INVITATION FOR BIDS

TOWN OF KNIGHTDALE

950 Steeple Square Court ● PO Box 640 ● Knightdale, NC 27545
Office (919) 217-2214 ● Fax (919) 217-2249
E-mail brent.quick@knightdalenc.gov

ISSUE DATE: **04/12/2015** IFB#: **M2015-001**

TITLE: **Parkside Commons Drive Resurfacing**

ISSUING DEPARTMENT: **Finance Department**
950 Steeple Square Court
Post Office Box 640
Knightdale, NC 27545

Sealed Bids will be received until **4/30/2015**, at **2:00** p.m. to furnish, deliver **Parkside Commons Drive Resurfacing** to be located in Knightdale, NC.

All inquiries for information concerning instructions to the bidder, bid submission requirements, or procurement procedures shall be directed to:

Brent Quick
Town of Knightdale
(919) 217-2214 (Telephone)
(919) 217-2209 (Fax)

Bids shall be mailed and/or hand delivered to the Finance Department shown above, and the envelope shall bear the name and number of this Invitation for Bids. It is the sole responsibility of the bidder to ensure that its bid reaches the Finance Department by the designated date and hour indicated above.

In compliance with this Invitation for Bids and to all the terms and conditions imposed herein, the undersigned offers and agrees to furnish the goods described in accordance with the attached signed bid.

Firm Name: _____ Date: _____

Address: _____ Phone: _____

_____ By: _____
(Typed)

By: _____
(Signature in Ink)

TOWN OF KNIGHTDALE
PARKSIDE COMMONS DRIVE RESURFACING

M2015-001

DATE OF ADVERTISING: April 12th, 2015

DATE OF PRE-BID CONFERENCE: April 21st, 2014 2:00 p.m..

DATE OF BID OPENING: April 30th, 2014 2:00 p.m.

NAME OF BIDDER: _____

ADDRESS: _____

_____

NC LICENSE NO.: _____

TOTAL BID: _____

CONTRACTOR SIGNATURE: _____

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ADVERTISEMENT FOR BIDS

Location: Knightdale, North Carolina
Project: Parkside Commons Drive Street Resurfacing

Sealed Bids will be received by the Town of Knightdale, NC for the patching and overlay of ~1800 LF of Parkside Commons Drive between Knightdale Boulevard and Mingo Crest Drive

The Town of Knightdale is an Equal Opportunity Employer. Small businesses, minority owned businesses, women owned businesses, businesses owned by low and moderate-income persons and Disadvantage Business Enterprises (DBE's) are encouraged to bid.

Bids will be received by the Town of Knightdale, NC until **2:00 pm (EST Council Chambers Clock), Thursday April 30th, 2015,** and then publicly opened and read aloud at the Town of Knightdale, First Floor-Town Council Chambers: 950 Steeple Square Court, Knightdale, NC 27545.

A Pre-bid Conference will be held **Tuesday April 21th, 2015 at 2:00 p.m.** at the Town of Knightdale, First Floor-Town Council Chambers: 950 Steeple Square Court, Knightdale, NC 27545. Attendance at the Pre-bid Conference is strongly encouraged for all bidders, but is not mandatory.

The Contract Documents may be examined at the following locations:

1. Town of Knightdale – Monday through Friday, 8 am to 5 pm

All contractors bidding on this project must be pre-qualified by the North Carolina Department of Transportation in order to be considered for contract award. In addition, all prime contractors must have a Dun and Bradstreet D-U-N-S ® Number. All Contractors must have proper licenses as required under the state laws governing their respective trades. The Disadvantaged Business Enterprise (DBE) goal for this project is 7%. Subcontractors must be certified by NCDOT as a DBE in order for their participation to count towards the goal. The Town of Knightdale reserves the right to waive any informalities or minor defects or reject any and all bids.

PROPOSAL FORM

PROPOSAL FOR THE CONSTRUCTION OF PROJECT NO. M2015-001
IN THE TOWN OF KNIGHTDALE, NORTH CAROLINA

DATE: _____

TOWN COUNCIL
TOWN OF KNIGHTDALE
KNIGHTDALE, NORTH CAROLINA

Ladies and Gentlemen:

The undersigned bidder has carefully examined the Form of Contract, the Form of Contract Bonds, the General Conditions, the Special Conditions, the Plans and Specifications, all of which are acknowledged to be a part of the proposal, and the Proposal Form; and he has also carefully examined the site of the proposed work. The undersigned bidder agrees to bind himself on award to him by the Town Council of the Town of Knightdale under this proposal, to execute within ten (10) days, in accordance with such award, a contract with necessary surety bonds, of which contract this proposal and the plans and specifications shall be a part, to provide all necessary machinery, tools, labor, and other means of construction, and to do all the work and to furnish all materials, except as otherwise noted, necessary to perform and complete the said project within the time limit specified below.

In addition to all other agreements and assurances, the undersigned bidder understands and hereby agrees as follows:

(1) If this contract is awarded to him he must, upon completion of this contract, or at any other time requested, furnish to the Town of Knightdale an accurate itemized statement of North Carolina Sales Tax paid on materials, supplies, equipment and any other items charged to this contract.

(2) The bidder further agrees to begin work within **10** calendar days from date of contract notice to proceed.

(3) The bidder represents and agrees to complete the entire project by within **28** calendar day of the issued Notice to Proceed.

Submitted this_____ day of _____, 20__.

Name of bidder:_____

Address:_____

ADDITIONAL BIDDER'S CERTIFICATION

Acceptance of Terms

In submitting this Proposal, the undersigned agrees that this bid will remain in effect for a period of **60** days following the opening of the Bids, that the undersigned agrees to enter into a Contract with the Owner, if awarded, on the basis of this Proposal, and that the undersigned agrees to complete the work in accordance with the Contract Documents.

Non-Collusion in Bidding

The Bidder specifically agrees to abide by all applicable provisions of Article 3 of Chapter 133 of the North Carolina General Statutes. By submission of this Bid, each Bidder and each person signing on behalf of any Bidder certifies, and in case of a joint Bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

(1) The prices in this Bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor;

(2) Unless otherwise required by Law, the prices quoted in the Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and

(3) No attempt has been made or will be made by the Bidder to induce any other person, partnership, or corporation to submit or not to submit a Bid for the purpose of restricting competition.

Type of Business

The undersigned hereby represents that it is a _____ (corporation, partnership, an individual or limited liability company). If a corporation, the undersigned further represents that it is duly qualified as a corporation under the Laws of the State of North Carolina and it is authorized to do business in this State.

_____ _____
Firm Name Date

_____
Authorized Signature

_____ Lynwood Road & McKnight Drive Resurfacing
Title Name of Project

_____
Address of Firm

INSTRUCTIONS TO CONTRACTORS AND REQUIREMENTS AS TO FORM FOR TOWN OF KNIGHTDALE CONTRACTS

DO NOT REMOVE FROM CONTRACT

Please observe the following in executing the attached contract:

1. The Town may contract with various categories of legal entities; and the legal requirements for proper execution (signing, witnessing, etc.) differ as to each.

   (A) If the contract is with an individual, that individual should sign the agreement exactly as his name is set out.

   (B) Execution on behalf of a corporation, authorized corporate officer must sign, with 2nd officer signing to attest (which is 2nd officer's verification of authority and signature authenticity), plus corporate seal affixed. The following are corporate officers allowed to sign for the corporation: president; vice-president; chairman; CEO; CFO; and Treasurer. The following officers are typically authorized to attest: secretary; vice president, trust officer; clerk to board; cashier (only for banks); and their assistants or deputies.

   A sole corporate officer may sign, accompanied with a notary's acknowledgement, using the corporate acknowledgement form.

   (C) If the agreement is with a partnership (General Partnership or Limited Partnership), a general partner must sign and his/her/its signature must be notarized.

   (D) LLC – LLC "Manager" or "managing member" must sign with proper notary acknowledgement.

2. After signing the contract, the appropriate notary's acknowledgement, either in the corporate form or individual/partnership form should be completed.

3. The Performance and Payment Bonds should be attached to the Contract package. Bonds are required by law on construction and repair contracts subject to formal bidding requirements (N.C.G.S. § 143-129 et seq. -- $300,000.00 for construction. They should be signed by the contractor, and his signature should be acknowledged with the appropriate acknowledgement form. Next, the bonds, in approved form, must be signed by the authorized agent of the Surety Company issuing the bonds, and an executed Power of Attorney document authorizing the agent to sign must accompany the bond documents. **Bonds should not be dated.** Bonds will be dated on or after the contract date by the Town.

4. The instrument should not be dated, except by the last person executing the contract, normally the Town Clerk.

5. Non-discrimination provisions should be included with the contract, as should applicable Certificates of Insurance with proper and timely coverage indicated.

6. All modifications or deletions should be initialed or signed by representatives of both the Contractor and the Town.

7. Five (5) original copies of the contract are sent to the Contractor for execution. These five originals should be signed and returned to the Town of Knightdale for final execution, after which two copies will be returned to the Contractor. One copy may be retained by the Contractor and the other, for the use of the bonding company(s).

8. The minority business firm listing is to be completed and submitted as part of the contract. Additional pages may be added as needed. All backup information related to solicitation of minority participation shall be copied and submitted with the contract.

NORTH CAROLINA

WAKE COUNTY

THIS CONTRACT is made and executed into this _____ day of _____, 20__ by and between TOWN OF KNIGHTDALE, NORTH CAROLINA, a municipal corporation hereinafter designated as the "TOWN" or the
"OWNER" and _____ hereinafter designated as the "CONTRACTOR":

W I T N E S S E T H:

That pursuant to the provisions of Chapter 143-128 et seq., as amended, of the General Statutes of North Carolina, proposals were invited by advertisement in accordance with law for the construction of the improvements hereinafter referred to. All proposals having been duly opened and recorded as provided by law, the Town Council of the Town of Knightdale, at a meeting on the _____ day of _____, 20__ awarded the contract for said construction to the aforesaid Contractor, the Contractor's proposal being a part of the contract:

NOW, THEREFORE, in consideration of the payments agreed to be made by the TOWN, hereinafter specified, the Town and the Contractor agree as follows:

I. DESCRIPTION OF WORK

(1) The Contractor, at his (its) own proper cost and expense and with skill and diligence, shall furnish all labor, tools, materials and equipment and do all things necessary for the proper construction and completion ready for use of the following improvements:

McKnight Drive

A. Resurfacing of approximately 1800 LF of Parkside Commons Drive consisting of approximately 1,500 tons of Superpave Asphalt, 10 manhole adjustments and 20 water valve adjustments.
B. Installation of approximately 8 sidewalk access ramps.
C. Approximately 8,000 square yards of asphalt milling.
D. Installation of approximately -0- yards of bituminous straight seal surface treatment.
E. Installation of approximately 100 tons of Base/Intermediate Asphalt for pavement patching.

(2) In strict accordance with and as shown in the specifications, schedules, drawings and other documents set forth herein or incorporated by reference as follows:

NCDOT Standards and Specifications for Roads and Structures (Latest Edition), NCDOT Standard Drawings, City of Raleigh Public Utilities Handbook and ACI Specifications.

The originals of such specifications, schedules, drawings and other documents are on file in the office of the Engineering & Public Works Director of the Town of Knightdale. The Contractor shall further perform in accordance with the directions (not inconsistent therewith) given from time to time during the construction by the Engineering & Public Works Director or such other official, employee, or other agent of the Town as the Town may designate.

II. GENERAL OBLIGATIONS OF THE CONTRACTOR

The Contractor will accept the prices specified in this contract and in the proposal in full compensation and satisfaction for the performance of this contract and as consideration of this contract. The Contractor shall be responsible for all loss and damages of every kind and nature which may arise out of or on account of the performance of the work required by this contract, and for all risks of every description connected with the said work; and the Contractor shall be responsible for well and faithfully completing the whole work according to the plans and specifications and the terms and conditions of this contract.

III. TIME OF COMMENCEMENT AND COMPLETION

The work required by this contract shall be commenced by the Contractor no later than **10** days after the issued Notice to Proceed and the entire work shall be completed within following contract times:

Parkside Commons Drive: 28 Calendar Days from Notice to Proceed.

Failure to complete the work by within the designated performance period will result in damages due to public inconvenience, obstruction and delay to traffic, safety, and other considerations. For each consecutive calendar day in excess of the contract time specified the contractor will be assessed liquidated damages at the rate established in the contract.

IV. QUALITY AND WORKMANSHIP

All work under this Contract shall be performed and completed to the satisfaction of the Engineering & Public Works Director of the Town of Knightdale, or of such other official, employee, or agent of the Town of Knightdale as may be designated by the Town, and such official, employee or agent designated by the Town shall in all cases of dispute determine the quantity, quality, acceptability and fitness of the work and materials and of several portions thereof which are to be paid for under this Contract and shall decide and determine all questions which may arise as to the measurements, lines, levels and dimensions of the work and all questions respecting the true construction, interpretation or meaning of the plans and specifications. In case of dispute between the Contractor and the said official, employee, or agent of the Town, the decision and determination of the latter shall be taken and shall be final and conclusive.

V. COMPENSATION

In consideration of the performance of this contract and the full completion of the work required of the Contractor by the terms and conditions of the contract, the Town agrees to pay to the Contractor the unit prices bid by the Contractor in his proposal payable as follows: Partial payments will be made to the Contractor by the Town every thirty days after work is commenced to the extent of ninety-five percent of the work then completed as estimated by the Engineering & Public Works Director of the Town of Knightdale and other officials or other representatives designated by the Town. Final estimate of the amount due to the Contractor will be made within thirty days after the certified completion and final acceptance of all the work required by the contract. Payment to the Contractor by the Town of the amounts so determined to be due, in accordance with this Contract, shall relieve the Town from all claims for work done and materials and equipment furnished under this Contract.

It is further mutually agreed between the parties that no estimate or partial payment made under this Contract shall be conclusive evidence of the performance of this Contract, either wholly or in part, and that no such payment shall be construed to be an acceptance of defective work or improper materials.

VI. SURETY BONDS

The Contractor has furnished and attached hereto a Performance Bond in the penal sum of _____dollars, and a Payment Bond in the penal sum of _____ dollars covering the faithful performance of this Contract and the payment of all obligations arising hereunder, in such form and content as the Town may prescribe and with surety approved by the Town. Should any surety upon the bond for the performance of this Contract become unacceptable to the Town, the Contractor must promptly furnish additional security as may be required from time to time by the Town to protect the interests of the Town and of persons, firms and corporations supplying labor or materials in the performance of the work contemplated by the Contract.

VII. CONTRACTOR'S WARRANTIES

The Contractor, in executing this Contract, warrants that he will be responsible for the maintenance or correction of any work completed under this Contract that may become defective due to faulty workmanship or materials for a period of one year after final acceptance of the work performed.

It is understood and agreed by the parties hereto that work done under this Contract shall be subject to all ordinances of the Town of Knightdale relating to work done in the public streets or other public property of the Town.

The Contractor has provided and attached hereto a Certificate of Insurance indicating compliance with the insurance requirements set forth in the Knightdale Town Code and applicable hereto.

VIII. AMENDMENTS AND MODIFICATIONS

The following additional provisions and/or changes in the foregoing provisions of the Contract have been made in this Contract prior to its execution:

(Indicate changes, if any)_____
_____
_____

IX. CONTROLLING LAW

All matters relating to this contract shall be governed by the laws of the State of North Carolina, without regard to its choice of law provisions, and venue for any action relating to this agreement shall be Wake County Civil Superior Court or the United States District Court for the Eastern District of North Carolina.

X. NON-DISCRIMINATION ASSURANCES

In consideration of the signing of this contract, the parties hereto for themselves, their agents, officials, employees and servants agree not to discriminate in any manner on the basis of race, color, creed, national origin, sex, age, handicap, or sexual orientation with reference to the subject matter of this contract, no matter how remote. This provision is hereby incorporated into this contract for the benefit of the Town of Knightdale and its residents, and may be enforced by action for specific performance, injunctive relief, or other remedy as by law provided. This agreement shall be binding on the successors and assigns of the parties with reference to the subject matter of this contract.

XI. NOTICE TO CONTRACTOR REGARDING INTRUSIONS BEYOND PROJECT LIMITS

The Contractor and Owner *(Town)* hereby acknowledge that the Owner has acquired permanent and temporary easements on private property for the construction of the Project, and that such easements, together with public street rights-of-way (and previously acquired easements or other property interests) comprise the sole areas where the Contractor is allowed to work on the Project, or to use for mobilization, access, staging, storage, and other purposes associated with the Project.

ANY OCCUPANCY OF OR INTRUSIONS ONTO PRIVATE PROPERTY OUTSIDE SUCH EASEMENTS OR RIGHTS-OF-WAY OWNED OR CONTROLLED BY THE TOWN WILL CONSTITUTE A TRESPASS UPON PRIVATE PROPERTY, AND WILL LIKELY INVOLVE SERIOUS LEGAL CONSEQUENCES FOR THE TOWN OF KNIGHTDALE. Accordingly, the Contractor will be solely responsible for such actions, and hereby agrees to hold harmless and indemnify the Town from all actions, claims, liabilities, and costs, including the payment of attorney's fees, arising from such actions. The Contractor further acknowledges that the Town may deduct or set-off from payments otherwise due the Contractor under the Contract sums reasonably estimated to represent the Town's liabilities or costs resulting from such trespass, occupancy or intrusions onto private property.

The only exception to the above stated limitations on the Contractor's work area will be in those instances where the Contractor has independently negotiated and secured agreements for temporary work and/or access privileges from Property Owners. Such agreements must be in writing, and a copy of any such agreement shall be provided to the Town in advance of any use or occupancy of private property pursuant to the agreement. The terms of these agreements should clearly express to the Property Owner that the Contractor is seeking such use, occupancy, or access independently from the Town of Knightdale, and its Contract with the Town of Knightdale, and that the Contractor will be solely responsible for activities carried out on such areas.

