be paid for separately. AFADs may be used as a supplement or an alternate to flaggers in accordance with FDOT Index 603. Include the cost for AFADs in Maintenance of Traffic (General).
17. Temporary Lane Separator:
- a. Furnish, install, maintain, remove and relocate temporary lane separator in accordance with the Plans and FDOT Design Standards, Index No 600.
  - b. Anchor the portable temporary lane separator with a removable anchor bolt. Use epoxy on bridge decks where anchoring is not allowed. Remove the epoxy from the bridge deck by hydroblasting or other method approved by Engineer.
- J. Work Zone Pavement Marking.
1. Description:
- a. Furnish and install work zone pavement markings for MOT in construction areas and in close conformity with the lines and details shown in the Plans and Design Standards.
  - b. Centerlines, lane lines, edge lines, stop bars and turn arrows will be required in work zones prior to opening the road to traffic.
  - c. The most common types of work zone pavement markings are painted pavement markings and removable tape. Other types of work zone pavement markings may be identified in the Plans.
2. Painted Pavement Markings:
- a. General: Use painted pavement markings meeting the requirements of Article 710. Use standard waterborne paint unless otherwise identified in the Plans or approved by Engineer.
3. Removable Tape:
- a. General: Use only where specifically shown on the Plans or where authorized by Engineer.
  - b. Materials. Use removable tape listed on the FDOT QPL and meeting the requirements of FDOT 990-4.

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- Removable tape to be used only when specific calls for in the plans.
- c. Application: Apply removable tape with a mechanical applicator to provide pavement lines that are neat, accurate and uniform. Equip the mechanical applicator with a film cut-off device and with measuring devices that automatically and accumulatively measure the length of each line placed within an accuracy tolerance of plus or minus 2%. Ensure removable tape adheres to the road surface. Removable tape may be placed by hand on short sections, 500 feet or less, if it is done in a neat accurate manner.
  - d. Retroreflectivity: Apply white and yellow traffic stripes and markings that will attain an initial retroreflectivity of not less than 300 mcd/lx-m<sup>2</sup> for white and contrast markings and not less than 250 mcd/lx-m<sup>2</sup> for yellow markings. Black portions of contrast tapes and black masking tapes must be non-reflective and have a reflectance of less than 5 mcd/lx m<sup>2</sup>. At the end of the six month service life, the retroreflectance of white and yellow removable tape shall not be less than 150 mcd/lx-m<sup>2</sup>.
  - e. Removability: Provide removable tape capable of being removed from bituminous concrete and portland cement concrete pavement intact or in substantially large strips, either manually or by a mechanical roll-up device, at temperatures above 40°F, without the use of heat, solvents, grinding or blasting.
4. Temporary Retroreflective Pavement Markers (RPM's): Use markers listed on the FDOT QPL and meeting the requirements of FDOT 990-5. Apply all markers in accordance with the FDOT Design Standards, Index No. 600, prior to opening the road to traffic. Replace markers any time after installation when more than three consecutive markers fail or are missing, at no expense to the Department, in a timely manner, as directed by Engineer.
- K. Method of Measurement.
1. General: Devices installed/used on the Project on any calendar day or portion thereof, within the allowable Contract Time, including time extensions which may be granted, will be paid for at the Contract unit price for the applicable pay item, except those paid for as Maintenance of Traffic (General).
  2. One or more of the following items may appear in a contract in addition to a direct payment item for Maintenance of Traffic (Lump Sum). Unless otherwise stipulated in the Contract Documents, only those items with an Awarded Unit Price will be considered for direct payment.
    - a. Traffic Control Officers:
      - 1) The County will reimburse Contractor for the services of uniformed law enforcement officers authorized to serve as traffic control officers for the purpose of controlling or directing traffic in the work zone as part of the County approved Traffic Control Plan and Maintenance of Traffic provided by Contractor pursuant to the Contract Documents.
      - 2) The quantity to be paid for will be the invoice unit price per hour for the actual number of officers certified to be on the project site, including any law enforcement vehicles and all other direct and indirect costs.
      - 3) Payment will be made at invoice cost from an appropriate dedicated allowance established by the County.
      - 4) Payment will be made only for those Traffic Control Officers specified in the Plans and authorized by the Engineer. The necessary invoices and documentation must be submitted to the Engineer along with the payment request.
    - b. Special Detours:
      - 1) When a detour facility is specifically detailed in the Plans, or is otherwise described or detailed as a special item, and an item for separate payment is included in the proposal, the work of constructing, maintaining, and subsequently removing such detour facilities will be paid for separately. Traffic control devices, warning devices, barriers, signing, and pavement markings for special detours will also be paid for separately.
      - 2) When the Plans show more than one detour, each detour will be paid for separately, at the Contract lump sum price for each.
      - 3) Where a separate item for a specific detour facility is included in the proposal, payment will be made under special detour.
    - c. Arrow Board: The quantity to be paid at the contract unit price will be for the number of arrow boards certified as installed/used on the project on any calendar day or portion thereof within the contract time.
    - d. Work Zone Signs:
      - 1) The number of temporary post-mounted signs (temporary regulatory, warning and guide) certified as installed/used on the Project will be paid for at the Contract unit price for work zone signs. When multiple signs are located on single or multiple posts, each sign panel will be paid individually. Signs greater than 20 square feet and detailed in the Plans will be paid for under Maintenance of Traffic (General).
      - 2) Temporary portable signs (excluding mesh signs) and vehicular mounted signs will be included for payment under work zone signs, only if used in accordance with the Design Standards.
    - e. Business Signs: The number of business signs certified as installed/used on the project will be paid for at the Contract unit price for business signs.
    - f. High Intensity Flashing Lights: The number of high intensity flashing lights (Type B) certified as installed/used on the project will be paid for at the Contract unit price for high intensity flashing lights (temporary - Type B).
    - g. Channelizing Devices: The number of Type I, Type II, direction indicator barricade, Type III, vertical panel, drum and longitudinal channelizing devices certified as

