

ADVERTISEMENT FOR BIDS

Pursuant to N. C. Gen. Stat. sec. 143-131(a), sealed bids for the 2016 Median Maintenance project will be received by the City of Asheville, 161 S. Charlotte St., Asheville, North Carolina, 28802, in the office of Vinnie Sullivan ((828) 259-5651 (vsullivan@ashevillenc.gov)) until 4 PM local time, July 13th, 2016, at which time the bids received will be publicly opened and read aloud in the second floor conference room of the Public Works Building.

The project is generally described as follows:

2016 Median Maintenance Project

This contract is for installation of landscape improvements on City of Asheville roadway median and bulb-outs. The winning bidder will be provided a basic schematic for each site provided by a landscape design team. The median and bulb-out locations are all within the central City of Asheville vicinity. This contract is for 1 year, but the City may elect to renew this agreement for two (2) additional twelve (12) month periods

A **pre-bid conference** for all General Contractors intending to furnish bids will be held on July 1st, 2016, at 9 A.M. in Room A109 on the first floor of the Public Works Building, 161 South Charlotte Street, Asheville, North Carolina.

The project, the City of Asheville minority business enterprise goal (MBE) and the City's Drug-Free Workplace Policy will be explained.

Complete plans, specifications and contract documents may be examined at the following locations:

**Engineering Services Division, Public Works building, room A201,
161 South Charlotte Street, Asheville, North Carolina**

Copies of complete plans, specifications and contract documents may be obtained at the following locations:

All contract documents and plans will be available for view or hard-copy reproduction on the City of Asheville website. <http://AshevilleNC.gov/Bids>

The City of Asheville will provide paper copies of plans and documents if it is not possible for the potential bidder to reproduce them from the electronic files provided on the website. A non-refundable fee of Three Hundred Dollars (\$300.00) in cash or certified check is required for receipt of the copies. Please place your order ahead of time of pick up.

Bidders are notified that the City of Asheville has adopted a Minority Business Plan which established guidelines and verifiable percentage goals for participation by minority businesses in the awarding of construction contracts. Minority businesses are invited to participate. The verifiable percentage goal for participation in this contract by minority businesses is 3% for African Americans, 8% for women and 1% for Hispanic, Asian and Native Americans.

Bidders are also notified that the City of Asheville has adopted a Drug-Free Workplace Policy requiring successful bidders to insure that a drug-free workplace is provided in the performance of any City of Asheville construction contracts. The requirements of that policy are included in the invitation to Bid and will be included in the contract for the construction of the Project.

The City of Asheville has adopted a Minority Business Plan to encourage participation by women and minority businesses in the award of contracts. Bidders are hereby notified that this contract is subject to the provisions of that Plan. Questions regarding the Minority Business Plan may be directed to, Brenda Mills, Economic Development Specialist, City of Asheville,

Post Office Box 7148, Asheville, NC 28802-7148 or by phone at (828) 259-8050 or by e-mail at bmills@ashevillenc.gov. You can access two sources for certified minority firms at www.ips.state.nc.us/ips/vendor/searchvendor.aspx?t=h and www.doa.state.nc.us/hub to search for vendors. It is the policy of the City to (1) provide minorities an equal opportunity to participate in all aspects of its contracting and procurement programs and (2) prohibit any and all discrimination against persons or businesses in pursuit of these opportunities.

All bidders must have current North Carolina licenses for all work on the project.

All bids must be submitted on the form of bid proposal provided. All bids must be enclosed in a sealed envelope and properly labeled. **Please enclose the bid bond in a separate sealed envelope from the rest of the bid.**

Bid proposals shall include the cost of required insurance, bonds, and payment of any applicable local, State and Federal taxes. The City Council of the City of Asheville has adopted a policy that the City of Asheville will not enter into contracts with bidders who are delinquent in the payment of ad valorem taxes owed to the City of Asheville.

The successful bidder will be required to furnish a performance bond and a payment bond in the amount of one hundred percent (100%) of the contract amount. Those bonds shall meet the requirements of N. C. Gen. Stat. sec. 143-129 and of Article 3 of Chapter 44A of the North Carolina General Statutes.

No bid may be withdrawn after bids have been opened, except as provided in N. C. Gen. Stat. sec. 143-129.1.

The City of Asheville reserves the right to reject any or all bids and to waive informalities.

CITY OF
ASHEVILLE

CAPITAL PROJECTS
MANAGEMENT
DIVISION

POST OFFICE BOX 7148

ASHEVILLE, NC 28802

(828) 259-5617



CITY OF ASHEVILLE

BID
DOCUMENTS
FOR
2016 Median Maintenance Project

Project # CPM-15-16-003
Bid # 298-CPM-15-16-003-1

City of Asheville
Public Works
Capital Projects Management Division

CITY OF ASHEVILLE

Esther Manheimer, MAYOR

COUNCIL MEMBERS

Gwen Wisler
Cecil Bothwell
Brian Haynes
Julie Mayfield
Gordon Smith
Keith Young

City Manager
Gary W. Jackson

Capital Projects Manager
Walter Ear, PE

**This instrument has been preaudited in the manner required by the
Local Government Budget and Fiscal Control Act.**

Director of Finance
Barbara Whitehorn

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All of the foregoing documents are hereby made a part of and incorporated herein by reference into the Contract/Agreement between the City and the Contractor

INSTRUCTIONS TO BIDDERS

All Bids shall be prepared in accordance with the following requirements:

Vinnie Sullivan, Project Manager with the City of Asheville Capital Projects Management Division, or his appointed representative shall administer the contract process.

IB-01 PREPARATION OF BIDS:

1. The Bid form furnished by the City of Asheville, Public Works Department, Capital Projects Management Division shall be used and shall not be altered. **The entire BID DOCUMENT PACKAGE shall be submitted as the Bid.**
2. All entries including signatures shall be written in ink.
3. The Bidder shall submit a unit or lump sum price for every item in the Bid form unless specific directions in the Invitation for Bids allow for partial Bids.
4. A total bid shall be entered in the Bid form for every item on which a unit price has been submitted. The total Bid for each item other than lump sum items shall be determined by multiplying each unit price bid by the quantity for that item, and shall be written in figures in the "Total Bid" column in the Bid form. In case of a discrepancy between the unit price bid for a contract item and the total bid for that item, the unit price bid shall govern. In the case of lump sum items, the price shall be written in figures in the "Total Bid" column in the Bid form.
5. The Total Contract Bid Price shall be written in figures in the proper place in the Bid form. The Total Contract Bid Price shall be determined by adding the Total Bid for each item.
6. Changes in any entry shall be made by marking through the entry in ink and making the correct entry adjacent thereto in ink. The individual signing the Bid shall initial the change in ink.
7. The Bid shall be properly executed. In order to constitute proper execution; the Bid shall be executed in strict compliance with the following. No other forms of execution will be accepted.
 - a. If a Bid is by an individual, it shall show the name and address of the individual and shall be signed by the individual.
 - b. If the Bid is by a Corporation, the President or Vice-president of the Corporation shall execute it in the name of the Corporation. The Secretary or Assistant Secretary shall attest the signature(s). The seal of the Corporation shall be affixed. The Bid shall show the address of the principal office of the Corporation.

- c. If the Bid is made by a Partnership, one of the general partners shall execute it in the name of the Partnership, by the address shown for the Partnership.
 - d. If the Bid is a joint venture, it shall be executed by each of the joint ventures in the appropriate manner set out above. The address for the joint venture shall be shown.
8. The Bid shall not contain any unauthorized additions, deletions or conditional bids.
 9. The Bidder shall not add any provisions reserving the right to accept or reject an award, or to enter into a Contract pursuant to an award.
 10. The Bid shall not contain irregularities of any kind, which make the Bid incomplete, indefinite, or ambiguous as to its meaning.
 11. Alternative Bids will not be considered unless specifically called for. Where numbered Alternate Bid Items are provided under any Contract, each Bidder must submit a bid price for each numbered Alternate Item.
 12. All attachments, certifications or acknowledgments attached to the Bid shall be executed in the same manner as the Bid.
 13. **Do not modify the City supplied provisions in any way including adding or removing provisions. Modification of the provisions shall result in immediate rejection of the bid. RETURN THE ENTIRE BID PACKAGE WITH THE SUBMITTAL.**
 14. The Bid Bond shall be delivered in a separate envelope from the Bid.

IB-02 **RECEIPT AND OPENING OF BIDS:**

Each Bid must be submitted in a sealed envelope, plainly marked on the outside, addressed and delivered as shown below. If forwarded by mail, the sealed envelope containing the Bid must be enclosed in another envelope addressed to:

FedEx and UPS

City of Asheville
 Attn: Vinnie Sullivan, CPMD
 161 South Charlotte Street
 Asheville, NC 28801

USPS

City of Asheville
 Attn: Vinnie Sullivan
 P.O. Box 7148
 Asheville, NC 28802

The envelope-containing Bid shall be marked as follows:

Upper left hand corner -
 Bidder's Name
 Bidder's Address

Lower left hand corner -
 NC General Contractor's License No.
 Classification
 Expiration Date

Bid For: 2016 Median Maintenance Project

Bids received prior to the advertised hour of opening will be kept securely sealed. The officer whose duty it is to open them will decide when the specified time has arrived, and no Bid received thereafter will be considered. Mailed Bids will be treated in every respect as though filed in person and will be subject to the same requirements. **If bidders are sending methods other than hand delivery, they are strongly urged to alert the bidding manager ahead of time so that efforts can be made to ensure receipt of the package in a timely manner.** It is the bidder's responsibility to assure that the bid is received in the prescribed location by the required deadline. If mail or delivery by other means is delayed beyond the date and hour set for the receipt of the bid, the proposals that are late will not be considered.

Bids received subsequent to the advertised hour of opening will be returned to the Bidder unopened. At the time and place fixed for the opening of Bids, the Owner will cause to be opened and publicly read aloud every Bid received within the time set for receiving Bids, irrespective of any irregularities therein. Bidders and other persons properly interested may be present in person or by representative.

IB-04 ADDENDA AND INTERPRETATIONS:

No interpretations of the meaning of the Specifications or other portions of the Contract Documents will be made orally.

Every request for such interpretation must be addressed to the City of Asheville, Bidding Manager for the project. To be given consideration, such requests must be sent to vsullivan@ashevillenc.gov at least **(3) working days prior** to the date fixed for the opening of Bids. Any and all such interpretations and any supplemental instructions will be in the form of written Addenda which, if issued, will be sent by email to all holders of Contract Documents and posted on the City of Asheville's bidding website. This will be delivered at the respective email addresses of the Contractor for such purposes not later than **(1) day(s) prior** to the day fixed for the opening of bids. Failure of any Bidder to receive any such Addenda shall not relieve said Bidder from any obligation under his Bid as submitted. It is the responsibility of each potential bidder to check the City's bidding opportunities page at

<http://www.ashevillenc.gov/Departments/Purchasing/RequestsforBidsProposals.aspx>

All Addenda so issued shall become part of the Contract Documents.

Prospective Bidders are cautioned concerning the use of a Post Office Box address as telegraphic Addenda cannot be sent to Post Office Boxes.

IB-05 DISCREPANCY IN BIDS:

In the event there is a discrepancy in any Bid between the unit prices and the extended totals, the unit prices shall govern. Bids which do not contain a price for every numbered item contained in the applicable Bid form, will not be accepted unless otherwise specified.

IB-06 QUALIFICATIONS OF BIDDERS:

It is the intention of the Owner to award the Contract(s) to a Bidder competent to perform and complete the work described therein in a satisfactory manner. Accordingly, a

successful Bidder shall **submit to the Owner a form, satisfactory to the Owner and within five (5) days following the Bid Opening:**

- (1) Evidence of Bidder's Certification and license to perform the work and services.
- (2) Evidence of Bidder's experience to perform the work. The bidder shall have at least five years of satisfactory experience, including at least two completed jobs with a scope similar to this project.
- (3) Evidence of Safety record of the Bidder to include OSHA 200 Logs for the Bidder's firm for the 5 years prior to the Bid Opening and the most recent Worker's Compensation Rating (or if the Bidder is self-insured, a complete listing shall be submitted of lost time on-the-job accidents for the past 5 years);
- (4) A Preliminary Progress Schedule (hereinafter collectively called "Qualification Information".

The Preliminary Progress Schedule shall consist of a time scaled bar chart and narrative in accordance with appropriate formats as specified by the Owner.

The Owner may make such other investigation as it deems necessary to determine the qualifications of the Bidder to perform the work and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may reasonably request. The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder (1) Fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract, and to complete the work contemplated therein in a reasonable manner and time; or (2) Fails to satisfy the Owner that such Bidder has maintained a satisfactory safety record over the past 5 years. Conditional Bids will not be accepted.

Bidders shall comply with all applicable laws regulating the practice of General Contracting as contained in Chapter 87 of the General Statutes of North Carolina.