XII. CERTIFICATE OF INSURANCE

Contractor agrees to purchase at its' own expense insurance coverages to satisfy the following minimum requirements. A certificate reflecting the following minimum coverages shall accompany this Contract:

> Workers' Compensation Insurance – Limits of no less than $1,000,000 each accident, each employee and policy limit. Waivers of Indemnity are not recognized by the North Carolina Department of Insurance and will not be accepted by the Town of Knightdale.
>
> Commercial General Liability – Combined single limits of no less than $1,000,000 each occurrence and $2,000,000 aggregate. This insurance shall include Comprehensive Broad Form Coverage including contractual liability. 'Town of Knightdale is named additional insured as their interests may appear' must be endorsed onto policy and listed on Certificate of Insurance.
>
> Commercial Automobile Liability – Limits of no less than $1,000,000 Combined Single Limit. Evidence of commercial automobile coverage is only necessary if vehicles are used in the provision of services under this Agreement and/or are brought on a Town of Knightdale site. 'Town of Knightdale is named additional insured as their interests may appear' must be endorsed onto policy and listed on Certificate of Insurance.

All insurance companies must be licensed in North Carolina and be acceptable to the Town of Knightdale's Risk Manager. Contractor shall be required to provide the Town no less than thirty (30) days notice of cancellation, or any material change, to any insurance coverage required by this Contract.

XIII. INCORPORATION OF DOCUMENTS

All documents and other items physically attached to this CONTRACT and all other documents incorporated hereinto by reference are to be considered fully a part of the CONTRACT, such items including the following, as indicated:

( ) Advertisement for Proposals

( ) Contractor's Proposal

( ) Procedure for NC Sales Tax Reporting

( ) Non-Discrimination Assurances

( ) Performance Bond (w/Power-of-Attorney)

( ) Payment Bond (w/Power-of-Attorney)

( ) Certificate of Insurance (inserted behind Page _____)

( ) General Conditions

( ) Special or Supplemental Conditions

( ) Job Specifications

( ) Other (Describe)

THE CONTRACTOR

_____

By:_____

_____
(Subscribe and indicate capacity)

(IF CORPORATE)

ATTEST:
By: _____
Corporate Secretary

(AFFIX CORPORATE SEAL)

THE OWNER

The Town of Knightdale

By: _____
Town Manager, Seth Lawless

(AFFIX TOWN SEAL)

ATTEST:
By: _____
Town Clerk and Treasurer

THIS INSTRUMENT APPROVED AS TO FORM:

_____
TOWN ATTORNEY

(PLEASE COMPLETE ACKNOWLEDGMENTS)

(CORPORATE ACKNOWLEDGMENT)

STATE OF _____
COUNTY OF _____

This is to certify that on the _____ day of _____, 20__, before me personally came _____, with whom I am personally acquainted, who, being by me duly sworn, says that (s)he is the President and _____ is the Secretary of_____ _____, Incorporated, the corporation described in and which executed the foregoing instrument; that (s)he knows the common seal of said corporation; that the seal affixed to the foregoing instrument is said common seal, and the name of the corporation was subscribed thereto by the said Secretary and the said corporate seal was affixed, all by order of the Board of Directors of said corporation, and that the said instrument is the act and deed of said corporation.

Witness my hand and official seal this _____ day of _____, 20__.

_____
Notary Public

My Commission Expires:

(SEAL)

_____

(TOWN ACKNOWLEDGMENT)

STATE OF NORTH CAROLINA
COUNTY OF WAKE

This is to certify that on the _____ day of _____, 20__, before me personally came Suzanne Yeatts, with whom I am personally acquainted, who, being by me duly sworn, says that she is the Town Clerk and Treasurer and Seth Lawless, is the Town Manager of the Town of Knightdale, the municipal corporation described in and which executed the foregoing; that she knows the corporate seal of said municipal corporation; that the seal affixed to the foregoing instrument is said corporate seal, and the name of the municipal corporation was subscribed thereto by the said Town Clerk and Treasurer and that the said corporate seal was affixed, all by order of the governing body of said municipal corporation, and that the said instrument is the act and deed of said municipal corporation.

Witness my hand and official seal this _____ day of _____, 20__.

_____
Notary Public

My Commission Expires:

(SEAL)

_____

(INDIVIDUAL ACKNOWLEDGMENT)

STATE OF _____
COUNTY OF _____

I, _____, a Notary Public do hereby certify that _____, personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

This the _____ day of _____, 20__.

_____
Notary Public

My Commission Expires:

(SEAL)

_____

(TOWN ACKNOWLEDGMENT)

STATE OF NORTH CAROLINA
COUNTY OF WAKE

This is to certify that on the _____day of _____, 20__, before me personally came Suzanne Yeatts, with whom I am personally acquainted, who, being by me duly sworn, says that she is the Town Clerk and Treasurer and Seth Lawless, is the Town Manager of the Town of Knightdale, the municipal corporation described in and which executed the foregoing; that she knows the corporate seal of said municipal corporation; that the seal affixed to the foregoing instrument is said corporate seal, and the name of the municipal corporation was subscribed thereto by the said Town Clerk and Treasurer and that the said corporate seal was affixed, all by order of the governing body of said municipal corporation, and that the said instrument is the act and deed of said municipal corporation.

Witness my hand and official seal this _____ day of _____, 20__.

_____
Notary Public

My Commission Expires:

(SEAL)

_____

(PARTNERSHIP ACKNOWLEDGEMENT)

STATE OF _____
COUNTY OF _____

I, _____, a Notary Public do hereby certify that _____, general partner of _____ _____, personally appeared before me this day and acknowledged the execution, with proper authorization, of the foregoing instrument, all in accordance with partnership instruments recorded in Book _____, Page _____, in the _____ County Registry, and that the instrument is the act and deed of the partnership.

This the _____ day of _____, 20__.

_____
Notary Public

My Commission Expires:

(SEAL)

_____

(TOWN ACKNOWLEDGMENT)

STATE OF NORTH CAROLINA
COUNTY OF WAKE

This is to certify that on the _____day of _____, 20__, before me personally came Suzanne Yeatts, with whom I am personally acquainted, who, being by me duly sworn, says that she is the Town Clerk and Treasurer and Seth Lawless, is the Town Manager of the Town of Knightdale, the municipal corporation described in and which executed the foregoing; that she knows the corporate seal of said municipal corporation; that the seal affixed to the foregoing instrument is said corporate seal, and the name of the municipal corporation was subscribed thereto by the said Town Clerk and Treasurer and that the said corporate seal was affixed, all by order of the governing body of said municipal corporation, and that the said instrument is the act and deed of said municipal corporation.

Witness my hand and official seal this _____ day of _____, 20__.

_____
Notary Public

My Commission Expires:

(SEAL)

_____

(LIMITED LIABILITY COMPANY ACKNOWLEDGEMENT)

STATE OF _____
COUNTY OF _____

I, _____, a Notary Public for said State and County, do hereby certify that _____, Manager of _____ _____, personally appeared before me this day and acknowledged the execution of the foregoing instrument, with proper authorization, on behalf of the company.

This the _____ day of _____, 20__.

_____
Notary Public

My Commission Expires:

(SEAL)

_____

(TOWN ACKNOWLEDGMENT)

STATE OF NORTH CAROLINA
COUNTY OF WAKE

This is to certify that on the _____ day of _____, 20__, before me personally came Suzanne Yeatts, with whom I am personally acquainted, who, being by me duly sworn, says that she is the Town Clerk and Treasurer and Seth Lawless, is the Town Manager of the Town of Knightdale, the municipal corporation described in and which executed the foregoing; that she knows the corporate seal of said municipal corporation; that the seal affixed to the foregoing instrument is said corporate seal, and the name of the municipal corporation was subscribed thereto by the said Town Clerk and Treasurer and that the said corporate seal was affixed, all by order of the governing body of said municipal corporation, and that the said instrument is the act and deed of said municipal corporation.

Witness my hand and official seal this _____ day of _____, 20__.

_____
Notary Public

My Commission Expires:

(SEAL)

_____

PERFORMANCE BOND FOR CONTRACT

NOW ALL MEN BY THESE PRESENTS, that we, _____ _____ the PRINCIPAL, hereinafter called Principal, and _____ _____as SURETY, hereinafter called Surety, and the above named, are held and firmly bound unto the Town of Knightdale, hereinafter called the Town, in the penal sum of $ _____DOLLARS ($_____) the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Town, numbered as shown above and hereto attached;

NOW, THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Town, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of such modifications to the Surety being hereby waived, then this obligation to be void; otherwise it shall remain in full force and effect.

IN WITNESS WHEREOF, the above-mentioned parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

Signed and sealed this _____ day of _____, 20__. **(To be dated by the Town)**

(ATTACHED POWER OF ATTORNEY, IF APPLICABLE)

_____

By: _____

ATTEST: (Indicate Capacity)
PRINCIPAL

_____
Secretary

(AFFIX CORPORATE SEAL IF APPLICABLE)

_____

ATTEST: By: _____
(Indicate Capacity)
SURETY

_____

STATE OF _____
COUNTY OF _____

Personally appeared before me the undersigned Notary Public, _____, who, being first duly sworn, acknowledged the due execution of the foregoing instrument for the purpose therein stated.

Witness my hand and notarial seal this the _____ day of _____, 20__.

_____
Notary Public

My Commission Expires: (SEAL)

_____

(CORPORATE ACKNOWLEDGMENT)

STATE OF_____
COUNTY OF_____

This is to certify that on the _____ day of _____, 20__, before me personally came _____, with whom I am personally acquainted, who, being by me duly sworn, says that (s)he is the President and _____ is the Secretary of _____, Incorporated, the corporation described in and which executed the foregoing instrument; that (s)he knows the common seal of said corporation; that the seal affixed to the foregoing instrument is said common seal, and the name of the corporation was subscribed thereto by the said Secretary and the said corporate seal was affixed, all by order of the Board of Directors of said corporation, and that the said instrument is the act and deed of said corporation.

Witness my hand and official seal this _____ day of _____, 20__.

_____
Notary Public

My Commission Expires:

(SEAL)

_____

STATE OF_____
COUNTY OF _____

I, _____, a Notary Public duly commissioned and qualified to act in_____ County, State of _____ do hereby certify that _____, Attorney-in-Fact for _____, a corporation, personally appeared before me this day, and being by me duly sworn, says that he executed the foregoing and attached Bond, duly sworn, says that he executed the foregoing and attached Bond, dated _____, _____ , for and in behalf of _____, as Surety and that his authority to execute and acknowledge said Bond is contained in an instrument duly executed, acknowledged, and recorded in the Office of Register of Deeds of _____ County, State of _____, on the _____ day of _____, _____, being recorded in Book Number _____, Page _____, of said Registry, and that the foregoing and attached Bond was executed under and by virtue of the authority given by said instrument granting him, the said _____, power of attorney; and that the said _____, Attorney-in-Fact, acknowledged the due execution of the foregoing and annexed Bond for the purpose therein expressed for and in behalf of said _____.

Witness my hand and notarial seal, this _____ day of _____, 20__.

_____
Notary Public

My Commission Expires:

(SEAL)

_____

PAYMENT BOND FOR CONTRACT

KNOW ALL MEN BY THESE PRESENTS, that we, _____ _____the PRINCIPAL, hereinafter called Principal, and _____ _____ as SURETY, hereinafter called Surety, and the above named, are held and firmly bound unto the Town of Knightdale, hereinafter called the Town, in the penal sum of _____DOLLARS ($_____) the amount stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Town as referenced above and hereto attached;

NOW, THEREFORE, if the principal shall promptly make payment to all person supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise it shall remain in full force and effect.

IN WITNESS THEREOF, the above bound parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representatives pursuant to authority of this governing body.

Signed and sealed this _____ day of _____, 20__. **(To be dated by the Town)**

(ATTACH POWER OF ATTORNEY, IF APPLICABLE)

By: _____

ATTEST: (Indicate Capacity)
PRINCIPAL

_____
Secretary

(AFFIX CORPORATE SEAL IF APPLICABLE)

_____

ATTEST: By: _____
(Indicate Capacity)
SURETY

_____

STATE OF _____
COUNTY OF _____

Personally appeared before me to the undersigned Notary Public, _____ _____, who, being first duly sworn, acknowledged edged the due execution of the foregoing instrument for the purpose therein stated.

Witness my hand and notarial seal this the _____ day of _____, 20__.

_____
Notary Public

My Commission Expires:

(SEAL)

_____

(CORPORATE ACKNOWLEDGMENT)

STATE OF _____
COUNTY OF _____

This is to certify that on the _____ day of _____, 20__, before me personally came _____, with whom I am personally acquainted, who, being by me duly sworn, says that (s)he is the President and _____ is the Secretary of _____, Incorporated, the corporation described in and which executed the foregoing instrument; that (s)he knows the common seal of said corporation; that the seal affixed to the foregoing instrument is said common seal, and the name of the corporation was subscribed thereto by the said Secretary and the said corporate seal was affixed, all by order of the Board of Directors of said corporation, and that the said instrument is the act and deed of said corporation.

Witness my hand and official seal this _____ day of _____, 20__.

_____
Notary Public

My Commission Expires: (SEAL)

_____

STATE OF_____
COUNTY OF _____

I, _____, a Notary Public duly commissioned and qualified to act in _____ County, State of _____, do hereby certify that _____, Attorney-in-Fact for _____, a corporation, personally appeared before me this day, and being by me duly sworn, says that he executed the foregoing and attached Bond, dated _____, _____, for and in behalf of _____, as Surety and that his authority to execute and acknowledge said Bond is contained in an instrument duly executed, acknowledged, and recorded in the Office of Register of Deeds of _____ County, State of _____, on the _____ day of _____, _____, being recorded in Book Number _____ , Page _____, of said Registry, and that the foregoing and attached Bond was executed under and by virtue of the authority given by said instrument granting him, the said _____, power of attorney; and that the said _____, Attorney-in-Fact, acknowledged the due execution of the foregoing and annexed Bond for the purpose therein expressed for and in behalf of said _____.

Witness my hand and notarial seal, this _____ day of _____, 20__.

_____
Notary Public

My Commission Expires:

(SEAL)

_____

PROCEDURE FOR REPORTING NORTH CAROLINA SALES TAX EXPENDITURES ON TOWN OF KNIGHTDALE CONTRACTS

1. The following procedure in handling the North Carolina Sales Tax is applicable to this project. Contractors shall comply fully with the requirements outlined hereinafter, in order that the owner may recover the amount of the tax permitted under the law.

2. (a) It shall be the general contractor's responsibility to furnish the owner documentary evidence showing the materials used and sales tax paid by the general contractor and each of his subcontractors. Any county sales tax included in the Contractor's statements must be shown separately from the state sales tax. If more than one county is shown, each county shall be listed separately.

   (b) The documentary evidence shall consist of a certified statement, by the general contractor and each of his subcontractors individually, showing total purchases of materials from each separate vendor and total sales taxes by each county paid each vendor. The certified statement must show the invoice number(s) covered and inclusive dates of such invoices. State sales tax shall be listed separately from county sales tax. If more than one county is shown, each county shall be listed separately.

   (c) Materials used from general contractor's or subcontractor's warehouse stock shall be shown in a certified statement at warehouse stock prices.

   (d) The general contractor shall not be required to certify the subcontractor's statements.

   (e) The documentary evidence to be furnished to owners eligible for sales or use tax refunds covers sales and/or use taxes paid on building materials used by contractors and subcontractors in the performance of contracts with churches, orphanages, hospitals not operated for profit, educational institutions not operated for profit, and other charitable or religious institutions or organizations not operated for profit and incorporated cities, towns, and counties in this State. The documentary evidence is to be submitted to the above-named institutions, organizations, and governmental units to be included in claims for refunds to be prepared and submitted by them to obtain refunds provided by G.S. 105-164.14 and is to include the purchases of building materials, supplies, fixtures, and equipment which become a part of or annexed to buildings or structures being erected, altered, or repaired under contracts with such institutions, organizations or governmental units.

3. The Contractor or contractors to whom an award is made on this project will be required to follow the procedure outlined above.

4. The Contractor is advised that all requests for payment, partial or final, for work completed under this contract must include a sales tax report submitted in accordance with the procedures outlined above.

(REQUIRED AT TIME OF FINAL PAYMENT)

AFFIDAVIT

M2015-001

PARKSIDE COMMONS DRIVE STREET RESURFACING PROJECT

Town of Knightdale Project No. **M2015-001** State of North Carolina County of Wake

In the State of North Carolina , County of _____, being duly sworn, deposes and says that they are _____of _____ and that they have full and official knowledge of all and every debt and obligation for labor and materials which have entered into and become a part of the public facilities constructed under Town of Knightdale Project Number **M2015-001**; and, acting in their official Capacity, and for the specific purpose of obtaining the funds due on this final estimate, they further depose and say that all debts or obligations for such labor and materials have been fully and completely paid and discharged in good and lawful money of the United States of America or by evidence of exchange or trade acceptances endorsed and guaranteed by a solvent National or State bank, and that there are no suits for damages against the Contractor, pending, prospective or otherwise, in consequence of their operations on the said project except as follows:

In witness whereof they have set their hand and seal,

_____

I, _____, a notary public of the County and State aforesaid, hereby certify that _____ personally known to me to be the affiant in the foregoing affidavit, personally appeared before me this day and having been by me duly sworn, deposes and says that the facts set forth in the above affidavit are true and correct.

Witness my hand and official seal this the _____ day of _____, 20__.

_____
Notary Public

My Commission Expires: (SEAL)

_____

SCHEDULE OF PRICES

Item Description	Quantity	Unit	Unit Bid Price	Bid Amount
Mobilization	1	Lump Sum		
			SUBTOTAL	
Resurfacing				
Asphalt Concrete Surface Mix SF 9.5A	1,500	Ton		
Asphalt Binder	99	Ton		
FOB Adjustment				
Adjust Manholes	10	Ea		
Adjust Water Valves	20	Ea		
Proofroll	8	Hr		
			SUBTOTAL	
Milling				
Full Width Milling (0-4") Edge	8,000	SY		
Pavement Patching	100	Ton		
			SUBTOTAL	
Pavement Marking				
Solid & Skip 4" White	250	LF		
Stopbar 24" White	90	LF		
Hi-Visibility Crosswalk 24" White	250	LF		
Single Arrow	6	Ea		
Interim 4" White Paint	250	LF		
Interim 24" Paint	90	LF		
Interim Arrows	6	Ea		
			SUBTOTAL	
Concrete				
5' Wide Sidewalk Removal	200	LF		
5' Wide Sidewalk Installation	200	LF		
ADA Ramp Removal	8	EA		
ADA Ramp Installation	8	EA		
			SUBTOTAL	
			TOTAL BID AMOUNT	

DETAIL SPECIFICATIONS

GENERAL CONDITIONS

1. **Definitions:**

(a) The contract documents shall consist of the Contract, the accepted Proposal, the General Conditions of the Contract, and the Drawings and Specifications, including all modifications thereof incorporated in the documents before their execution.