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- installed/used on the project meeting the requirements of FDOT Design Standards, Index No. 600 and have been properly maintained will be paid for at the Contract unit prices for barricade (temporary). Payment will be made for each channelizing device that is used to delineate trailer mounted devices. Payment will be made for channelizing devices delineating portable changeable message signs during the period beginning fourteen (14) working days before Contract Time begins as authorized by Engineer.
- h. Barrier Wall (Temporary): The Contract unit price for barrier wall (temporary) will be full compensation for furnishing, installing, maintaining, and removing the barrier wall. When called for, the Contract unit price for barrier wall (temporary/relocate) will be full compensation for relocating the barrier. The certified quantity to be paid for will be determined by the number of sections times the nominal length of each section.
  - i. Lights, Temporary, Barrier Wall Mount: The number of Type C steady burn lights, mounted on barrier wall, certified as installed/used on the project, meeting the requirements of the Design Standards and have been properly maintained will be paid for at the Contract unit price for lights temporary, barrier wall mount.
  - j. Glare Screen (Temporary): The certified quantity to be paid for will be determined by the number of sections times the nominal length of each section.
  - k. Temporary Crash Cushions:
    - 1) Redirective: The quantity to be paid for will be the number of temporary crash cushions (redirective) certified as installed/used and maintained on the project, including object marker.
    - 2) Gating: The quantity to be paid for will be the number of temporary crash cushions (gating) certified as installed/used and maintained on the project, including object marker.
  - l. Temporary Guardrail: The quantity to be paid for will be the length, in feet, of temporary guardrail constructed and certified as installed/used on the project. The length of a run of guardrail will be determined as a multiple of the nominal panel lengths.
  - m. Advance Warning Arrow Panel: The quantity to be paid at the Contract unit price will be for the number of advance warning arrow panels certified as installed/used on the project on any calendar day or portion thereof within the contract time.
  - n. Portable Changeable Message Sign: The quantity to be paid at the Contract unit price will be for the number of portable changeable message signs certified as installed/used on the project on any calendar day or portion thereof within the contract time. Payment will be made for each portable changeable message sign that is used during the period beginning fourteen working days before Contract Time begins as authorized by Engineer.
  - o. Portable Regulatory Signs: The quantity to be paid for will be the number of portable regulatory signs certified as installed/used on the project on any calendar day or portion thereof within the Contract time, will be paid for the Contract unit price for portable regulatory sign.
  - p. Radar Speed Display Unit: The quantity to be paid for will be the number of radar speed display units certified as installed/used on the project on any calendar day or portion thereof within the Contract Time, will be paid for the Contract unit price for radar speed display unit.
  - q. Temporary Signalization and Maintenance: For existing intersections, the quantity to be paid for will be the number of signalized intersections per day for the full duration of the Contract. For temporary intersections, the quantity to be paid for will be the number of signalized intersections per day for the duration of the temporary intersection. No separate payment will be made for temporary signalization and maintenance at new intersections.
  - r. Temporary Traffic Detection and Maintenance: For existing intersections, the quantity to be paid for will be the number of signalized intersections per day beginning the day Contract Time begins and ending the day the permanent detection is operational and the final lane configuration is in place. For temporary and new intersections, the quantity to be paid for will be the number of signalized intersections per day beginning the day the temporary detection is functional and ending the day the permanent detection is operational and the final lane configuration is in place for a new intersection; or, when the detection is removed for a temporary intersection.
  - s. Work Zone Pavement Markings: The quantities, furnished and installed, to be paid for will be the length of skip and solid pavement markings, and the area of pavement markings placed as follows:
    - 1) The total transverse distance, in feet, of skip pavement marking authorized and acceptably applied. The length of actual applied line will depend on the skip ratio of the material used. Measurement will be the distance from the beginning of the first stripe to the end of the last stripe with proper deductions made for unpainted intervals as determined by plan dimensions or stations, subject to the requirements of the Contract Documents.
    - 2) The net length, in feet, of solid pavement marking authorized and acceptably applied.
    - 3) The number of directional arrows or pavement messages authorized and acceptably applied.
    - 4) The number of temporary RPM's authorized and acceptably applied.
  - t. Temporary Raised Rumble Strips: The quantity to be paid for will be the number of temporary raised rumble strip sets certified as installed/used on the project on any calendar day or portion thereof within the Contract Time.
  - u. Temporary Lane Separator: The quantity of temporary lane separator to be paid for will be plan quantity, in feet, including drainage gaps, completed and accepted.
- L. Submittals.