All Bidders must be Landscape Contractors licensed in the State of North Carolina to perform work of a nature as required by the Contract Documents.

IB-07 BID SECURITY:

Each bid must be accompanied by a Bid Bond, cash, cashier's check or a certified check of the Bidder made payable to the Owner in an amount not less than five percent (5%) of the amount of the Bid. Bid Bonds shall be issued by a corporate surety licensed under the laws of North Carolina to execute such bonds. **Bid bonds are to be submitted in an envelope separate from the other bid documents.**

When the Bidder elects to submit a certified check or cashier's check as his Bid Bond, the check shall be drawn on a bank or trust company insured by the Federal Deposit Insurance Corporation.

Where alternate items are included in the Bid, the amount of bid security shall be not less than five percent (5%) of the alternate, or combination of alternates, that result in the highest Bid.

Revised Bids submitted before the opening of Bids, if representing an increase of the original Bid, must have the Bid security adjusted accordingly, otherwise the Bid will not be considered.

The security of the Bidders will be released upon the earlier to occur of (a) the expiration of five days after the Contract has been signed by the accepted Bidder and the Owner; or (b) the expiration of sixty (60) days after the day the bids are opened, upon demand of any such bidders whose bid has not been accepted prior to such demand.

In the event that all Bids are rejected, the security of all Bidders whose security has not been previously returned will be returned at the time of such rejection.

IB-08 RESPONSIBILITIES OF BIDDERS:

Each bidder shall, by careful examination, satisfy himself as to the nature and location of the work, the conformation of the ground, the character, quality and quantity of the 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 or the cost thereof under the Contract.

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 the permanent and temporary utility facilities in their present or relocation positions, whether or not specifically shown on the plans or covered in the project Special Conditions. 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.

The failure or omission of any Bidder to thoroughly examine and familiarize himself with the Contract Documents or to receive or examine any form, instrument or document or visit the site and acquaint himself with the conditions there existing shall in no way relieve any Bidder from any obligation in respect to his bid.

No verbal agreement or conversation with any officer, agent or employee of the Owner, either before or after the execution of the Contract, shall affect or modify any of the terms or obligations therein.

The Contract Documents consist of the following:

1. Advertisement for Bids
2. Instruction to Bidders
3. Bid Bond
4. Performance bond
5. Payment bond
6. City of Asheville Special Requirements
7. Standard and Project Special Provisions
8. Exhibits to this Contract
 - a) Bid Form
 - b) Bid Proposal

- c) Non-Collusion Affidavit
 - d) Debarment Certification
 - e) Drug Free Workplace Certification
 - f) Minority Business Minimum Compliance Requirements
 - (1) Checklist for Review of Good Faith Efforts
 - (2) MB Form 1
 - (3) MB Form 1A
 - (4) MB Form 2
 - (5) MB Form 5
 - g) Notice of Award
 - h) W-9
 - i) Contractors Sales and Use Detail Tax Report
 - j) Final Release and Lien Waiver
 - k) Contractor's Application for Payment
 - l) Contract Signature Pages
9. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
- a) Notice of Award / Notice to Proceed
 - b) Work Change Directives
 - c) Change Orders
 - d) Supporting Documents

IB-09 COLLUSIVE AGREEMENTS:

Each Bidder submitting a Bid to the Owner for any portion of the work contemplated by the documents on which bidding is based, shall execute and attach thereto an affidavit substantially in the form herein provided, to the effect that he has not entered into a collusive agreement with any person, firm or corporation in regard to any Bid submitted.

Before executing any Sub-contract, the successful Bidder shall submit the name of any proposed Sub-contractor for prior approval and an affidavit substantially as above.

IB-10 TAXES

The Contractor shall include in his Bid the cost of all sales and use taxes and furnish to the Owner at the end of each month and upon completion of his Contract, a statement setting forth all such taxes paid. This statement shall indicate the amount paid to each firm and be adequate for audit by the State Department of Revenue.

IB-11 COMPARISON OF BIDS:

Bids will be compared on the basis of the totals of the approximated quantities comprising all items, at the unit and lump sum prices bid for these items. The resulting total Contract Bid Price will be compared which will include and cover the furnishing of all materials, and the performance of all labor requisite or proper, and completing of all the work called for under the accompanying Contract, and in the manner set forth and described in the Contract Documents.

The lowest Bidder under each Contract will be that Bidder whose Bid totals the lowest number of dollars as determined above.

When numbered Alternate bid items or contingent items are required, the lowest Bidder is the Bidder whose bid for the Alternate or combination of Alternates or contingent

items, selected by the Owner is the lowest. The Owner reserves the right to select any Alternate or combinations of Alternates and contingent items.

The quantities shown in the Contract Bid Form are considered to be approximate only and are given as the basis for comparison of bids. The City of Asheville may increase or decrease the quantity of any item or portion of the work as may be deemed necessary or expedient.

An increase or decrease in the quantity of any item will not be regarded as sufficient grounds for an increase or decrease in the unit prices, nor in the time allowed for the completion of the work, except as provided for in the contract.

IB-12 AWARD OF CONTRACT:

The award of the Contract will be made to the lowest responsible bidder, who, in the opinion of the Owner, is qualified to perform the work required and is responsible and reliable. When Alternate Bid items are required in the Bid, the Contract will be awarded to that responsible Bidder whose Bid for the Alternate or combination of Alternates, selected by the Owner, is the lowest.

These Bids are asked for in good faith, and awards will be made as soon as practicable, provided satisfactory Bids are received.

The Owner may consider informal and reject any Bid not prepared and submitted in accordance with the provisions hereof.

The right is reserved to waive informalities in bidding, to reject any or all Bids, or to accept a Bid other than the lowest submitted if such action is deemed to be in the best interest of the Owner.

IB-13 COMMENCEMENT OF WORK:

Upon execution and delivery of the Contract and insurance certificates and policies, the Contractor will be notified to proceed with the work of the Contract. The work of the Contract shall be commenced within ten (10) days following such notification or as otherwise specified in the Notice to Proceed.

The Contractor shall notify the Public Works Inspector of the Public Works Department in writing, of his intention to enter upon the site of the work at least five (5) days in advance of such entrance.

IB-14 DAMAGES FOR FAILURE TO EXECUTE CONTRACT:

If an accepted Bidder shall fail or refuse to sign and deliver this Contract and required surety bonds and insurance documentation within twenty (20) days after he has received Notice of Award of his Bid, the Owner shall retain, as partial damages for such failure or refusal, the Bid security of such defaulting Bidder. In addition to such damages, the Owner reserves whatever rights and remedies it may have against such defaulting Bidder.

Execution of the Contract shall include submission of a complete original Certificate of Insurance with proof of coverage as required and of the form required by the General and Supplementary Conditions of the Contract Documents.

IB-15 EQUAL EMPLOYMENT OPPORTUNITY

Attention of Bidders is particularly called to the requirements for insuring that employees and applicants for employment are not discriminated against because of their race, color, religion, sex, or national origin.

IB-16 PROGRESS SCHEDULE/TIME OF COMPLETION

As part of completing the bid proposal, the bidder shall set forth its own progress schedule and stipulate completion dates for all the work. Unreasonable entries, such as, but not limited to, the list below shall be considered a failure to meet the intent of the Contract documents and the bid shall be rejected.

1. The same or nearly the same date for all phases of the Work.
2. Progress of the Work shall begin as specified in these documents and be continuous, regardless of completion date.
3. There is not a hard completion date for this project; it will be complete when the fiscal year funding is extinguished. Preparation work for the planting season may commence immediately upon receipt of the notice to proceed. For the purposes of this contract, the planting season will be defined as September 1st through November 30th. **All work must be completed by December 16th , 2016 for this stage of the project.**

****END OF SECTION****

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

CONTRACT NUMBER: _____

THIS AGREEMENT is entered into this _____ day of _____, 20_____
by and between the City of Asheville (hereinafter referred to as the "City"), and _____
_____(hereinafter referred to as the "Contractor").

WITNESSETH

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the parties agree as follows:

1. Scope of Work

The Contractor shall furnish all labor, material, equipment, supervision, permits and insurance necessary to perform the work as set forth in the Contract Documents and as generally defined below. The Contractor shall inspect the location of the project and make himself aware of the existing conditions and the extent of the work to be performed.

This contract is for implementation of the median improvements described in the design documents attached herein. The work includes all clearing, grubbing, and disposal of all clearing debris, planting of the areas within the design documents, including installation of trees, shrubs, ground covers, herbaceous plants and bulbs, seeding or sodding or lawn areas, and all other associated activities including traffic control and associated items and activities. This contract is for 1 year, but the City may elect to renew this agreement for two (2) additional twelve (12) month periods

The scope of work is described within the design document provided by McGill Associates, P.A., entitled "Asheville Median Maintenance Landscaping Project", dated December 2015.

2. Contract Administration

Vinnie Sullivan, Project Manager with the City of Asheville Capital Projects Management Division, or his appointed representative shall administer the contract process, and shall have authority to act on behalf of the City and shall be the interpreter of the bidding requirements and specifications of this Contract, (herein "Agent"). A representative of the City of Asheville Streets Dept., shall be the Project Manager during the construction phase of the contract.

3. Time for Performance

The Contractor shall begin work within **10 days** upon a written Notification to Proceed by the City, and shall complete the work by December 16th, 2016, unless said time period is extended by written consent of the City through its Engineer. The City shall determine when the work has been completed by its formal and written acceptance of the work. The Contractor shall complete the work within the time specified, such time being of the essence in this Agreement and a material consideration hereof, but the City retains the right to extend said time period. The Contractor is required to prosecute the Work in a continuous and uninterrupted manner from the time the Contractor receives the Notice to Proceed until completion and final acceptance of the Project. The Contractor shall not be permitted to suspend operations except for reasons beyond the Contractor's control, except where the City has authorized a suspension of the Contractor's operations in writing.

4. Contract Time and Liquidated Damages

The estimated Notice to Proceed date for this project is August 15th, 2016. The contractor may begin work prior to this date upon approval of the Engineer or his duly authorized representative only if the actual Notice to Proceed has been executed. If such approval is given, and the Contractor begins work prior to the date of availability, the City of Asheville will assume no responsibility for any delays caused prior to the date of availability by any reason whatsoever, and such delays, if any, will not constitute a valid reason for extending the completion date. No work will be permitted and no purchase order will be issued until all required bonds and prerequisite conditions and certifications have been satisfied. **Failure to complete all work within the time hereby given will result in liquidated damages of Five Hundred Dollars (\$500) per day.**

5. Contract Sum

The City shall pay the Contractor for accepted installed work based on the unit prices provided by the Contractor as set forth in the Bid Form. The total sum shall not exceed \$_____. Said total sum shall be subject to additions only by written amendments to this Agreement signed by both parties.

The Contractor is solely responsible for the price of all labor, materials and equipment necessary to perform the work as set forth in the Contractor's bid.

This is a unit price Contract. The quantities shown in the itemized proposal for the project are considered to be approximate only and are given as the basis for comparison of bids. The City of Asheville may increase or decrease the quantity of any item or portion of the work as deemed necessary or expedient. An increase or decrease in the quantity of an item will not be regarded as sufficient ground for an increase or decrease in the unit prices, nor in the time allowed for the completion of the work, except as provided in the contract. The City shall pay to the Contractor based on the unit prices submitted on the Contract Bid Form following acceptance of the work by the City's appointed project inspector. The Contractor is solely responsible for the price of any materials or equipment necessary to perform the work as set forth in the Contractor's bid.

6. Payment

Partial payments based on progress estimates will be made as specified in the Supplemental Specifications, Special Provisions, and in accordance with 109-4 of the North Carolina Department of Transportation Standard Specifications for Roads and Structures.

7. Insurance

The Contractor agrees to keep and maintain for the duration of this Agreement including but not limited to commercial general liability, auto liability, workers' compensation, employer's liability, and umbrella coverage with at least the minimum limits shown below. The Contractor shall furnish the City with certificates of insurance for each type of insurance described herein, with the City listed as Certificate Holder and as an additional insured on the Contractor's general liability and auto liability policies and provide a waiver of subrogation on the Contractor's general liability and workers' compensation policies. In the event of bodily injury or property damage loss caused by the Contractor's negligent acts or omissions in connection with Contractor's services performed under this Agreement, the Contractor's Liability insurance shall be primary with respect to any other insurance which may be available to the City, regardless of how the "Other Insurance" provisions may read. In the event of cancellation, substantial changes or nonrenewal, the Contractor and Contractor's insurance carrier shall give the City at least thirty (30) days prior written notice.

No work shall be performed until the Contractor has furnished to the City the above referenced certificates of insurance and associated endorsements, in a form suitable to the City. Upon request, the Contractor shall provide the City copies of their insurance policies.

Commercial General Liability:	\$1,000,000 per occurrence
Excess (Umbrella) Liability:	\$2,000,000
Commercial Auto Liability:	\$1,000,000 combined single limit
Workers' Compensation:	Statutory
Employer's Liability:	\$500,000 each accident/total disease/employee disease

Evidence of said coverages shall be provided to the City's Risk Management Division. Certificate of Insurance lists City of Asheville, PO Box 7148, Asheville, NC 28802, as Certificate Holder.

