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STATEMENT OF WORK

1. GOVERNING SPECIFICATIONS

A. Purpose of this IFB:

To obtain a Contractor for herbicide application services for the Pennsylvania Department of Transportation (PennDOT) Engineering District 5. These herbicide application services may include, but are not limited to plant growth regulators, non-selective, selective, woody plant bud inhibitor, basal stem and invasive weed control in turf, brush, and around roadside structures.

B. Definitions:

1. **Applicator (Certified):** An employee of the Contractor who is certified by the Pennsylvania Department of Agriculture to apply herbicides for Category 10 (Right-of-Way).
2. **Contractor:** The business entity performing the statement of work.
3. **End Result:** A type of herbicide application where the Contractor's payment is based on the level of achievement of intended results.
4. **Hourly Spray Truck Compliment:** A type of herbicide application where the Contractor is paid hourly based on the pay items contained in the IFB.
5. **Non-Selective:** A type of herbicide application where there is a bare ground objective.
6. **Operator:** An employee of the Contractor who operates the spray truck and may or may not be an Applicator. Requirements per crew provided within this document.
7. [PennDOT Form OS-501](#): PennDOT Confirmation of Service
8. **PennDOT Roadside Activity Report (Form M-609):** This is a mobile electronic app for tracking work performed by the Contractor.
9. [PennDOT Publication 23](#): PennDOT Maintenance Manual
10. [PennDOT Publication 212](#): PennDOT Bureau of Highway Safety and Traffic Engineering Official Traffic Control Devices.
11. [PennDOT Publication 213](#): PennDOT Bureau of Maintenance and Operations (BOMO) Temporary Traffic Control Guidelines.
12. **Pesticide Business License:** refers to the Commercial Pesticide Application Business License that is required for a business to apply herbicides in Pennsylvania. Issued by the Pennsylvania Department of Agriculture (PDA). The pesticide business license number (BU) must be displayed on vehicles applying herbicides.
13. **Pesticide hypersensitivity Registry:** A listing of locations for people who have been verified by a physician to be excessively or abnormally sensitive to pesticides. List provided by the PDA to each registered entity holding a Pesticide Business License.
14. **Safety Data Sheet:** A written document prepared by the manufacturer using globally accepted format of chemical product safety information.
15. **Selective:** The type of herbicide application where there are broad leaf or invasive plant control objective.
16. **Shadow Vehicle:** a vehicle positioned within the activity in advance of the work space and work vehicles.

- #### C. Concurrent Contracts:
- PennDOT reserves the right to solicit IFBs and award work for additional contracts or Contractors, to run concurrently with this contract, under different payment type structures such as lump sum and mileage units of measures.

- D. Subcontracting: Although other opportunities exist such as traffic control and material acquisition etc., subcontracting of herbicide application will not be permitted.

There is no goal for Small Diverse Businesses (SDB) or Veteran Business Enterprise (VBE) on this solicitation, but bidders are encouraged to subcontract to SDB and VBE firms.

E. Executive Order 2021-06, Worker Protection and Investment

Pursuant to Executive Order 2021-06, Worker Protection and Investment (October 21, 2021), the Commonwealth is responsible for ensuring that every Pennsylvania worker has a safe and healthy work environment and the protections afforded them through labor laws. To that end, contractors and grantees of the Commonwealth must certify that they are in compliance with all applicable Pennsylvania state labor and workforce safety laws. Such certification shall be made through the Worker Protection and Investment Certification Form (BOP-2201) and submitted with the bid, proposal or quote.

F. Service Performance Standards:

1. Services are to be performed in accordance with PennDOT Publication 23 – Maintenance Manual, Chapter 13 and all work shall be consistent with standard operating procedures and applicable Federal, State, and Local Laws, rules and regulations for the protections of public health and the environment and includes following OSHA safety requirements and other agencies involved in the application and regulation of pesticides. It is to be understood that financial and climactic conditions may require the programs to deviate from Chapter 13 of Publication 23. The District Roadside Specialist shall have full discretion to plan programs and make changes throughout the contract period when it is in the best interest of the Commonwealth.
2. Work shall also be in accordance with PennDOT’s National Pollutant Discharge Elimination System Permit PA0270792 (NPDES Permit), (Attachment A), as well as any renewals or replacement of the permit. Each spray crew shall have:
 - a. The Contractor’s adverse incident response plan
 - b. Appropriate spill kit.
3. The District Roadside Specialist may require the contractor to supply Materials. Contractor furnished materials will be reimbursable using the Material Contingency Item paid at the invoice price plus 10% for handling and will be documented on the roadside daily activity report (M-609).
4. Contractor supplied material must be EPA registered; registered for use in Pennsylvania by the Pennsylvania Department of Agriculture and labeled for roadside/right-of-way use. Only herbicides listed on the current PennDOT NPDES Permit are to be used. An updated list of approved herbicides will be provided to the Contractor before each application season
5. Along highways scheduled for herbicide application, crews must exercise caution when encountering sections of roadside that are adjacent to residential and commercial properties. Do not apply herbicides to shade trees or ornamental trees or bushes and plants where the property owners are providing maintenance.
6. PennDOT reserves the right to sample all Contractor supplied herbicide mixtures at the tanks and nozzles to determine the accuracy of mixes.