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1. Submittal Instructions: Prepare a certification of quantities, using the Department's current approved form, for certified MOT payment items for each project in the Contract. Submit the certification of quantities to Engineer. The Department will not pay for any disputed items until Engineer approves the certification of quantities.
2. Contractor's Certification of Quantities: Request payment by submitting a certification of quantities no later than Twelve O'clock noon Monday after the estimate cut-off date or as directed by Engineer, based on the amount of work done or completed. Ensure the certification consists of the following:
  - a. Contract Number, Certification Number, Certification Date and the period that the certification represents.
  - b. The basis for arriving at the amount of the progress certification, less payments previously made and less an amount previously retained or withheld. The basis will include a detail breakdown provided on the certification of items of payment in accordance with 102-A. After the initial setup of the MOT items and counts, the interval for recording the counts will be made weekly on the certification sheet unless there is a change. This change will be documented on the day of occurrence. Some items may necessitate a daily interval of recording the counts.
- d. Business Signs: Price and payment will be full compensation for all materials and labor required for furnishing, installing, relocating, maintaining, and removing the signs as well as the cost of installing any logos provided by business owners.
- e. High Intensity Warning Lights: Price and payment will be full compensation for furnishing, installing, operating, relocating, maintaining and removing high intensity flashing lights (Type B).
- f. Channelizing Devices: Prices and payment will be full compensation for furnishing, installing, relocating, maintaining and removing the channelizing devices, including the costs associated with attached warning lights as required.
- g. Barrier Wall (Temporary): Price and payment will be full compensation for furnishing, installing, maintaining, and removing the barrier. When called for, barrier wall (temporary) (relocate) will be full compensation for relocating the barrier.
- h. Lights, Temporary, Barrier Wall Mount: Price and payment will be full compensation for all work and materials for furnishing, installing and maintaining the warning lights mounted on barrier wall. Payment will not be made for lights that are improperly placed or are not working.
- i. Glare Screen (Temporary): Price and payment will be full compensation for furnishing, installing, maintaining, and removing the glare screen certified as installed/used on the project. When called for, glare screen (relocate) will be full compensation for relocating the glare screen.