8. Hold Harmless and Indemnification

CONTRACTOR shall indemnify, defend and hold harmless the City and its subsidiaries, divisions, officers, directors and employees from all liability, loss, costs, claims, damages, expenses, attorney fees, judgments and awards arising or claimed to have arisen, from any injury caused by, or allegedly caused by, either in whole or in part, any act or omission of the CONTRACTOR or any employee, agent or assign of the CONTRACTOR. This provision is not applicable to any claim arising out of or related to any active or primary negligence of or by City, its officers or employees.

The Contractor shall comply with the provisions of the Americans with Disabilities Act and all rules and regulations promulgated thereunder. The Contractor hereby agrees to indemnify the City from and against all claims, suits, damages, costs, losses and expenses in any manner arising out of or connected with the failure of the Contractor, its subcontractors, agents, successors, assigns, officers or employees to comply with provisions of the ADA or the rules and regulations promulgated thereunder.

Nothing herein shall be construed as a waiver on the part of the City to any defense of any claim, including, but not limited to the defense of governmental immunity.

9. Amendments and Change Orders

This Contract along with the Supplemental Specifications and Exhibits as referenced herein constitutes the entire agreement between the City and Contractor. This contract may be amended, supplemented or modified only by a duly executed written instrument as an amendment to this contract or a written change order to the Contractor signed by both parties hereto.

10. Compliance with Laws

a. Contractor shall comply with all state, federal or local laws, or ordinances, codes, rules or regulations governing performance of this Agreement, including but not limited to, equal opportunity employment laws, O.S.H.A., minimum wage and hour regulation, North Carolina State Building Code regulations and immigration laws.

b. The contractor shall provide a Drug-Free Workplace, as set forth in the Invitation to Bid, during the performance of this contract.

c. This Contract is entered into in North Carolina and shall be construed under the

statutes and laws of North Carolina.

d. All claims, disputes and other matters in question between the Contractor and the City arising out of, or relating to, the Agreement or breach thereof, shall be decided by a civil action or civil actions, which shall be commenced and tried only in Buncombe County, North Carolina. Each party hereby waives any right or claim for a change of venue from Buncombe County, North Carolina. This section shall be effective notwithstanding any other provisions to the contrary in the Agreement or supplements thereto. Nothing herein shall, however prevent the Contractor and the City from mutual agreement to submit claims, disputes, or other matters in question to arbitration, either binding or non-binding, or to mediation.

10. General Conditions

a. This Agreement embodies all the representations, rights, duties, and obligations of the parties. Any prior oral or written agreement not embodied herein shall not be binding upon or endure to the benefit of any of the parties.

b. The Contractor shall be properly licensed and skilled in their respective trade, and shall have been established in the construction field for a minimum of three years and must regularly engage in construction contracting in North Carolina.

c. The work shall be stated so as to minimize inconvenience to the City. Access as required by the City to the facility shall be maintained by the Contractor throughout construction unless prior written approval is otherwise obtained in advance. The Contractor shall provide signs, barricades, and warning devices to ensure safe passage for both vehicular and pedestrian traffic at all times.

d. The Contractor shall make necessary provisions to protect the area surrounding all construction sites and shall be responsible for full restoration of any damages and/or costs of restoration to the construction site. All damages on all sites, incidental to the installation of the work described in the attached Exhibit "A" shall be repaired or replaced by the Contractor.

e. The Contractor shall make necessary provisions to protect structures and property from any and all damage arising out of, relating to, or resulting from this work. Also, all debris, rubbish or waste materials shall be removed from the site by the Contractor and at the Contractor's expense.

f. All sales tax levied on materials entering into this project shall be paid by the Contractor, including the Optional Sales and Use Tax.

g. Contractors shall obtain any applicable license and/or permits prior to the start of construction and shall notify the necessary inspectors at the proper times during construction.

h. Contractor shall obtain a written certificate of compliance upon completion of the permitted work and before final payment is made.

i. The Contractor shall at all times keep the premises free from accumulations of waste materials or rubbish caused by his employees at work; and at the completion of the work, he shall remove all his rubbish from and about the premises and all his tools, scaffolding and surplus materials and shall leave the premises "broom clean" or its equivalent. It is further agreed that all materials and equipment that have been removed and replaced as a part of the work hereunder shall belong to the Contractor, unless otherwise specified in the work described in Exhibit "A".

j. The Contractor shall, upon completion of the work, and before final payment is authorized by the City or its agent, furnish the City with an affidavit certifying that all charges for materials and any other expenses incurred by the Contractor pertaining to the execution of this Agreement have been paid in full, to the end that no liens of any kind or character (save and except those between the parties hereto) may be affixed against the above described property. Final payment on the Agreement amount will be made only after final inspection and acceptance of all work to be performed by the Contractor, and the Contractor submits satisfactory releases of liens or claims for liens by the Contractor, subcontractor, laborers, and materials suppliers.

11. Warranties and Guarantees

All work is to be warranted and guaranteed against materials, equipment, and workmanship for a period of one (1) year. The contractor is responsible for ensuring that all activities to maintain the product for the warranty period occurs. The one year period begins once all work has been completed, final payment has been made, and the Release of Lien has been signed. Any and all manufacturers' warranties shall be assigned to the City. A warranty walk-through inspection shall be conducted approximately one month before the end of the warranty period. A punchlist of all items observed by the owner to be deficient and a result of work activities performed by the contractor shall be generated and shared with the contractor. The contractor shall resolve these conditions to the satisfaction of the owner.

12. Termination

The City may terminate this Agreement upon ten (10) days written notice to the Contractor. In that event, the Contractor shall be paid for any completed work done which is satisfactory to the City. In the event the Contractor should terminate this Agreement, the expenses which the City incurs as a result of securing a new Contractor shall be deducted from any payments owed to the Contractor by the City.

The Contractor will be required to provide to the City, upon termination, an executed release of lien before final payment is processed.

13. Minority Business Plan

The City of Asheville has adopted a Minority Business Plan to encourage participation by women and minority businesses in the award of contracts. Bidders are hereby notified that this contract is subject to the provisions of that Plan. It is the policy of the City to (1) provide minorities an equal opportunity to participate in all aspects of its contracting and procurement programs and (2) prohibit any and all discrimination against persons or businesses in pursuit of these opportunities.

14. Right to Audit

Contractor shall maintain all fiscal records relating to this Agreement in accordance with Generally Accepted Accounting Principles, and shall maintain any other records pertinent to this Agreement in a manner so as to clearly document Contractor's performance. The City shall have a right to access the fiscal and other records of Contractor that are pertinent to this Agreement to perform examinations and audits. Contractor shall retain and keep accessible all the fiscal and other records for a minimum of three (3) years following final payment and termination of this Agreement, or until the conclusion of any audit or controversy related to this Agreement, whichever is later.

15. Payment

All applicable forms for payment must be filled out and payment applications / invoices coordinated and accepted by the Engineer prior to submitting for payment. Failure to do this will result in the invoice not being paid.

16. Funding

Notwithstanding any other provisions of this Agreement, if the City does not receive said funding for this Agreement from the City Council for any fiscal year applicable to this Agreement, then the City shall have the right to terminate this Agreement without penalty by giving not less than thirty (30) days' written notice documenting the lack of funding.

17. E-Verify Employer Compliance:

Employers and their subcontractors with 25 or more employees as defined in Article 2 of Chapter 64 of the NC General Statutes must comply with E-Verify requirements to contract with governmental units. E-Verify is a Federal program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law. E-verify can be accessed via this link: <http://www.uscis.gov/e-verify/employers> .

18. Iran Divestment Act:

N.C.G.S. 143C-6A-5(a) requires the City of Asheville to obtain and retain on file a certification from all bidders, contractors, and their subcontractors that they are not listed on the Final Divestment List created by the state Treasurer pursuant to N.C.G.S. 143C-6A-4.

The certification is required at the following times:

- When a bid is submitted
- When a contract is entered into (if the certification was not already made when the vendor made its bid)
- When a contract is renewed or assigned

N.C.G.S. 143C-6A-5(b) requires that contractors with the State, a North Carolina local government, or any other political subdivision of the State of North Carolina must not utilize any subcontractor found on the State Treasurer's Final Divestment List.

The State Treasurer's Final Divestment List can be found on the State Treasurer's website at the address www.nctreasurer.com/Iran and will be updated every 180 days.

Contract Signature Page

Contract # _____
Council Resolution # _____ (if applicable)

IN WITNESS WHEREOF, each party has caused this agreement to be executed by it's duly authorized official as of the day and year written above.

The Department Director by Written Approval conveys that this contract has been reviewed and presented for approval by the City of Asheville.

C.I.P. Manager DATE _____

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

Chief Financial Officer DATE _____

City Manager's signature, if required
Attest to: CITY OF ASHEVILLE

City Clerk BY: _____ DATE _____
(Corporate Seal) City Manager

STATE OF NORTH CAROLINA
COUNTY OF BUNCOMBE

I, Notary Public of the County and State aforesaid, certify that _____, personally came before me this day and acknowledged that she is the City Clerk of the City of Asheville, a municipal corporation, and that by authority duly given and as the act of the corporation the foregoing instrument was signed in its name by its City Manager and attested by herself as its City Clerk.

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

Notary Public
Printed Name: _____
My Commission Expires: _____

COA Project No: CPM-15-16-003

ACCEPTED BY THE
City of Asheville

City Manager

Date

NOTICE OF AWARD

To: _____

PROJECT Description: _____

The Owner has considered the Bid Proposal submitted by you for the above-described Project in response to its receipt of Bids on _____, 20__, and the Instructions to Bidders.

You are hereby notified that your Bid Proposal has been accepted in the amount of \$ _____
_____.

You are required by the Instructions to Bidders to execute the Contract and furnish the required Performance Bond, Payment Bond and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Contract and to furnish said Bonds within ten (10) days from the date of this Notice, said Owner will be notified to consider all your rights arising out of the Owner's acceptance of your Bid Proposal as abandoned and as a forfeiture of your Bid Proposal. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the Owner.

Dated this _____ day of _____, _____.

CITY OF ASHEVILLE

By: _____
City Manager

ACCEPTANCE OF NOTICE OF AWARD

Receipt of the above Notice of Award is hereby acknowledged this ____ day of _____, 20__.

Contractor

By: _____

Title: _____

NOTICE TO PROCEED

TO: _____

DATE: _____
PROJECT: _____

You are hereby notified to commence WORK in accordance with the Contract dated _____, 20__, on or before _____, 20__, and you are to complete the WORK within _____ consecutive calendar days thereafter. The date of completion of all Work is therefore _____, 20__.

CITY OF ASHEVILLE

By: _____
City Manager

ACCEPTANCE OF NOTICE TO PROCEED

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

_____ this the ____ day of _____, 20__.

Contractor

By: _____

Title: _____

GENERAL PROVISIONS

This contract is for the installation of landscape improvements on City of Asheville roadway median and bulb-outs as indicated in the contract documents. All work and materials shall be in accordance with the provisions of this Contract, the Project Special Provisions, the North Carolina Department of Transportation Standard Specifications for Roads and Structures 2012, the North Carolina Department of Transportation Roadway Standards Drawings, and the current edition of the Manual of Uniform Traffic Control Devices (MUTCD). If conflict arises between provisions of this Contract and other referenced provisions, this Contract controls.

The Contractor shall keep himself fully informed of all Federal, State and local laws, ordinances, and regulations, and shall comply with the provisions of Section 107 of the Standard Specifications.

The 2012 Standard Specifications for Roads and Structures of the North Carolina Department of Transportation hereinafter referred to as the "Standard Specifications" shall apply on all portions of this project unless otherwise specified herein. Where special provisions refer to particular items, materials, procedures or etc., the appropriate section of the Standard Specifications shall still apply. The absence of a description or specification for any item shall automatically refer to the appropriate section of the Standard Specifications.

Wherever and whenever the definition or term "Department of Transportation," is used throughout herein, same shall mean and constitute the "City of Asheville." Wherever and whenever the definition or term "Department" is used throughout herein, same shall mean and constitute the "City of Asheville Capital Projects Management Division" (during the bidding phase of the contract) and "City of Asheville Streets Division" (during the construction phase of the contract), unless otherwise specifically defined. Wherever and whenever the definition or term "Engineer" or "Chief Engineer" is used throughout herein, same shall mean and constitute the "Project Manager for the City of Asheville."

PRE-CONSTRUCTION CONFERENCE

The Engineer and the Contractor will establish a mutually agreeable date and time on which the pre-construction conference will be held. The Contractor's project superintendent and other individuals representing the Contractor who are knowledgeable of the Contractor's proposed progress schedule or who will be in charge of major items of the work shall attend the pre-construction conference.