G. Project Management:

1. PennDOT Project Manager:

Will be the District's Roadside Specialist/Supervisor (DRS) or their designee. The PennDOT Project Manager will be noted as DRS throughout the rest of this document. Once a Purchase Order is issued to the awarded Contractor, the Project Manager or their designee will be provided to the Contractor. District management may change the PennDOT Project Manager as they deem necessary.

2. Contractor Project Manager:

- a. The Contractor shall name one person as the Project Manager.
- b. The Project Manager shall be the Department's sole point of contact for all service-related activity including but not limited to, scheduling, programing, and other program related activities.
- c. This person shall have the authority to make all service-related decisions and Contractor personnel shall not change these decisions.
- d. The Project Manager shall be accessible by Cellular Phone and e-mail. Phone numbers and e-mail address shall be provided to the DRS prior to the start of any work. All cost associated with the job duties of the project manager shall be incidental to the pay items.

3. Contractor Staff

- a. The Contractor shall supply two professionally and physically able operators with each spray truck unless otherwise stated within each specific pay item. One of these operators shall be a certified applicator and be able to communicate clearly with the Department. The Foreman of the crew must be a certified applicator.
- b. The certified applicator(s) must demonstrate the skill and ability to, without assistance, operate, calibrate, and perform field maintenance on all equipment associated with the application complement. Failure to demonstrate these abilities shall result in the removal of the certified applicator from all application work on a spray unit until such time as the skills and abilities can be demonstrated to the DRS. The removal of a certified applicator must not result in a disruption of service.
- c. The certified applicator for each crew must be supplied with a cellular phone. The telephone number must be given to the DRS prior to the start of any work. The certified applicator will be responsible for the following items:
 - i. Varying rates of application based upon all site conditions such as spray material, vegetation to be controlled, weather, speed of equipment, wind velocity, traffic conditions, and other factors listed on product labels.
 - ii. The ability to read PennDOT supplied maps and understand the PennDOT State Route (SR) system.
 - iii. Daily recording on county maps, if required and supplied by the DRS, of the routes completed and the scheduling of herbicide application within the county as coordinated with the DRS and county.
 - iv. Familiarization with the areas to be treated within each county to maintain smooth and efficient operations.
 - v. Scheduling meetings with the DRS prior to working in each county and the resolving of the sequence of herbicide applications, the routes to be treated, and the respective traffic controls and protection equipment and devices required in accordance with PennDOT Publication 213.
 - vi. Complete understanding of the procedure for reporting of work progress in the mobile M-609 application.
 - vii. Maintain a current copy of Pesticide Hypersensitivity Registry and follow all guidelines related to contacting individuals listed in this publication.

- viii. Contact the DRS 8:00 AM each day to list the roads that are planned to be treated with a pesticide application during that day. This is intended as a daily check-in and status report by the crew Foreman.
 - ix. Possess knowledge and ability to maintain and field adjust the equipment in order to sustain a continuous and productive operation.
 - x. Possess the professional and technical ability to distinguish between desirable and undesirable vegetation. If in doubt, Contractor Project Manager will be consulted.
 - xi. Review weather prior to start of each workday and continuously monitoring the weather conditions throughout the workday to ensure effectiveness of the application and adherence to the label.
 - xii. A complete understanding of the herbicide products used in the District's Herbicide application program.
- d. Any changes to the equipment and/or personnel must be requested in writing to the DRS or designee and only granted with their approval. Provide changes of equipment and personnel equivalent to or better. For continuation of operations, the DRS or designee may verbally approve changes to equipment or personnel. If at any time a substitution of equipment is needed or additional equipment units of the same are requested, in the interest of time, some equipment requirements may be waived by the DRS in order to get the equipment utilized as when needed.
 - e. The Department reserves the right to have any Contractor personnel removed from the project at any time at its discretion.
4. Meetings
- a. Pre-Season Meeting

Each year, all certified applicators and Contractor Project Manager will be required to attend a pre-season meeting with the DRS at a location to be specified by PennDOT within the applicable District boundaries.

 - i. All Contractor costs associated with this meeting shall be incidental to the service and no payments will be made for time spent traveling to the meeting, the duration of the meeting or time after the meeting unless directed by the DRS. This meeting may last up to 8 hours to ensure required training and set up are completed.
 - ii. The meeting will be inclusive of the setup, calibration, and final inspection of equipment prior to the equipment being used within the District.
 - iii. Parts of the meeting will be used to establish an understanding of the PennDOT Roadway Management System (RMS), and the Mobile M-609 application. No payment will be made during this portion of the meeting as well as those previously mentioned.
 - iv. It is recommended, but not required, that the Contractor have potential replacement certified applicators attend this meeting. Otherwise, substitutions may not be permitted.
5. The following information shall be supplied to the DRS prior to the start of each herbicide application season and not later than April 1.
- a. Completed PA Certified Pesticide Applicator Licensing Form (Attachment B.) for the new season.
 - b. Contact list to include the first and last name, cell phone numbers and clear identification of the Project Manager and all certified applicators.
 - c. List of spray trucks including the vehicle identification number as assigned by the Contractor.
 - d. A copy of the current Pesticide Business License.

