

EXHIBIT B



TECHNICAL SPECIFICATIONS

Clark Park Neighborhood Alley Stabilization

City of Tempe Project No. 5410391



City of Tempe
Public Works Department
31 E. 5th Street
Tempe, AZ 85281

March 2024
Revised October 2024

PROJECT REQUIRED ENVIRONMENTAL MITIGATION MEASURES

The project mitigation measures are not subject to change without written approval from Arizona Department of Transportation (ADOT) Environmental Planning. The Contractor shall follow all the requirements of the permits specified herein and comply with the project special provisions as well as the MAG Uniform Standard Specifications for Public Works, as well as all applicable local environmental requirements.

City of Tempe Responsibilities

- If any active bird nests cannot be avoided by construction activities, the Engineer will contact the City of Tempe Project Manager (480.350.8875) to evaluate the situation.

Contractor Responsibilities

- If vegetation trimming or clearing will occur during the migratory bird breeding season (March 1 - August 31), the contractor shall avoid any active bird nests. If the active nests cannot be avoided, the contractor shall notify the Engineer to evaluate the situation. During the non-breeding season (September 1 – February 28) vegetation trimming and clearing are not subject to this restriction.

ITEMS, MEASUREMENT, AND PAYMENT

The scope of the project shall include that given in the Invitation for Bids and elsewhere in these Technical Specifications. There are no plans for this project; a typical alley cross section is provided in Appendix A. A total of approximately 3.6 miles of alleys shall be dust proofed. Figures of the alley routes are provided in Appendix B. Estimated alley dust proofing quantities are provided in Appendix C. The majority of the alleys designated for treatment with this project are unimproved, dirt alleys. If a paved alleyway is designated for treatment under this contract the Engineer may decide not to treat that paved alley.

Measurement and payment for all pay items in the proposal shall be as specified in the applicable section of the Maricopa Association of Governments Uniform Standard Specifications for Public Works Construction (MAG Specifications) latest edition, and City of Tempe Supplements, and any applicable City Specifications or Standards as specified in these Technical Specifications. In the event of a conflict between these Specifications and the requirements of the MAG Specifications, these Specifications shall prevail.

Payment of the contract items shall be compensation in full for furnishing all overhead, labor, material, tools, equipment, and appurtenances necessary to complete the work in a good, neat, and satisfactory manner as indicated in the Specifications, with all necessary connections and appurtenances for the satisfactory use of and/or operation of said item. No additional payment will be made for work related to each item unless specifically noted or specified. Measurement will be in place for the completed work with no allowance for waste.

The Contractor shall conduct a preconstruction survey to designate and log in all utilities (above ground and underground), existing walls and fences, landscaping, and/or any other existing features within or adjacent to the alleys that need to be paved. Any claims of damage within the project area shall be the responsibility of the Contractor unless he can prove the damage existed prior to his operation.

The following utility companies have facilities in the project vicinity but are not anticipated to be in conflict: Arizona Public Services (APS): Electric, AT&T: Coax & Fiber, Arizona State University: Communication & Fiber Optics, Campus Communication Group LLC: Fiber Optics, City of Tempe: Sewer, Water, Irrigation, CATV, Fiber Coax, Electric, Cox Communication: CATV, Fiber, Crown Castle Solutions Corporation: Communication, Fiber, CTLQL_Century Link- Coaxial, Fiber, MCI_Verizon Business: Fiber, Pauley Construction, LLC-Communication, Fiber, Salt River Project_ Maricopa County- Communications, Electric, Fiber, Irrigation, Southwest Gas- Gas, High Pressure Gas, Verizon Wireless- Communications, Fiber Zayo-Communications, Fiber. All utilities are expected to be protected in place during construction.

The contractor shall evaluate existing subsurface soils and collect soil samples for laboratory testing before starting construction. The results from exploratory evaluation, lab testing and data analysis will prepare contractor to understand the equipments required for excavation, fill material required, whether native soil can be used as engineered fill placement and if the native soil requires dewatering. The cost for laboratory testing and soil boring shall be incidental to the project cost along with following items such as mobilization, utilities designation and protection and obtaining and preparing various permits. All individual item quantities presented are approximate and shall be field verified prior to providing dust proofing.

Item No. 1 - Mobilization/ Demobilization

Description:

The work under this item shall consist of single round trip mobilization/ demobilization of Contractor equipment, supplies and incidentals required for the performance of the work on the project. Mobilization/ Demobilization shall be performed as per MAG Standard Section 109.10.

Mobilization/ Demobilization will be measured for payment by the lump sum as a single complete unit of work. Payment for mobilization/ demobilization will be made at the contract lumpsum price. Payment will be made in equal one-third portions.

Item No. 2 - Clearing and Grubbing

Description:

The work under this item shall consist of clearing and grubbing the entire length and width of the project within right of way, easements. Clearing and Grubbing shall be performed per MAG Standard Section 201.