CLAIMS FOR ADDITIONAL COMPENSATION OR TIME EXTENSION

Any claims for additional compensation and/or extensions of the completion date shall be submitted to the Engineer with detailed justification within **thirty (30) days** of the time of the event. The failure of the Contractor to submit the claim(s) within **thirty days** shall be a bar to recovery.

Failure on the part of the Contractor to furnish bonds or certifications or to satisfy preliminary requirements necessary to issue the contract will not constitute grounds for extension of the contract time.

DAY AND TIME RESTRICTIONS

Construction will be during daylight hours only unless approved by the Engineer.

HOLIDAY RESTRICTIONS

The City will observe the following days as holidays, and will not provide any construction inspection or staff function on these days:

New Year's Day
Martin Luther King, Jr. Day
Good Friday
Memorial Day
Independence Day
Labor Day
Thanksgiving (two days)
Christmas (three days)

The Contractor may perform incidental items of construction which require minimum inspection; however, no major operations which, in the opinion of the Engineer, require daily inspections may be performed on these days.

NOTIFICATION OF OPERATIONS

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

NO MAJOR CONTRACT ITEMS

None of the items included in this contract will be major items.

PERMITS

A City of Asheville Temporary Closure permit may be required for this project at a current fee of \$50.00 for a closure period less than 30 days. The permit application must be submitted, reviewed, and approved before construction begins. Information regarding the temporary closure permit process may be obtained by contacting Ted Williams at 828-259-5476 or by e-mail at twilliams@ashevillenc.gov.

SUBSURFACE INFORMATION

There is **no** subsurface information available on this project. The Contractor shall make his own investigation of subsurface conditions.

Standard Special Provisions

DO NOT REMOVE, ADD TO OR MODIFY PROVISIONS.
DOING SO WILL RESULT IN REJECTION OF BID.

Authority of the Engineer

The Engineer for this project shall be a representative of the City of Asheville Streets Dept., who shall be the Project Manager during the construction phase of the contract. The Project Manager for the bidding phase of this contract shall be Vinnie Sullivan, Capital Projects Project Manager for the City of Asheville, acting directly or through his duly authorized representatives.

The Engineer will decide all questions which may arise as to the quality and acceptability of work performed and as to the rate of progress of the work; all questions which may arise as to the interpretation of the contract; and all questions as to the acceptable fulfillment of the contract on the part of the Contractor. Their decision shall be final, they shall have executive authority to enforce, and make effective such decisions and orders that the Contractor fails to carry out promptly.

Availability of Funds - Contract Termination

In the event of termination, the Contractor shall be given written notice of termination at least 60 days before completion of scheduled work for which funds are available. In the event of termination, the Contractor shall be paid for work already performed in accordance with the contract specifications.

Bankruptcy

The City of Asheville, at its option, may terminate the contract upon the filing by the Contractor of any petition for protection under the provisions of the Federal Bankruptcy Act.

Construction Stakes Lines and Grades

Unless otherwise required in the contract, the Contractor will be responsible for all construction layout and construction staking.

Cooperation with City Forces and Other Contractors

The Contractor must cooperate with City forces and other contractors working within the limits of this project, as directed by the Engineer.

Default of Contract

The City of Asheville shall have the right to declare a default of the contract for breach by the Contractor of any material term or condition of the contract. Default of contract shall be in accordance with the terms, conditions, and procedures of this Contract and the applicable provisions Article 108-9 of the *Current North Carolina Department of Transportation Standard Specifications for Roads and Structures*.

Debarment statement

The Contractor certifies and understands that by his/her signature on the Bid Form that he/she and the contracting firm he/she represents has not been banned, debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency.

Driveways and Private Property

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

Inspection

All work shall be subject to inspection by the Engineer at any time. Routinely, the Engineer will make periodic inspections of the completed work. It will be the responsibility of the Contractor to keep the Engineer informed of his proposed work plan and to submit written reports of work accomplished on a frequency to be determined by the Engineer.

Interpretation of quantities in proposal form

Payment to the Contractor will be made only for the actual quantities of the various items that are completed and accepted by the Inspector in accordance with the terms of the contract.

Labor and Materials

All labor and/or materials required to properly complete this project shall be considered incidental to this Contract unless stated as a bid item.

Littering and Site Clean Up

Littering will not be tolerated in any form or fashion. The Contractor shall clean the site of excess excavation, waste packing materials, wire, and all other debris which results from required work. At the end of each workday, the site shall be clean and clear. The Contractor shall be responsible for hauling and disposing of all waste materials, and shall dispose of all waste materials in accordance with the Standard Specifications. No debris shall be blown into the street using a leaf blower, but shall be blown into a central location and removed using a broom, shovel, or other means.

Materials and Testing

The Engineer reserves the right to perform all sampling and testing in accordance with the applicable provisions of Section 106 of the Standard Specifications and the Department's "Materials and Test Manual." However the Engineer may reduce the frequency of sampling and testing where he deems it appropriate for the project under construction. Specific testing requirements for line items described in McGill's plans and specification can be found within those documents.

The Contractor shall furnish the applicable certifications and documentation for all materials as required by the applicable provisions of the Standard Specifications. Material which is not properly certified will not be accepted.

If asphalt is installed during this project, delivery tickets for all material shall be furnished in accordance with Section 106-7 of the NCDOT Standard Specifications and shall include the following information:

1. COA Work Order Number
2. Date
3. Time issued
4. Type of Material
5. Gross weight
6. Tare Weight
7. Net weight of material
8. Plant Location
9. Truck Number

10. Contractor's name
11. Public weighmaster's stamp or number
12. Public weighmaster's signature or initials in ink
13. Division of Highways' Job mix formula number, if ticket is for asphalt plant mix.
14. Division of Highways' Asphalt Plant Certification Number, if ticket is for asphalt plant mix.

Progress Schedule

The Contractor shall prepare and submit for review and approval a schedule of proposed working progress. This schedule shall be submitted in the form of a Gant Chart using MS Project or other format that is approved by the Engineer.

The proposed progress schedule shall be submitted no later than 7 days before the date of the project preconstruction conference and shall be approved before any payments will be processed for the project.

When the Engineer has extended the completion date or if the project overrun is anticipated to exceed 5%, the Contractor may submit a revised progress schedule to the Engineer for review and approval. If plan revisions are anticipated to change the sequence of operations in such a manner as will affect the progress but not the completion date, then the Contractor may submit a revised progress schedule for review and approval but the completion date shall remain unchanged.

The proposed progress schedule shall contain the following items:

A time scale diagram with major work activities and milestone dates clearly labeled.

(1) For purposes of composing the progress schedule, major work activities are defined as components comprising more than 5% of the total project cost or occupying more than 10% of total contract time and shall include, if applicable, the following:

- (a) Clearing and grubbing
- (b) Grading
- (c) Sidewalks

(2) For purposes of composing the progress schedule, major milestones are derived from the project construction phasing and shall include, if applicable, the following:

- (a) Start of construction
- (b) Intermediate completion dates or times
- (c) Seasonal limitation/observation periods/moratoriums
- (d) Traffic shifts
- (e) Beginning and end of each traffic control phase or work area
- (f) Road openings
- (g) Completion date

(3) A written narrative that explains the sequence of work, the controlling operations, intermediate completion dates, milestones, project phasing, anticipated work schedule and estimated resources. In addition and if applicable, explain how permit

requirements, submittal tracking and coordination with subcontractors, utility companies and other entities will be performed.

Prompt Payment

Prompt payment of monies due subcontractors, second tier subcontractors and material suppliers and release of retainage:

Contractors at all levels; prime, subcontractor, or second tier subcontractor, shall within seven calendar days of receipt of monies, resulting from work performed on the project or services rendered, pay subcontractors, second tier subcontractors, or material suppliers as appropriate. This seven-day period begins upon knowledgeable receipt by the contracting firm obligated to make subsequent periodic or final payment. These prompt payment requirements will be met if each firm mails the payment to the next level firm by evidence of postmark within the seven-day period.

This provision for prompt payment shall be incorporated into each subcontract or second tier subcontract issued for work performed on the project or for services provided. If any retainage is held on subcontractors, all retainage shall be released within seven calendar days of release by the City.

Failure of any entity to make prompt payment as defined herein may result in withholding of money due to that entity in the next partial payment until such assurances are made satisfactory to this provision.

Safety Vests

All Contractors' personnel, all subcontractors and their personnel, and any material suppliers and their personnel shall wear a reflective vest or outer garment conforming to the requirements of MUTCD at all times while on the project.

Safety and Accident Protection

In accordance with Article 107-21 of the Standard Specifications, the Contractor shall comply with all applicable Federal, State, and local laws, ordinances, and regulations governing safety, health, and sanitation, and shall provide all safeguards, safety devices, and protective equipment, and shall take any other needed actions, on his own responsibility that are reasonably necessary to protect the life and health of employees on the job and the safety of the public, and to protect property in connection with the performance of the work covered by the contract.

Supervision By Contractor

At all times during the life of the project the Contractor shall provide one permanent employee who shall have the authority and capability for overall responsibility of the project and who shall be personally available at the work site within 24 hours notice. Such employee shall be fully authorized to conduct all business with the subcontractors, to negotiate and execute all supplemental agreements, and to execute the orders or directions of the Engineer.

At all times that work is actually being performed, the Contractor shall have present on the project one competent individual who is authorized to act in a supervisory capacity over all work on the project, including work subcontracted. The individual who has been so authorized shall be experienced in the type of work being performed and shall be fully capable of managing, directing, and coordinating the work; of reading and thoroughly understanding the contract; and receiving and carrying out directions from the Engineer or

his authorized representatives. He shall be an employee of the Contractor unless otherwise approved by the Engineer. The Contractor may, at his option, designate one employee to meet the requirements of both positions. However, when the designated employee is absent from the work site, an authorized individual qualified to act in a supervisory capacity on the project shall be present.

Subletting of Contract

The Contractor shall not sublet, sell, transfer, assign or otherwise dispose of this contract or any portion thereof; or his right, titles, or interest therein; without written consent of the Engineer. Subletting of this contract or any portion of the contract shall conform to the requirements of the applicable provisions of Article of 108-6 of the **Standard Specifications**.

Temporary Suspension of Work

In accordance with Article 108-7 of the **Standard Specifications**, the Engineer will have the authority to suspend the work wholly or in part, any written order for such periods as he may deem necessary for any of the following reasons.

1. Conditions considered unfavorable for the suitable prosecution of the work, or
2. The Contractor's failure for correct conditions unsafe for workmen or the general public, or
3. The Contractor has not carried out orders given to him by the Engineer, or
4. The Contractor's failure to perform any provisions of the contract.

No extension of the completion date will be allowed for the above suspensions except as may be provided for in Article 108-10

Traffic Control and Work Zone Safety

The Contractor shall maintain traffic during construction and provide, install, and maintain all traffic control devices in accordance with these project guidelines, the Project Special Provisions, **Standard Specifications for Roads and Structures 2012**, and the current edition of the **Manual on Uniform Traffic Control Devices (MUTCD)**.

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

All personnel when working in traffic areas or areas in close proximity to traffic shall wear an approved safety vest, or shirt or jacket which meets the color requirements of the **MUTCD**.

The Contractor shall comply with all applicable Federal, State, and local laws, ordinances, and regulations governing safety, health, and sanitation, and shall provide all safeguards, safety devices, and protective equipment, and shall take any other needed actions, on his own responsibility that are reasonably necessary to protect the life and health of employees on the job and the safety of the public, and to protect property in connection with the performance of the work covered by the contract.

Failure to comply with any of the requirements for safety and traffic control of this contract shall result in **suspension of work** as provided in subarticle 108-7(2) of the **Standard Specifications**.

Utility Conflicts

THE CONTRACTOR SHALL HAVE ALL UTILITIES WITHIN THE WORK ZONE LOCATED BEFORE WORK IS COMMENCED WITHIN THAT LOCATION.

It shall be the responsibility of the Contractor to contact all affected utility owners and determine the precise locations of all utilities prior to beginning construction. Utility owners shall be contacted a minimum of 3 full business days prior to the commencement of operations. Special care shall be used in working around or near existing utilities, protecting them when necessary to provide uninterrupted service. In the event that any utility service is interrupted, the Contractor shall notify the utility owner immediately and shall cooperate with the owner, or his representative, in the restoration of service in the shortest time possible. Existing fire hydrants shall be kept accessible to fire departments at all times.

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

Warranty

All work shall be under warranty by the contractor for a period of one year from acceptance by the City. If the work should fail within this time period it shall be corrected at the contractor's expense. Means of repair shall be at the discretion of the construction project manager. Repair work shall be under warranty for one year from the City's acceptance.

Revise the *2012 Standard Specifications* as follows:

STANDARD SPECIAL PROVISION

(1-17-12)

ERRATA

Z-4

Division 2

Page 2-7, line 31, Article 215-2 Construction Methods, replace "Article 107-26" with "Article 107-25".