H. Contractor Licensing and Certification Requirements

1. The Contractor must provide copies of valid licensing and certifications for the following:
 - a. Pesticide Business License: Category E (Right-of-Way Pest Control)
 - b. Applicator License Category 10 Certification: Right of Way & Weeds. Required for all Applicators. Use the PA Certified Pesticide Applicator Licensing Form to list the applicators used under this contract.
2. All applications must be made by or under the control at the application site of a certified applicator.
3. The certified applicators pesticide application license must be in Right-of-Way Category 10 for Roadside applications. Certified applicators in Rest Areas with only a Category 10, can only spray herbicides.

I. Work Schedule: (Applies to Hourly and End Result herbicide contracts)

Herbicide application operations may be performed Monday through Friday. The Department Project Manager or designee may authorize work on Saturday and Sunday, as necessary. No work shall be scheduled to occur on the following holidays unless written permission to do so is provided by the Department Project Manager or designee:

- New Year's Day
- Dr. Martin Luther King Jr. Day
- President's Day
- Memorial Day
- Juneteenth Day
- Independence Day
- Labor Day
- Columbus Day
- Veteran's Day
- Thanksgiving Day
- Day after Thanksgiving Day
- Christmas Day

The following Monday will be recognized as the day when no work is to be scheduled for all holidays occurring on a Sunday, and the Friday before will be recognized as the day when no work is to be scheduled for all holidays occurring on a Saturday.

1. During times of inclement weather or special events, the DRS may postpone work until a more suitable time.
2. If it is deemed to be in the best interest of the Department, the DRS may allow a revised work schedule.
3. When directed by the DRS, applications shall be done on state highways on weekends, during hours of darkness, or other low volume traffic periods. Trucks applying herbicides during hours of darkness shall be equipped with sufficient lighting to fully illuminate the spray target area.
4. Each crew must report work status (working/not working) to the DRS by email each day; this report is to be made by 8:00 AM. (EST).

5. No work will be permitted on limited access, interstates, and expressways from dusk to dawn without written consent of the DRS.
 6. The Department anticipates forty (40) hours of production work per crew each week. The Contractor shall be permitted to work extended workdays if it is in the best interest of the Department and prior approval is granted in writing by the DRS. Requests must be made a day in advance of anticipated extended workday unless otherwise instructed. In the event of programming needs, weather conditions, or major equipment failure that affects the application timing of the herbicide programs, the Contractor, at the Department's discretion, shall be required to work in excess of the normal forty-hour work week. This shall require an extended workday and up to a six-day work week. This additional work shall be paid at the Purchase Order (PO) unit prices.
 7. The number of hours worked are dependent on satisfactory work performance, program demands and funding.
- J. Equipment Requirements: (Applies to all herbicide contracts.)
1. Initial Equipment Inspection (after the bid opening)
 - a. The apparent low bidder will be required, at their expense, to assemble their proposed equipment and personnel. The DRS will review the equipment and personnel in reference to the specification requirements.
 - b. The initial demonstration shall take place at a time and place determined by the Department and be within ten (10) working days of the bid opening date. The DRS according to their schedule will make the site selection.
 - c. A list of equipment modifications and additional personnel training, if needed, shall be developed by the DRS and supplied to the apparent low bidder within two working days of the initial demonstration.
 - d. After the modifications list is delivered to the apparent low bidder, the apparent low bidder will respond with their corrective action for each of the deficiencies noted and the timeframe in which they will be corrected. This response will be required within five working days after the list of modifications is sent from the DRS.
 - e. The time, place and/or method of the follow-up demonstration to resolve deficiencies will be at the discretion of the DRS. Notice of 5 working days will be given prior to any follow up inspection. If deficiency resolution is not to the satisfaction of the DRS, the Department reserves the right to go to the next lowest bidder.
 - f. Final inspection shall take place 60 days after the bid opening unless a later date is mutually agreed upon.
 2. Subsequent pre-season inspections
 - a. Subsequent pre-season equipment checks will take place after April 1 of each year. This may be done during the pre-season meeting discussed in Section G.4. The DRS may state specific corrections needed to equipment based on the equipment specifications. Corrections shall be made within five (5) calendar days after written notification. Written notification will include e-mail, fax, or mailed delivery.
 3. Contractor shall furnish the personnel and equipment of the type, condition, and quantity necessary for the proper and productive execution of the contracted work.

