

CITY OF WILSON  
PUBLIC WORKS

## PROPOSAL

**DATE AND TIME OF BID OPENING:** May 5, 2019 AT 2:00 PM

**TYPE OF WORK:** Mill and Resurface Various Roads in  
the City of Wilson

**LOCATION:** Various Routes



**NOTICE:**

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA.

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**NAME OF BIDDER**

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**ADDRESS OF BIDDER**

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**BIDDER'S N.C. CONTRACTOR'S LICENSE NUMBER**

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**SCOPE OF CONTRACT**

The scope of this contract is perform the type work listed for various roads in Wilson, see list below.

<b>Street</b>	<b>From</b>	<b>To</b>	<b>Sq. Yd</b>	<b>Tons</b>
Lodge Street	Hines Street	Railroad Xing	3,173.33	261.8
Lodge Street	Railroad Xing	Barnes Street	2,640.00	217.8
Lancaster Road	Nottingham Road	Buckingham Dr	5,795.56	478.13
Merrills Park Dr	Nash Street	Cul de Sac	2,179.35	179.8
Westbrook Drive	Cardinal Drive	Ellington Drive	2,666.67	220
Fieldcrest Road	Worth Drive	Longview Road	6,968.89	574.93
Harrison Drive	Ward Blvd.	Tilghman Road	15,657.20	1291.72
Roundtree St	College St	Raleigh Rd	2243	188

All work and materials shall be in accordance with the provisions of the City of Wilson’s Manual of Specifications Standards and Design.

The contractor shall keep themselves fully informed of all Federal, State, and local laws, ordinances, and regulations.

**CONTRACT TIME & LIQUIDATED DAMAGE**

The date of availability for this contract is upon notification by the Public Works Director on or about 5-7-20. The contractor may begin work prior to this date upon approval from the Engineer or his duly authorized representative. If such approval is given, and the Contractor begins work prior to the date of availability, the City of Wilson will assume no responsibility for any delays caused prior to the date of availability by any reason whatsoever, and such delays, if any, will not constitute a valid reason for extending the completion date.

No work will be permitted under this contract until all required insurance certifications have been satisfied. The completion date of this contract is 11-20-2020

**Liquidated damages for this contract are Four Hundred Dollars (\$400.00) per calendar day.**

**MOBILIZATION**

Mobilization should not exceed 5% of the total bid.

<b>Pay Item</b>	<b>Pay Unit</b>
Mobilization	Lump Sum

**WORK RESTRICTIONS – HOLIDAYS AND HOLIDAY WEEKENDS**

The Contractor shall not narrow or close a lane of traffic on any of the above mentioned roads, detain and/or alter the traffic flow on or during holiday weekends, special events, or any other time when traffic is unusually heavy, including the following schedules:

1. For unexpected occurrences that create unusually high traffic volumes, as directed by the Engineer.

**PROSECUTION OF WORK**

The Contractor will be required to prosecute the work in a continuous and uninterrupted manner from the time he begins the work until completion and final acceptance of the project.

The Contractor will not be permitted to suspend his operation except of reasons beyond his control or except where the Engineer has authorized a suspension of the Contractor’s operation in writing.

In the event that the Contractor’s operations are suspended in violation of the above provisions, the sum of Four Hundred Dollars (\$400.00) will be charged the Contractor for each and every calendar day that such suspension takes place. The said amount is hereby agreed upon as liquidated damages due to extra engineering and maintenance costs and due to increased public hazard resulting from a suspension of work.

Liquidated damages chargeable due to suspension of the work will be additional to any liquidated damages that may become chargeable due to complete the work on time.

**RETAINAGE**

For the term of the initial agreement and any contract extension the contractor agrees to invoice the contracting agency (City of Wilson) in the amount of ten (10) percent less than the agreed amount of the contract. This amount will not be deducted for extra work in the contract and will be refunded without interest, pending the project site review, by the City of Wilson or six (6) months after completion of work. In case of default this amount will be used to obtain these services from another source.