(b) Whenever the term "Contractor" is used, it shall be understood as referring to the General Contractor, subcontractor, and all other contractors or their duly authorized agent to whom the work here described is awarded by contract.

(c) Whenever the term "Public Works Director" is mentioned, it is understood to mean the Public Works Director of Knightdale, North Carolina, his assistant or duly authorized agent. The Public Works Director shall make all necessary explanations as to the meaning and intent of the Specifications and may correct any errors or omissions in same which is necessary for the proper fulfillment of its intentions.

(d) Whenever the term "Town" is used, it is to mean the Town of Knightdale, North Carolina.

(e) The term "Work" of the Contractor or subcontractor includes labor or materials, or both, equipment, transportation, or other facilities necessary to complete the contract.

(f) The "North Carolina Department of Transportation Standard Specifications for Roads and Structures", latest edition shall be considered a part of these specifications in instances to which they are referred. The "North Carolina Department of Transportation Policies Procedures", for 2002 accommodating utilities on highway right-of-way shall be considered a part of these specifications in instances to which they are referred.

2. **Bidders Disqualification**:

2.01 That the Town Manager may disqualify bidders from participation in bidding and award of contracts for Town construction projects based on the following conditions existing simultaneously:

A. The dollar value of the work completed is less than the dollar value of the work which should have been completed on the basis of the contractor's approved progress schedule by more than twenty percent of the current contract amount. The dollar amount of the work completed will be the total estimate to date shown in the latest partial pay estimate. The current contract amount will be the contract estimate plus accumulated overruns and less accumulated underruns shown in the latest partial pay estimate.

B. The percentage of the work completed is less than the percentage of contract time elapsed on the work by more than twenty percent. The percentage of work completed will be the dollar value of the work complete as defined above divided by the current contract amount as defined above. The percentage of contract time elapsed will be the number of calendar days elapsed as shown in the latest partial pay estimate divided by the total contract time in calendar days.

2.02 The Town Manager shall not include any late days which are caused by the Town in any of his calculations directed at determining bid status.

2.03 Any contractor who wishes to contest the decision of the Town Manager declaring ineligibility may appeal to the Town Council by delivering a notice of appeal to the Town Clerk no later than ten days after receipt of the Town Manager's decision. The notice of appeal shall clearly set out the reasons why the Contractor believes that the terms of this Resolution have been inappropriately applied or the equitable arguments for not applying this Resolution's terms. When considering an appeal the Town Council shall consider, among other things, the report of the Town Manager, the notice of appeal, and the Contractor's current status on any other current Town contracts and its performance on any other contracts to which the Contractor and the Town have been parties to within the two calendar years immediately preceding the filing of the notice of appeal.

2.04 Bidders so disqualified shall remain disqualified for any period in which they are still in conflict with the schedule provisions of this article.

3. **Intent of Documents**:

The intention of the documents is to include all labor and materials, equipment and transportation necessary for the proper execution of the work. It is not intended, however, that materials or work not covered by or properly inferable from any heading, branch, class or trade of the Specifications shall be supplied unless distinctly so noted on the drawings. Materials or work described in words which so applied have a well-known technical or trade meaning shall be held to refer to such recognized standards.

4. **Detail Drawings and Instructions**:

The Public Works Director shall furnish with reasonable promptness, additional instructions, by means of drawings or otherwise, necessary for the proper execution of the work. All such drawings and instructions shall be consistent with the contract documents, true developments thereof, and reasonably inferable therefrom.

5. **Progress Schedule**:

The Contractor shall submit for approval by the Public Works Director prior to the pre-construction conference, a carefully prepared progress schedule, showing the proposed dates of starting and completing each of the various operations of the work. Also a progress schedule which specifically addresses the completion of streets to be resurfaced shall be submitted. **This schedule shall reflect a minimum of 10% of the total streets to be completed in the first full month of the contract.** This schedule can be combined with the above mentioned schedule or separate. This schedule of completed streets and tons will be utilized on a monthly basis for assessment based on the Contractor's progress in comparison with the approved progress schedule. If applicable, liquidated damages will be deducted on a monthly basis based on the approved project schedule. The progress schedule shall be in graphic form and if required, in accordance with the form supplied by the Town.

6. **Contractor's Understanding**:

It is understood and agreed that the Contractor has, by careful examination satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality and quantity of materials to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the work, the general and local conditions, and all other matters which can in any way affect the work under this contract. No verbal agreement or conversation with any officer, agent or

employee of the Town, either before or after the execution of the contract shall affect or modify any terms or obligations herein contained.

7. **Superintendence by Contractor**:

Except where the Contractor is an individual and gives his personal superintendence to the work, the Contractor shall provide a competent superintendent, satisfactory to the Town of Knightdale on the work at all times during working hours with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination and prosecution of the work.

Only two (2) separate paving crews shall be operational on any given day of paving, however, additional work such as sidewalk access ramp installation, pavement markings, patching and utility adjustments may continue.

The Contractor shall notify the Public Works Director 48 hours in advance of any work scheduled on weekends.

8. **Materials, Appliances, Employees**:

Unless otherwise specified, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation and other facilities necessary for the execution and completion of the work.

Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

The Contractor shall at all times enforce strict discipline and good order among his employees, and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him.

9. **Technical Specifications and Drawings**:

Anything mentioned in the Technical Specifications and not shown on the Drawings or shown on the Drawings and not mentioned in the Technical Specifications shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in Drawings, or Technical Specifications, the matter shall be immediately submitted to the Town of Knightdale without whose decision, said discrepancy shall not be adjusted by the Contractor, save only at his own risk and expense.

10. **Royalties and Patents**:

The Contractor shall pay all royalties and patent fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Town harmless from loss on account thereof, except that the Town shall be responsible for such loss when a particular process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has information that the process or article specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Public Works Director.

11. **Permits**:

Permits and licenses of a temporary nature necessary for the prosecution of the work shall be secured and paid for by the Contractor unless otherwise stipulated.

Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the Town unless otherwise stipulated.

12. **Protection of Work and Property**:

The Contractor shall continuously maintain adequate protection of all his work from damage and shall protect the Town's and private property from injury or loss arising in connection with this contract. He shall make good any such damages, injury or loss, except such as may directly be due to errors in the contract documents or caused by agents or employees of the Town.

13. **Cooperation with Utility Owners**:

Prior to the beginning of construction, the Town will notify all utility owners known to have facilities affected by the construction of the project. The Contractor shall coordinate the schedule with the utility owners for the necessary adjustments of all affected public or private utility facilities. The utility adjustments may be made either before or after the beginning of construction of the project. The adjustments will be made by the utility owner or his representative or by the Contractor when such adjustments are part of the work covered by his contract.

The Contractor shall use special care in working around and near all existing utilities that are encountered during construction, protecting them where necessary so that they will give uninterrupted service. The Contractor shall call the agency concerned for location of all utilities and shall be responsible for any damage to existing utilities and structures resulting from his work around these utilities or structures.

The Contractor shall cooperate with the utility owner, and/or the owner's representative in the adjustment or placement of utility facilities when such adjustment or placement is made necessary by the construction of the project or has been authorized by the Town.

In the event that utility services are interrupted by the Contractor, the Contractor shall promptly notify the owners and shall cooperate with the owners and/or the owner's representative in the restoration of service in the shortest time possible.

Existing fire hydrants shall be kept accessible to fire department personnel at all times.

Prior to submitting his bid, the Contractor shall make his own determination as to the nature and extent of the utility facilities, including proposed adjustments, new facilities, or temporary work to be performed by the utility owner or his representative; and as to whether or not any utility work is planned by the owner in conjunction with the project construction. The Contractor shall consider in his bid all of the permanent and temporary utility facilities in their present or relocated positions, whether or not specifically shown on the plans or covered in the project special provisions. It will be the Contractor's responsibility to anticipate any additional costs to him resulting from such utility work and to reflect these costs in his bid for the various items in the contract.

Where changes to utility facilities are to be made solely for the convenience of the Contractor, it shall be the Contractor's responsibility to arrange for such changes and the Contractor shall bear all costs of such changes.

14. **Inspection of Work**:

The Public Works Director and his representatives shall at all times have access to the work wherever it is in preparation or progress and the Contractor shall provide facilities for such access and for inspection.

If the specifications, the Public Works Director's instructions, laws, or ordinances or any public authority require any work to be specially tested or approved, the Contractor shall give the Public Works Director

timely notice of its readiness for inspection. Inspections by the Public Works Director shall be promptly made, and where practicable at the source of supply. If any work should be covered up without approval or consent of the Public Works Director, it must, if required by the Public Works Director, be uncovered for examination at the Contractor's expense.

15. **Changes in Work**:

The Town, without invalidating the contract, may order extra work or make changes by altering, adding or deducting from the work, the contract sum being adjusted accordingly. All such work shall be executed under the conditions of the original contract except that any claims for extension of time caused thereby shall be adjusted at the time ordering such changes, as mutually agreed upon by the Town and Contractor. As long as additional work does not exceed original estimates, additional days will not be granted.

The value of any such extra work or change shall be determined by the unit prices named in the contract, up to but not exceeding 25% of the original contract total price.

For extra work which exceeds 25% of the original contract total, the value of any such extra work or change shall be determined in one or more of the following ways:

(a) By estimate and acceptance of a lump sum.
(b) By unit prices named in the contract or subsequently agreed upon.
(c) By cost and percentage or by cost and a fixed fee.

16. **Conformity with Plans and Specifications**:

All work performed and all materials furnished shall be in reasonably close conformity with the lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown on the plans, or indicated in the specifications.

In the event the Public Works Director finds the materials or the finished product in which the materials are used not within reasonably close conformity with the plans and specifications but that reasonably acceptable work has been produced, he will then make a determination if the work is to be accepted and remain in place. If the Public Works Director agrees that the work is to be accepted, he will have the authority to make such adjustment in contract price as he deems warranted based upon sound engineering judgment and the final estimate will be paid accordingly.

In the event the Public Works Director finds the materials or the finished product in which the materials are used or the work performed are not in reasonably close conformity with the plans and specifications and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by the Contractor at no cost to the Town.

17. **Liquidated Damages and Delays**:

a. Liquidated Damages. If the work cannot be completed within the time stipulated in the contract, including any extensions of time for excusable delays as herein provided, the Contractor shall pay to the Town of Knightdale, a fixed and agreed amount, as liquidated damages for each calendar day of delay, until the work is completed, the amount as set forth in the contract and the Contractor and his sureties shall be liable to the Town of Knightdale for the amount thereof.

b. Excusable Delays. The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due to:

(1) Any act or omission of the Town outside the scope of the contract, including extra work; acts of God; unusually severe and abnormal weather conditions; acts of any other contractor in the performance of work for the Town; or other conditions, events, or circumstances beyond the control and without the fault or negligence of the Contractor, which the Contractor could not have reasonably anticipated; or

(2) Any delay of any Subcontractor occasioned by any of the causes specified in subparagraph (1) above.

Provided, however, the Contractor shall provide written notice to the Public Works Director within ten (10) days from the occurrence, condition, event, or other cause which is claimed to have delayed the completion of the work. Such notice shall state what effect, if any, such occurrence, condition, event, or other cause is claimed to have upon the time for completing the contract work, and shall state in what respects, if any, the contract completion deadline should be revised, and the reasons therefore. No claim by the Contractor for an extension of time for completion shall be considered unless notice of such delay claim is given the Town in accordance with the provisions of this subparagraph.

c. No Damages for Delays The Town shall not be obligated or liable to the Contractor for, and the Contractor hereby expressly waives any claims against the Town for, any damages, costs, or expenses of any nature occasioned by delays, work disruptions or interference, changes in work sequence, work suspension or rescheduling arising from any act or omission of the Town outside the scope of the Contract, acts of God, unusually severe and abnormal weather conditions, or other causes beyond the Contractor's control, it being understood and agreed that the Contractor's sole and exclusive remedy in the event of his inability to achieve completion by the contract deadline due to claimed delays shall be an extension of the contract schedule, but only if a claim for such extension is properly made in accordance with the provisions of subparagraph (b) above.

18. **Opening Sections of Project to Traffic**:

The Town of Knightdale, at its election, may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the technical specifications; and if, in its opinion, each such section is reasonably safe, fit, and convenient for the use and accommodations for which it was intended. On such sections which are open, the Contractor shall conduct the remainder of his operations so as to cause the least obstruction to traffic. The Contractor shall not be relieved of his liability or responsibility, shall not receive any additional compensation due to the added cost of the work, nor shall he receive any extension of the completion date, by reason of such openings.

The Contractor shall not be responsible for any maintenance cost due directly to the use of such sections. The period of guarantee stipulated in Section 51 – Guarantee of Work, shall not begin to run until the date "of release of final inspection punch list items" for all work which the Contractor is required to construct under this contract.

19. **Town's Right to Do Work**:

If the Contractor should neglect to prosecute the work promptly or fail to perform any provisions of the contract, the Town, after 24 hours written notice to the Contractor, may without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.

20. **Correction of Work Before Final Payment**:

Before issuing final payment, the Contractor shall promptly remove from the premises all materials condemned by the Public Works Director as failing to conform with the contract, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute his own work in accordance with the contract and without expense to the Town and shall bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.

21. **Final Inspection, Clean Up and Project Final Acceptance**:

21.01 Final Inspection

a. When the improvements contained in this contract are substantially completed, the Contractor shall notify the Public Works Director in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The notice shall be given at least ten (10) days prior to the date stated for final inspection and bear the signed concurrence of the representative of the Public Works Director having charge of the inspection. If the Public Works Director determines that the status of the improvements are accurately represented, the Public Works Director will make the arrangements necessary to have the final inspection on the date stated in the notice, or soon thereafter as is practicable. The Final Inspection Team will include the Public Works Director's representatives and the Contractor. The Final Inspection Team may also include representatives of each department of the Town of Knightdale as well as a representative of the North Carolina Department of Transportation.

b. The Final Inspection Team, on the date agreed upon in 21.01(a), shall make a thorough visual inspection to insure that the project is satisfactorily completed according to the plans and specifications of the contract and that all clean up work is complete.

c. The Final Inspection Team, following the final inspection, shall prepare a written list of the deficient items and clean up work that needs to be corrected before the issuance of the Final Acceptance Document. The list shall include a reasonable period of time, agreed upon with the Contractor, allowing for the completion of the deficient items and clean up work. A copy of the list shall be mailed to the Contractor.

21.02 Clean up Work

Clean up work shall include clean up of trash in the medians and rights-of-way. It shall also include a final mowing of the grass in medians and rights-of-way. Grass in the median and on the rights-of-way shall not exceed 8 inches in height at the time of final acceptance. Clean up and mowing along slopes may be required as directed by the Public Works Director.

21.03 Project Final Acceptance

The Contractor, after finishing all clean up work and correction of all deficient items, shall notify the appropriate party on the Inspection Team to make a final inspection of the project. If the Final Inspection Team, during its inspection finds that the deficient items and clean up work have been satisfactorily completed according to the terms of this Article and the contract specifications, then the Final Inspection Team recommends to the Public Works Director 's Representative to issue the Final Acceptance Document.

22. **Payments to Contractor and Retainage**:

22.01 Partial Payments

a. Partial payment will be based upon progress estimates prepared by the Public Works Director once each month on the date established by the Public Works Director.

b. Monthly or partial payments made by the Town of Knightdale to the Contractor are monies advanced for the purpose of assisting the Contractor to expedite the work of construction. The Contractor shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the Town of Knightdale. Such payments shall not constitute a waiver of the right of the Town of Knightdale to require the fulfillment of all terms of the contract and the delivery of all improvements embraced in this contract complete and satisfactory to the Town of Knightdale in all details.

22.02 Retainage

An amount equal to five percent (5%) of the total amount due will be deducted and retained until 90 percent (90%) of the work is completed.

After 90 percent (90%) of work is completed, a reduction in retainage to two percent (2%), if warranted by job performance, may be approved by the Public Works Director after review and approval of the Town Manager.

22.03 Final Payment

a. After final inspection and acceptance by the Town of Knightdale and Public Works Director of all work under the contract, the Contractor shall prepare his requisition for final payment which shall be the sum of the Bid unit Prices multiplied by the quantities actually issued or this sum adjusted by approved change orders less prior payments. Final payment request must be accompanied by the Final Payment Affidavit.

b. The Town of Knightdale before paying the final estimate may require the Contractor to furnish releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment and services to the Contractor, if the Town of Knightdale deems the same necessary in order to protect its interest. The Town of Knightdale, however, may, if it deems such action advisable, make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments so made shall in no way impair the obligations of any surety or sureties furnished under the contract.

c. Withholding of any amount due the Town of Knightdale as "Liquidated Damages", shall be deducted from payments due to the Contractor.

The Town may withhold on account of subsequently discovered evidence, nullify whole or part of any certificate to such extent as may be necessary to project itself from loss on account of:

a. Defective work not remedied.

b. Claims filed or reasonable evidence indicating probable filing of claims.

c. Failure of the Contractor to make payments properly to Subcontractor or for materials or labor.

d. A reasonable doubt that the Contract can be completed for the balance unpaid.

e. Damage to another Contractor.

When the above items have been cleared to the satisfaction of the Public Works Director, payment shall be made for amounts withheld because of them.