Page 2-17, Article 226-3, Measurement and Payment, line 2, delete "pipe culverts,".

Page 2-20, Subarticle 230-4(B), Contractor Furnished Sources, change references as follows: Line 1, replace "(4) Buffer Zone" with "(c) Buffer Zone"; Line 12, replace "(5) Evaluation for Potential Wetlands and Endangered Species" with "(d) Evaluation for Potential Wetlands and Endangered Species"; and Line 33, replace "(6) Approval" with "(4) Approval".

Division 6

Page 6-7, line 31, Article 609-3 Field Verification of Mixture and Job Mix Formula Adjustments, replace "30" with "45".

Page 6-10, line 42, Subarticle 609-6(C)(2), replace "Subarticle 609-6(E)" with "Subarticle 609-6(D)".

Page 6-11, Table 609-1 Control Limits, replace "Max. Spec. Limit" for the Target Source of $P_{0.075}/P_{be}$ Ratio with "1.0".

Division 10

Page 10-74, Table 1056-1 Geotextile Requirements, replace "50%" for the UV Stability (Retained Strength) of Type 5 geotextiles with "70%".

Division 12

Page 12-8, Table 1205-4 and 1205-5, replace "THERMOPLASTIC" in the title of these tables with "POLYUREA".

Division 17

Page 17-26, line 42, Subarticle 1731-3(D) Termination and Splicing within Interconnect Center, delete this subarticle.

PLANT AND PEST QUARANTINES

(Imported Fire Ant, Gypsy Moth, Witchweed, And Other Noxious Weeds)

(3-18-03)

Z-04a

Within quarantined area

This project may be within a county regulated for plant and/or pests. If the project or any part of the Contractor's operations is located within a quarantined area, thoroughly clean all equipment prior to moving out of the quarantined area. Comply with federal/state regulations by obtaining a certificate or limited permit for any regulated article moving from the quarantined area.

Originating in a quarantined county

Obtain a certificate or limited permit issued by the N.C. Department of Agriculture/United States Department of Agriculture. Have the certificate or limited permit accompany the article when it arrives at the project site.

Contact

Contact the N.C. Department of Agriculture/United States Department of Agriculture at 1-800-206-9333, 919-733-6932, or <http://www.ncagr.com/plantind/> to determine those specific project sites located in the quarantined area or for any regulated article used on this project originating in a quarantined county.

Regulated Articles Include

1. Soil, sand, gravel, compost, peat, humus, muck, and decomposed manure, separately or with other articles. This includes movement of articles listed above that may be associated with cut/waste, ditch pulling, and shoulder cutting.
2. Plants with roots including grass sod.
3. Plant crowns and roots.
4. Bulbs, corms, rhizomes, and tubers of ornamental plants.
5. Hay, straw, fodder, and plant litter of any kind.
6. Clearing and grubbing debris.
7. Used agricultural cultivating and harvesting equipment.
8. Used earth-moving equipment.
9. Any other products, articles, or means of conveyance, of any character, if determined by an inspector to present a hazard of spreading imported fire ant, gypsy moth, witchweed or other noxious weeds.

EROSION & SEDIMENT CONTROL/STORMWATER CERTIFICATION:

1-16-07

SP1G180

General

Schedule and conduct construction activities in a manner that will minimize soil erosion and the resulting sedimentation and turbidity of surface waters. Comply with the requirements herein regardless of whether or not a National Pollutant Discharge Elimination System (NPDES) permit for the work is required.

Establish a chain of responsibility for operations and subcontractors' operations to ensure that the Erosion and Sediment Control/Stormwater Pollution Prevention Plan is implemented and maintained over the life of the contract.

- (A) Certified Supervisor –Provide a certified Erosion & Sediment Control Stormwater Supervisor to manage the Contractor and subcontractor(s) operations, insure compliance with Federal, State and Local ordinances and regulations, and to manage the Quality Control Program.
- (B) Certified Foreman – Provide a certified, trained foreman for each construction operation that increases the potential for soil erosion or the possible sedimentation and turbidity of surface waters.
- (C) Certified Installer – Provide a certified installer to install or direct the installation for erosion or sediment/stormwater control practices.

Roles and Responsibilities

- (A) Certified Erosion & Sediment Control Stormwater Supervisor - The Certified Supervisor shall be responsible for ensuring erosion and sediment/stormwater control is adequately implemented and maintained on the project and conducting the quality control program. The Certified Supervisor shall be on the project within 24 hours from initial exposure of an erodible surface to the project's final acceptance when questions or concerns arise with Erosion and Sedimentation Control/Stormwater issues. Perform the following duties:
 - (1) Manage Operations - Coordinate and schedule the work of subcontractors so that erosion and sediment/stormwater control measures are fully executed for each operation and in a timely manner over the duration of the contract.
 - (a) Oversee the work of subcontractors so that appropriate erosion and sediment/stormwater control preventive measures are conformed to at each stage of the work.
 - (b) Prepare the required weekly erosion control punchlist and submit to the Engineer.
 - (c) Attend all weekly or monthly construction meetings to discuss the findings of the NPDES inspection and other related issues.
 - (d) Implement the erosion and sediment/stormwater control site plans requested.
 - (e) Provide for erosion and sediment/stormwater control methods for the Contractor's temporary work not shown on the plans, such as, but not limited to work platforms, temporary construction, pumping operations, plant and storage yards, and cofferdams.
 - (f) Acquire applicable permits and comply with requirements for borrow pits, dewatering, and any temporary work conducted by the Contractor in jurisdictional areas.
 - (g) Conduct all erosion and sediment/stormwater control work in a timely and workmanlike manner.
 - (h) Fully install erosion and sediment/stormwater control work prior to suspension of the work.
 - (i) Coordinate with Department, Federal, State and Local Regulatory agencies on resolution of erosion and sediment/stormwater control issues due to the Contractor's operations.

- (j) Ensure that proper cleanup occurs from vehicle tracking on paved surfaces and/or any location where sediment leaves the right-of-way.
 - (k) Have available a set of erosion control plans that has been properly updated to reflect necessary plan and field changes for use and review by Department personnel as well as regulatory agencies.
- (2) Requirements set forth under the NPDES Permit - The Department's NPDES permit outlines certain objectives and management measures pertaining to construction activities. The permit references *NCG010000*, General Permit to Discharge Stormwater under the NPDES, and states that the Department shall incorporate the applicable requirements into its delegated E&SC Program. Some of the requirements are, but are not limited to:
- (a) Control project site waste to prevent contamination of surface or ground waters of the state (i.e. construction materials, concrete washout, chemicals, litter, fuels, lubricants, coolants, hydraulic fluids, any other petroleum products, and sanitary waste).
 - (b) Inspect E&SC/Stormwater devices at least once every 7 calendar days, twice weekly for 303(d) impaired streams and within 24 hours after a significant rainfall event of 0.5 inches within 24 hours.
 - (c) Maintain an onsite rain gauge and a record of rainfall amounts and dates.
 - (d) Maintain E&SC/Stormwater inspection records for review by Department and Regulatory personnel upon request.
 - (e) Implement approved reclamation plans on all borrow pits and waste sites.
 - (f) Maintain a log of turbidity test results as outlined in the Department's Procedure for Monitoring Borrow Pit Discharge.
 - (g) Provide secondary containment for bulk storage of liquid materials.
 - (h) Provide training for employees concerning general E&SC/Stormwater awareness, the NPDES Permit requirements, and the requirements of the General Permit, NCG010000.
 - (i) Report violations of the NPDES permit to the Engineer who will notify the DWQ Regional Office within 24 hours.
- (3) Quality Control Program - Maintain a quality control program to control erosion, prevent sedimentation and follow provisions of permits. The quality control program shall:
- (a) Follow permit requirements related to the Contractor and subcontractors' construction activities.
 - (b) Ensure that all operators and/or subcontractor(s) on site have the proper erosion and sediment/stormwater control certification.
 - (c) Notify the Engineer when the required certified erosion and sediment/stormwater control personnel are not available on the job site when needed.
 - (d) Conduct the inspections required by the NPDES permit.
 - (e) Take corrective actions in the proper timeframe as required by the NPDES permit for problem areas identified during the NPDES inspections.
 - (f) Incorporate erosion control into the work in a timely manner and stabilize disturbed areas with mulch/seed or vegetative cover on a section-by-section basis.
 - (g) Maintain temporary erosion and sediment control devices.

- (h) Remove temporary erosion or sediment control devices when they are no longer necessary as agreed upon by the Engineer.
- (i) The Contractor's quality control and inspection procedures shall be subject to review by the Engineer. Maintain NPDES inspection records at the project site. Make NPDES inspection records available at all times for verification by the Engineer.

(B) Certified Foreman - At least one Certified Foreman shall be onsite for each type of work listed herein during the respective construction activities to control erosion, prevent sedimentation and follow permit provisions:

- (1) Foreman in charge of grading activities
- (2) Foreman in charge of bridge or culvert construction over jurisdictional areas
- (3) Foreman in charge of utility activities

The Contractor may request to use the same person as the Level II Supervisor and Level II Foreman. This person shall be onsite whenever construction activities as described above are taking place. This request shall be approved by the Engineer prior to work beginning.

The Contractor may request to name a single Level II Foreman to oversee multiple construction activities on small bridge or culvert replacement projects. This request shall be approved by the Engineer prior to work beginning.

(C) Certified Installers - Provide at least one onsite, certified installer for each of the following erosion or sediment/stormwater control crew

- (1) Seeding and Mulching
- (2) Temporary Seeding
- (3) Temporary Mulching
- (4) Sodding
- (5) Silt fence or other perimeter erosion/sediment control device installations
- (6) Erosion control blanket installation
- (7) Hydraulic tackifier installation
- (8) Turbidity curtain installation
- (9) Rock ditch check/sediment dam installation
- (10) Ditch liner/matting installation
- (11) Inlet protection
- (12) Riprap placement
- (13) Stormwater BMP installations (such as but not limited to level spreaders, retention/detention devices)
- (14) Pipe installations within jurisdictional areas

If a *Certified Installer* is not onsite, the contractor may substitute a Level I Installer with a Level II Foreman, provided the Level II Foreman is not tasked to another crew requiring Level II Foreman oversight

Pre-construction Meeting

Furnish the names of the Certified Erosion & Sediment Control Stormwater Supervisor, Certified Foremen, and Certified Installer and notify the Engineer of changes in certified personnel over the life of the contract within 2 days of change.

Ethical Responsibility

Any company performing work for the North Carolina Department of Transportation has the ethical responsibility to fully disclose any reprimand or dismissal of an employee resulting from improper testing or falsification of records.

Revocation or Suspension of Certification

Upon recommendation of the Chief Engineer - Operations to the certification entity, certification for Supervisor, Certified Foremen, and Certified Installers may be revoked or suspended with the issuance of a Continuing Immediate Corrective Action (Continuing ICA), Notice of Violation, or Cease and Desist Order for erosion and sediment control/stormwater related issues.

Should any of the following circumstances occur, the Chief Engineer may suspend or permanently revoke such certification.

- (A) Failure to adequately perform the duties as defined within the certification program
- (B) Issuance of a continuing ICA, NOV, or Cease and Desist Order
- (C) Failure to fully perform environmental commitments as detailed within the permit conditions and specifications
- (D) Demonstration of erroneous documentation or reporting techniques
- (E) Cheating or copying another candidate's work on an examination
- (F) Intentional falsification of records
- (G) Directing a subordinate under direct or indirect supervision to perform any of the above actions
- (H) Dismissal from a company for any of the above reasons
- (I) Suspension or revocation of one's certification within another state

Suspension or revocation of a certification will be sent by certified mail to the registrant and the Corporate Head of the company that employs the registrant.

A registrant has the right to appeal any adverse action which results in suspension or permanent revocation of certification by responding, in writing, to the Chief Engineer within 10 calendar days after receiving notice of the proposed adverse action.

Chief Engineer - Operations
1537 Mail Service Center
Raleigh, NC 27699-1537

Failure to appeal within 10 calendar days will result in the proposed adverse action becoming effective on the date specified on the certified notice. Failure to appeal within the time specified will result in a waiver of all future appeal rights regarding the adverse action taken. The registrant will not be allowed to perform duties associated with the certification during the appeal process.

The Chief Engineer will hear the appeal and make a decision within 7 days of hearing the appeal. Decision of the Chief Engineer will be final and will be made in writing to the registrant.

If a certification is temporarily suspended, the registrant shall pass any applicable written examination and any proficiency examination, at the conclusion of the specified suspension period, prior to having the certification reinstated.

PERMANENT SEEDING AND MULCHING:

(7-1-95)

1660

SP16 R02

The Department desires that permanent seeding and mulching be established on this project as soon as practical after slopes or portions of slopes have been graded. As an incentive to obtain an early stand of vegetation on this project, the Contractor's attention is called to the following:

For all permanent seeding and mulching that is satisfactorily completed in accordance with the requirements of Section 1660 in the *2012 Standard Specifications* and within the following percentages of elapsed contract times, an additional payment will be made to the Contractor as an incentive additive. The incentive additive will be determined by multiplying the number of acres of seeding and mulching satisfactorily completed times the contract unit bid price per acre for Seeding and Mulching times the appropriate percentage additive.