4. Contractor shall provide all lubricants, fuel, fluids and antifreeze for equipment. Contractor shall ensure all equipment and operators are in conformance with applicable PA Motor Vehicle laws and federal regulations. Spray Trucks will be required to be of sufficient size to legally haul all required equipment and supplies.
5. All equipment shall be in sound mechanical condition, good working order, with a uniformly painted, neat, and clean appearance. At the request of the DRS all equipment shall be washed /cleaned within forty-eight (48) hours of email notice.
6. Overnight storage of equipment will be the responsibility of the Contractor. The Department may allow overnight parking in designated areas on Commonwealth property but only with the permission of the DRS and such approval may be revoked at any time when it is in the Department's best interest.
7. All vehicles shall display the Contractor's business name, City, State, U.S. DOT numbers and Pesticide Business License Numbers as required by the Pesticide Control Act of 1973.
8. Shadow Vehicles, and all advance warning devices associated with them, including but not limited to flashing lights and arrow panels, shall be supplied and be in accordance with the most current addition of PennDOT Publication 213.
9. All vehicles applying herbicides shall be equipped with, at the Contractor's expense, a real-time GPS (Global Positioning System) Location Verifying Unit Receiver Signal System to record the location of the spray vehicles using GPS satellites. The spray vehicle computer and GPS Location Verifying Units shall be supplied, maintained, and installed by the Contractor, at their expense, for the duration of the Purchase Order. The GPS Location Verifying Units system shall be capable of real-time and historic tracking of all spray trucks at the same time collectively or individually. The Department reserves the rights to download any stored or recorded information within the vehicles spray monitoring or location monitoring units at any time during the term of the Purchase Order. The Contractor is responsible for providing the Department with a website access location to view the GPS location, of any spray truck, at any time, in real-time. The website shall be compatible with Department used web browsers and be compatible with Smartphone's using the iPhone, Android, and Windows Operating Systems. GPS information must be formatted into a file format compatible with PennDOT's existing software.
10. The GPS Units should be capable of accuracies of ten to fifteen meters uncorrected and five meters when differentially corrected. The mobile units must contain a data dictionary capable of collecting and delivering a summary of each day's activities in the form of a printed report which will be correlated with the form M-609 and used as a basis of payment for work performed. This summary must be available to the District Roadside Specialist each day work is completed. The GPS unit reports must show the following information:
 - a. State Routes traveled
 - b. Locations along the traveled state routes
 - c. Direction of travel along the state routes
 - d. Location and time correlated
 - e. Vehicle Identifier (truck number, drivers name, etc.)
11. All spray equipment shall be calibrated at a minimum of one time each week and at the beginning of a new spray program. All spray equipment shall also be calibrated upon starting work in a different county. Calibrations shall be documented on Form M-609.

12. Spray vehicles assigned to this service shall not perform other work outside of the specified areas unless released by the DRS and only after tanks and storage are emptied to the satisfaction of the DRS. The emptying of tanks and storage shall be done at the Contractor's cost. Upon return, all tanks and lines shall be empty and cleaned. Any equipment that leaves the District shall be subject to re-inspection at the Contractor's expense.
13. All spray trucks and shadow vehicles shall be equipped with truck-to-truck communication. If a different means of truck-to-truck communication is utilized other than CB radio, provide the DRS with a unit of the same to be used for communication with the crew when in the field and in proximity. This unit shall not need to be hard wired to a vehicle. If the unit is battery operated, provide all charging equipment.
14. All vehicles involved in herbicide operations must have the Pesticide Business License number displayed (in three (3) inch high letters and numbers) on both sides of the vehicle at a readily visible location.

1000-gallon Spray Truck (Pay Item 1)

1. Three units of this size will be required at the start of the spray season. It is possible the complement will be reduced to 2 units any time after July 31.
2. Spray Trucks shall be equipped with a 1000 gallon or larger total capacity with independently separate, dual tank capability. For the purpose of this work, independently separate shall mean that the tanks shall not share any walls and be standalone. The smaller tank will have a minimum capacity of 200 gallons and a maximum capacity of 300 gallons. The large tank shall be designated as Tank #1 and the smaller Tank shall be designated Tank #2. Tank(s) will be equipped with mechanical or hydraulic agitation and a bottom sump from which the pump influent line (the line that connects the tank to the suction side of the pump) shall connect.
3. The tanks freshwater filling system shall be constructed with metal pipe and be of the same size as the auxiliary refill pump effluent housing as stated number 3 below. The filling system shall be permanently mounted on the truck. The fill system shall be constructed to have a visual air gap (minimum air gap of six (6) inches) between the end of the pipe and the tank opening. Backflow preventers will not be accepted. Each complement will be required to have any pipe fittings, adapters, reducers, etc. that may be needed to properly connect to water sources.
4. Each truck shall be equipped with an auxiliary refill system to be capable of refilling tanks from roadside streams in 30 minutes or less. The suction line (pump influent) shall be a minimum of 20' in length and the same size as the pump influent housing. The effluent hose shall be at a minimum 25' in length and the same size as the effluent housing.
5. All valves used to shut off system flow at tanks, solenoid valves, and other areas of the system shall be quarter turn one way ball valves. Gate valves will not be accepted.
6. Valves used to divert system flow downstream of the solenoid valves may be two-way valves or three-way valves.