23. **Town's Right to Terminate Contract**:

If the Contractor should be adjudged as bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of insolvency, or if he should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if he should fail to make prompt payment to Subcontractors or for material or labor, or persistently discharged laws, ordinances or the instructions of the Public Works Director, or otherwise be guilty of a substantial violation of any provision of the contract, then the Town, upon the certificate of the Public Works Director that sufficient cause exists to justify such action, may without prejudice to any other right or remedy and after giving the Contractor seven days written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, tools, appliances, there and finish the work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price shall exceed the expense of finishing the work, including compensation for additional managerial and administrative services, such excess shall be paid to the Contractor. If such expense shall exceed the unpaid balance, the Contractor shall pay the difference to the Town. The expense incurred by the owner as herein provided, and the damage incurred through the Contractor's default, shall be certified by the Public Works Director.

24. **Contractor's Right to Stop Work or Terminate Contract**:

If the work should be stopped under an order of any Court, or other public authority, for a period of three months, through no act or fault of the Contractor or of anyone employed by him, then the Contractor may, upon seven days written notice to the Public Works Director, stop work or terminate this contract and recover from the Town payment for all work executed and loss sustained upon any plant or materials and reasonable profit and damages.

25. **Liability Insurance**:

The Contractor shall maintain such insurance as will protect him from claims under workman's compensation acts and such other insurance as will protect him and the Town from any other claims for damages for property damage and personal injury, including death, which may arise from operations under this contract whether such operations be by himself, or by any subcontractor or anyone directly or indirectly employed by either of them. Certificates of insurance shall be filed with the Public Works Director, if he so requires, and shall be subject to his approval for adequacy of protection. Policies of insurance coverage for personal liability and property damage shall be submitted.

26. **Care of Work**:

a. The Contractor shall be responsible for all damages to person or property that occur as a result of his fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work

performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the Town of Knightdale.

b. In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorization is authorized to act at his discretion to prevent such threatened loss or injury and he shall so act. He shall likewise act if instructed to do so by the Town of Knightdale. Any compensation claimed by the Contractor on account of such emergency work will be determined by the Town of Knightdale as provided in Section 15 "CHANGES IN WORK" under GENERAL CONDITIONS.

c. The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations.

d. The Contractor shall shore up, brace, underpin, secure, and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the improvements embraced in this contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the Town of Knightdale from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the Town of Knightdale may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

e. Any claim for damage arising under this contract shall be made in writing to the party liable within reasonable time of the first observance of such damage.

27. **Indemnity**:

The Contractor shall indemnify, save harmless, and defend the Town against all losses and claims, demands, payments, suits, actions, recoveries, and judgments of every nature and description brought or recovered against it by reason of any act or omission of the said Contractor, his agents and employees, in the execution of work or in the guarding of it.

28. **Safety and Accident Prevention**:

28.01 General

The Contractor shall exercise proper precautions at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The Contractor shall abide by all applicable safety standards and regulations contained in the Occupational Safety and Health Act, for the construction industry and any other applicable Laws.

a. All excavation and trenching work shall conform to OSHA requirements under 29 CFR Part 1926 Subpart P and any other applicable requirements.

b. The Contractor shall have an employee who is a designated competent person as described under OSHA regulations, 29 CFR Part 1926 Subpart P. The person shall be

capable of identifying existing or predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

c. The Contractor shall provide and maintain safety equipment as outlined under OSHA 29 CFR Part 1926 Subpart P and other applicable safety provisions, which include trench boxes, ladders, shoring, barricades, warning vests, gas monitors, meter for hazardous atmospheres and other necessary safety equipment to protect the employees and the job site.

28.02 Records

The Contractor shall maintain an accurate record of all cases of death, occupational diseases, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the contract. The Contractor shall promptly furnish the Town of Knightdale with reports concerning these matters.

28.03 Indemnity

The Contractor shall indemnify and save harmless the Town of Knightdale from any claims for damages resulting from personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this contract.

29. **Bidding Process and Guaranty Bonds**:

29.01 Bidding Process

The Town of Knightdale's bidding process policy is regulated by the North Carolina State GS 143-129, GS 143-131 and Town of Knightdale Standard Procedure 501-3 which define Formal and Informal public contract.

a. Formal Contracts, as described by GS 143-131, are those contracts for construction or repair work that require expenditure of $300,000.00 or more; and for the purchase or lease purchase of apparatus, supplies, materials or equipment that require an expenditure of $90,000.00 or more.

b. Informal Contracts, as described by GS 143-131, are those contracts for construction or repair work that require expenditure of $5,000.00 to $299,999.00; and for the purchase or lease purchase of apparatus, supplies, materials or equipment that require expenditure of $5,000.00 to $89,999.00.

c. All Bids as described in 29.01(a), shall be accompanied by a deposit equal to not less than 5 percent of the total amount of the Bid in the form of cash, cashier's check, a certified check or a bid bond by a surety authorized to do business in the State of North Carolina.

29.02 Guaranty Bonds

29.02.1 Guaranty Bonds for Formal Contracts

a. The successful bidder in a formal contract, within ten (10) days after the notice of award is received by him, shall provide the Town of Knightdale with a contract payment bond and a contract performance bond, each in an amount equal to 100

percent of the amount of the contract. All bonds shall be in conformance with GS 44A-33. The corporate surety furnishing the bonds shall be authorized to do business in the State of North Carolina.

b. The successful bidder's failure to execute the contract and file acceptable bonds within ten (10) days after the notice of award is received by him will be just cause for the forfeiture of the bid bond or bid deposit and rescinding the award of the contract. Award may then be made to the next lowest responsible bidder or the work may be re-advertised and constructed under contract, or otherwise as the Town of Knightdale may decide.

29.02.2 Guaranty Bonds for Informal Contracts

a. The successful bidder, within ten (10) days after the notice of award is received by him, shall provide a payment bond in the amount of 100 percent of the amount of the contract.

b. No performance bond or payment bond will be required for individual construction contracts if the total cost is less than $100,000.00. A performance bond and payment bond for the full amount of the contract is required for all construction contracts over $50,000.00 if the contract is part of a project with a total cost of over $299,999.99. In place of the bonds the Contractor may deposit money, a certified check, or acceptable government securities.

30. **Sanitary Facilities**:

The Contractor shall furnish, install, and maintain ample sanitary facilities for the workers. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes of the State and Town of Knightdale. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

31. **Use of Premises:**

a. The Contractor shall confine his equipment, storage of materials, and construction operations to the contract limits as shown on the Drawings or if no contract limits are shown, to the right-of-way shown and as prescribed by ordinances or permits or as may be directed by the Town of Knightdale and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment.

b. The Contractor shall comply with all reasonable instructions of the Town of Knightdale and the ordinances and codes of the Town of Knightdale, regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

32. **Liens**:

Neither the final payment nor any part of the retained percentage shall become due until the Contractor, shall deliver to the Town a complete release of all liens arising out of the contract, or receipts in full in lien thereof and, if required in either case, an affidavit that so far as he has knowledge or information the releases and receipts include all labor and materials for which a lien could be filed but the Contractor may, if any subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Public Works Director, to indemnify the Town against any lien. If any lien remains unsatisfied after all

payments are made, the Contractor, shall refund to the Town all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

A copy of the Affidavit is included with the Payment Bond Contract and shall be submitted with the Contractor's request for final payment.

33. **Working Time Restrictions**:

No work on or blockage of existing through traffic lanes and/or special turn lanes shall occur on designated streets during the peak traffic hours of 7:00 a.m.-9:00 a.m. or 4:00 p.m.-6:00 p.m., Monday through Friday. Work adjacent to traffic lanes may occur during these hours if proper signage and safety precautions are effected as described in latest edition of the Manual on Uniform Traffic Control Devices.

The Contractor shall have monies withheld due to public inconvenience, obstruction and delay to traffic, safety and other considerations, for any work performed on time restricted streets during 7:00 a.m.-9:00 a.m. or 4:00 p.m.-6:00 p.m., Monday-Friday at the rate of $250.00 for every 15 minutes of violation or fraction thereof.

No traffic lane closure (through or turn lane) shall occur on **Red Alert Days**. Red Alert Days are determined by North Carolina Ozone Forecast Center, Division of Air Quality,

34. **Assignment**:

Neither party to the contract shall assign the contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him hereunder, without previous written consent of the Town Council of the Town of Knightdale.

35. **Citizen Notification**:

The Contractor shall be responsible for notifying, in writing, all property owners/residents directly affected by this project just prior to beginning construction. A copy of this notification shall be submitted and approved by the Public Works Director prior to its issuance to the residents. This also includes all businesses whether owned, leased or rented by the property owner of record. Property owner addresses will be provided to the Contractor by the Public Works Director. Notices are to be mailed and/or hand delivered.

THE CONTRATOR shall distribute Notices of Intent to resurface (prior notifications) a minimum of 2 WEEKS in advance of when resurfacing is planned.

The CONTRACTOR shall distribute Notices of Actual Work to be performed a minimum of 24 hours prior to performing such work.

In the event resurfacing is scheduled for a weekend of holiday, the notices and signs shall be distributed a minimum of 72 hours prior to the resurfacing.

The CONTRACTOR shall also post "No Parking" signs in conspicuous places facing traffic a minimum of 24 hours prior to actual resurfacing with a maximum spacing of 100' of center required. A closer spacing may be required as directed by the Knightdale Police Department.

The time of day that signs and Notices of Intent to resurface are posted should be recorded along with the license numbers of cars parked on the street at that time and a copy made available for the PUBLIC WORKS DIRECTOR and the POLICE DEPARTMENT if towing is necessary.

If towing is necessary the Town of Knightdale Police Department will make the final decision if the vehicles are to be towed. The time and location in which the "No Parking" signs were posted and the Notices of Intent to resurface were distributed will be a considering factor for the towing of vehicles.

On the day of actual work, any towing necessary may be carried out under TOWN OF KNIGHTDALE Codes
Section 11-2181 and Section 12-7005, Section A, Paragraph 6. Police contact number is 829-1911.

Special permission will be required by agencies performing work within the street right-of-way under the following conditions. This permit will be required when:

1. When the traveled portion of the roadway is obstructed between the hours of 7 a.m. to 9 a.m. and 4 p.m. to 6 p.m. if the street involved is marked with either painted center lines or lane lines.

2. Any street which is totally closed to through traffic.

3. Any streets within the Central Business District.

This permit may be obtained from the Street Division in advance. The PUBLIC WORKS DIRECTOR has the authority to approve or deny issuance of any permit.

36. **Separate Contracts**:

The Town reserves the right to let other contracts in connection with this work. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with others.

37. **Subcontracted Work and Subcontractors**:

a. The Contractor shall perform a minimum 50% of the work under the contract with his own forces. In addition, the Contractor shall perform the final resurfacing overlay on a minimum 50% of the total number of streets under the contract with his own forces. Unless otherwise stated elsewhere in the contract, the Contractor shall not subcontract more than 50% of the work stipulated in this contract.

b. The Contractor shall, as soon as practicable after the signing of the contract, notify the Public Works Director in writing of the names of subcontractors proposed for the work and shall not employ any subcontractors that the Public Works Director may within a reasonable time object to as incompetent or unfit. The Contractor agrees that he is as fully responsible to the Town for the acts and omissions of his subcontractor and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him. Nothing in the Contract Documents shall create any contractual relation between any subcontractor and the Town.

c. The Contractor shall obtain approval of subcontractors as well as any change in subcontractors during the work on the contract from the Public Works Director. A period of seven (7) days minimum is required for the approval of a subcontractor.

38. **Points and Instructions**:

The Contractor shall provide reasonable and necessary opportunities and facilities for setting points and making measurements. He shall not proceed until he has made timely demand upon the Public Works

Director for, and has received from him, such points and instructions as may be necessary as the work progresses. The work shall be done in strict conformity with such points and instructions.

The Contractor shall carefully preserve bench marks, reference points and stakes, and in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

39. **Status of Public Works Director**:

The Public Works Director shall have general supervision and direction of the work. He has authority to stop the work wherever such stoppage may be necessary to insure proper execution of the contract. He shall also have authority to reject all work and materials which do not conform to the contract, to direct the application of force to any portion of the work, as in his judgment is required, and to order the force increased or diminished, and to decide questions which arise in the execution of the work.

40. **Public Works Director's Decision**:

The Public Works Director shall, within a reasonable time after their presentation to him, make decisions in writing on all claims of the Town or the Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the contract documents. All such decisions of the Public Works Director shall be final.

41. **Lands for Work**:

The Town shall provide the lands upon which the work under this contract is to be done, except that the Contractor shall provide land required for the erection of temporary construction facilities and storage of his materials, together with right of access to same.

42. **Cleaning Up**:

The Contractor shall, as directed by the Public Works Director, remove from the Town's property and from all other public and private property, at his own expense, all temporary structures, rubbish and waste materials resulting from his own operations.

43. **Access to Property**:

The Contractor shall, where necessary, provide and maintain access to and from all properties along the line of his work.

44. **Safeguards**:

The Contractor shall provide, erect and maintain adequate barricades, warning signs, and lights at all excavations, closures, detours and points of danger.

45. **Survey Construction Stakes**: (*Removed*)

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46. **Materials Sampling and Testing**:

All tests of material shall be made by a recognized and approved testing laboratory designated by the Public Works Director. The expense of such tests shall be borne by the Town unless otherwise specified.

The Engineer shall have the option to reject request for testing due to the Contractor's inadequate preparation of material or other reasonable causes determined by the Engineer as necessary for the delay of testing. The Contractor shall notify the Public Works Director 48 hours ahead of time for the needed test.

47. **Tools, Plant and Equipment**:

If at any time before the commencement or during the work, tools, plant, or equipment appear to the Public Works Director to be insufficient, inefficient, or inappropriate to secure the quality of the work required or the proper rate of progress, the Public Works Director may order the Contractor to increase their efficiency, to improve their character, to augment their number, or to substitute new tools, plant or equipment as the case may be, and the Contractor must conform to such order; but the failure of the Public Works Director to give such an order shall not relieve the Contractor to secure the quality of work and the rate of progress necessary to complete the work within the time required.

48. **Measurement of Quantities**:

The quantities of work performed will be computed by the Public Works Director on the basis of measurements taken by him or his assistants, and these measurements shall be final and binding. The specifications shall designate the manner in which the measurements of the various types of work shall be measured.

49. **Working Day Defined:**

A day shall be counted as a working day in the opinion of the Public Works Director, whether conditions would permit the Contractor to do six (6) hours of work within daylight hours. Days of delay due to acts of GOD, strikes, court orders, and things of like nature causing delay of the work shall not be counted a working day. The Public Works Director shall keep a daily record of working conditions and when requested to do so, he/she shall furnish the Contractor within a reasonable time the number of working days that have elapsed.

Unless crews are on site prior to 1:00 p.m. of any workday, the Public Works Director has the right to refuse any work that the Contractor may do. To start work after 1:00 p.m. on a workday, the Contractor must have prior permission from the Public Works Director. Should this occur, it will be counted as a working day that the Contractor should have worked. It will not be counted as a day of delay. When work is to resume, one (1) day prior notice must be given to the Public Works Director. That work will begin the next day.
There are specific streets that need to be paved on weekends (Saturday and Sunday). Where possible, streets that can be identified, will be marked, streets not marked on Contract, as weekend work, may be added by the Public Works Director. Advance notice must be given to Contractor, and a date mutually set to pave on that weekend.

50. **Project Time Defined**:

Project time shall consist of all calendar days, including weekends and holidays, from the contract notice to proceed date through the specified number of days allowed for the completion of the project in the contract document. The Contractor has been given a project time inclusive of an anticipated amount of

bad weather, be it due to the winter months or abnormal rainfall during the remainder of the calendar year.

51. **Guarantee of Work**:

The Contractor shall guarantee his work performed under his contract against failures or trouble due to faulty workmanship or materials for a period of twelve (12) months from the date of acceptance of the work.

52. **Force Account Work**:

Force account reports shall be submitted to and approved by the Public Works Director within five (5) days following completion of the work. Failure on the part of the Contractor to submit such a report on time may result in refusal to pay for the work done.

53. **Disposal of Waste Materials from Street and any Other Types of Construction**:

Disposal of all waste material from construction sites shall be made in strict accordance with all Town ordinances pertaining to disposal of construction waste. It shall be the responsibility of the Contractor to secure the necessary permits and provide all information required to secure said permits. The Contractor shall designate the disposal site prior to beginning construction and in the event waste material is to be disposed of on private property a letter from the property owner shall be furnished the Public Works Director granting the Contractor or his agent such permission and listing the requirements made by the property owner or the Contractor, if any.

54. **Contractor License**:

All invited bidders and contractors shall be advised that those who submit formal bids on this project must be licensed in the State of North Carolina whether he (they) is/are a resident or nonresident of this State, in accordance with GS 87-10 and shall be advised that they must show evidence of a license issued by the North Carolina Licensing Board for General Contractors before the bid is considered. The bidders are advised that Article 37 Subcontractors, of the General Conditions shall be strictly adhered to during the term of this contract.

55. **Emergency Work Crew**:

The Contractor and/or the Contractor's subcontractors shall provide an emergency repair crew with adequate trucks and other equipment available when needed to make repairs, clean-up, signing and other work required in connection with this contract. This repair crew shall be on call during non-working hours and during weekends and holidays. The name, address and phone number of at least two responsible members of this crew shall be provided the Public Works Director or his representatives prior

to beginning any work. The members of this crew shall be based, reside, live or stay in Wake County during the periods that they are on call. Should this "emergency" crew be unavailable for any reason when needed, the Town shall have the right to have the required work performed by the quickest means available and the Contractor shall be back-charged at a rate of two (2) times the total cost to the Town.

56. **Construction Water**:

A. Contractors are responsible for securing adequate construction water for their job sites.

B. All construction water usage must be metered and will be billed to the Contractor. The Contractor must contact the City of Raleigh Public Utilities Department, Meter Services Division

(250-2737) to make the applicable arrangements for billing the water usage. The Contractor may provide his own meter or if available upon advance notice to the Public Utilities Department, a numbers changed to meter will be provided. If the Contractor provides his own meter it must meet Town standards for the meter and include a backflow device.

C. Construction water for all Town contract projects shall be billed by the City of Raleigh, Public Utilities Department.

D. Contractors must furnish the following information for water usage.

1. Meter location and project name.
2. Address where applicable and responsible party name.
3. Duration of use and frequency of meter reading.