## **PRECONSTRUCTION CONFERENCE**

Immediately after receipt of notice of award, the Public Works Director and the Contractor will establish a mutually agreeable date on which the preconstruction conference will be held. The Contractor's superintendent and other individuals representing the Contractor who are knowledgeable of the Contractor's proposed progress schedule or who will be in charge of major items of work shall attend the preconstruction conference

## **NOTIFICATION OF OPERATIONS**

The Contractor shall notify the Engineer 48 hours in advance of beginning work on this project. The Contractor shall give the Engineer sufficient notice of all operations for any sampling, inspection or acceptance testing required.

## **SAFETY VESTS**

All Contractors' personnel, all subcontractors and their personnel, and any material suppliers and their personnel must wear an OSHA approved reflective vest or outer garment at all times while on the project.

## **TRAFFIC CONTROL AND WORK ZONE SAFETY**

The Contractor shall maintain traffic during construction and provide, install, and maintain all traffic control devices in accordance with these project guidelines, North Carolina Department of Transportation Standard Specifications for Roads and Structures and the current edition of the Manual of Uniform Traffic Control Devices (MUTCD).

The Contractor shall utilize complete and proper traffic controls and traffic control devices during all operations. All traffic control and traffic control devices required for any operation shall be functional and in place prior to the commencement of that operation. Signs for temporary operations shall be removed during periods of inactivity. The Contractor is required to leave the project in a manner that will be safe to the traveling public and will not impede motorists.

Failure to comply with any of the requirements for safety and traffic control of this contract shall result in suspension of work.

No direct payment will be made for traffic control items.

## **WORK ZONE SIGNING**

Install and maintain signing in accordance with Sections 1100 & 1200 of the North Carolina Department of Transportation January 2018 Standard Specifications for Roads and Structures, the North Carolina Department of Transportation January 2018 Highway Design Branch Roadway Standard Drawings and the following provisions:

Furnish, install, maintain, and remove work zone signs and any required lane closure signing.

Install any required lane closure signing needed during the life of the project (see North Carolina Department of Transportation January 2018 Highway Design Branch Roadway Standard Drawings Nos. 1101.02, 1101.11 and 1110.02).

No direct payment will be made for work zone signing.

All work zone signs may be portable.

### **POSTED WEIGHT LIMITS**

The Contractor's attention is directed to the fact that many primary and secondary roads and bridges are posted with weight limits less than the legal limit. The contractor will not be allowed to exceed the posted weight limits in transporting materials or equipment to the project. The Contractor should make a thorough examination of all maps and haul routes on this project.

### **DRIVEWAYS AND PRIVATE PROPERTY**

The Contractor shall maintain access to driveways for all residents and property owners throughout the life of the project. The Contractor shall not perform work for private citizens or agencies in conjunction with this project or within the project limits of this contract.

### **UTILITY CONFLICTS**

Special care shall be used in working around or near existing utilities, protecting them when necessary to provide uninterrupted service. In the event that any utility service is interrupted, the Contractor shall notify the owner of the utility immediately and shall cooperate in the restoration of service in the shortest time possible.

The Contractor shall adhere to all applicable regulations and follow accepted safety procedures when working in the vicinity of utilities in order to insure the safety of construction personnel and the public.

### **MISCELLANEOUS**

All work items necessary to complete the work other than listed on the "Bid Form" will be considered incidental in nature and no further compensation will be made. Any work performed in an unsatisfactory manner could be basis for nonpayment.

Any damage caused by the Contractor shall be repaired or replaced by the Contractor to the satisfaction of the Engineer at no cost to the City of Wilson.

All work performed by the Contractor shall be in accordance with the Standard Specifications and workmanship/appearance done to the satisfaction of the Engineer.

### **OVERRUNS AND UNDERRUNS OF CONTRACT QUANTITIES**

Refer to Article 104-5 of the Standard Specifications for Roads and Structures.

### **COORDINATION**

- A. Coordinate manhole and valve box adjusting with the Public Works Director or designated representative as it relates to resurfacing.
- B. All new paved areas shall have positive drainage to eliminate ponding. Where new paved areas join existing; measures shall be taken to incorporate positive drainage to eliminate ponding.

### **PAVEMENT PROFILING - MILLING**

The work included under this contract item shall consist of the removal of existing bituminous surfaces of in-place pavements within this contract, to produce the desired profile, cross-section, and surface conditions as specified by the Public Works Director. All removed material shall become the property of the Contractor.