7. All valves, hoses, and tanks shall be permanently labeled to indicate their operational function. Labels on hoses shall be marked with arrows indicating the direction of flow. Any equipment that is unlabeled or not in use as needed by these specifications shall be removed so as not to be confused with the operational spray system.
8. The pumping system shall be outfitted with a system capable of discharging the required quantity of spray mixture at the specified pressure.
9. The pump return line to the tank shall be of the same size as the pump effluent housing. A metal ball valve and liquid filled system pressure gauge shall be installed using metal pipe in the return line as close to the pump effluent housing as possible for regulating and reading pressure.
10. An inline filter with interchangeable manufacturers recommended mesh size screens shall be installed between the tank and pump. Provide spare screens as needed for the types of herbicides and formulations that are used in order to provide constant unobstructed flow.
11. The spray unit is to be equipped with a sprayer control system capable of automatically maintaining the application rate and shall include a vehicle speed sensor which is either connected to the vehicle speedometer or has a radar type sensor. The computer shall be capable of operating a minimum of 7 separate booms.
12. The spray unit shall be equipped with a nozzle system for applying non-selective and/or selective herbicides as directed by the DRS. This system shall contain a check valve on each individual nozzle assembly immediately preceding that nozzle assembly. The system shall be capable of simultaneously spraying both the guiderail and the roadway shoulder.
13. All guiderail and shoulder nozzle assemblies shall be constructed so that they can be adjusted up and down along both the vertical and horizontal axis. Each nozzle assembly must be designed to overlap each adjacent nozzle.
14. The guiderail application system shall be constructed to provide coverage inside and behind guiderail post. Each nozzle assembly shall be capable of applying an eighteen-to-thirty-six-inch pattern. All guiderail nozzle assemblies shall be capable of extending out from the side of the truck a minimum of eighteen inches (18").
15. The shoulder application system shall be constructed of solid metal pipe and pipe fittings permanently attached to the square tubing to utilize four (4) three-quarter inch (3/4") nozzle body assemblies. Each nozzle assembly shall spray an eighteen to thirty-six-inch pattern behind the truck to completely cover the area between the left and right guiderail application nozzles.
16. Each truck shall have at least one spare set of adjustable bars for the outside guiderail nozzle assemblies to facilitate field repairs if needed during the workday. If the spare set is used, it shall be replaced within forty-eight (48) hours.
17. All trucks used for this application shall be equipped with two (2) identical Boomless Spray Head systems capable of operating a minimum of seven (7) separate spray sections independently or simultaneously. Independent spray sections shall be as follows: 2ft, 2ft, 4ft, 4ft, 6ft, 6ft totaling a streak-free pattern covering at least twenty-eight (28) feet.

Sections one (1) through four (4) shall have an oscillating motion electrically driven by a 12-volt system. The spray system heads shall be mounted on both sides of the truck per the manufacturer's instructions. Only one spray head will be utilized at a time. The switching between spray heads shall not interrupt spraying operation more than 10 minutes. The Spray Systems shall be capable of raising and lowering a minimum of thirty (30) degrees for embankment applications and swing in and out (when in the "in" position, spray head will be facing towards the back of the truck) ninety (90) degrees. The operation of independent spray sections and movement of the Spray System shall be done from inside the cabin of the spray truck with an independent switch for each boom section.

18. The mounting points of the spray heads shall be at a point half the length of the total truck bed. Hoses providing material to the spray head shall be no larger than one-half inch (1/2") in diameter.
19. Each truck shall have at least one hose connection point that is independent of the computer flow control. A minimum of two hundred (200) feet of PVC / Polyurethane blended core double nylon braid 1/2" electric reel mounted hose with a six hundred (600) pound pressure rating and include wands and handguns for special projects. Handguns will be required for bareground application in order to apply material around sign posts and areas not accessible by the guiderail and shoulder application systems.
20. Each spray truck shall be equipped with a minimum of 3 truck mounted container-holding brackets designed so that 15 gallon returnable/refillable drums fit inside and remain stable. The contractor shall be responsible for the care of the drums while they are in their custody. The contractor shall be responsible for loading and unloading of the drums. Additionally, provide the following to aide in the handling of the 15 gallon returnable/refillable containers:
 - a. A permanently mounted hardwired, twelve-volt (12V) electric material handling pump minimum four (4) gallons per minute with pressure switch. Include needed suction and discharge hoses long enough the reach the tank(s) and micromatic couplers needed to connect the pump and hoses to the drums.
 - b. One (1) hand pump mounted on the necessary drum micromatic coupler with discharge hose long enough to empty into the tank(s).
21. One 4 gallon capacity backpack sprayer shall be available at all times as an integral part of complement operations additional backpacks shall be supplied during low volume applications for each person on the spray crew. All backpacks shall be equipped with quick couple devices to be able to switch between three application devices. One each for low volume foliar, low volume Basal and the general use wand supplied with the backpack
 - a. Low volume foliar Application: capable of instantaneously switching between a minimum of two different application patterns
 - b. Low volume Basal application: ultra-low volume wand 24" length with shutoff in unit tip.
22. All spray trucks shall be equipped with a minimum sixteen (16) cubic foot lockable watertight storage box. No pesticides of Department provided materials will be permitted to be stored in areas that are open to the elements.
23. Each Pesticide Complement shall always have the following equipment on the spray truck:
 - a. Two (2) translucent 5 gallon buckets with 0.25 gallon graduations.