Add the following to MAG Subsection 201.1 DESCRIPTION:

The Contractor shall excavate and clear all debris, trash, tires, vegetation, and other solid wastes within the area of the alley to be dust proofed. The Contractor shall survey all alleys before bidding and establish their estimate and a work schedule based on the current City of Tempe Bulk Trash Pickup schedule. The Contractor shall dispose of all previously stated materials in a legal manner at a proper disposal site. The Contractor shall pay for all work including disposal fees, for the entire project.

Construction Requirements:

Delete MAG Subsections 201.3, CONSTRUCTION METHODS: DELETE FIRST PARAGRAPH AND REPLACE WITH

The construction site and entire length and width of the alleyway, but not beyond the limits of right-of-way and easements shall be cleared of all trees, stumps, brush, roots, rubbish, debris and other objectionable matter except as follows.

Measurement:

Delete MAG Subsections 201.5, PAYMENT, CLEARING AND GRUBBING and substitute the following:

Clearing and Grubbing will be measured by the acre of surface area for each acre of

alleyway for which the work is accepted.

Delete MAG Subsection 201.6 MEASUREMENT, REMOVAL AND DISPOSAL OF TREES and substitute the following:

All trees needing pruning to allow passage of the Contractor's equipment shall be pruned by the Contractor in accordance with the International Society of Arboriculture. If construction impacts the roots, trunk or branches of existing trees, the Contractor shall take all necessary precautions to ensure the survival and protection of the tree in accordance with the International Society of Arboriculture.

No separate measurement will be made for Trees pruning and removal.

Payment:

Delete MAG Subsection 201.7 PAYMENT, REMOVAL AND DISPOSAL OF TREES and substitute the following.

The accepted quantity of clearing and Grubbing, measured as provided above, will be paid for at the contract unit price per acre, complete in place. No additional payment will be made for trimming, removal of trees and root pruning.

Item No. 3 - Subgrade Preparation

Description:

The work under this item shall consist of preparation of subgrade in preparation for placement of the RAP millings. Subgrade preparation shall be performed as per MAG Standard Section 301.

Delete MAG Subsections 301.2, PREPARATION OF SUBGRADE: DELETE SECOND PARAGRAPH AND REPLACE WITH

Subgrade preparation consists of scarifying subgrade, leveling, watering, dewatering, compacting native or fill material for preparation and placement of the asphalt millings and disposing of excess and unsuitable material from the site. Removals of unsuitable material should be performed per MAG standards section 205 for Roadway Excavation. The Contractor shall remove up to two inches of soil resulting in prepared subgrade being two inches below existing grade, level the alley to provide a level, smooth, rut-free surface while generally maintaining the final grade after compaction. Subgrade preparation shall extend to within one (1) foot to two (2) feet of the alley edge where there are walls. In cases where typical cross section is not fenced or linear, the subgrade preparation will continue longitudinally, leaving the required one to two feet buffer from typical edge of the alley or as per direction from the Engineer.

The Contractor shall use a potable water at all times for leveling, dustproofing and soil

conditioning for compaction. All excess material from subgrade preparation shall be hauled to a proper dump site and disposed of at the Contractor's cost.

All underground utilities and above ground utilities within the alley segment shall be protected in place. The contractor shall identify all underground and aboveground utility equipments and their depths before construction and protect them in place.

Delete MAG Subsections 301.3, RELATIVE COMPACTION: DELETE TWO BULLET POINTS BELOW FIRST PARAGRAPH AND AND REPLACE WITH

- A. All streets95 percent
- B. Other Traffic Ways.....90 percent
- C. Curb, Gutters and Sidewalk.....95 percent

Measurement:

Delete MAG Subsections 301.7 MEASUREMENT and substitute the following:

Subgrade Preparation will be measured by the square yard of surface area for each square yard of alleyway for which the work is accepted.

Payment:

Delete MAG Subsections 301.8 PAYMENT and substitute the following:

The accepted quantity of subgrade preparation, measured as provided above, will be paid for at the contract unit price per square yard, complete in place.

Item No. 4 - Placing RAP 2 IN (Prepared, Hauled, & Placed)

Description:

The work under this item shall consist of procurement of Recycled Asphaltic Pavement (RAP), processing RAP to desired gradation, placement of the RAP, and compaction of the RAP to prepare for application of Dust Palliative /Stabilizer Product.

Materials:

The asphalt millings provided by the contractor shall meet the requirement criteria of Maricopa Association of Governments (MAG) Standard Specification 701.5. No City sources for millings are anticipated. The millings to be placed by contractor shall meet physical properties of MAG standard Table 702-1 Select Material Criteria Type B.

Approximately 2" deep of asphalt millings shall replace the compacted native soil or excavated waste material in the alleys.

Construction Requirements:

The Recycled Asphaltic Pavement (RAP) procured shall be placed and constructed as an aggregate base course per MAG standard section 310 except for compaction. The contractor shall process asphalt millings with water until optimum moisture content is achieved.

The finished alleys shall be compacted to 90% relative density by contractor to stay consistent with the minimum compaction of underlying subgrade or until compaction has met its optimum density as approved by the Engineer or by the Contract Administrator/Designee using typical rolling patterns. All water valves, manhole lids, survey monuments, water meters, etc. shall be protected in place and adjusted if required. Final surface shall allow all existing property owners' gates to fully open or shall be adjusted.