The Contractor shall plan and prosecute a schedule of operations so that milled roadways will be overlaid with bituminous concrete asphalt as soon as possible, and, in no instance, shall the time lapse exceed 4 days after the milling operations, unless otherwise specified. The milled areas of the roadway shall be kept free of irregularities and obstructions that may create a hazard or annoyance to traffic in accordance with the requirements of NCDOT Standard Specifications for Roads and Structures, Section 607, Milling Asphalt Pavement, latest revision.

The Contractor shall plan and prosecute the milling operation to avoid trapping of water on the roadway. At the discretion of the Public Works Director, cutting drainage slots in roadway shoulders or inlets may be required, at no additional costs. The Contractor shall also restore the cut drainage slots and any damage due to weather or traffic afterwards at no additional cost to the City.

The Contractor Shall mill around utility structures as close as the milling machine will allow without damaging said utility structure and then use a jackhammer and shovel to remove the remainder of the bituminous material.

**A. The equipment and manpower furnished for this work shall be:**

- 1) A cold milling machine capable of cutting at least 2 inches deep and 55 inches wide in flexible pavement while leaving a uniform cut and rideable surface capable of handling traffic prior to placement of a new bituminous overlay. The ground speed of the machine shall be independent of the cutting equipment. The machine shall maintain a sharp cutting edge at all times. The machine shall have a self-contained water system for control of dust and fine particles. The machine shall be capable of working in wet and dry conditions with temperatures down to 32° F.
- 2) The width of the machine shall be such to allow for one lane of traffic at all times. The machine shall be capable of cutting within 1 inch of manholes, valve box tops and facedown walks with a minimum radius of 5 feet.
- 3) If the machine is not self-loading, then a capable loader shall be furnished for placing the material onto trucks.
- 4) A power broom or equivalent is to be used for cleaning the planed surfaces. Refer to Section 02740 Base Course and Paving Page 02740-13 of The City of Wilson, NC - Manual of Specifications, Standards and Design
- 5) The Contractor shall furnish all hose and water.
- 6) Traffic control and flagman are to be provided by the Contractor.

**B. The construction methods shall be as follows:**

Where bituminous pavement extends into the existing curb and gutter, the Contractor shall be required to plane at different slopes. The first cuts shall remove the material existing above the gutter line (whether by milling, motor grader, or hand shovel). These cuts will be made at the appropriate gutter slope (1/2":1') for both 24 and 30 inch curb and gutter. Any curb and gutter with a different slope will be planed at the existing curb and gutter slope.

The last cuts shall remove the material to a minimum depth of 1" below the gutter line, or to a depth as specified by the Public Works Director, with a street cross- section slope of 1/4":1' or to slope of existing street.

Where curb and gutter exists but the pavement is at or below the existing gutter line, the pavement will be cut to a depth of the thickness of overlay below the gutter line while adjusting street cross-section to 1/4":1' toward the centerline of



the street.

Where existing straight curbing has pavement built up to expose less than 6 inches of curbing, the pavement will be planed down on grade of 1/4":1' or whatever the existing grade of the street back to the street centerline until a desired height of curbing is exposed.

Where center of pavement has correct crown but, pavement has rutting or ripples (possibly caused by vehicular braking), the pavement will be planed to the depth necessary to remove all such defects.

If milling encroaches into base, the area shall be patched the same day

<b>Pay Item</b>	<b>Pay Unit</b>
Milling Asphalt Pavement	SY

### **PRODUCT DELIVERY, STORAGE AND HANDLING**

- A. Plant operations shall be in accordance with the applicable sections of Section 610, Asphalt Concrete Plant Mix Pavements of the NCDOT Standard Specifications for Roads and Structures, latest revision.
- B. Limitation for producing and placing asphalt mixtures shall comply with Section 610-4, Weather, Temperature, and Seasonal Limitations For Producing and Placing Asphalt Mixtures, of the NCDOT Standard Specifications for Roads and Structures, latest revision.
- C. Storage shall be in accordance with Section 610-6, Hot Mix Storage Systems of the NCDOT Standard Specifications for Roads and Structures, latest revision.
- D. Hauling and Spreading shall be in accordance with Section 610-7, Hauling of Asphalt Mixture and Section 610-8, Spreading and Finishing of the NCDOT Standard Specifications for Roads and Structures, latest revision.
- E. Delivery:
  - 1) Hauling equipment shall be loaded in a manner to minimize segregation of the mix.
  - 2) Haul trucks must park in a designated area to minimize tracking of tack coats.
  - 3) Once loaded, haul trucks shall proceed immediately to the job site.