Percentage of Elapsed Contract Time	Percentage Additive
0% - 30%	30%
30.01% - 50%	15%

Percentage of elapsed contract time is defined as the number of calendar days from the date of availability of the contract to the date the permanent seeding and mulching is acceptably completed divided by the total original contract time.

TRAFFIC CONTROL:

(01-17-12)

RWZ-1

Maintain traffic in accordance with Divisions 10, 11 and 12 of the *2012 Standard Specifications* and the following provisions:

Install Work Zone Advance Warning Signs in accordance with Standard Drawing No. 1101.01 of the *2012 Roadway Standard Drawings* prior to beginning any other work. Use a lane closure or slow moving operation to complete the work, as necessary, unless otherwise indicated (refer to Standard Drawing No. 1101.02, 1101.11, 1110.01, 1110.02 and 1130.01 of the *2012 Roadway Standard Drawings*). Use a moving operation only if the minimum speed maintained at all times is 3 mph with no stops that narrow or close a lane of travel. If the moving operation is progressing slower than 3 mph at any time, install a lane closure. Maintain the existing traffic pattern at all times, except in the immediate work zone where lane closures are allowed as determined by the Engineer.

Refer to attached details, if applicable, and Standard Drawing No. 1101.01, 1101.02, 1101.03, 1101.04, 1101.05, 1101.11, 1110.01, 1110.02, 1115.01, 1130.01, 1135.01, 1145.01, 1150.01, 1165.01, 1170.01 and 1180.01 of the *2012 Roadway Standard Drawings* when closing a lane of travel in a stationary work zone such as pavement patching resurfacing, or pavement marking removal. Properly ballasted cones may be used instead of drums for lane closures during daylight hours. However, drums are required for the upstream taper portion of lane closures in all applications. The stationary work zone shall be a maximum of 3 miles in length at any given time unless otherwise directed by the Engineer. A pilot vehicle operation may be used in conjunction with flaggers and the appropriate pilot vehicle warning signing as directed by the Engineer. During periods of construction inactivity, return the traffic pattern to the existing alignment and remove or cover any work zone signs. When covering work zone signs, use an opaque material that prevents reading of the sign at night by a driver using high beam

headlights. Use material which does not damage the sign sheeting. Replace any obliterated markings as required by other sections of the *2012 Standard Specifications* and the Engineer.

When personnel and/or equipment are working on the shoulder adjacent to an undivided facility and within 5 feet of an open travel lane, close the nearest open travel lane using Standard Drawing No. 1101.02 of the *2012 Roadway Standard Drawings* unless the work area is protected by barrier or guardrail. When personnel and/or equipment are working on the shoulder, adjacent to a divided facility and within 10 feet of an open travel lane, close the nearest open travel lane using Standard Drawing No. 1101.02 of the *2012 Roadway Standard Drawings* unless the work area is protected by barrier or guardrail. When personnel and/or equipment are working within a lane of travel of an undivided or divided facility, close the lane according to the traffic control plans, *2012 Roadway Standard Drawings* or as directed by the Engineer. Conduct the work so that all personnel and/or equipment remain within the closed travel lane. Do not work simultaneously, on both sides of an open travel way, within the same location, on a two-lane, two-way road. Do not perform work involving heavy equipment within 15 feet of the edge of travel way when work is being performed behind a lane closure on the opposite side of the travel way. Perform work only when weather and visibility conditions allow safe operations as directed by the Engineer.

Do not exceed a difference of 2 inches in elevation between open lanes of traffic for nominal lifts of 1.5 inches. Install advance warning UNEVEN LANES signs (W8-11 at 48" X 48") 500 feet in advance and a minimum of once every half mile throughout the uneven area.

Backfill at a 6:1 slope up to the edge and elevation of existing pavement in areas adjacent to an open travel lane that has an edge of pavement drop-off as follows:

- (A) Drop-off that exceeds 2 inches on roadways with posted speed limits of 45 mph or greater.
- (B) Drop-off that exceeds 3 inches on roadways with posted speed limit less than 45 mph. Backfill the unacceptable drop-off with suitable compacted material, as approved by the Engineer, at no expense to the Department. This work is not considered part of shoulder reconstruction.

When utilizing a slow-moving operation for such items as pavement marking placement, pavement marker installation and pesticide spraying, the slow moving operation caravan shall consist, as a minimum, of the vehicles and devices shown on the Moving Operation Caravan Details as shown on Standard Drawing No. 1101.02, sheets 11, 12 and 13 of the *2012 Roadway Standard Drawings*. Traffic cones may be used when necessary to provide additional protection of wet pavement markings. Ballast all traffic cones so they will not be blown over by traffic.

Failure to comply with the following requirements will result in a suspension of all other operations:

1. Before working, the Contractor shall submit a written construction sequence for traffic control and construction lighting to the Engineer at the first pre-construction meeting and the sequence must be approved before closing a lane of traffic. The Contractor and Engineer will coordinate with the Traffic Management Unit at 919-773-2800 or Traffic Services for additional traffic control guidance, as necessary.
2. Coordinate the installation of items required by the contract documents such that these operations are completed in the order as agreed upon with the Engineer at the first pre-construction meeting. Refer to the Provisions, Typicals and Details unless otherwise directed by the Engineer.

3. Once the Contractor has started work at a location, the Contractor should prosecute the work in a continuous and uninterrupted manner from the time he begins the work until completion and final acceptance unless determined otherwise by the Engineer.
4. Obtain written approval of the Engineer before working in more than one location or setting up additional lane closures.

Operate equipment and conduct operations in the same direction as the flow of traffic. Do not cross medians with equipment, except at properly designated interchanges.

If applicable, provide appropriate lighting in accordance with Section 1413 of the *2012 Standard Specifications*.

Payment will be made for the traffic control items that have been included in the contract. No direct payment will be made for providing other traffic control as required herein, as the cost of same will be considered incidental to the work being paid for under those various traffic control items that have been included. Where the Contractor maintains traffic as required herein but no specific pay items have been included in the contract, all associated costs will be considered incidental to the work being paid for under the various items in the contract.

WORK ZONE SIGNING:

(01-17-12)

RWZ-3

Description

Install and maintain signing in accordance with Divisions 11 and 12 of the *2012 Standard Specifications*, the *2012 Roadway Standard Drawings* and the following provisions:

Furnish, install, maintain and remove advance warning work zone signs and any required lane closure signing. All work shall adhere to Division 11 of the Standard Specifications. Adapt the traffic control plans, when directed by the Engineer, to meet field conditions to provide safe and efficient traffic movement. Changes may be required when physical dimensions in the detail drawings, standard details and roadway details are not attainable, or result in duplicate or undesired overlapping of devices. Modification may include moving, supplementing, covering or removal of devices.

All work zone signs may be portable.

Construction Methods

(A) General

Install all warning work zone signs before beginning work on a particular work area. If signs are installed prior to the beginning of work on a particular work area, cover the signs until the work begins. Install each work zone warning sign separately and not on the same post or stand with any other sign except where an advisory speed plate or directional arrow is used.

(B) Advance Warning Work Zone Signs

Install advance warning work zone signs in accordance with Standard Drawing No. 1101.01, 1101.02 and 1110.01 of the *2012 Roadway Standard Drawings* prior to beginning of work and

remove upon final completion of the project. If there is a period of construction inactivity longer than two weeks, remove or cover advance warning work zone signs. Uncover advance warning work zone signs before work resumes. All other operations could be suspended upon failure to comply with the above requirements. Such suspended operations would not be resumed until the above requirements are fulfilled.

(C) Lane Closure Work Zone Signs

Install any required lane closure signing needed during the life of the project in accordance with the Standard Drawing No. 1101.02, 1101.11 and 1110.02 of the *2012 Roadway Standard Drawings*.

Measurement and Payment

No payment will be made for signing for line items that have been included in the contract. No direct payment will be made for providing other work zone signing as required herein, as the cost of same will be considered incidental to the work being paid for under those various work zone signing items that have been included. Where flagmen are needed for traffic control, costs for the flagmen shall be considered incidental to the line items listed in the contract. Where the Contractor provides work zone signing as required herein but no specific pay items have been included in the contract, all associated costs will be considered incidental to the work being paid for under the various items in the contract.

Project Special Provisions

Specifications for work performed in the plant installation portion of the project are included within the plans and specifications provided by McGill Associates, P.A., herein referred to as “McGill plans” and “McGill Specifications”. The McGill plans, entitled “Asheville Median Maintenance Landscaping Project”, as well as the associated specifications, notes, and details, will provide details on installation of the following line items and unit quantities. All questions pertaining to these project components should be referred to McGill Associates, P.A.:

Median Maintenance Proposed Plant Inventory	
Trees	Size
Sugar Maple - <i>Acer saccharum</i> 'Legacy'	2" Cal. 15' High
Yellowwood - <i>Cladrastis kentukea</i>	2" Cal. 15' High
Ginkgo 'Autumn Gold'	2" Cal. 10' High
Ginkgo 'Autumn Gold'	2" Cal. 8' High
Siberian Spruce - <i>Picea amarika</i>	1.5" Cal. 8' High
Dogwood - <i>Cornus florida</i>	1.5" Cal. 8' High
Redbud - <i>Cercis candensis</i>	2" Cal. 8' High
Redbud - <i>Cercis candensis</i>	1.5" Cal. 6' High

Shrubs	Size
Redtwig Dogwood - <i>Cornus</i> 'Artic Fire'	5 Gallon
Yew - <i>Taxus x media Densiformis</i>	5 Gallon
Dogwood - <i>Cornus sericea</i> 'Farrow'	3 Gallon
Boxwood - <i>Buxus sinica insularis</i> 'Winter Gem'	3 Gallon
Little Henry - <i>Itea virginica</i> 'Sprich'	3 Gallon
Fothergilla <i>gardenii</i>	3 Gallon

Ground Covers	Size
Blue Rug Juniper - <i>Juniper</i> 'wiltoni'	1 Gallon
Ajuga reptans 'Binblasca'	1 Gallon
Varigated Liriope - <i>Liriope muscari</i>	1 Gallon
Monkey Grass - <i>Liriope muscari</i>	4" pot

Ornamental Grasses	Size
Pennisetum 'Little Bunny'	1 Gallon
Pink Muhly Grass - <i>Muhlenbergia capillaries</i>	4" pot

Miscellaneous	Unit
All site Unclassified Bed Preparation including existing vegetation removal and disposal	Lump Sum
3" deep Double Hammered Hardwood Mulch	Cubic Yard

The unit price for each component of the installation shall include, but is not limited to, all labor, materials, hardware, accessories, hauling, reinforcements, loading, proper disposal, and adjustment necessary to properly install each line item to the satisfaction of the owner, consulting engineer, and/or inspectors. Measurement and payment will be at the units indicated above, at the quantities indicated on the bid schedule, and at the unit price amounts quoted by the contractor.

Refer to McGill's 'Asheville Median Maintenance Landscaping Guide' for materials to remain and other notes. Contractor shall field verify all quantities.

McGill Specifications

SECTION 02900 LANDSCAPING

PART 1: GENERAL

1.01 SCOPE OF WORK

- A. General: This section covers the furnishing of all labor, equipment and materials necessary for the installation of all trees, shrubs, ground covers, herbaceous plants and bulbs. Also included is the seeding or sodding of lawn areas.
- B. References:
 - 1. ANSI Z60.1 -- "American Standard for Nursery Stock", current edition.
 - 2. TCIA Tree Care Industry Association Standards (current edition) / ANSI A300.
 - 3. "Hortus Third", Macmillan Publishing Company, current edition.

1.02 QUALITY ASSURANCE

- A. The landscape installer shall have at least five years of satisfactory experience including at least two completed jobs of dollar value and scope similar to this work.
- B. No substitutions will be permitted without the prior written approval of the Owner.
- C. The Owner may inspect planting beds, trees and shrubs either at place of growth or at site before planting, for compliance with requirements for genus, species, variety, size and quality. The Owner retains the right to further inspect trees and shrubs for size and conditions of balls and root systems, insects, injuries and latent defects, and to reject unsatisfactory or defective material at any item during progress of work. Contractor shall remove rejected trees or shrubs immediately from project site.
- D. The landscape installer should be familiar with the quality of materials available from suppliers in order to minimize the likelihood that unacceptable products will be rejected.
- E. Tagging of plants prior to digging at the nursery is recommended.

1.03 SUBMITTALS

- A. Certificates of Inspection as required by law or governing authorities to accompany shipments.
- B. Vendors certified analysis for soil amendments, fertilizer materials, and grass seed.
- C. Evidence of State certification for sod.