Survey monuments shall be re-established and referenced by a Registered Land Surveyor (RLS). The RLS shall reset and punch the survey monuments. The contractor shall, at their cost, replace all property, materials or equipment, both private and public, that is destroyed, damaged, ruined or left contaminated as a result of this work.

Measurement:

Placing RAP (prepared, hauled, & placed) will be measured by the square yard of surface area for each square yard of alleyway for which the work is accepted, including subgrade compaction, millings being provided, placed, and compacted.

Payment:

The accepted quantity of Placing RAP (prepared, hauled, & placed), measured as provided above, will be paid for at the contract unit price per square yard, complete in place. There shall be no separate measurement or payment made for material hauling and re-establishment of survey monuments, the cost being considered included.

Item No. 5 - Dust Palliative/ Stabilizers Product Application

Description:

The work under this item shall consist of furnishing of all labor, equipments and materials needed to prepare and apply dust palliative/ stabilizer (acrylic copolymer) on alleys covered with 2" thick Reclaimed Asphalt Pavement (RAP). The Dust palliative (acrylic copolymer) shall be applied as topical treatment to provide stabilized dust resistant surface course.

Materials:

Acrylic copolymer dust palliative/stabilizer shall conform to the requirements of MAG Standard Specification Section 792.2.

Water used for diluting acrylic copolymer dust palliative/stabilizer product and for pre-wetting of treated subgrade shall be either potable or from a source compatible with dust palliative/stabilizer product ingredients.

Construction Requirements:

The Dust palliative/ Stabilizer product (acrylic copolymer) shall be applied as a topical treatments per MAG Standard Specification section 230.

Delete MAG Subsections 230.5, PREPARATION OF SURFACE and DELETE MAG Subsections 230.6 APPLICATION REPLACE WITH

All surface preparation shall be in conformance with Maricopa County Rule 310 and 310.01 as applicable.

The preparation of subgrade and placement of RAP shall conform to this technical specification before application of Dust palliative/ Stabilizer product.

Dust palliatives shall not be applied when the surface is excessively wet or saturated. Surface will be premoistened only if required by the product manufacturer.

Topical applications shall be rolled only when recommended by the manufacturer. Complete penetration of palliative will be required prior to the surface rolling. Complete penetration occurs when the compaction equipment will not track or pick up the dust palliative and/ or the top layer of the surface material.

Dust palliative/stabilizer product shall be applied by a pressure-type distribution vehicle equipped with a power unit for the pump, full circulation spray bars adjustable laterally and vertically, and computer controls. The distribution vehicle shall be calibrated to ensure a controlled application method. Valves which control the flow from nozzles shall be of a positive active design to provide a uniform, unbroken spread of dust palliative/stabilizer on the surface.

Corners or surface that cannot be accessed by the distributor truck shall be hand sprayed by means of hoses or bars pressurized by a gear pump or air tanks.

Distributor equipment shall be equipped with a tachometer and pressure gauge. To provide for accurate, rapid determination and control of the amount of dust palliative being applied, distributor equipment shall include one or more of the following: accurate volume measuring

devices, a calibrated tank, and/or a certified meter or weight tickets and calibration charts relating to the specific gravity of the concentrate and/or dilution.

Unless otherwise identified in the Specifications, acrylic copolymer dust palliative shall be applied to the prepared surface at a rate recommended by manufacturer with approval from engineer. Typical value ranges from 0.15 to 0.20 (gal/Sy). The Contractor shall dilute the product as needed and the dilution ratio may be adjusted to bring the mixture to the desired moisture content. Product shall be applied in multiple passes at reduced application rates to meet the total application rate specified and/or assure uniform coverage.

The contractor shall notify the engineer for a minimum of 5 working days prior to application of dust palliative.

Measurement:

The Dust palliative/stabilizer product shall be applied will be measured by square yard in place, compacted to proper depth and accepted.

Payment:

Payments will be made for applicable items at the contract unit price and shall constitute full compensation for the item complete in place.

Item No. 6 – Traffic Control

Traffic control during construction shall conform to the City of Tempe Traffic Barricade Manual, latest editions and Manual on Uniform Traffic Control Devices for Streets and Highways. The contractor shall set up a meeting with the Solid Waste and Recycling Office to determine an acceptable schedule for the road closures prior to submitting the Road restrictions and Closures Permit application. The contractor shall notify affected residents five days prior to the start of the work of all restrictions, full or partial.

Traffic control will be paid for at the contract lump sum price, which price shall be full compensation for the item, complete-in-place.

Traffic control will include permitting, notification to public, signing rental equipments, garbage removal.

Item No. 7 – Stormwater Pollution Prevention Plan Best Management Practices Allowance

The allowance for SWPPP BMP's will not exceed \$5,000 for erosion control and pollution prevention program requirements, with no mark up, as stated in the contract.

Item No. 8 – Bird Surveys

The allowance for bird surveys if vegetation removal occurs between March and August will not exceed \$5,000, with no mark up, as stated in the contract.