E. Contractors observed using unmetered water will be fined by the City of Raleigh, Public Utilities Department..

F. Contractors are to reference the Public Utilities Handbook, Part 10, entitled Construction Specifications for Water and Sewer Mains, for additional regulations applicable to construction water usage.

57. **Business Assistance Program (BAP) for Minority and Woman Owned Businesses**:

56.01 General

General contract bidders on Town of Knightdale contracts are encouraged to include minority and woman owned businesses in the performance of contracts and subcontracts for construction and material supply as outlined by City Standard Procedure No. 505-2. Minority and woman owned businesses are those having at least 51% ownership by an individual or individuals classified as a racial minority or a female.

58. **Dust Control**:

The Contractor shall, as directed by the Public Works Director provide adequate equipment and use other available means to control the dust during the term of this contract. Failure on the part of the Contractor to correct dust control problems as directed will result in the Public Works Director notifying the Contractor to comply with the contract provisions. In the event that the Contractor fails to begin such remedial action within 24 hours after receipt of such notice, the Public Works Director may proceed to have the work performed with other forces. The actual cost of the work so performed along with a 20% administrative fee will be deducted from monies due to the Contractor on his contract. Under adverse conditions, the Public Works Director may choose to suspend the Contractor's operations on the project until all dust control problems have been completed to his satisfaction. Such suspension will not justify an extension of contract time.

59. **Traffic Control:**

Any work performed without traffic control, as per MUTCD, will not be paid for by the Owner.

STANDARD GENERAL PROVISIONS

All construction shall conform to pertinent OSHA requirements, Town of Knightdale Standards and Specifications, and NCDOT Standard Specifications for Roads and Structures. Editions in effect at the time of the bid date shall govern.

1. Construction Progress Schedule and Bi-Weekly Meetings

The Contractor shall provide, at the pre-construction conference, a completed Town of Knightdale progress schedule. The schedule shall be kept up to date and presented with each month's billing information and shall be made available at the bi-weekly progress meetings and at other times as may be deemed necessary by the Public Works Director or his representative. The Contractor will be represented at bi-weekly progress meetings during the construction of this project. The meetings will be held at the project site or in the Town offices as determined by the Town.

2. Progress Schedule Liquidated Damages

Failure to complete the work within the contract time will result in damages due to public inconvenience, obstruction and delay to traffic, safety and other considerations. For each consecutive calendar day in excess of the contract time specified, the Contractor shall pay, or have withheld monies due, a sum of FIVE HUNDRED DOLLARS ($500.00) per day. This will be adjusted and assessed on a monthly basis at the time of each partial payment request based on the Contractor's progress in comparison with the approved progress schedule.

Formula for Calculating Liquidated Damages

A = Number of streets scheduled for completion accumatively by month.

B = Days in month.

C = Number of streets scheduled for completion per day.

D = Number of streets scheduled for completion minus number of streets actually completed to date.

E = Number of days behind.

F = $500.00 liquidated damages per day.

G = Liquidated damages monthly total.

A / B = C
D / C = E
E x F = G

3. Unit Bid Price

The unit bid price on the items in this contract shall include all materials, labor, equipment, and incidentals necessary to satisfactorily install said items completely in place and accepted unless otherwise mentioned in this contract document.

4. Point of Contact

The Contractor upon start of construction shall provide the Engineer with names, addresses, and telephone numbers of two people to be contacted after office hours in case of emergency.

5. **Material Tickets**

The Contractor shall turn in all material tickets for the purpose of payment to the Project Inspector on a daily basis.

6. **Trenches**

All trenches shall be back-filled and made safe at the end of each workday. Payment for installation of utility and drainage lines that requires open cut to existing pavement shall include the cost of pavement for repairs (including pavement saw cut and removal) as incidental to the installation of the utility. No separate payment will be made for this work unless otherwise specifically mentioned in this contract.

7. **Subsurface Investigation**

The Contractor shall make his/her own subsurface investigations. Any information obtained by the Town as a result of its own subsurface investigations will be made available upon request. This information is provided for informational purposes only and shall not relieve the Contractor of responsibility for making his own investigations.

8. **Traffic Control**

The Contractor shall provide all traffic control devices and signs to warn the traveling public in accordance with the latest Manual on Uniform Traffic Control Devices (MUTCD). Two-way traffic shall be maintained at all times, unless otherwise required by the traffic control plan.

The Contractor shall indemnify and save harmless the Town of Knightdale and all its officials, agents and employees from all suits, actions or claims of any character, name or description brought for or on account of any injuries or damages received or sustained in.

9. **Materials and Equipment Storage and Parking**

When vehicles, equipment, and materials are not being actively used they shall be moved at least 30 feet away from the edge of any travel way open to traffic (or as directed by the Engineer). All debris shall be immediately moved to a location at least 30 feet from the edge of any travel way open to traffic. If vehicles, equipment, materials, and debris are protected by guardrail or barrier, a 5-foot minimum offset from the rail shall be used.

10. **Personnel Parking**

All personnel involved with construction operations shall not park their personal vehicles within the right of way of the project limits for the duration of the construction project. The Contractor shall furnish a parking area that is located off the project limits. The Contractor shall be responsible for daily transportation of all employees to and from the provided parking area and the project site.

There will be no direct payment for the work cover by this provision. Payment at the contract unit prices for the various items in the contract will be full compensation for all work covered by this provision.

11. **Sidewalk, Driveway, Curb & Gutter Removal and Replacement**

Care should be taken during construction to avoid damaging the existing sidewalk, curb & gutter and pavement outside the immediate construction area. If damaged, it shall be replaced in accordance with the NCDOT Standard Specifications for Roads and Structures/Town of Knightdale Standards, as determined by the Engineer, without extra cost to the Town. Prior to construction, the Contractor shall inspect the site and report to the Engineer any damages existing before construction.

The Contractor shall be advised that when a portion of any area of concrete driveways, curb and gutter and pavement must be removed, all areas to be removed shall be defined by a machine-sawed joint, prior to removal. Saw cut of concrete driveway, curb & gutter and pavement are considered incidental to removal unless otherwise provided in the contract.

12. **Maintenance of Mail Boxes, Signs, Miscellaneous Appurtenances**

The Contractor shall be required to maintain mailboxes, signs and all miscellaneous appurtenances impacted by construction activities in working order for the duration of construction as directed by the Engineer. Work on the same items shall be done in a timely manner. No separate payment for work on these items will be made as the work will be considered incidental to other items in the contract unless otherwise mentioned in the contract document.

13. **Project Completion**

When the project is nearing completion the Town will obtain comments from the impacted property owners concerning items that are outstanding, yet to be completed. The Engineer will determine which items have sufficient justification to be included in the final punch-list, and the Contractor will be required to complete these items with no additional payment and in a timely fashion.

14. **Videotape of Project Site**

The Contractor will videotape the project site in its entirety before construction begins, with emphasis on properties adjoining the project, drives, trees, appurtenances and other distinguishing features. Appropriate narration will include location and description of property and physical features. The Contractor will provide two copies of the project tape in DVD format to the Town. No separate payment will be made for this work, and all associated costs will be considered incidental to other items in the contract.

15. **Coordination with Utility Companies**
(See Article 13 of General Conditions)

Utilities as shown on the plans are intended to represent general locations only. It shall be the responsibility of the Contractor, prior to construction, to contact appropriate utility owners and precisely locate utilities that could be affected by the proposed construction. If the utility belongs to the Town, the Contractor shall dig sample holes to uncover the utility. The digging of sample holes shall be coordinated with the Engineer who will determine the number of such holes and will schedule the Town Surveyor to locate utility vertical and horizontal locations. There is no line item to pay for digging work. Work is considered incidental to other pay items.

The Contractor shall be responsible for repair of any damage to the utility as well as any other damage may be caused due to the disturbance of the utility. The Contractor will not be permitted to submit any claims for delays caused by utility relocation and proposed utility construction.

The Town has coordinated designs of utility relocation with private utility owner representatives. Existing utility, design and conflict resolution plans are included as a part of the contract.

The Contractor shall be responsible for coordinating concurrent construction directly with utility owner representatives. Coordination efforts and concurrent construction conflicts will be addressed and discussed during the pre-construction meeting. The Town, at the time of pre-construction conference, will provide names, addresses and telephone numbers of private utility owner representatives.

All underground utilities may not have been identified. The Contractor shall call North Carolina One Call to identify underground utilities before starting any digging and/or excavation operation.

The Contractor shall be responsible for field verifying heights and locations of power lines and will be required to maintain the distance from the power lines in accordance with local, State and Federal Safety regulations.

16. **Protection of Existing Plants**

The work under this item shall consist of the protection of selected trees, shrubs, or other woody plants.

The plants protective fencing shall meet the requirements of Town of Knightdale Standard Drawing 50.02. Fencing shall encompass the plants to the drip-line. Deviations from this must be approved by the Engineer.

Plant protective fencing shall be installed prior to beginning any construction on this project. Plant protective fencing shall be constructed at the locations as directed by the Engineer and in accordance with Town specification. The fencing shall be maintained in place until all construction operations in that particular area are complete. At completion, only light grading equipment such as small agricultural tractors shall be allowed on the plants' roots. Fill dirt no deeper than two inches shall be allowed under the limb spread of any plant.

No building materials, dirt, or equipment shall be stored inside the protective fencing. Plants that die as a result of the Contractor's negligence shall be removed and replaced as directed by the Engineer at the Contractor's expenses. The new plant shall be guaranteed for a year, planted in the proper season, and planted with approved arboricultural specifications.

The Contractor will be required to cooperate with other contractors, utility companies and others needing access to the project site as (approved by the engineer) to complete the work.

PROJECT SPECIAL PROVISIONS

M2014-001

SECTION 1

RESURFACING

The published volume entitled "NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES", Latest Edition with all amendments and supplements thereto, is by reference incorporated into and made part of this contract; that, except as herein modified, all the construction and work included in this contract is to be performed in accordance with the specifications contained in said volume, and amendments and supplements thereto, under the direction of the Public Works Director.

Price adjustments for asphalt binder for surface course plant mix will be made in accordance with Section 620 of the NCDOT Standard Specifications as modified herein. The Base Price Index for the asphalt binder for plant mix is **$512.00** per ton which represents an average of FOB selling prices of asphalt binder at suppliers' terminals on **April 1, 2015**. The adjusted contract unit price will then be applied to the theoretical quantity of asphalt binder authorized for use in the plant mix placed during the partial payment period involved, except that where recycled plant mix is used, the adjusted unit price will be applied only to the theoretical number of tons of additional asphalt binder materials required by the JMF.

1. **Asphalt Binder Content of Asphalt Plant Mixes**

The approximate asphalt binder content of the asphalt concrete plant mixtures used on this project will be as follows:

Asphalt Concrete Base Course, Type B 25.0B	4.3%
Asphalt Concrete Intermediate Course, Type I 19.0B	4.7%
Asphalt Concrete Surface Course, Type SF 9.5A	6.6%
Asphalt Concrete Surface Course, Type S 9.5B	5.9%

The actual asphalt binder content will be established during construction by the Engineer within the limits established in the NCDOT Standard Specifications or Project Special Provisions.

2. **Tack Coat**

Base the unit rate on a per ton basis of asphalt placed. For calculation purposes, it is estimated that approximately 8,000 SY will be resurfaced.

Apply tack coat material to existing asphalt or concrete surfaces in accordance with NCDOT specifications. Tack coat materials shall consist of the following: Asphalt Binder, Grade PG 64-22 or Emulsified Asphalt, Grade RS-1H, Grade CRS -1H, Grade CRS-1, Grade HFMS-1, or Grade CRS-2 unless otherwise approved by the Public Works Director. Apply tack coat only when the surface to be treated is sufficiently dry and when the atmospheric temperature in the shade away from artificial heat is 35°F or above. Do not apply tack coat when the weather is foggy or rainy.

Clean the existing asphalt or concrete surface to which tack coat is to be applied of all dust and foreign material prior to placing the tact coat. Remove grass, dirt, and other materials from the edge of the existing pavement prior to the placement of tack coat. Apply tack coat uniformly at a rate from 0.04 to 0.08 gallons per square yard. Where public traffic is being maintained, apply only as much tack coat as can be covered during the same day's operation. In the event that tack coat material is not covered in the

same day's operation, the Public Works Director may require the application of suitable granular material or other means to provide a safe traffic condition at no additional cost to the Town. Take necessary

precautions to limit the tracking and/or accumulation of tack coat material on either existing or newly constructed pavements. Excessive accumulation of tack may require corrective measures. Apply tack coat as directed by and in the presence of the Public Works Director. Do not place any asphalt mixture until the tack coat has sufficiently cured.

Sand, screenings, or other environmentally safe products may be required to prevent tracking the tack coat onto existing streets, when directed by the Public Works Director. **The sand screenings shall be minimum length in order for a haul truck tire to make one full rotation and remain in contact with the screenings. The width shall be the same as the existing roadway.** When paving is completed, the Contractor will be required to immediately remove screening materials placed to eliminate tracking.

3. **Asphalt Concrete Plant Mix Pavements**

Asphalt Concrete Surface Course Type SF 9.5A or S 9.5B, as directed by the Public Works Director, shall be used. It shall be in accordance with Section 610 of the NCDOT Standard Specifications for Roads and Structures.

At least 10 days prior to start of asphalt mix production submit, in writing and in electronic form, the mix design and proposed job mix formula (JMF) targets for each required mix type and combination of aggregates to the Public Works Director for review and approval.

Transport the mixture from the mixing plant to the point of use in vehicles that have tight, clean, smooth beds that have been sprayed with an approved release agent material, to prevent the mixture from adhering to the beds. Remove excess release agent prior to loading. Cover each load of mixture with a canvas or other suitable material. Assure temperature of the mixture immediately prior to discharge from the hauling vehicle is within a tolerance of plus 15°F to minus 25°F of the specified job mix formula temperature.

Mixtures produced simultaneously from different plant sources cannot be intermingled by hauling to the same paver on the roadway unless the mixtures are being produced from the same material sources and same job mix formula.

Utilize a self-contained, power propelled paver capable of spreading and finishing the asphalt mixture to the required grades, cross sections, thicknesses, and widths shown on the plans and typical sections and to uniform density and texture. Equip and operate the paver with a fully activated screed plate that is designed to be preheated for the full length whenever necessary. Should unevenness of texture, tearing, segregation, or shoving occur during the paving operation due to unsatisfactory methods or equipment, immediately take such action as may be necessary to correct such unsatisfactory work. Excessively throwing back material will not be permitted. Immediately after the asphalt mixture has been spread, struck off, and surface and edge irregularities adjusted, thoroughly and uniformly compact the pavement. Compact the mix to the required degree of compaction for the type of mixture being placed. Provide sufficient number and weight of rollers, except as noted, to compact the mixture to the required density while it is still in a workable condition. Compact all final wearing surfaces, except open-graded asphalt friction course, using a minimum of 2 steel wheel tandem rollers, unless otherwise approved. A pneumatic-tired roller with 2 tandem axles and smooth tread tires may be required for intermediate rolling. Begin compaction of the material immediately after the material is spread and shaped to the required width and depth. Carry out compaction in such a manner as to obtain uniform density over the entire section. Perform compaction rolling at the maximum temperature at that the mix will support the rollers without moving horizontally. Complete the compaction (including both intermediate rolling) prior

to the mixture cooling below a workable temperature. Perform finish rolling to remove roller marks resulting from the compaction rolling operations.

Pavement imperfections resulting from unsatisfactory workmanship such as segregation, improper longitudinal joint placement or alignment, and non-uniform edge alignment, or excessive pavement repairs will be considered unsatisfactory.

4. **Cleaning Streets**

It shall be the responsibility of the Contractor to thoroughly clean the street before resurfacing. Any leaves, vegetative material, and debris shall be removed from the Public Right of Way. **Depositing any debris or other material behind the curb will not be permitted.** If large piles of leaves of other debris exist that in the opinion of the Public Works Director are in excess of that which is required for the Contractor to remove, they shall be removed by the Public Works Director provided adequate notice is given for this purpose.

The Contractor shall clean each street of waste materials resulting from his own operations no more than 2 days after the final overlay is complete. Should this period of time be exceeded final overlay operations shall be stopped until streets are clean.

5. **Raised Manholes or Valves**

No manholes or valves will be raised and left for a period of time greater than 14 days before the street is resurfaced. Should this period of time be exceeded utility adjustments shall be stopped until the resurfacing of such streets has been completed.

6. **Standards for Manhole and Valve Box Adjustments**

All water valves are to be replaced with new valve boxes and lids that are approved by the City of Raleigh's Public Utilities Department. The unit rate shall include the cost of purchase and installation.

No cast iron risers will be allowed for adjustment of manholes. Standard procedures for raising manholes and valve boxes listed below shall be followed. The Town shall provide standard manholes for any existing manholes that were broken prior to the beginning of work. The Contractor shall provide new water valve boxes and lids for all water valves.

6.1. Adjustments on all manhole and valves will not exceed a tolerance of more than ¼ inch from finished grade as measured with an 8-foot straightedge.

6.2. Manholes and valve boxes will be centered and aligned for proper access to manhole or operating nut on valves. Necessary precautions will be taken to prevent debris from falling into these structures and interfering with proper operation of said utility.

6.3. For valve boxes make a circular cut 1' from the outside edge of the valve box. Top section of each valve box shall be completely removed to allow proper tamping of materials before final adjustment is made.

6.4. All material around manholes and valves shall be tamped to a minimum of 95 percent compaction before placing concrete.

6.5. Floor the inside of the manhole with some material to catch any debris that may fall inside the manholes during construction.

6.6. For manholes, make a circular cut 2' from the outside edge of the manhole. With pick and shovel remove the broken debris down to a depth level with the bottom of the manhole ring, or farther if necessary to get a solid manhole wall.

6.7. Remove the ring and cover and set it off to one side. Do not try to raise or adjust the manhole with the ring in place.

6.8. Mix the mortar. Mortar used in brick masonry shall be composed of one (1) part Portland Cement (and may contain not more than 10 percent lime, based on the volume of cement) and two (2) parts clean sand. Mortar will be mixed in a clean, tight mortar box or mechanical mixer and will be used within 45 minutes after mixing. It will be a fairly stiff mixture so it can be shaped.