- D. Certificates indicating nursery source of each plant.
- E. Soil analysis report for existing soil and proposed supply of soil, if needed. Also indicate location of source.
- F. Source of mulch for approval and five gallon bucketful physical sample.
- G. Proposed planting schedule, indicating dates for each type of landscape work during normal seasons for such work. Once accepted, revise dates only as approved in writing, after documentation of reasons for delays.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Products shall be packed and shipped in a manner which will not damage them.
- B. Damaged products shall be rejected upon delivery and promptly removed from the site.
- C. Products which must be stored prior to installation shall be protected from damage (including any environmental damage) and theft.
- D. Time delivery of sod so that it will be placed within 36 hours after harvesting. Protect sod against drying and breaking of rolled strips. Installer shall only be paid for sod installed.
- E. Schedule delivery of plant material to avoid storage on site. If planting does not occur on same day as delivery, store in a location protected from sun and weather. Protect from vandalism.
 - 1. Do not prune trees and shrubs before delivery.
 - 2. Cover to protect stock during transport. Wind burned or wilted plants will not be accepted.
 - 3. Bind stock to protect branches, bark, and overall shape during transport.
 - 4. Provide freshly dug balled and burlapped or container grown stock unless otherwise approved.
 - 5. Do not drop stock. Load and unload with care.
 - 6. Delivery stock only after soil has been prepared. Schedule harvesting and delivery in quantities suitable for immediate planting upon arrival. Plant immediately. If planting cannot be accomplished immediately, provide shade, protect from wind, protect balls or roots from drying by covering at all times with moist saw dust, wood chips, shredded bark, peat moss, or other similar mulching material.

1.05 PROJECT CONDITIONS

- A. Schedule and coordinate work with all trades involved.

- B. Verify that the areas of work have been properly contoured prior to beginning work.
- C. Consult record drawings and installers to determine actual underground utility and drainage system locations in the vicinity of this work. Damage to known or unrecorded utilities will be repaired at the Contractor's expense.
- D. Notify the Owner of any unforeseen conditions which will affect plant installation or growth.
- E. Test internal drainage of soils at representative planting locations by digging a hole 12" deep and approximately 12" in diameter, then filling the hole with water. If the water drains away within 24 hours, the drainage should be adequate.
- F. The results of the soil tests may indicate recommendations which will affect the type and analysis of soil amendments.

1.06 SCHEDULE OF PERMANENT SEEDED VEGETATION

- A. Soil Amendments: Per 1000 SF
 - 1. Dolomitic limestone 90 lbs
 - 2. 10-20-20 12 lbs
- B. Seed Mixture: Per 1000 SF
 - 1. "Rebel" turf-type fescue 3 lbs
 - 2. "Falcon" turf-type fescue 3 lbs
 - 3. Total Mix 6 lbs
- C. Mulch: Per 1000 SF
 - 1. Grain Straw 1 1/2 bale
 - 2. Wood Cellulose Fiber 35 lbs
- D. Optimum Seeding Dates:
 - 1. March 15 - April 15
 - 2. August 15 - September 15

Consult with the Owner prior to planning seeding outside of the above dates.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Applicator must be properly trained to use all herbicides and must be licensed to purchase and use restricted herbicides, if any.

1.08 WARRANTY OF LANDSCAPE WORK

- A. Following the date of acceptance plants shall be warranted by contractor for one year excluding conditions of vandalism, theft, accident, acts of God and Owner's negligent maintenance.
- B. Replace each unacceptable plant as soon as season requirements permit.
- C. Only one replacement per plant will be required, except for losses due to failure to comply with specifications.

PART 2: PRODUCTS

2.01 MATERIALS

A. Manufacturers:

1. When a manufacturer's name and product are identified, the purpose is to set a standard of quality and/or design and is not intended to limit competition. Approved equal products are acceptable.
2. If a substitution is desired, see Quality Assurance above.

B. Imported Soil: Table and homogenous locally occurring soil obtained from a well-drained, arable site and not delivered in a muddy or frozen condition. It shall be reasonably free of subsoil, stones, clods, sticks, roots, or other extraneous matter and shall contain no toxic materials. Soil is subject to approval by Owner.

C. Lime:

1. Free flowing dolomitic agricultural grade lime in compliance with state, federal and local regulations.
2. All lime shall contain at least 75% calcium carbonate and 10% magnesium carbonate and shall be crushed so at least 90% will pass the No. 10 sieve and 50% through a No. 100 mesh sieve.

D. *Fertilizer:

1. Conforming to state and federal standards, dry, free flowing, granular or pellet form commercial product. Ratio indicates N-P-K requirements.
2. Fertilizer tablets: Agriform Planting Tablets 20-10-5 as manufactured by Sierra Chemical Company, 1001 Yosemite Drive, Milpitas, CA 95035, or approved equal, telephone (408) 263-8080. May be used at installer's option.
3. Encapsulated fertilizer: Osmocote 19-6-12 as manufactured by Sierra Chemical Company, or approved equal. May be used at installer's option.

* Follow fertilizer application recommendations provided by soil testing agency when soil testing is required (see plans).

E. Organic Matter:

1. Sawdust: Well rotted sawdust, free of chips, stones, sticks, soil or toxic substances and with 7.5 lbs. nitrogen uniformly mixed into each cubic yard.
2. Manure: Well rotted, unleached stable or cattle manure not less than 8 months or more than 2 years old, containing not more than 25% by volume of straw, sawdust or other bedding materials and containing no chemicals or ingredients harmful to plants.

3. Commercial Bagged Manure Such as "Black Cow": or "Baa Baa Doo," or approved equal.
- F. Grass Seed: Comply with State Department of Agriculture requirements. Obtain seed from most recent crop.
- G. Sod: Provide Certified or Approved Turfgrass sod so labeled.
- H. Plant Materials:
1. Plants shall conform to applicable sections of ANSI-Z60.1 and to any more stringent requirements which may be stated herein or on the Drawings.
 2. Plants shall be true to type and name; typical of their species or variety; densely foliated when in leaf, with a normal well-developed branch structure and a fibrous root system; possess a normal balance between height and spread; be free from defects, disfiguring knots, sun scald, injuries, abrasions of the bark, plant diseases and insect eggs, borers or infestations and of acceptable appearance.
 3. Plants shall have been nursery grown under climatic conditions similar to the location of this project, for at least one growing season prior to this work.
 4. Perennial: dense, well-rooted, type as indicated (bare-root, cell-pack, pot or container #).
 5. Bulbs:
 - a. Definitions:
 - i. "Bulb" is used below as a generic term to describe true bulbs, bulbets, corms, cormels, tuberous root and rhizomes.
 - ii. "Bulb size" is a measurement of circumference in centimeters.
 - iii. "Top size" is a trade term used to indicate the largest size available for a specific variety during the present growing season.
 - b. There is no bulb trade standard. Buy from a reputable dealer.
 - c. Bulb quality will be approved by the Designer prior to planting. Bulb quality will be judged by the following characteristics;
 - i. Firm and free from deep blemishes, cuts or soft spots.
 - ii. Heavy for their size.
 - iii. Have a solid and firm basal plate.

6. The greater quantity shall take precedence if discrepancies occur between the quantities designated on the materials list and those indicated on the drawings.
7. Nomenclature shall conform to "Hortus III".
8. At least 10% of each species delivered to the site shall bear a tag showing the genus, species, and variety of the plant.
9. Substitutions will be allowed only on the basis of prior written approval by the Owner and may be granted if the installer can demonstrate that plants of a specific type, size or quality are not available within a 200-mile radius of the site.
10. Plants larger than those specified on the plant list may be used, but use of such plants shall not increase the contract price.

I. Materials for Planting Trees:

1. Stakes: 2"x 2"x8'-0" lumber capable of withstanding above ground and underground conditions during the guarantee period.
2. Guy wire: Nylon Wire w/ Stakes - See Tree Planting Detail on Plans
3. Manufactured guying system may be used in lieu of the above if they provide adequate stability for the trees.

J. Mulch Materials for Plants:

1. Composted Hardwood: Shredded long fibers, free of extraneous and harmful matter.

K. Mulch for Seeded Areas:

1. Straw: Most recent crop of rye, oats or wheat.
2. Wood Fiber: Moisture content of 10% ($\pm 2\%$); organic Matter 99.4% ($\pm 0.2\%$); ash content 0.6% ($\pm 0.2\%$) water holding capacity of 1050 grams water/100 grams dry fiber.

L. Herbicides:

1. To selectively eradicate existing vegetation choose an herbicide which will not be toxic to vegetation to be saved or to new landscaping.
2. For pre-emergence vegetation control, choose an environmentally safe herbicide which will not harm plants to be saved on new landscaping.

PART 3: EXECUTION

3.01 PREPARATION

A. Layout individual tree and shrub locations with stakes or flags. Flag outlines of planting beds and secure landscape architect's approval prior to beginning soil preparation. Make adjustments as directed. Remove and properly dispose existing vegetation as noted on Landscape Plans.

B. Herbicide Application:

(Seek Owner's permission prior to any application of herbicide):

1. In the buffer planting area apply an environmentally safe herbicide such as pelargonic acid, Acetic acid (Vinegar), Essential Oils intended to be used as an herbicide or other Owner Approved alternative to Roundup or other Glyphosate based herbicide, when needed. No Glyphosate herbicides may be applied. Protect neighbor's proportion of project area and any vegetation to remain.
2. When necessary, use Owner Approved, environmentally friendly herbicides to eradicate vegetation before tilling plant seed and sod beds.
3. Use Owner Approved, environmentally friendly herbicides to control emerging weeds in shrub and ground cover beds and around trees

C. Preparation of Planting Bed Soil:

1. Excavate all planting beds to a depth of 12" minimum. Loosen subsoil to allow water to percolate freely. Stockpile excavated soil for landscape architect's approval for reuse.
2. Upon approval of excavated soil, prepare a mixture of two (2) parts excavated soil and one (1) part organic material. Replace the soil, till in additional soil amendments as required; lightly compact and rake out smooth. Dispose of extra soil offsite or at an Owner approved location on-site.
3. If excavated soil is not approved, bring in clean low clay content backfill and mix with organic matter as above.

D. Shrub Planting:

1. Scoop out a shallow hole for each plant root ball. Set balled and burlapped (B&B) or container stock on layer of compacted planting soil mixture, plumb and in center of pit with top of ball approximately 1"-2" above adjacent finished landscape grades. Remove burlap and wire from top 2/3 of ball. When set, place additional backfill around base and sides of ball, and work each layer to settle backfill and eliminate voids and air pockets. When excavation is approximately 2/3 full, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again after placing final layer of backfill.
2. Set container grown stock as specified for balled burlapped stock. Split the sides of the root ball prior to planting.

3. Mulch pits, and planted areas. Provide not less than a 4" thickness of mulch and work into top of backfill and finish level with adjacent finish grades.
4. Apply anti-desiccant, if required, using power spray to provide an adequate film over trunks, branches, stems, twigs and foliage.
5. Prune, thin out and shape shrubs in accordance with standard horticultural practice. Prune shrubs to retain natural character.

E. Preparation of Lawn and Sod Areas of Slopes 3:1 or Less:

1. Thoroughly and uniformly till the soil amendments into the subsoil to a depth of 6" below finished grade.
2. Rake stones and other debris out of the top 3" of the amended soil and smooth it to remove ridges and fill depressions as required to meet finished grades.
3. Roll the area with a lawn roller half filled with water ballast.
4. Verify that all areas have positive drainage and that there is no ponding.

F. Preparation of Slopes in Excess of 3H:1V

1. Scarify slope to 4" depth with a chain harrow, grader or dozer with chisels attached or by hand so that pitting or trenching will be approximately 4" apart for seeds to lodge within and germinate.
2. Remove stones and other debris from the slope surface.

3.02 INSTALLATION

A. Tree Planting:

1. Till and loosen to a depth of 12", an area four times the diameter of the root ball. Organic matter may be added if it is mixed uniformly throughout the loosened area
2. Scoop out a shallow hole in the middle of the loosened area for the root ball. Set the root ball on undisturbed or compacted soil, with the top of the ball 2"-4" above the finished grade.
3. Remove at least the top two-thirds of the wire basket and burlap. Remove all nylon straps or cords.
4. Place native soil backfill in 2"-3" layers. Work each layer by hand to compact backfill and eliminate voids. Maintain plant in a plumb position during backfilling.
5. When backfilling is approximately two-thirds complete, sprinkle evenly with 1/1 cup of superphosphate per inch of each per size. Saturate backfill with water and complete backfilling, then water and water again.

6. Once water has been absorbed, place not less than a 4" thickness of mulch and work into the top of the backfill. Finish level with adjacent finished grade.

B. Tree Support:

1. Trees requiring support shall be staked or guyed on the same day as planting.
2. Do not support trees with a caliper less than 3/4".
3. Staking for trees less than 3" caliper: Double stake each tree vertically with 180° stake separation and outside the root ball. Place stake and wires parallel to walks, drives and buildings. In open areas stakes perpendicular to the predominant wind direction. The top of each stake shall be driven to at least 3-1/2 feet below the tip of the plant's main leader. Tie the tree 36" from the top of the rootball.