### M. Basis of Payment.

1. Maintenance of Traffic (General):
  - a. No Direct Payment Provided: When no item for direct payment of Maintenance of Traffic (Lump Sum) is provided by the Contract, the costs for performing all work and requirements specified under this Article, except as may be specifically covered for payment under other items, will be included among the various scheduled items of the Contract.
  - b. Direct Payment Provided: When direct payment for Maintenance of Traffic (Lump Sum) is provided in the Contract, the quantity to be paid all work and costs specified under this Article, except as may be specifically covered for payment under other items, will be the lump sum Contract Price.
2. Additional items of Direct Payment. Only those items with an Awarded Unit Price will be considered for direct payment.
  - a. Special Detours: Price and payment will be full compensation for providing all detour facilities shown in the Plans and all costs incurred in carrying out all requirements of this Article for general MOT within the limits of the detour, as shown in the Plans.
  - b. Commercial Materials for Driveway Maintenance: Price and payment will be full compensation for all work and materials specified for this item, including specifically all required shaping and maintaining of driveways.
  - c. Work Zone Signs: Price and payment will be full compensation for all work and materials for furnishing signs, supports and necessary hardware, installation, relocating, maintaining and removing signs.
  - d. Temporary Crash Cushion (Redirective/Gating): Price and payment will be full compensation for furnishing, installing, maintaining and subsequently removing such crash cushions. Payment for restoring damaged crash cushions will be the manufacturer's/distributor's invoice price for the new materials/parts plus 20% markup. The 20% markup is compensation for all necessary work including; but not limited to, labor, equipment, supplies and profit, as authorized by Engineer. Additional MOT required for the repair of the crash cushion will be paid for under the appropriate MOT pay item.
  - e. Temporary Guardrail: Price and payment will be full compensation for furnishing all materials required for a complete installation, including end anchorage assemblies and any end connections to other structures and for installing, maintaining and removing guardrail.
  - f. Arrow Board: Price and payment will be full compensation for furnishing, installing, operating, relocating, maintaining and removing arrow boards.
  - g. Portable Changeable Message Sign: Price and payment will be full compensation for furnishing, installing, operating, relocating, maintaining and removing portable changeable message signs.
  - h. Portable Regulatory Signs:
    - 1) Price and payment will be full compensation for furnishing, installing, relocating, maintaining and removing a completely functioning system as described in these Specifications portable regulatory signs. Price and payment will be full

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compensation for furnishing, installing, operating, relocating, maintaining and removing portable regulatory signs.

- 2) Payment will include all labor, materials, incidentals, repairs and any actions necessary to operate and maintain the unit at all times that work is being performed or traffic is being affected by construction and/or MOT operations.
- o. Radar Speed Display Unit:
- 1) Price and payment will be made only for a completely functioning system as described in these specifications. Payment will include all labor, hardware, accessories, signs, and incidental items necessary for a complete system.
  - 2) Payment will include any measurements needed to insure that the unit conforms to all specification requirements.
  - 3) Payment will include all labor, materials, incidentals, repairs and any actions necessary to operate and maintain the unit at all times that work is being performed or traffic is being affected by construction and/or MOT operations. Price and payment will be full compensation for furnishing, installing, operating, relocating, maintaining and removing radar speed display unit.
- p. Temporary Signalization and Maintenance: Price and payment will constitute full compensation for furnishing, installing, operating, maintaining and removing temporary traffic control signals including all equipment and components necessary to provide an operable traffic signal. Payment will be withheld for each day at each intersection where the temporary signalization is not operational within 12 hours after notification.
- q. Temporary Traffic Detection and Maintenance: Price and payment will constitute full compensation for furnishing, installing, operating, maintaining and removing temporary traffic detection including all equipment and components necessary to provide an acceptable signalized intersection. Take ownership of all equipment and components. Payment will be withheld for each day at each intersection where the temporary detection is not operational within 12 hours after notification.
- r. Temporary Raised Rumble Strips: Price and payment will be full compensation for all work and materials described in this Section, including all cleaning and preparing of surfaces, disposal of all debris, furnishing of all materials, application, curing, removal, reinstalling and protection of all items, protection of traffic, furnishing of all tools, machines and equipment, and all incidentals necessary to complete the work.
- s. Work Zone Pavement Markings:
- 1) Price and payment will be full compensation for all work specified including, all cleaning and preparing of surfaces, furnishing of all materials, application, curing and protection of all items, protection of traffic, furnishing of all tools, machines and equipment, and all incidentals necessary to complete the work. Final payment will be withheld until all deficiencies are corrected.

- 2) Removable tape may be substituted for work zone paint at no additional cost to the Department.
- 3) Payment for temporary RPMs used to supplement line markings will be paid for under temporary retroreflective pavement markers. Install these markers as detailed in the Design Standards.

- t. Temporary Lane Separator: Price and payment will be full compensation for all work specified in this Section.
3. Traffic Control Officers: Price and payment will be full compensation for the services of the traffic control officers.
4. Payment Items: Payment will be made under:

Item No.	Description	Unit
102- 1A-	Maintenance of Traffic	LS
102-74-1	Barricades (Temporary- Type I, II, VP & Drum ).	per each per day
102-76A	Advance Warning Arrow Panel	per each per day