6.9. Starting on a solid foundation, raise the top of the manhole with a level, solid layer of mortar or mortar and bricks. If bricks are used, they must be laid solid leaving no voids or empty spaces. The final product must be a smooth, level area so that the entire width of the flange on the bottom of the manhole ring will be sitting on a solid, uniform bearing surface.

6.10. After the manhole has been properly brought up to the desired level, set the ring back in place and fill the hole around the outside of the casting for a minimum depth of 8" with a 3000 psi concrete to existing pavement grade, having no more than a 4-inch slump.

6.11. Set and leave a reflectorized barricade equipped with a working flashing warning light over the utility until such time required for the concrete to set/harden to a point where traffic will not do damage to the utility.

6.12. The utility casting shall then be painted with reflectorized fluorescent paint to warn the traveling public of this condition.

6.13. After the concrete has set, remove the flooring and any debris that has fallen into the manhole.

6.14. Any utility raised more than one (1) inch above the existing grade shall have asphalt placed as a wedge around such utility.

6.15. All utilities that are removed for milling shall have a steel plate of sufficient thickness to support vehicle traffic placed in the bottom of the excavation. The excavation shall be backfilled with compacted hot mix asphalt.

6.16. If the decision is made by the Public Works Director to utilize NCDOT approved risers, the Contractor shall provide and install manhole and water valve risers immediately prior to resurfacing.

6.17. All utility work areas shall be maintained in satisfactory condition until resurfacing occurs.

7. **Infrastructure Damage**

The Contractor shall be responsible for repairing any damage to the Town's or the City of Raleigh's infrastructure. This includes damage to curb & gutter and pavement. Tack will not be tolerated on the exposed face of curbs & or gutters. If this occurs this shall be removed immediately. Special attention shall be utilized while paving in areas with existing granite cubs & gutter.

8. **Resident Notification**

The Contractor's attention is directed to Article 44, SAFEGUARDS of the General Conditions. In addition to the above, it shall be the responsibility of the Contractor for notification of residents before commencement of work in accordance with the Town Code. A copy of the notification will be provided to the Contractor by the Public Works Director.

9. **Progress Schedule**

(See Articles 5 & 6 of General Conditions)
The Contractor shall adhere to Articles 5 & 6 of General Conditions. **Furthermore, the Contractor shall develop a proposed project schedule and submit this schedule for approval prior to the preconstruction conference.** This schedule shall show amount of streets, tons of work to be accomplished on both a monthly and cumulative basis. The actual progress schedule shall be presented on a monthly basis in conjunction with the submittal of each partial payment request to compare actual progress to the original approved schedule. If applicable, liquidated damages will be deducted on a monthly basis, based on the approved progress schedule. Weekly updates may be directed by the Public Works Director. The original approved schedule shall be revised to include time extensions and changes in the Contractor's controlling operations. The revised schedule shall be presented to the Public Works Director for approval.

11. **Asphalt Leveling Course**

Asphalt paving consisting of a leveling course may be required on specific streets. This shall be performed as determined by the PUBLIC WORKS DIRECTOR and at the same unit price as noted in the Contract. In the event a leveling course is required, this shall be performed prior to the installation of any surface treatment applications if applicable.

12. **Plant Tickets**

The number of batches and total weight of all loads of mixture shall be recorded in duplicate upon plant ticket forms by an authorized representative of the TOWN. With each load delivered to the work, the truck driver shall present one copy of the plant ticket to the Public Works Director or his/her representative. The driver shall retain one copy for the Contractor. The plant inspector shall keep the stub copy. The weights to be included in the estimate shall be the total of the tickets delivered by the truck driver to the Public Works Director or his/her representative on the work. At any time the delivery of material and for the purpose of checking the weighing equipment at the plant, the Public Works Director may direct the Contractor to weigh or cause to be weighed on tested and approved platform scales at the Contractor's expense the contents of any truckload that is to be delivered to the work. When any material will be charged or billed separately, a ticket or copy of ticket must be provided. When any work is being done, the Public Works Director must be notified in advance that the work will be done and material tickets provided.

PROJECT SPECIAL PROVISIONS

M2014-001

SECTION 2

SIDEWALK ACCESS RAMPS

1. **Work**

The Contractor shall complete the work in this contract in strict accordance with Town Standards. This project consists of retrofitting each intersection with sidewalk access ramps. The location of each facility may vary due to existing catch basins, fire hydrants, poles, etc. Prior to beginning any construction, each work site shall be examined by the Contractor and the Public Works Director, at which time the Public Works Director will give specific direction as to the concrete removal limits and location of the new facility.

2. **Curbs & Gutter Construction**

The portion of the curb and gutter section shall conform to the slopes and dimensions as indicated on the details or as directed by the Public Works Director.

This construction shall be accomplished by the use of a machine sawed cut, utilizing equipment which has been specifically designed for this purpose, and approved by the Public Works Director. **A smooth transition shall be provided between the gutter section and the curb section. Also all sharp edges, which were created by the cutting operations, shall be beveled. Grinding if required shall be utilized to accomplish these items.**

3. **Incidental Curb & Gutter Removal/Replacement**

Curb & gutter which cannot be adequately cut utilizing specialized equipment as noted above shall be removed and replaced by conventional methods. Payment for this item shall include removal, disposal and replacement of new curb & gutter, in accordance with the specified slopes, dimensions, etc.

Concrete debris shall be immediately removed from the job site.

The newly cut curb shall be protected by placing reflectorized traffic cones, barrels or barricades. A minimum of two cones, one barrel or one barricade shall be utilized.

The Contractor shall maintain these warning devices, along with additional warning devices until all sidewalk construction is completed. If any asphalt patching is needed due to damage during construction, the Contractor shall be responsible for repair of these items using hot plant mixed asphalt. If pavement patching is necessary, it shall be incidental to the work and not a pay item.

4. **Sidewalk Removal**

The Contractor shall be advised that when a portion of any area of concrete sidewalk must be removed, all areas to be removed shall be defined by a machine sawed joint before removal.

Disposal of all waste material from construction sites shall be made in strict accordance with all Town ordinances pertaining to disposal of construction waste. It shall be the responsibility of the Contractor to

secure the necessary permits and provide all information required to secure said permits. The Contractor shall designate the disposal site prior to beginning construction, and in the event waste material is to be disposed of on private property, a letter from the property owner shall be furnished to the Public Works Director granting the Contractor or their agent such permission and listing the requirements made by the property owner or the Contractor, if any.

The Contractor shall not use the right-of-way for storage of equipment or materials, etc.

5. **Subcontractors**

The Contractors (bidders) are advised that subcontractors will be limited to a maximum of 50 percent (50%) of this contract. The successful bidder shall abide by the requirements set forth in Article 37 Subcontractors of the General Conditions.

6. **Traffic Control**

In addition to items set forth in the General Conditions, Articles 44 and 59, the Contractor shall provide adequate reflectorized barrels, barricades and traffic cones as directed by the Public Works Director, to protect the traveling public as well as pedestrian traffic. In addition, the Contractor will install sidewalk closed signs at every location in which the construction activity may interfere with pedestrian traffic.

7. **Granite Curb**

The Contractor shall reshape the granite curb, in place, to the grade required by the detail drawings. This work will involve sawing, and or grinding to achieve the desired grade and a texture consistent with the original granite curb.

SIDEWALK ACCESS RAMPS SPECIFICATIONS

1. North Carolina General Statute 136-44.14 requires that all street curbs being constructed or reconstructed for maintenance procedures, traffic operations, repairs, corrections of utilities, or altered for any reason after September 1, 1973 shall provide sidewalk access ramps for the physically handicapped at all intersections where both curb and gutter and sidewalks are provided and at the other points of pedestrian flow.

   In addition, Section 228 of the 1973 Federal Aid Highway Safety Act requires provision of curb ramps on any curb construction after July 1, 1976 whether a sidewalk is proposed initially or is planned for a future date.

   The Americans with Disabilities Act (ADA) of 1990 extends to individuals with disabilities comprehensive civil rights protections similar to those provided to persons on the basis of race, sex, national origin, and religion under the civil rights act of 1964. The adopted curb ramps have been designed to comply with Title III of the ADA that became effective on January 26, 1992.

2. Sidewalk access ramps shall be provided at locations as shown on the plans or as directed by the Public Works Director. Sidewalk access ramps shall be located as indicated in these details; however, the location may be adjusted as directed by the Public Works Director where existing light poles, fire hydrants, drop inlets, etc. affect placement.
   The Contractor shall at no time remove any street sign without prior approval from the Public Works Director.

3. The Town of Knightdale Standard Details will be utilized for construction of the sidewalk access ramps. The diagonal type access ramp will be utilized at the majority of locations as noted.
   NOTE: Truncated Dome inserts are now required as per the Town of Knightdale Standard Details STD 20.11 Sheets 1 through 5. No slope on the sidewalk access ramps shall exceed 0.08 (12:1) in relationship to the grade of the street unless directed by the Public Works Director.

4. In no case shall the width of the sidewalk access ramp be less than 48 inches (4 feet-0 inches); however, width may exceed 48 inches as directed by the Public Works Director.

5. Use Class A concrete with a sidewalk finish in order to obtain a rough nonskid type surface.

6. A ½ inch expansion joint will be required where the concrete sidewalk access ramp joins the curb and as shown on standard drawing.

7. The joint filler shall be a non-extruding joint material conforming to the ASTM specifications for performed expansion joint filler for concrete (non-extruding and resilient types).

9. Subgrade Preparation: The subgrade for sidewalks and driveways shall be formed by the excavating to the required depth, if directed by the Public Works Director, and shaped to the proper cross-section and shall be thoroughly compacted by rolling or tamping before placing any concrete.

10. Forms: Forms used in constructing sidewalks shall be of wood or metal, of the full depth of the concrete, straight, free from warp, and of sufficient strength, and/or of a flexible material pre-approved before construction by the Public Works Director as to allow for narrowing, mounding, and curving of walks. They shall be staked securely enough to resist the pressure of the concrete without springing.

    If of wood, they shall be of two (2) inch surfaced plank. All forms shall be subject to the approval of the Public Works Director. All wood forms shall be thoroughly wetted and metal forms oiled before placing concrete. All forms shall be thoroughly cleaned before re-use.

11. Placing Concrete: No concrete shall be placed until the forms and the Public Works Director has approved subgrades. The subgrade shall be thoroughly wetted and the concrete shall be placed thereon in one course to the required depth. The concrete shall be thoroughly spaded, rammed, and struck off with a template to the required grade and cross section.

12. Joints: Contraction joints shall be provided uniformly to separate the slab and shall be cut in a straight line to a depth equal to at least one-third (1/3) of the total slab thickness. The joint shall be not less than one-eight (1/8) inch no more than one-forth (1/4) inch in width.

13. Finishing: After the freshly poured concrete has been brought to at the established grade, it shall be floated to produce a surface free from irregularities. The final surface shall be obtained by troweling with a steel trowel or hand float and brushing lightly with a light weight brush in a transverse direction so as to produce a uniform gritty surface of the proper texture. All edges and joints shall be rounded to one-fourth (1/4) of an inch.

14. Cold Weather Pouring: Concreting operations shall not be undertaken or continued when the surrounding air temperature is below 40° F or the local weather reports indicate the possibility of temperatures of 32° F or lower within the ensuing 24 hours unless provisions are made to insulate or heat the concrete in a manner satisfactory to the Public Works Director. In any event, the Contractor shall plan and protect his/her work in a manner which will assure satisfactory results. Any concrete damaged by freezing shall be removed and replaced by the Contractor at his/her own expense.

Concrete when deposited in the forms shall have a temperature of not less than 50° F nor more than 90° F. The concrete shall be maintained at a temperature of not less than 50°F for a period of at least 72 hours in the case of normal concrete or 24 hours when high early cement is used. Concrete shall not be deposited on a frozen subgrade.

The North Carolina Department of Transportation Standard Specifications for Roads and Structures, Latest Edition Section 420-7 "Placing Concrete in Cold Weather" (A), (B), and (C) will be strictly adhered to for this alternate, unless directed by the Public Works Director.

15. Removal of Forms and Backfilling: After the concrete has set sufficiently the forms shall be removed and the spaces on both sides shall be immediately backfilled with suitable earth, uniformly spread and compacted. The areas between the curb and sidewalk and immediately back of the sidewalk shall be left in a smooth, neat, and workmanlike condition. When necessary the backfill material will be sloped further to account for change in slope or grade as directed by the Public Works Director.

    Special attention shall be given in the seeding and mulching in the established areas. **Lawn quality care shall be taken and appropriate seed used to match existing lawn types on a lot per lot basis.** Seeding, mulching, and seedbed preparation shall be approved by the Public Works Director prior to acceptance and payment. Backfilling, seeding and mulching is considered incidental to the completion of the sidewalk access ramp and as such no separate pay item is included.

16. Removal of Defective/Damaged Work: The Public Works Director shall have the authority to and shall require the removal of any sidewalk laid under these specifications which does not conform to the requirements as set forth herein or existing sidewalk damaged by the Contractor. Upon notification by the Public Works Director, the Contractor shall take immediate action to correct the faulty work, or damaged work, at the Contractor's own expense.

17. Construction Water:
    A. Contractors are responsible for securing adequate construction water for their job sites.

    B. All construction water usage must be metered and will be billed to the Contractor. The Contractor must contact the Public Utilities Department, Meter Services Division (250-2737) to make the applicable arrangements for billing the water usage. The Contractor may not provide his/her own meter. Upon advance notice to the Public Utilities Department, a meter equipped with a backflow device can be rented at the expense of the Contractor.

    C. Construction water for all Town contract projects shall be billed by the City of Raleigh, Public Utilities Department.

    D. Contractors must furnish the following information for water usage.

    1. Meter location and project name.
    2. Address where applicable and responsible party name.
    3. Duration of use and frequency of meter reading.

PROJECT SPECIAL PROVISIONS

PW 2012-2

SECTION 3

MILLING / PAVEMENT REHABILITATION

1.0 **Work**

a. The work covered in this section consists of milling bituminous pavement at locations, depths, and widths as indicated in the schedule of provision or as directed by the Public Works Director. Edge Milling shall be at least 4' in width. Butt joints will be required at intersecting streets. Butt joints will be paid at the Edge Milling rate. The work includes removing, transporting, and disposing of the milled material, cleaning the milled pavement surface, all incidental clean-up and all traffic control.

b. The milled material shall become property of the Contractor, and shall be disposed of by the Contractor in areas provided by him in accordance with Town ordinances pertaining to disposal of construction waste.

c. A pre-construction meeting shall be held a minimum of two weeks before the actual construction of this section. The general contractor, the milling contractor and any additional subcontractors who will be participating in this construction shall attend. During this meeting discussion will involve scheduling of the different construction phases as well as traffic control and any other related items. **The Contractor shall submit for approval specific traffic control plans for each of the milling locations. As a general note total road closures will not be permitted.**

d. Interim pavement markings shall be installed as directed in the Pavement Markings portion of this contract. The pavement markings shall be installed as soon as the milling operations will allow.

f. Once the street is milled, notification signs (ROUGH PAVEMENT, BUMP AHEAD, ROAD CONSTRUCTION, etc.) shall be erected and maintained until the street is resurfaced.

2.0 **Equipment**

2.1 Equipment shall include a self-propelled unit capable of removing the existing bituminous pavement to the depths, widths, and typical sections as indicated in the schedule or provisions or as directed by the Public Works Director. The equipment shall have been designed and built exclusively for pavement milling operations and shall have sufficient power, traction, and stability to accurately maintain depth of cut and slope. The milling machine shall be equipped with a grade control system, which will automatically control the longitudinal profile and cross slope of the pavement surface. The machine shall be capable of leaving a uniform surface suitable for handling traffic without excessive damage to the underlying pavement structure.

2.2 Additional equipment necessary to satisfactorily remove the pavement in the area of curb and gutter, and other obstructions shall be provided. The milling equipment shall be equipped with a means of effectively limiting the amount of dust escaping from the removal operations in accordance with local, state, and federal air pollution control laws and regulations.

3.0 Construction Requirements

a. The existing pavement shall be milled in a manner which will restore the pavement surface to a uniform longitudinal profile and cross section at the locations as indicated in the schedule of provisions or at locations as directed by the Public Works Director where indicated the asphalt removal shall be to a specified depth and shall produce a specific cross slope. The Contractor shall mill intersections and other irregular areas as indicated in the schedule of provisions or as directed by the Public Works Director. The milling shall extend from curb to curb, with excess asphalt material being removed to expose the existing face of curb and gutter.

b. The Contractor may elect to make multiple cuts to achieve the required depth of cut or to achieve the desired cross slope.

c. The milling equipment shall be operated in such a manner as to prevent damages to the underlying pavement structure, utilities, drainage facilities, curb and gutter, paved surfaces outside the milled area, and any other appurtenances. The milled pavement surface shall be reasonably smooth and free of excessive scarification marks, gouges, ridges, continuous groves, or the damage as determined by the Public Works Director. All butt joints shall be straight and true. Any leveling or patching required as a result of negligence by the Contractor shall be repaired with hot bituminous plant mix at no cost to the Town of Knightdale and in a manner acceptable to the Public Works Director. The Contractor shall coordinate the adjustment of manholes, meter boxes, and valve boxes and resurfacing with the milling operation.

d. **The milled pavement surface shall be thoroughly cleaned of all loose aggregate particles, dust, and other objectionable material, by the use of an approved street sweeper.** The Contractor can also utilize additional equipment as necessary for this removal. This debris shall not be allowed to accumulate on the Right of Way, private property, sidewalks, or driveways. If this occurs it shall be cleaned off immediately. **Street sweepers to be utilized shall be of the Vacuum or Regenerative Air Sweeper type with a minimum six (6) cubic yard capacity. No mechanical sweepers will be allowed, except to assist the above noted approved sweeper types.**

4.0 Working Hours/Days of the Week

Working hours/days of the week will be as follows:

Daylight hours: Monday through Saturday 7:00 am to 6:00 pm (Lane restrictions as described in paragraph 33 of General Conditions apply)

Any night work will be performed in commercial areas only and by approval of Public Works Director with 48 hrs. notice prior to the commencement of night work.