### **PREPARATION OF SURFACE**

Prior to beginning paving operations, the existing areas to be resurfaced shall be thoroughly cleaned by the Contractor to the satisfaction of the Public Works Director or one of his representatives. This cleaning shall include sweeping of the streets with a power operated broom, cutting excess debris with a grader, washing with a water truck, and hand cleaning any debris left over after this operation is complete.

Cleaning operations shall commence just prior to the resurfacing of streets. In addition, the Contractor shall expose any existing paved areas, which have been covered by soil, grass, or debris. These areas shall be thoroughly cleaned, herbicide applied, and tacked before resurfacing. Any excess material left over after this operation shall be removed or spread out to the satisfaction of the City Engineer. No additional payment shall be made for this work.

When the surface of the existing pavement or base is irregular, it shall be brought to a uniform grade and cross as described in The City of Wilson, NC Manual Of Specifications Standards And Designs, Part 3, Base Course And Paving, paragraph 3.6.1B, Removing Depressions and Irregularities.

### **TACK COAT**

Procedures and equipment shall be in accordance with Section 605, Tack Coat of the NCDOT Standard Specifications for Roads and Structures, latest revision and Section Bituminous Concrete Pavement of these specifications.

All castings, the gutter edge, and other surfaces which pavement rests against shall be painted with asphalt tack coat material by way of a hand brush, or other approved means, prior to the placing of the surface course. All asphaltic cement or other materials which discolor the surface of concrete structures and items which are spilled or placed on such surfaces shall be removed at the Contractor's expense. His inability to remove such foreign and disfiguring stains shall result in the complete removal of the structures so stained or disfigured, and these removed structures or surfaces shall be replaced at his expense. Particular care shall be taken to prevent tack coat from getting into and on gutter areas.

When resurfacing existing pavements, the exiting pavement shall be tacked with RS-1H asphalt at the rate of 0.03 gallon per SY to 0.10 gallon per SY. Application of the tack coat shall be made by an approved asphalt distributor. The tack coat shall be allowed sufficient time to "break" prior to beginning the resurfacing operation.

### **PLACING AND FURNISHING**

Bituminous concrete asphalt shall only be placed when the weather conditions are suitable (see paragraph I, Placement Limitations, below). Bituminous concrete asphalt shall not be placed until surface upon which it is to be placed has been approved by the Public Works Director. Prior to delivery of surface course material, the base course shall be completed for receiving the surface course material and shall be kept from traffic, with the exception of the mixture vehicles and those other vehicles necessary for the placement of asphalt. For strip paved streets, the edge of the pavement shall be marked

by means of a continuous line placed and maintained a sufficient distance ahead of the paving operation to provide proper control of the pavement width and horizontal alignment.

Contact surfaces of curb and gutters, manholes, etc., shall be painted with a thin uniform coating of cut-back asphalt just before the surface mixture is placed against them. Immediately adjacent to headers, flush curbing, gutters, liners, and other structures, the surface course mixture shall be spread uniformly high so that after the final compaction it will be approximately 1/8 inch above the edge of the structure.

An approved asphalt paver shall be used to distribute the bituminous mix over the widest pavement width practicable. Wherever practicable and when the capacity of sustained production and delivery is such that more than one paver can be operated, pavers shall be used in echelon (i.e. when 2 or more pavers are used such that one paver follows the front paver to the rear and side of the front) to place the wearing course in adjacent lanes. Crossovers, as well as areas containing manholes or other obstacles that prohibit the practical use of mechanical spreading and finishing equipment, may be constructed using hand tools. However, care shall be taken to obtain the required thickness, jointing, compaction, and surface smoothness.

The longitudinal joint in one layer shall offset that in the layer immediately below by approximately 6 inches. However, the joint in the wearing surface shall be at the centerline of the pavement if the roadway comprises two traffic lanes or at lane lines if the roadway is more than two lanes in width. Offsetting layers will not be required when adjoining lanes are paved in echelon (when 2 or more pavers are used such that one paver follows the front paver to the rear and side of the front) and the rolling of both lanes occurs within 15 minutes after laydown. The Contractor shall have a certified Asphalt Concrete Paving Technician present during paving operations. Immediately after placement and screeding, the surface and edges of each layer shall be inspected and straightedged by the technician and necessary corrections performed prior to compaction. The finished pavement shall be uniform and smooth.