- b. One (1) 128 fluid ounce liquid measure measuring pitcher with graduations of 2 ounces marked on the pitcher
- c. One (1) 64 fluid ounce liquid measure measuring pitcher with graduations of 2 ounces marked on the pitcher
- d. All personal protective equipment as required by the pesticides being applied.
- e. Two (2) spare OC nozzles of each type used to include the nut for the guiderail and shoulder spraying system including
 - i. OC20
 - ii. OC30
 - iii. OC40
 - iv. OC60
 - v. OC80
- f. One (1) ¾ inch nozzle body with cap nut.
- g. Two (2) spare nozzles of each design type used for the Boomless Spray Head system and three spare 90 degree elbows of each design for the Boomless Spray Head.
- h. A small assortment of commonly used pipe fittings, hose bibs, hose clamps, and quick couplers
 - i. One (1) set of large channel lock type pliers
 - j. One (1) 14" pipe wrench
 - k. One (1) 12' pipe wrench
 - l. Two (2) Phillips head screw drivers
 - m. Two (2) standard screw drivers
 - n. One (1) large funnel
 - o. A spill kit of sufficient size to effectively contain a spill based on the size of the tanks
 - p. Fire extinguisher, first aid kit, and eye wash
 - q. Nut drivers of various sizes to adjust or remove nozzles and hose clamps
 - r. Two (2) extra check valves of the same design used on the truck
 - s. A spill response and adverse incident response plan developed by the contractor in accordance with the most current PennDOT NPDES permit to include:
 - i. Background and applicable regulations
 - ii. Incident reporting chain of command
 - iii. Spill preparedness checklist
 - iv. Spill response/ control methods
 - v. Spill response procedures

Low Volume Spray Truck (Pay Item 2)

1. The Department requires the use of a low volume truck to be utilized for special projects in areas that may not be easily accessible by Large Spray trucks. This Spray truck complement may also be utilized for applications in and around stockpiles, rest areas, and park and rides. One unit will be made available to the department within three (3) calendar days' notice. This unit will be inspected during the initial and subsequent equipment inspections as stated in Section J. A second Unit will be provided within ten (10) calendar days of notice. The Second unit will be subject to inspection only after the request for it is made.
2. Trucks shall be equipped with a 150 to 200 gallon polyethylene, UV resistant, spray tank mounted on a four wheeled drive pickup truck of sufficient size to haul the tank filled with water, 2 operators in accordance with section G.3, up to 30 gallons of herbicide concentrate packaged in 2.5, 5, or 15 gallon containers, up to 20lbs of dry herbicides in packaging and any other required equipment and material listed below.
3. The tank shall be of a design that allows for complete draining through a bottom sump.

4. The pump shall be driven by a gas-powered engine and capable of producing 9.1 gallon per minute and 150 PSI. A pressure regulator and liquid filled pressure gage shall be installed on the pump to regulate flow.
5. Unit shall include 200 feet of ½ inch PVC reel mounted hose minimum 300 PSI rated. Provide a handgun with adjustable pattern tip and horizontal distance of a minimum of 45feet.
6. Two four-gallon capacity backpack style pump sprayers shall be required with this complement at all times. All backpacks shall be equipped with quick couple devices to be able to switch between three application devices. One each for low volume foliar, low volume Basal and the general use wand supplied with the backpack
 - a. Low volume foliar Application: capable of instantaneously switching between a minimum of two different application patterns
 - b. Low volume Basal application: ultra-low volume wand 24” length with shutoff in unit tip.
6. Each Complement shall always have the following equipment on the spray truck:
 - a. one (1) translucent 5-gallon bucket with 0.25 gallon graduations.
 - b. One (1) 64 fluid ounce liquid measure measuring pitcher with graduations of 2 ounces marked on the pitcher
 - c. All personal protective equipment as required by the pesticides being applied.
 - d. A small assortment of commonly used pipe fittings, hose bibs, hose clamps, and quick couplers
 - e. One (1) set of large channel lock type pliers
 - f. Two (2) Phillips head screw drivers
 - g. Two (2) standard screw drivers
 - h. A spill kit of sufficient size to effectively contain a spill based on the size of the tanks
 - i. Fire extinguisher, first aid kit, and eye wash
 - j. A spill response and adverse incident response plan developed by the contractor in accordance with the most current PennDOT NPDES permit to include:
 - i. Background and applicable regulations
 - ii. Incident reporting chain of command
 - iii. Spill preparedness checklist
 - iv. Spill response/ control methods
 - v. Spill response procedures

Shadow Vehicles with Attenuator – Freeways and Expressways (Pay Item 3)

1. The primary purpose of the shadow vehicle is to provide information to approaching drivers while protecting workers and work vehicles. Any vehicle can be used as a shadow vehicle if it is equipped with a flashing, oscillating, or revolving yellow light which is visible from any direction (360° visibility) and is not being used as a work vehicle. The yellow light must be activated within an active work zone.
2. The following conditions apply to shadow vehicles used on freeways and expressways:
 - a. Shadow vehicles 1 and 2, as identified in PATA 601, 602 and 603 shall be equipped with a Truck Mounted Attenuator (TMA) rated for the work zone.