All Town noise ordinances will be observed.

5.0 **Traffic Control**

Articles 28, 33, and 35 of the General Conditions shall be strictly adhered to. Refer to Section 1.0.d of the Milling Special Provisions; during the milling pre-construction meeting the Contractor shall submit the work schedule for the milling work to include traffic control plans, order of completion of the various phases of work etc. Total road closures will not be allowed. The schedule shall also include a resurfacing schedule for this portion of the work. The Contractor will be required to utilize "Uneven or Rough Pavement Ahead", "Bump Ahead", signs etc., as directed by the Public Works Director. The Town of Knightdale shall be contacted well in advance of this work for advertisements of construction activity. Further the Contractor will distribute letters of notification to all residents and or businesses who will be affected by this work. Signing of the street as outlined in Article 35 of the General Conditions will apply.

6.0 **Patching**

The Contractor shall be responsible for pavement patching on all streets which have been milled. Milled pavement areas, in which exposed subgrade materials are present after the milling has been completed, shall be patched immediately if practical, but not later than prior to the end of the work day. A minimum depth of 2 inches of patching material shall be utilized. Additional areas shall be patched as directed by the Public Works Director. All patching shall be performed as per the special provision section as outlined in the Pavement Patching portion of this Contract. Payment of pavement patching shall be in accordance with the unit prices as noted in the Pavement Patching portion of this contract. Milled pavement areas, patches and all work areas must be maintained in satisfactory condition until resurfacing occurs.

7.0 **Utility Adjustments**

7.1 The Contractor shall be required to adjust the manhole and water valves prior to milling in accordance with Standards for Manhole and Valve Box Adjustments, Section 1, Article 6.

7.2 If the decision is made by the Public Works Director not to adjust (lower and raise) utilities on selected streets, asphalt shall be milled and/or chipped from around existing utilities to a depth equal to the new asphalt depth. Standards for Manhole and Valve Box Adjustments, Section 1, Article 6.14 shall also apply.

8.0 **Resurfacing**

Resurfacing shall be performed within 3 days after the milling and other related items have been completed, in accordance with the resurfacing portion of this contract.

8.1 Payment for the utility adjustments under this section will consist of the adjustment down and the final adjustment after milling. Payments will be made for completed adjustments only.

9.0 **Method of Measurement**

The quantity of milled bituminous pavement to be paid for will be the actual number of square yards of pavement surface which has been milled in accordance with the requirements of this section. In measuring this quantity, the length will be the actual length milled, measured along the pavement surface. The width will be the actual width milled measured along the pavement surface, including any incidental areas which require removing i.e. small areas adjacent to curb and gutter, etc.

PROJECT SPECIAL PROVISIONS

M2014-001

SECTION 4

BITUMINOUS STRAIGHT SEAL

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PROJECT SPECIAL PROVISIONS

M2014-001

SECTION 5

PAVEMENT PATCHING

1. **Pavement Patching**:

The Contractor shall repair the existing pavement in pre-designated areas. The work shall consist of removing the existing material to a depth as directed by the Public Works Director below the existing finished grade, compacting the excavated area, and placing and compacting Asphalt Concrete Mix ACIC, Type I 19.0 B in the excavated area.

The Contractor shall excavate in areas as directed by the Public Works Director to the depth directed. Excavation shall be neatly squared, clean vertical sides. All loose material shall be removed from the excavated area. If the subgrade materials are disturbed, the Public Works Director may require the subgrade materials to be recompacted utilizing compaction equipment suitable for this purpose. Existing pavement areas shall be tacked and bituminous material shall be placed in even, uniform lifts. Bituminous material shall be compacted using steel wheeled mechanical compaction equipment, in accordance with current NCDOT standards.

The Contractor will be responsible for providing, installing, and maintaining all temporary traffic control. No separate payment will be made for traffic control as it will be considered incidental to the pay item "Pavement Repair."

The finished surface shall be smoothed and shaped to provide a final compacted surface grade consistent with the adjacent existing pavement grades. The final surface grade of the patch shall be within one-eighth (1/8" ±) of the adjacent existing pavement and grade. Any patch areas more than one-eighth (1/8" ±) above adjacent existing pavement shall be milled to proper grade at Contractor's expense.

All pavement patching areas shall be maintained in satisfactory condition until resurfacing occurs.

Payment for the item Pavement Patching shall be compensation for excavation and compaction of repair areas, removal and disposal of existing pavement and base material, tacking pavement areas, and furnishing, placing, compacting bituminous materials, and traffic control.

Payment for Pavement Patching shall be determined by the actual tons of bituminous material placed and verified by delivery tickets. Adjustments in compensation due to variations in the price of asphalt cement will not be applicable to payment for the work covered by this section. The number of batches and total weight of all loads of mixture shall be recorded in duplicate upon plant ticket forms by an authorized representative of the Town. With each load delivered to the work, the truck driver shall present one copy of the plant ticket to the Public Works Director or his representative.

PROJECT SPECIAL PROVISIONS

M2014-001

SECTION 6

THERMOPLASTIC PAVEMENT MARKINGS

Description:

This project will consist of the furnishing and placement of Alkyd/Maleic Thermoplastic Reflective Pavement Markings in the form of lines and symbols of the type specified herein. **Markings will be applied within 24 hours of the resurfacing. This also includes any interim pavement markings due to milling operations.**

The Contractor has the option to utilize interim pavement markings. Refer to methods of application noted further in this Section. **In the event that pavement markings are not installed within the above mentioned 24 hour period, additional resurfacing will not be permitted. This action will not constitute a delay of work as outlined in the "liquidated damages and delays" portion of the general conditions of this contract.**

The markings are to be installed at the locations shown on the pavement marking plans and in accordance with NCDOT Roadway Standard Drawings. **If the pavement marking plans and NCDOT Standards conflict, the Public Works Director shall be notified prior to the installation of such work.** Installations shall be performed in accordance with the lines, symbols, and dimensions shown on the pavement marking plans or as described herein. The Contractor shall furnish all materials, services, labor and equipment necessary for the required pavement preparation and pavement marking installation. The Contractor shall provide sufficient personnel experienced in the handling and application of the Thermoplastic Pavement Marking Materials to assure that the work is done properly.

The material shall be plainly visible to the motorist both day and night. Nighttime visibility shall be enhanced by retro-reflection induced by standard automobile headlights.

The work shall meet the requirements of these Special Provisions and the North Carolina Department of Transportation Standard Specifications for Roads and Structures, Latest Edition.

All approvals from the Public Works Director for work to be performed shall be obtained prior to any work beginning in accordance with this specification.

Thermoplastic Pavement Marking Materials:

(1) DESCRIPTION: This special provision covers machine applied hot Alkyd/Maleic Thermoplastic Pavement Marking material with both incorporated glass beads and drop-on glass beads.

(2) THERMOPLASTIC MATERIAL: The Thermoplastic Material for hot Alkyd/Maleic applications shall consist of homogeneously composed pigments, filler, resins, and glass reflectorizing spheres.

The Thermoplastic Material shall be available in both white and yellow. The material shall be free of contaminates and shall be dry blended or hot mixed form 100% virgin stock using no reprocessed materials. The Thermoplastic Material, while on the roadway surface and at any natural temperature, shall exist in a hard solid state with cold ductility that permits normal movement with the road surface without chipping and and/or cracking.

The material manufacturer has the option of formulating the Thermoplastic Material according to his own specifications, however, the manufacturer shall meet the minimum requirements specified herein including but

not limited to composition, physical characteristics, etc. All Thermoplastic Pavement Marking products shall be previously approved by the North Carolina Department of Transportation. The physical and chemical properties contained in this specification shall apply regardless of the type of formulation used.

The Thermoplastic Material upon heating shall not exude fumes which are toxic or injurious to persons or property.

The Thermoplastic Material shall not deteriorate or discolor when held at the application temperature for periods of time up to 4 hours or upon repeated reheating (a minimum of 4 times). The color, viscosity, and chemical properties versus temperature characteristics of the Thermoplastic material shall remain constant for up to 4 hours at the application temperature and shall be the same from batch to batch. The Thermoplastic Material shall be readily applicable at temperatures between 400° F and 440° F from the approved equipment.

Composition:

The pigment, beads, and filler shall be uniformly dispersed in the resin. The material shall be free from all skins, dirt, and foreign objects and shall comply with requirements according to Table 1:

TABLE 1

Component	By Weight
Binder	18% Minimum
Glass Beads (premixed)	30% Minimum
Titanium Dioxide	10% Minimum
Yellow Pigment (for yellow marking only)	4% Minimum
Calcium Carbonate & Inert Filler	See Note

NOTE: The amount of calcium carbonate and inert fillers shall be at the option of the manufacturer, providing all other requirements of the specifications are met. The total of silica content used in the formulation of the Thermoplastic Material shall be the glass beads (premixed).

(1) BINDER

The binder shall consist of a mixture of synthetic resins (at least one synthetic resin shall be solid at room temperature) and high boiling point plasticizers. At least one-third of the binder composition shall be 100 percent maleic-modified glycerol ester of resin and shall be no less than 10 percent by weight of the entire material formulation. The binder shall contain no or any combination of tall oil resins with maleic-modified glycerol esters of rosin.

(2) GLASS BEADS – PREMIXED AND DROP-ON

The glass beads used in formulation or dropped on shall be smooth, clear, free from any air inclusions, and scratches that might effect their function as a retro-reflective media and shall have the characteristics listed below.

(a) MOISTURE RESISTANCE: Drop-on beads only – shall be 100 percent passing

(b) ROUNDNESS PERCENT BY WEIGHT: Not more than 20 percent of the glass spheres shall be irregular or fused spheroids and at least 80 percent of the spheres shall be true spheres.

(c) INDEX OF REFRACTION: Shall be a minimum of 1.50.

(d) GRADATION U.S. STANDARD SIEVE:

US Standard Sieve Size	Minimum	Maximum
Passing #20	100%	NA
Passing #20 and retained on #30	5%	10%
Passing #30 and retained on #50	40%	80%
Passing #40 and retained on #80	15%	40%
Passing #80	0%	5%

(e) CHEMICAL RESISTANCE: Beads shall be 100 percent passing.

(3) OTHER INGREDIENTS

Titanium Dioxide shall meet the ASTM D 476-Type 2 specifications.

Physical Characteristics:

(1) COLOR - The Thermoplastic Pavement Marking Material shall meet the following requirements for daylight reflectance and color when tested using a standard color difference meter (0 degrees, 45 degrees) and a magnesium oxide standard or an approved secondary standard.

WHITE: Daylight reflectance at 45 degrees – 0 degrees of 75 percent minimum and match federal test standard number 595a (Color 17886)

YELLOW: Daylight reflectance at 45 degrees – 0 degrees of 45 percent minimum and match federal test standard number 595a (Color 13538) which shall fall within the limits of the FHWA highway color tolerance chart, PR color #1.

(2) REFLECTIVITY - At the time of installation, the in-place marking shall have the minimum reflectance values shown below, as obtained with a Mirolux 12 Retro-reflectometer. The Mirolux 12 has an Illumination Angle of 86 ½ degrees and Observation Angle of 1 ½ degrees. The Illuminated Area is 3 ½ inches by 6 ½ inches. The photometric quantity shall be measured in millicandelas per lux per meter squared (med / lux / m²). The reflectance values shown below shall be maintained for a minimum of 30 days from the time of placement of the marking material.

WHITE: 375 med/lux/m² YELLOW: 250 med/lux/m²

(3) YELLOWNESS INDEX - The white Thermoplastic Material shall not exceed a yellowness index of 0.15.

(4) BOND STRENGTH - The bond strength of the Thermoplastic Material to Portland Cement Concrete shall exceed 1.24 Map (180 psi).

(5) CRACKING RESISTANCE AT LOW TEMPERATURE - The Thermoplastic Pavement Marking Material shall be 100 percent passing.

(6) IMPACT RESISTANCE - The impact resistance of the Thermoplastic Material shall be a minimum of 10 inch pounds.

(7) SPECIFIC GRAVITY - The specific gravity of the Thermoplastic Pavement Marking Material shall not be less than 1.95 + .05 nor more than 2.15 + .05.

(8) SOFTENING POINT - The Thermoplastic Material shall have a softening point of not less than 92.8° C (200° F).

(9) DRYING TIME - When applied at a temperature of 211° +/- 7° C (412° +/- 12.5° F) and thickness of 3.2mm (0.125 in.). The Thermoplastic Material shall set to bear traffic in not more than two minutes when the air temperature is 11° C (50° F) and not more than 15 minutes when the air temperature is 32° C (90° F).

(10) STORAGE LIFE - The material shall meet the requirements of this specification for a period of one year. The Thermoplastic Pavement Marking Material must also melt uniformly with no evidence of skins or of unmelted particles for this one year time period. Any material not meeting the above requirements shall be replaced by the manufacturer.

Thermoplastic Pavement Marking Observation Period:

The Contractor shall maintain responsibility for the thermoplastic pavement markings for a 180 day observation period beginning upon the satisfactory completion of all work in this specification. The Contractor shall guarantee the markings under the payment and performance bond.

During the 180 day observation period the Thermoplastic Pavement Marking Material furnished and installed under this contract shall show no sign of failure due to blistering, excessive cracking, bleeding, staining, discoloration, oil content of the pavement materials, smearing or under heat, deterioration due to contact with grease deposits, oil, diesel fuel, or gasoline drippings, chipping, sapling, poor adhesion to the pavement materials, loss of reflectivity, vehicular damage, and normal wear.

Specifically, at the end of the observation period, the pavement marking material must be within 10 mils of the initial above the pavement thickness as required elsewhere in this specification.

Also the minimum reflectance values at the end of the observation period shall be 325 Ed / lug / m² for white material and 200 Ed / lug / m² for yellow material. The reflectance values shall be taken using a Mirolux 12 reflectometer discussed elsewhere in this specification. The Contractor, at no expense to the Town of Knightdale, shall replace any pavement markings that will not perform satisfactorily under traffic during the 180 day observation period due to defective materials and/or workmanship in manufacture and/or application. (Failure to comply with any portion of this specification shall be considered as unsatisfactory performance of the Thermoplastic Pavement Marking Material).

Marking replacement shall be performed in accordance with the requirements specified herein for the initial application, including but not limited to surface cleaning, pavement marking removal, seasonal and weather limitations, etc.

Traffic shall be operating on the facility during the entire 180 day observation period unless otherwise directed by the plans or the Public Works Director.

Methods of Application:

The Contractor shall furnish and install by the specified method of application Thermoplastic Pavement Markings as directed by and in accordance with the pavement marking plans:

> Machine applied, hot **extruded** Thermoplastic with glass spheres in the proper ratio to immediately produce a highly reflective marking as described elsewhere in this specification. Extrusion may be accomplished using either conventional extrusion equipment or "ribbon gun" extrusion devices.
> Machine applied, hot **sprayed** Thermoplastic with glass spheres in the proper ratio to immediately produce a highly reflective marking as described elsewhere in this specification.

The Thermoplastic Pavement Markings shall be applied to the road surface in a molten state with a homogeneous surface application of glass spheres. When applied properly and at the designated uniform thickness and width the marking shall, upon cooling, be uniformly reflectorized and have the ability to resist deformation caused by traffic throughout its entire length.

The Contractor, at his option, may use interim pavement marking paint as described in Section 920 of the N.C. Standard Specifications for Roads and Structures. If this option is chosen, no direct payment shall be made for this, as such work shall be considered incidental to the work being paid for by the various Thermoplastic Pavement Marking items in this Contract. The Contractor shall cover any interim pavement marking paint with Thermoplastic Pavement Marking Material within 30 calendar days of placement.

Surface Preparation:

To insure maximum possible adhesion, the pavement surface upon which Thermoplastic Pavement markings are to be placed shall be cleaned free of grease, oil, mud, dust, dirt, grass, loose gravel, and other damaging material prior to the application of the Thermoplastic Pavement Markings. Cleaning shall be performed on all surfaces which are to receive new Thermoplastic Pavement Markings. The area to be cleaned shall be a minimum of 2 inches wider than the Thermoplastic Pavement Markings to be placed, such that an additional 1 inch of cleaned area is on each side of the Thermoplastic Pavement Markings after they are applied.
Where cleaning of objectionable material is obscuring existing pavement markings of a lane occupied by public traffic, the residue including but not limited to dust shall be removed immediately from the surface being treated. Such removal shall be by methods approved by the Public Works Director.

On all pavement surfaces greater than 2 years old and Portland Cement Concrete Pavements, a liquid epoxy resin primer-sealer or equivalent shall be applied to the area where hot Thermoplastic Pavement markings are to be placed unless otherwise recommended by the manufacturer. The primer-sealer shall be that recommended by the manufacture of the Thermoplastic Material and shall be approved by the Public Works Director prior to pavement surface, and shall be completely dry prior to application of the Thermoplastic Material. The primer-sealer shall not discolor nor cause any noticeable change in the appearance pavement markings. A sample of the primer-sealer shall be submitted to the Public Works Director and shall be approved by the Public Works Director prior to application

No direct payment shall be made for this surface preparation (pavement cleaning and application of primer-sealer), as such work shall be considered incidental to the work being paid for by the various thermoplastic Pavement Marking items in this contract.

Removal of Existing Pavement Marking for Longline Marking Preparation:

The Contractor shall remove existing pavement markings as directed by the Public Works Director, which are in a location where the Thermoplastic Pavement Markings are to be placed. The existing pavement markings shall be removed sufficiently, as directed by and by methods acceptable to the Public Works Director.

When removing existing pavement markings for longline marking preparation a minimum of 80 percent of the total area of the existing pavement markings shall be removed, such that a minimum of 80 percent of the pavement surface is uniformly exposed throughout. The Contractor shall remove existing pavement markings so that the pavement surface is in proper condition for successful bonding of the Thermoplastic Pavement Markings and a neat appearance is provided. The area the existing pavement marking are to be removed from shall be a minimum of 2 inches wider than the Thermoplastic Pavement Markings to be placed, such that an additional 1 inch of pavement marking removal area is on each side of the Thermoplastic Pavement Markings after they are applied. The Thermoplastic Pavement Markings shall be placed on the same day the existing markings are

removed. The Contractor shall place the Thermoplastic Pavement Markings as shown on the plans and as directed by the Public Works Director. No loose or flaking existing pavement markings shall remain after successful removal for Thermoplastic marking preparation.