The placement of bituminous concrete shall be as continuous as possible and shall be scheduled such that the interruption occurring at the completion of each day's work will not detrimentally affect the partially completed work. Material that cannot be spread and finished in daylight shall not be dispatched from the plant unless the use of artificial lighting has been approved. When paving is performed at night, sufficient light shall be provided to properly perform and thoroughly inspect every phase of the operation. Such phases include cleaning planed surfaces, tack application, paving, compacting, and testing. Lighting shall be provided and positioned such as to not create a blinding hazard to the traveling public.

The Contractor shall distribute to each residence or business along a road to be paved, a flyer with notification of the work to be done and the dates it will be performed. Also to be included is a request that all vehicles be removed from the street during this time period. The flyers are to be delivered 2 to 4 days prior to the actual start date of the construction.

### **MEASUREMENT AND PAYMENT**

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the January 2018 Standard Specifications for Roads and Structures.

The base price index for asphalt cement for plant mix is \$535.00 per ton.

This base price index represents an average F.O.B. selling prices of asphalt cement at supplier's terminals on June 1 2019.

<b>Pay Item</b>	<b>Pay Unit</b>
Asphalt Binder for Plant Mix, Grade PG 64-22	Ton
Asphalt Concrete Surface S9.5B	Ton

### **PLACEMENT LIMITATIONS**

Asphalt mixtures that have temperatures of less than 225°F, when ready to dump into the mechanical spreader, will be rejected. All compaction rolling shall be completed prior to the mat cooling down to 175°F. Finish rolling may be performed at a lower mat temperature. Use steel roller for initial compaction on mat then finish compaction on mat with a pneumatic rubber tire roller. Contractor shall not use vibration on the rollers.

### **PAVEMENT TOLERANCE**

The surface will be tested by using a 10-foot straightedge. The variation of the surface from the testing edge of the straightedge between any two contacts with the surface shall not be more than 1/4 inch. Humps and depressions exceeding the specified tolerance shall be corrected, or the defective work shall be removed and replaced with new material.

## **LAYER THICKNESS**

Minimum Layer Thickness: Bituminous concrete SUPERPAVE pavement courses shall be placed in layers not exceeding 4.0 times the nominal maximum size aggregate in the bituminous mixture. The maximum thickness may be reduced if the mixture cannot be adequately placed in a single lift and compacted to required uniform density and smoothness. The minimum thickness for a pavement course shall be no less than 2.5 times the nominal maximum size aggregate in the bituminous mixture.

<b>Recommended Thickness Chart</b>		
<b>Mix Type</b>	<b>Minimum Single Lift Depth (inches)</b>	<b>Maximum Layer Total Depth</b>
SF9.5	1 (resurfacing only)	2.5
S9.5X	1.5	2.5
S12.5X	2	3
I19.0X	2.5	4
B25.0X	3*	No Restrictions
B37.5C	4.5	No Restrictions

\* For B25.0X placed on unstablized subgrade, minimum lift thickness is 4.0 in.

## **JOINTS**

**1) General:** All joints shall present the same texture, density, and smoothness as other section of the course. The joints between old and new pavements or between successive days' work shall be carefully made in such a manner as to ensure a continuous bond between old and new sections of the course. All contact surfaces of previously constructed pavements shall be painted with a thin, uniform coat of hot bituminous material just before the fresh mixture is placed.

Care shall be exercised when tying into curb and gutter and newly over-layed travel lanes to ensure a uniform grade and joint.

At tie-ins to existing pavement surfaces, the Contractor shall construct the final riding surface by cutting the existing asphalt for its full to permit tying to The City of Wilson, NC - Manual of Specifications, Standards and Design the existing pavement; driveways and ramps included. Joint location to be determined and/or approved by the Public Works Directors. Suitable guide lines or devices shall be used to ensure cutting of the joint on a true line. The joint

shall be thoroughly cleaned and dried prior to being sealed. This work shall be done at no additional cost to the City.

Method of temporary joints at the end of each workday shall be approved by the Public Works Director.