- b. Shadow vehicles equipped with a TMA as stated in Publication 213; General Notes page 2 of 2 – Truck Mounted Attenuators (TMA) shall be mandatory for placement on shadow vehicles utilized on freeways and expressways, including exit and entrance ramps. The TMA is optional on all other highways. When a TMA is used, the weight of the shadow vehicle must be greater than the minimum weight specified by the TMA manufacturer.
- c. While doing work on the freeway and expressway entrance and exit ramps, one TMA shall be required. Since driving between interchanges at normal highway speeds is routine in this operation, the Department is specifying that a towable style attenuator that can travel at normal highway speeds be required. The Shadow Vehicle equipped with a towable attenuator shall meet the requirements for TMA as stated in Publication 213.
- d. In most cases, two Shadow Vehicles will be required to meet the minimum requirements of Publication 213.
 - i. The hourly rate will be based on one vehicle.
 - ii. When two vehicles are needed each vehicle will be invoiced at the hourly rate.

Personnel

- a. One person will be required for each shadow vehicle.
- b. Personnel shall possess a current driver license with all required endorsements as required by the current laws and be familiar with Publication 213 and operating this type of equipment.

Equipment Requirements

- a. The shadow vehicle shall be loaded to a weight recommended by the manufacturer of the Truck Mounted Attenuator or Trailer Mounted Attenuator.

Shadow Vehicles – Conventional Highways (Pay Item 4)

- 1. Definition of a Shadow Vehicle – a vehicle positioned within the activity in advance of the workspace and work vehicles. The primary purpose of the shadow vehicle is to provide information to approaching drivers while protecting workers and work vehicles. Any vehicle can be used as a shadow vehicle if it is equipped with a flashing, oscillating, or revolving yellow light which is visible from any direction (360° visibility) and is not being used as a work vehicle. The yellow light must be activated within an active work zone.
- 2. This vehicle shall be quipped as stated in “Work Zone Traffic Control Guidelines” Publication 213 PATA 300 series: Conventional Highways- Mobile Operations.
- 3. All shadow vehicles shall be equipped with flashing arrow panel in appropriate mode with required W series sign.
- 4. The hourly rate will be based on one vehicle. In the event, additional vehicles are needed, they will be invoiced at the individual hourly rate.

Personnel

- a. One person will be required for each shadow vehicle.
- b. Personnel shall possess a current driver license with all required endorsements as required by the current laws and be familiar with Publication 213 and operating this type of equipment

K. Insurance Requirements:
See Section V.46 Contract-045.1 Insurance General

L. Property Damage:

The Contractor will be responsible for any off-target and property damage to Department, Commercial, or Private entities. All repairs for such damage will be made at the expense of the Contractor. The Contractor will be expected to contact all complainants within 48 hours of notification from the Department and rectify any property damage as soon as possible. The Contractor must notify the DRS of property damage resolution within ten working days of receipt of property damage complaint. Failure to do so may result in reduction or termination of work.

M. Work Zone Traffic Control Requirements (WZTC):

1. Conduct Maintenance and Protection of Traffic in accordance with the most current versions of PennDOT Publication 212 and PennDOT Publication 213.
2. When working on freeways and expressways, contact traffic management center at 610-871-4600 15 minutes prior to starting work and within 15 minutes of ending work. Call with any updates throughout the workday such as change of directions.
3. PennDOT Publication 213 outlines the minimum requirements for maintenance and protection of traffic. The Contractor may be permitted to go above and beyond these requirements should they feel it necessary however the Department will only pay the Contractor for the minimum requirement to be satisfied.
4. Work Vehicles shall pull over when reasonable and safe to allow traffic queues to clear.
5. Shadow Vehicle will be required for any work on ramps per PennDOT Publication 213, "General Notes-General Items".
6. Additional details on WZTC will be outlined in the specific pay items.

N. Active Construction Zones and Beautification Areas:

The Contractor shall not perform any operations within active construction zones or beautification areas unless directed to do so by the Department Project Manager or designee.