Whenever grinding, scraping, sandblasting, shotblasting, or other operations are performed to remove existing pavement markings, the work shall be conducted in such a manner that the finished pavement surface is not damaged or left in a condition that may mislead or misdirect the motorist. The Contractor shall repair any damage to the pavement, pavement joint materials, or the pavement surface caused by the removal of existing pavement markings by methods acceptable to the Public Works Director and at no additional cost to the Town of Knightdale. When these operations are completed, the pavement surface shall be blown clean by compressed air to remove
residue and/or debris resulting form the removal of existing pavement markings.

When removal of existing pavement markings and/or objectionable materials is obscuring existing pavement markings of a lane occupied by public traffic, the residue including but not limited to dust shall be removed immediately from the surface being treated. Such removal shall be by methods approved by the Public Works Director.

No direct payment shall be made for the removal of existing pavement markings for longline marking preparation, which have not been authorized by the Public Works Director.

Weather Limitations:

Thermoplastic Pavement Markings shall not be applied on existing pavement surfaces or new concrete pavements unless the ambient air temperature and the temperature of the pavement is 50° F and rising.

Thermoplastic Pavement Markings shall not be applied on new asphalt surfaces unless the ambient air temperature and the temperature of the pavement is 50° F and rising unless as specified below. Thermoplastic Pavement Markings may be placed on new asphalt surfaces when the ambient temperature is 40°F and rising and the temperature of the pavement is a minimum of 50° F when marking is being placed immediately behind the paving operation.

Thermoplastic Pavement Markings shall not be placed when the pavement surface shows visible evidence of containing moisture.

Premarking:

The Contractor shall be required to premark each installation of Thermoplastic pavement Marking Materials prior to application. The premarking shall be of a manner that will be helpful to the Contractor and the Public Works Director in placing the Thermoplastic Pavement Markings as directed in the plans. The actual placement of the Thermoplastic Pavement Marking materials shall not be performed until the premarking has been inspected and approved by the Public Works Director.

No direct payment shall be made of this premarking as such work shall be considered incidental to the work being paid for by various Thermoplastic Pavement Marking items in the contract.

Application Equipment:

All the equipment used to install hot Thermoplastic Pavement Marking materials under this specification shall be constructed to provide all the features as follows:

An oil jacketed premelting kettle shall be utilized for uniform melting and heating of the Thermoplastic Pavement Marking material. The kettle shall be equipped with an automatic thermostat control to provide positive temperature control. The kettle shall provide continuous mixing and agitation of the Thermoplastic Pavement Marking Material.

The applicator shall be equipped with an automatic thermostat control device for the storage kettle to maintain the Thermoplastic Pavement Marking Material at the application temperature. The applicator storage kettle shall provide continuous mixing and agitation of the Thermoplastic Pavement Marking Material during installation. The equipment shall be constructed so that all mixing and conveying parts, up to and including the application apparatus, maintains the Thermoplastic Pavement Marking Material at the specified installation temperature. The applicator shall be capable of containing a minimum of 150 pounds of molten Thermoplastic Pavement Marking Material.

The premelting kettle and applicator shall be constructed and arranged to meet the requirements of the National Board of Fire underwriters, the National Fire Protection Association, and State and Local authorities. Conveying parts of the applicator, between the main material reservoir and the application apparatus, shall be constructed to prevent clogging and accumulation.

The applicator shall apply the "drop-on" glass beads to be placed molten Thermoplastic Pavement Markings Material by means of pressurized bead dispenser or other mechanical conveying method (not simply dependent on gravity for uniform application or dropped by hand). The bead dispenser shall be equipped with an automatic cutoff control synchronized with the cutoff system for the Thermoplastic Marking Material so that all Thermoplastic Marking Material placed shall be covered with a uniform layer of "drop-on" glass beads.

Application equipment shall be so constructed as to assure continuous uniformity in the thickness and width of Thermoplastic Pavement Marking. The applicator shall provide multiple width settings ranging from 4 inches to 12 inches and multiple thickness settings to achieve above the pavement thickness ranging form 0.090 inches to 0.0120 inches.

The applicator shall provide a method for cleanly cutting off stripe ends and shall be equipped with a means of applying all "skip lines", symbols, and word messages.

The applicator shall be mobile and maneuverable to the extent that straight lines can be followed and all standard curves can be made in true arcs.

All parts of the equipment which come in contact with the Thermoplastic Pavement Marking Material shall be constructed for easy accessibility during cleaning and maintenance.

Application of Thermoplastic Marking Material:

All parts of the application and premelting equipment shall be thoroughly cleaned of foreign material prior to the introduction of the Thermoplastic Pavement Marking Material proposed in this specification. Openings of a maximum 12 inches and a minimum of 6 inches in length shall be provided at intervals of 250 feet in edge lines placed on the inside of curves and in edge lines on the low side of tangents.

The material shall be heated uniformly throughout and shall have a homogeneous disbursement of binder, pigment, and glass beads when applied to the surface of the pavement.

To avoid blistering and poor adhesion, the Thermoplastic Pavement Marking Material shall be applied to dry pavements in a molten state at a minimum temperature of 205° C (400° F) for Bituminous Pavements and at a minimum temperature of 218° C (425° F) for Portland Cement Concrete Pavements. The temperature shall be checked every 10 minutes for compliance with the specified application temperature range.

“Drop-on Beads” shall be uniformly applied to the surface of the molten Thermoplastic Pavement Marking Material so that the beads are partially embedded. The beds shall be applied at a rate to obtain the minimum reflectance values described elsewhere in this specification (ie., 8 to 10 pounds per 100 square feet of marking material may give the required retro-reflectivity).

The cross-sectional thickness of the Thermoplastic Pavement Marking Material above the surface of the pavement for center lines, skip lines, transverse bands, mini-skip lines, legends and median islands shall be minimum of 0.120 inches; edges lines, gore lines, 8 inch crosswalk lines, diagonals, and arrows shall be a minimum of .090 inches. The Thermoplastic Pavement Marking Material, when formed into traffic symbols and lines shall have a uniformly thick and smooth surfaced cross-section throughout it entire length.

All pavement marking widths, as a minimum, shall be the dimension as specified in the plans and shall not exceed the dimension by more than ½ inch.

Pavement marking lines shall be straight or of uniform curvature and shall conform with the tangents, curves, and transitions as specified in the plans and/or directed by the Public Works Director. Longitudinal lines shall be offset a minimum of 2 inches from longitudinal construction joints of pavements. Longitudinal lane lines of multi-lane roads shall be offset 2 inches towards the median.

The finished line shall have well defined edges and be free of horizontal fluctuations. The lateral deviation of the finished lines shall not exceed ½ inches from the proposed location alignment, as specified in the plans and/or directed by the Public Works Director, at any point. Any greater deviations shall be sufficient cause for requiring the Contractor to remove and correct such pavement markings at no additional expense to the Town of Knightdale.

All pavement markings lines shall be applied with one pass of the pavement marking equipment, except the “X” of the railroad crossing symbol, 24 inch stop bars, and 24 inch transverse bands, where 2 passes of the equipment will be permitted.

The stem portion of straight arrows is to be applied in a single pass and the stem portion of turn arrows is to be applied in a maximum of 2 passes of the application equipment. Arrowheads may be applied by multiple passes of the application equipment, not to exceed 3 passes.

All pavement marking lines and symbols installed by multiple passes of the application equipment shall exhibit no gaps separating the application passes.

The various letters and symbols shall conform to the size and shape outlined in the “Manual on Uniform Traffic Control Devices for Streets and Highways”, dated 2003 (as updated), and as shown in the pavement marking plans.

The Thermoplastic Pavement Marking Material shall be capable of accepting an overlay of compatible material.

The Contractor shall protect the pavement markings until they are track free by placing warning devices.

Any molten pavement marking which is crossed by a vehicle shall be reapplied, and any subsequent marking made by the vehicle shall be removed by methods acceptable to the Public Works Director and at no additional expense to the Town of Knightdale.

The Contractor shall be responsible for removing all pavement marking materials spilled upon the road surface by a method acceptable to the Public Works Director.

Compliance of Marking Material with the Specification:

The material manufacturer shall provide to the Public Works Director verifiable certification stating the acceptability of the Thermoplastic Pavement Marking Material, drop-on glass beads, and incorporated (premixed) glass beads.

Prequalification of Products:

All Alkyd/Maleic Thermoplastic Pavements marking products shall be previously approved by the North Carolina Department of Transportation. For more information on the approved products, contact the Traffic Control Unit at Century Center Building B, 1020 Birch Ridge Dr. Raleigh, North Carolina, 27610, (919) 250-4151.

Packaging for Shipment:

Dry mixed Thermoplastic Material shall be shipped in leak proof, moisture proof containers.

The Thermoplastic Pavement Marking Material shall be in block or granular form packaged in either suitable corrugated containers or thermal degradable plastic bags to which it will not adhere during shipment or storage.

The packages shall weigh approximately 23 kg (50 pounds). The corrugated containers shall consist of blocks approximately 4 inches x 28 inches x 2 ¼ inches in size. Each container shall designate the color, manufacturer's name, batch number, and date of manufacture. The label shall warn the user that the material shall be heated in the range of 204° -227° C (400°-400° F) during application.

Method of Measurement:

The quantity of Thermoplastic Pavement Marking lines to be paid for shall be the actual number of linear feet of Thermoplastic Pavement Marking Lines which have been satisfactorily placed. The Quantity of solid lines shall be the summation of the linear feet of solid line measured end-to-end of the line. The quantity of skip or intermittent lines shall be the summation of the linear feet derived by multiplying the nominal length of the marking lines by the number of marking lines in place.

The quantity of Thermoplastic Pavement Marking Symbols to be paid for shall be the actual number of Thermoplastic Pavement Marking Symbols satisfactorily placed.

Basis of Payment

The quantity of Thermoplastic Pavement marking Lines measured as provided above, shall be paid for at the contract unit price per linear foot for "Thermoplastic Pavement Marking Lines".
The quantity of Thermoplastic Pavement Marking Symbols, measured as provided above, shall be paid for at the contract unit price per each for "Thermoplastic Pavement Marking Symbols".

The quantity of reflectorized pavement markings to be paid for shall include the removal of the existing markings and replacement of new reflectorized pavement markings.
Such prices and payment shall be full compensation for all layout, materials, testing, tools, equipment, labor and all other requirements necessary to complete the work.

No payment will be made for Thermoplastic Pavement Markings until the entire street has been completed, with permanent markings. The exception to this item is for specific streets which have been identified to receive interim pavement markings.

The Contractor shall submit Thermoplastic Pavement quantities for verification in spreadsheet format identifying pavement markings on a street by street basis.

Parkside Commons Resurfacing-Sheet 1 of ___

N

0 50 100 200 Feet

1 inch = 100 feet

Disclaimer

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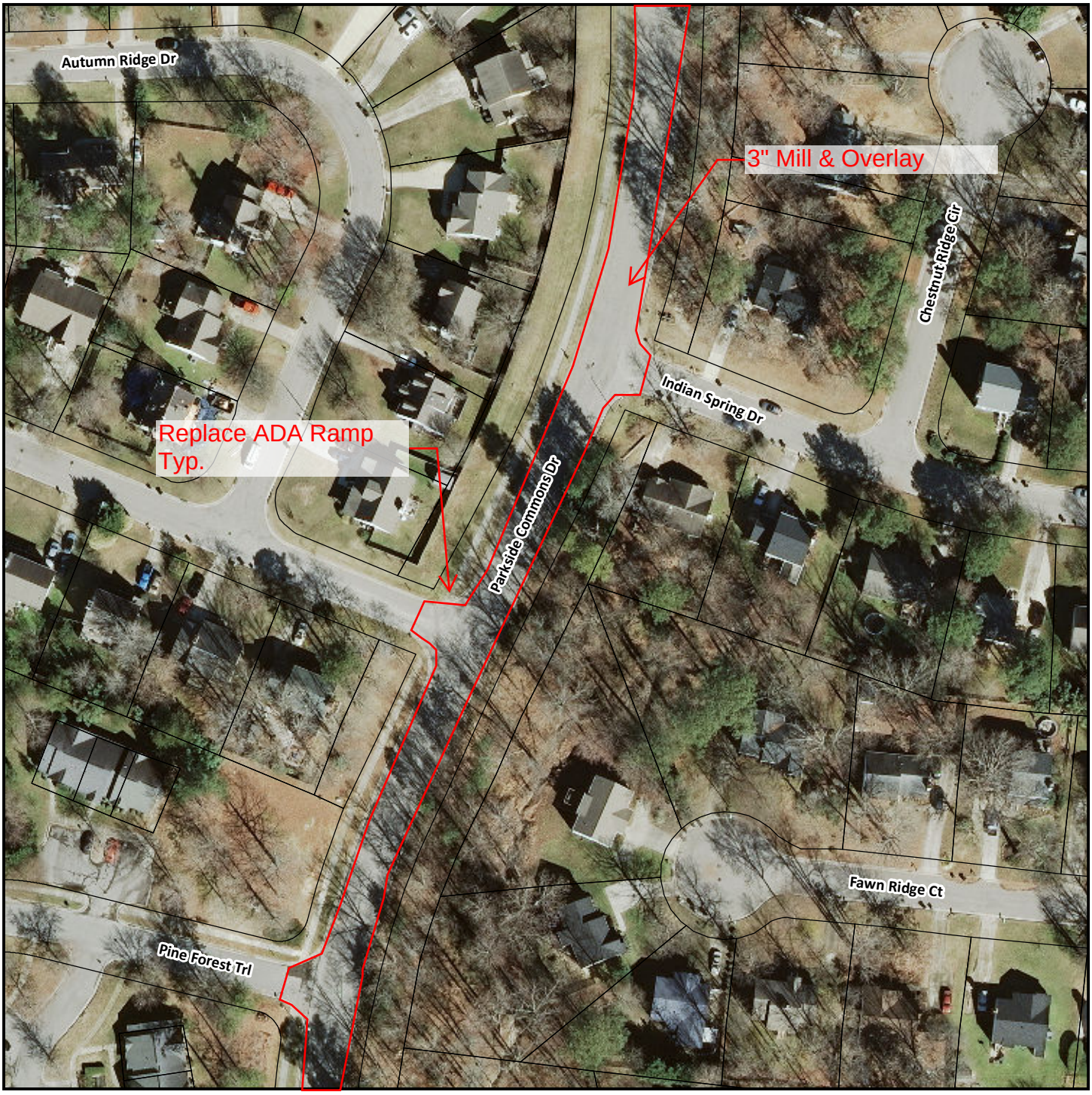

Parkside Commons Resurfacing-Sheet 2 of ___

N

0 50 100 200 Feet

1 inch = 100 feet

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Parkside Commons Resurfacing-Sheet 3 of ___

N

0 50 100 200 Feet

1 inch = 100 feet

Disclaimer

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ADDENDUM NO. 001 TO CONTRACT DOCUMENTS

Project: Parkside Commons Drive Resurfacing Project No. M2015-001

Owner: Town of Knightdale

To All Bidders:

Contractors submitting proposals for the above named project shall take noted of the following changes, additions, deletions, clarifications, etc. in the Contract Documents, which shall become part of and have precedence over anything contrarily shown or described in the Contract Documents, and all such shall be taken into consideration and be included in the Contractor's Bid Proposal.

Refer to attached sheet(s)

The return acknowledgement requested below will be deemed evidence that the bidder has received the Addendum and has followed the instructions outlined herein. Please sign, date, clearly print company name, and fax this sheet back to the Town of Knightdale at 919-217-2249 immediately upon receipt.

_____
Company Name

_____
Acknowledgement of Receipt

_____
Date

_____
Fred V. Boone, PE
Knightdale Town Engineer

Town of Knightdale, North Carolina
Parkside Commons Resurfacing
M2015-001

Addendum No. 1

1. Project Special Provisions Section 3: Milling/Pavement Rehabilitation

   Page BD2: Remove the table of contents in its entirety and replace it with the enclosed sheet. (This clarifies that no bid bond is required with this project).

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ADDENDUM NO. 002 TO CONTRACT DOCUMENTS

Project: Parkside Commons Drive Resurfacing Project No. M2015-001

Owner: Town of Knightdale

To All Bidders:

Contractors submitting proposals for the above named project shall take noted of the following changes, additions, deletions, clarifications, etc. in the Contract Documents, which shall become part of and have precedence over anything contrarily shown or described in the Contract Documents, and all such shall be taken into consideration and be included in the Contractor's Bid Proposal.

Refer to attached sheet(s)

The return acknowledgement requested below will be deemed evidence that the bidder has received the Addendum and has followed the instructions outlined herein. Please sign, date, clearly print company name, and fax this sheet back to the Town of Knightdale at 919-217-2249 immediately upon receipt.

_____
Company Name

_____
Acknowledgement of Receipt

_____
Date

Fred V. Boone, PE
Knightdale Town Engineer

Town of Knightdale, North Carolina
Parkside Commons Resurfacing
M2015-001

Addendum No. 2

1. Project Special Provisions Exhibits:

   Remove exhibits #1-#3 in their entirety and replace them with the enclosed sheets. (This clarifies the method of install of the overlay and the rate of application for S9.5A).

Parkside Commons Resurfacing-Sheet 1 of 3

N

0 50 100 200 Feet

1 inch = 100 feet

Disclaimer

*iMaps makes every effort to produce and publish the most current and accurate information possible. However, the maps are produced for information purposes, and are **NOT** surveys. No warranties, expressed or implied ,are provided for the data therein, its use,or its interpretation.*

Parkside Commons Resurfacing-Sheet 2 of 3

N

0 50 100 200 Feet

1 inch = 100 feet

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Parkside Commons Resurfacing-Sheet 3 of 3

N

0 50 100 200 Feet

1 inch = 100 feet

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