In addition to the following, both transverse and longitudinal joints shall conform to Section 610-11, paragraphs (A) and (B), respectively of the NCDOT Standard Specifications for Roads and Structures, latest revision.

**2) Transverse:** The roller shall pass over the unprotected end of the freshly laid mixture only when the laying of the course is to be discontinued or when delivery of the mixture is interrupted to the extent that the unrolled material may become cold. Construct a sloped wedge ahead of the end of the full depth pavement to provide for compaction and the protection of the full depth pavement. Place a paper parting strip beneath this wedge to facilitate joint construction unless waved by the Public Works Director. Before paving operations are resumed, remove the sloped wedge and cut back into the previously constructed pavement to the point of full pavement depth to expose an even vertical surface for the full thickness of the course as directed by the City Engineer.

**3) Longitudinal:** In all cases, the edges of cold longitudinal joints shall be cut back to expose an even, vertical surface for the full thickness of the course prior to constructing the adjacent pavement.

## **COMPACTION**

Immediately after the bituminous mixture is placed and struck off and surface irregularities are corrected, the mixture shall be thoroughly and uniformly compacted by rolling.

During compaction of bituminous concrete asphalt, the roller shall not pass over the end of freshly placed material except when a construction joint is to be formed. Edges shall be finished true and uniform.

The surface shall be rolled when the mixture is in the proper condition. Rolling shall not cause undue displacement, cracking, or shoving.

The number, weight, and type of rollers furnished shall be sufficient to obtain the required compaction while the mixture is in a workable condition. The sequence of rolling operations and the selection of roller types shall provide the specified pavement density. However, the minimum and maximum roller weight shall be 5 tons and 10 tons, respectively.

Immediately after the hot mixture is placed, it shall be sealed with rollers. Thereafter, rolling shall be a continuous process, insofar as practicable, and all parts of the pavement shall receive uniform compaction. In the event that the rolling operation is not able to properly keep up with the placement of the mixture, the finishing machine shall be stopped and no mixture shall be laid until the rolling has been caught up.

Rolling shall begin at the sides and proceed longitudinally parallel to the center of the pavement, each trip overlapping at least  $\frac{1}{2}$  the roller width, gradually progressing to the crown of the pavement. When abutting a previously placed lane, the longitudinal joint shall be rolled first, followed by the regular rolling procedure. On superelevated curves, rolling shall begin at the low side and progress to the high side by overlapping of longitudinal trips parallel to the centerline.

Displacements occurring as a result of reversing the direction of a roller, or from other causes, shall be corrected at once by the use of rakes or lutes and addition of fresh mixture when required. Care shall be taken in rolling not to displace the line and grade of the edges of the bituminous mixture. The motion of the roller shall be at all times slow enough to avoid displacement of the hot mixture. All roller marks must be eliminated.

To prevent adhesion of the mixture to the rollers, the wheels shall be kept properly moistened with water or water mixed with a very small quantity of detergent or other approved material. Excess liquid will not be permitted. Along forms, curbs, headers, walls, and other places not accessible to rollers, the mixture shall be thoroughly compacted with hot hand tampers, smoothing irons, or mechanical tampers. On depressed areas, a trench roller may be used or cleated compression strips may be used under the roller to transmit compression to the depressed area.

Edges of bituminous pavement surfaces shall be true curves or tangents. Irregularities shall be corrected.

The surface of the compacted course shall be protected until the material has cooled sufficiently to support normal traffic without marring.

## **DENSITY**

Superpave mix design criteria for mixes listed in Table 610-2 of the NCDOT Standard Specifications for Roads and Structures shall be minimum 90.0% (based on AASHTO T209) for SF 9.5B mix and 92% for all other mixes. Density shall also meet Section 610.4 of the NCDOT Standard Specifications for Roads and Structures.

**PAVEMENT SAMPLES**

Bituminous pavement coring sampling and density test reports shall be submitted at completion of project in accordance with the requirements of the NCDOT Standard Specifications for Roads and Structures Section 609, Quality Management System For Asphalt Pavements, latest revision.

Provide reports on the results of the corings in accordance with Section 609-5, Contractor’s Quality Control System of the NCDOT Standard Specifications for Roads and Structures, latest revision.