O. Reporting:

1. Roadside Activity Reporting: The following requirements apply:
 - a. The Contractor shall become a PennDOT Business Partner, obtain credentials to use the application, and follow Accessing PennDOT iPad Applications for Business Partners (Attachment D). This document provides guidance on registering to become a Business Partner and using the application statewide.
 - b. The Contractor shall be responsible for the purchase, maintenance, and operation of all hardware, including devices such as, but not limited to compatible cell phones or tablets, necessary to use the application.
 - c. The Contractor shall complete Form M-609 via the application upon completion of each day's work.
2. Complaint Resolution Summary Reporting
 - a. This must capture complaints generated from Department as well as directly from property owners. A complete report to include:
 - i. Date of complaint.
 - ii. Source of complaint.
 - iii. Location
 - iv. Short summary
 - v. Plan of resolution to the customer's satisfaction.

- vi. Date of resolution completion.
 - b. The Contractor will submit this report electronically to the DRS at the end of each month.
- 3. Confirmation of Services Reporting
 - a. A completed Confirmation of Service Form (Form OS-501, SAMPLE: Attachment C) and all related M-609's, shall be submitted by the Contractor to the DRS or designee, for review and verification, on a mutually agreed upon duration.
 - b. The PennDOT DRS or designee will notify the Contractor if corrections are needed.
 - c. Each Form OS-501 shall be itemized, include sufficient detail, and coordinate with the line items on the Purchase Order.
- 4. Reporting Forms Modifications:
 - a. The Department reserves the right, throughout the life of the contract, to make changes to Forms M-609 and/or OS-501, including their instructions, content, and all other requirements.
- P. Estimated Quantities:

All quantities are estimated and may not reflect actual quantities. The estimated quantities are indicated on the Bid Sheet which requires the Contractor to download, input unit pricing and upload as part of their Response. The Department reserves the right to award any or all the Pay Items listed on the Bid Sheet.

II. BILLING AND PAYMENT

- 1. "Billable" hours to the Department will include:
 - a. Time spent applying herbicides as directed.
 - b. Filling tanks with water at Department facilities, from bodies of water within the boundaries of the PennDOT District, and/or at other approved sites within the PennDOT District.
 - c. Acquiring, loading, and mixing herbicide concentrates within the PennDOT District.
 - d. Routine calibration of equipment. Calibrate at a minimum of one time each week, at the beginning of a new spray program and when starting in a different county. Document calibrations on the Form M-609.
 - e. Minor equipment repairs not to exceed fifteen (15) minutes per occurrence and not to exceed a total time of thirty (30) minutes per day.
 - f. Time spent traveling from one work location to another work location or "deadheading" (driving on various state routes to get from one spray area to another and not applying herbicides for periods of time) during the workday. Discretion should be used in planning crew travel between worksites to minimize travel time. At the discretion of the DRS, if travel time is excessive billable hours may be reduced.
 - g. Reasonable time spent for crew bathroom breaks.
 - h. When directed by the DRS, up to one (1) hour to flush the spray system when switching between application programs.
 - i. When directed by the DRS, up to one (1) hour to complete the set-up equipment for a different spray program other than in the pre-season meeting.
 - j. Reasonable time to complete required M-609 documentation while in the field.
 - k. Reasonable time to contact individuals on the hypersensitivity list.
- 2. "Non-billable" hours will include but not be limited to:
 - a. Meetings requested by the Department.

- b. Travel from the crew's home base to the work site or Department County maintenance office before the start of work.
 - c. Travel from the work site to the crew's home base at the conclusion of a day's work.
 - d. For b and c above, approximately fifteen (15) minutes' leeway will be given prior to the start of work and the conclusion of work for the set up to begin work and ending work including necessary paperwork.
 - e. Equipment failure lasting in excess of fifteen (15) minutes or in excess of more than two occurrences of fifteen (15) minutes in the same work day.
 - f. Lunch breaks
 - g. Waiting for roads or vegetation to dry in the morning after arriving to the work area and finding it to be too wet to work or after rainfall during the day.
 - h. Time spent monitoring weather conditions.
 - i. Filling tanks and mixing/loading at locations not approved by the DRS or outside of the PennDOT District.
 - j. Filling out and completing any paperwork for the Contractor's organization that is not required by the Department pertaining directly to this contract.
 - k. Equipment inspections or crew audits performed in the field by the Contractor's personnel.
1. Invoices shall be submitted by the Contractor as defined under Section II PAY ITEMS. For further instructions regarding invoicing, see Section V.21, Billing Requirements, of the contract Terms and Conditions.
 2. Untimely or incomplete submissions of Form OS-501 and required supporting documentation (including M-609s) may delay processing of the invoice.

Attachments:

- A. PennDOT's National Pollutant Discharge Elimination System Permit PA0270792
- B. PA Certified Pesticide Applicator Licensing Form
- C. Roadside Activity Report (M-609) Guidance
- D. Confirmation of Service Form (PennDOT Form OS-501)
- E. BOP-2201 EO 2021-06 Worker Protection Form
- F. GSPUR-89 Reciprocal Limitations Act Requirements
- G. Trade Secret Confidential Proprietary Information Notice Form-revised
- H. BOP-1301 Domestic Workforce Utilization Certification Services
- I. Iran Free Procurement Certification and Disclosure Form