Suitability of the samples shall be based on the limits of precision specified in Section 609-6, Quality Assurance of the NCDOT Standard Specifications for Roads and Structures, latest revision.

Section 02740 Base Course and Paving Page 02740-18

The City of Wilson, NC - Manual of Specifications, Standards and Design April 2008

Table 610-6 of NCDOT Standard Specifications for Roads and Structures

<b>Table 610-6 Placement Temperatures for Asphalt</b>	
<b>Asphalt Concrete Mix Type</b>	<b>Minimum Surface and Air Temperature</b>
B25.0B, C	35°F
I19.0B, C, D	35°F
SF9.5A, SF9.5B	40°F <sup>A</sup>
S9.5C	45°F <sup>A</sup>
S9.5D	50°F

A. For the final layer of surface mixes containing RAS, the minimum surface and air temperature shall be 50°F.

Other placement limitations, to include but not limited to, mixture temperatures, and cold weather paving shall be in accordance with Section 610, Asphalt Concrete Plant Mix of the NCDOT Standard Specifications for Roads and Structures, latest revision.

**RIDEABILITY**

Finished pavement surface shall be free of defects, irregularities, undulations, ridges, etc., whether transverse or longitudinal, that, in the opinion and discretion of the Public Works Director, would negatively impact rideability. after the Public Works Director or his representative have inspected and approved the pavement for paving.



**PROTECTION OF ASPHALTIC SURFACE COURSE**

Sections of newly placed and compacted asphalt surface course may be barricaded and protected from all defects for a period of at least 8 hours until they have become properly hardened by cooling. Protect asphalt from petroleum products during and following placement of surface course. When directed by the Public Works Director, Certain resurfaced areas may require cooling of asphalt prior to opening to traffic. If patching is required to make repairs, the base material in place shall be removed to a minimum depth of 4 inches, replaced with bituminous concrete base course (type B-25.0B) and surfaced with 2 inches of SF-9.5A bituminous asphalt concrete.

**ASPHALT PATCHING**

Asphalt Patching will be used in areas milled into the sub grade, it will also be used as a leveling course. All areas that need asphalt patching will be determined by the Engineer. All areas to be patched shall be cleaned and tacked. Asphalt cost will be determined by unit prices for Asphalt Binder and Asphalt Surface SF 9.5B. Pay Item is for all other work associated with patching.

<b>Pay Item</b>	<b>Pay Unit</b>
Asphalt Patching	TON

**CLEANING AFTER COMPLETION**

Cleaning operations shall commence immediately following completion of required work. This work shall consist of but not limited to removal of asphalt material from valves boxes, manholes, catch basins, and drop inlets. All asphalt debris shall be removed for the curb and gutter, driveways and adjacent properties. No additional payment shall be made for this work.

**PAVEMENT MARKINGS**

Procedures and equipment shall be in accordance with Section 1205, Pavement Marking General Requirements, of the NCDOT Standard Specifications for Roads and Structures, latest revision and Section. Estimated quantities reflect linear footage to account for the requirement of 2 applications.

<b>Pay Item</b>	<b>Pay Unit</b>
Paint Pavement Marking Lines	Linear Foot

**Project Bid Form**

Item No.	Item Description	Quantity	Unit	Unit Price	Total
1	Mobilization	1	LS		
2	Asphalt Milling 0 -1.5"	40,820	SY		
3	Asphalt Binder for Plant Mix, Grade PG 64-22	205	TON		
4	Asphalt Conc. Surface SF9.5B	3410	TON		
5	Paint 4"	35,000	LF		
6	Paint 12"	200	LF		

**CONTRACTOR SIGNATURES**

CONTRACTOR \_\_\_\_\_

ADDRESS \_\_\_\_\_

Federal Identification Number \_\_\_\_\_ Contractor License Number \_\_\_\_\_

Authorized Agent \_\_\_\_\_ Title \_\_\_\_\_

(Please Print)

Signature \_\_\_\_\_ Date \_\_\_\_\_

Witness \_\_\_\_\_ Title \_\_\_\_\_

(Please Print)

Signature \_\_\_\_\_ Date \_\_\_\_\_

**CITY OF WILSON SIGNATURES**

Authorized Agent \_\_\_\_\_ Title \_\_\_\_\_

(Please Print)

Signature \_\_\_\_\_ Date \_\_\_\_\_