C. Pruning Woody Plants:

1. After planting, neatly prune plants to enhance their form and character.
2. Limit pruning to the minimum necessary such as to remove injured twigs and rubbing branches (TCIA - ANSI A300 (Part 1) - 2008 (R2014) Pruning.

D. Planting Perennial:

1. Soak bare-root plants in water for about one-half hour before planting them.
2. Soak the planting bed and let it drain prior to planting.
3. Set plants to the depth at which they were grown allowing the soil settlement.
4. Spread out bare roots, then firm backfill over them by hand.
5. If rootballs are very densely packed, slice the rootball across the bottom and spread out the halves firmly against the soil, then firm backfill around and over them leaving no air pockets.

E. Bulbs and Bulb-Like Plants:

1. Store bulbs in a cool place or in a refrigerator
2. Do not store bulbs in closed plastic bags.
3. Verify schedule for planting with supplier's instructions.
4. Late planting: If planting must be delayed until late in the season mulch the planting bed well in advance of planting time in order to protect it from

freezing. If the soil under the mulch is not frozen, plant the bulbs and replace the mulch.

5. Bulbs, except iris, are normally planted in a depth approved equal to three times their diameter at the widest point. Verify with the suppliers instructions.
6. For large planting beds excavate the entire bed to the required depth.
7. For smaller plantings dig individual holes to the required depth, at the required spacing, with a special bulb planting tool or mattock. Incorporate bonemeal or superphosphate in accordance with the manufacturer's instructions. Place the bulb upon firm soil and avoid creating an air pocket beneath the bulb. Cover each bulb with soil and compact it by hand.
8. Water the planted area thoroughly after the covering bulbs, unless ground is rain soaked.

F. Fertilizing Plants:

1. Trees: **1/2 cup superphosphate per inch of caliper size.
2. Shrubs: **1/4 cup superphosphate per gallon size of container.
3. Groundcover and Perennial: *Broadcast 4-8-6 fertilizer at rate of 2 lb. per 100 SF.

** Follow fertilizer application recommendations provided by soil testing agency when soil testing is required (see plans).

G. Mulching Plants:

1. Mulch planting areas promptly after planting.
2. Trees and shrubs: 3" depth of composted hardwood mulch. Do not allow mulch to be in contact with tree trunks.
3. Groundcover and Perennial Beds: 2" depth of composted hardwood mulch.
4. Bulb Beds: 2" depth of composted hardwood mulch.

H. Seeding and Mulching – General:

1. Verify that graded areas to be seeded are acceptable. Beginning seeding signifies acceptance of the grading by the seeding installer.
2. Refer to the schedule for mixtures, types and application rates.
3. Apply seed uniformly by hand, cyclone seeder, drill, cultipacker seeder or hydraulically (slurry may include fertilizer, seed and cellulose fiber mulch).

On sloping land, seeding operation should be performed across the slope.

4. Cover seed with soil 1/8" to 1/4" deep, except when hydro-seeder is used.
5. When a hydro-seeder or cultipacker type seeder is not used, firm the seedbed following seeding using such equipment as a cultipacker, roller, or light drag spread spenitred mulch to form a continuous blanket of not less than 1-1/2" loose measurement overseeded areas.

I. Sodding:

1. Do not lay dried or broken sod. Use only fresh, properly protected sod.
2. Lightly moisten the soil bed prior to laying the sod.
3. Lay first and subsequent rows parallel and in a straight line with sides and ends tightly butted together. Do not overlap ends or leave voids.
4. As sodding is completed in any one section of the work, the entire area shall be lightly rolled and then thoroughly watered to a depth sufficient that the underside of the sod pad itself and the soil underneath are thoroughly wet.

J. Cleaning:

1. Restore damaged, soiled or stained improvements to acceptable condition.
2. Remove excess and waste materials from the site. Dirt, debris, leaves, etc., are not to be blown into the street but shall be blown into a central location, swept using brooms, and removed.

K. Protection:

1. Protect buildings and other improvements from damage which could result from landscape work.
2. Protect landscape work from damage by erecting and maintaining suitable signs and/or barricades.

3.03 MAINTENANCE

A. Maintenance of Plants:

1. Contractor to completely maintain plantings from time of installation through time of the warranty period (warranty period is one (1) year from time of acceptance).
2. To be acceptable each plant shall be in apparent good health and condition. This means that any plant which is not acceptable shall be

replaced prior to acceptance, and such replacement does not diminish warranty requirements.

B. Maintenance of Seeded Areas:

1. Protect seeded areas against disturbance immediately after seeding has been completed by placing warning signs and barricades.
2. Take sufficient precautions to prevent mulch from entering drainage structures and promptly remove any blockage which occurs.
3. The maintenance period is one (1) year from Owner acceptance of initial planting.
 - a. Maintenance also includes all necessary watering, erosion repair, mulching, reseeding and weeding to produce uniform coverage of seeded areas, mowing, disease control, and fertilization.
4. Requests for inspection of individual sections will be allowed provided that the section is substantial in size relative to the entire job and has clearly defined boundaries.
5. To be acceptable:
 - a. Total lawn grass coverage shall uniformly well established and in control of erosion within the seeded area.
 - b. Total vegetative cover on slopes shall be uniformly well established and in control of erosion.

C. Maintenance of Sodded Areas:

1. During the first week, soil on sod pads shall be kept moist at all times. In the absence of adequate rainfall, maintain soil moisture to a depth of 4" by daily watering.
2. During the second week, maintain adequate moisture in the upper 4" of soil necessary for the promotion of deep root growth.
3. Do not mow until the sod is firmly rooted and securely in place. No more than 40% of the grass blade shall be removed by the initial and subsequent mowings.
4. Maintenance shall continue for at least one (1) year from time of Owner acceptance of initial planting.

3.04 INSPECTION AND ACCEPTANCE

A. Inspection and Acceptance:

1. When landscape work is completed, Owner will, upon request, make an inspection to determine acceptability.
2. Landscape work may be inspected for acceptance in parts agreeable to Owner, provided work offered for inspection is complete.
3. When inspected landscape work does not comply with requirements, replace rejected work and schedule a re-inspection by Owner. Remove rejected plants and materials promptly from project site.
4. Warranty period will begin on date when work is accepted.
5. A warranty inspection will be made 365 days after Owner acceptance of initial planting. Plant replacements will be made as soon as the next planting season allows.

SECTION 322905 RESTORATION OF SURFACES

PART 1: GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Modified General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This section covers the furnishing of all labor, equipment and materials necessary for the proper restoration of existing surfaces disturbed or damaged as a result of construction operations which are not specifically scheduled or specified for topsoil and seeding, paving, landscaping or other surfacing.
- B. In general, the types of replacement included in this section are seeding along pipelines, concrete sidewalks, driveways, roadways, ditches, lawns and landscaped areas, and curb and gutter.
- C. Any damage to existing structures shall be repaired using materials and workmanship equal to, or better than, those of the original construction.

1.03 DEFINITIONS

- A. CABC – Crushed aggregate base course.
- B. NCDOT – North Carolina Department of Transportation.
- C. PSI – Pounds per square inch.

1.04 SUBMITTALS

- A. All submittals shall be in accordance with the requirements of the pertinent specification sections referenced herein.
- B. An appropriate concrete mix design shall be submitted for all concrete sidewalks, driveways, roadways, and curb and gutter restored as part of this project.

PART 2: PRODUCTS (Not Applicable)

PART 3: EXECUTION

3.01 SEEDING DISTURBED AREAS

- A. All ground surfaces disturbed by construction activity, which are not classified as lawns, landscaped areas, or pavement areas, but would be classified as open fields, shall be raked smooth and seeded in accordance with the appropriate paragraph(s) within Section 329200 entitled Turf and Grasses. Large rocks, clumps

of earth and excessive spoil material shall be removed from the area prior to seeding.

- B. Shoulders of all roads shall be restored as specified for lawns and landscaped areas.
- C. Wooded areas not classified as lawns shall be restored to as near their original condition as possible.

3.02 CONCRETE SIDEWALKS

- A. Concrete walks removed in connection with, or damaged as a result of, construction operations under the Contract shall be replaced with new construction. Such walks shall be constructed of 4,000 PSI concrete on a thoroughly compacted subgrade, shall have a vertical thickness, unless otherwise noted, of not less than 4 inches or the thickness of the replaced walk where greater than 4 inches.
- B. Walks shall be float finished, edged with an edging tool, and grooved at intermediate intervals not in excess of the width of the walk, uniform throughout the length of the walk in any one direction.

3.03 DRIVEWAYS

- A. Unless otherwise noted, unpaved driveways shall be surfaced with not less than 4 inches of CABC, topped with 4 inches of stone, gravel, or other materials equal to that found in the original driveway. Driveways shall be left in a condition better than their original condition.
- B. Concrete drives shall be replaced with 4,000 PSI concrete and shall have equal thickness and reinforcing steel to that of the original drive. Prior to placing the concrete a 6-inch aggregate base course shall be placed in the drive area.
- C. Unless otherwise noted, bituminous or asphaltic concrete drives shall be restored to original base and asphalt thicknesses or a minimum of 6 inches of aggregate base course and a 2-inch surface course, whichever is greater. Base material shall be compacted in 3-inch lifts and Type SF 9.5A or S 9.5B asphalt compacted in 2-inch lifts to match existing pavement section. All work shall be in accordance with the appropriate paragraph(s) of Section 321216 entitled Bituminous Paving.

3.04 ROADWAY REPLACEMENT

- A. Bituminous or Asphaltic pavements shall include all areas paved with blacktop, built up pavements or oil and stone, tar and stone and similar pavements constructed with a bituminous or asphalt and stone materials.
- B. Immediately upon completion of installation of underground piping and structures, the trench shall be backfilled and the roadway shall be repaired. Provide materials as specified in the Contract Drawings. If, in the opinion of the Owner, the area

adjacent to the excavation has not been damaged to the extent that the base course need to be replaced, restoration may consist of a surface course of sufficient thickness to meet the existing pavement.

- C. Unless otherwise noted, bituminous or asphaltic concrete roadways shall be restored to original base and asphalt thicknesses or a minimum of 6 inches of aggregate base course and a 2-inch surface course, whichever is greater. Base material shall be compacted in 3-inch lifts and Type SF 9.5A or S 9.5B asphalt compacted in 2-inch lifts to match existing pavement section. All work shall be in accordance with the appropriate paragraph(s) of Section 321216 entitled Bituminous Paving.
- D. Portland cement concrete roadways shall be replaced with 4,000 PSI concrete and shall have equal thickness and reinforcing steel as the original roadway. An aggregate base course with a thickness of 6 inches shall be placed prior to the placing of concrete.
- E. Differential settlement of restored pavements shall be corrected immediately.
- F. The Contractor shall repair and restripe any traffic markings that were damaged, removed or covered during construction. All work shall be done in accordance with NCDOT requirements and specifications.
- G. All existing manhole and valve covers shall be raised, as required, by the Contractor prior to paving. The cost of this work shall be included in the unit bid prices for other related work and no additional payment shall be made.

3.05 DITCHES

- A. Ditches shall be regraded to the original grade and line. The surface of all ditches shall be returned to the same condition as found before commencing work.

3.06 LAWNS AND LANDSCAPED AREAS

- A. Lawns and landscaped areas shall be regraded and replaced as follows:
 - 1. Grading shall be to the grade existing before construction of the work under this Contract.
 - 2. Lawn replacement shall be in accordance with the appropriate paragraph(s) within Section 329200 entitled Turf and Grasses. Topsoiled areas shall be replaced with topsoil of equal quality and quantity.
- B. Landscaped areas shall be replaced with shrubs, hedges, ornamental trees, flowers, or other items to original condition.

3.07 CURB AND GUTTER

- A. Curb and gutter removed with or damaged as a result of construction operations, injured or disturbed by the Contractor, his agents, or employees, shall be replaced with new construction to a condition similar and equal to that existing before

damage was incurred. 4,000 PSI concrete shall be used in curb and gutter replacement.

- B. All work associated with curb and gutter replacement shall be in accordance with Section 846-3 of the NCDOT Standard Specifications for Roads and Structures (latest edition). Horizontal and vertical alignment of the curb and gutter shall match that of the existing to the greatest extent practical, unless directed otherwise by the Owner.

3.08 DAMAGE TO STRUCTURES

- A. Any damage to existing structures shall be repaired of materials and workmanship equal to those of original construction. Extensively damaged structures, where the structural stability has been affected or which cannot be repaired in a suitable fashion shall be replaced entirely. Replacement shall not commence until approval of the plan of replacement has been given by the Owner. Replacement costs shall be responsibility of the Contractor.

SECTION 329200 TURF AND GRASSES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Modified General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This section covers the furnishing of all labor, equipment and materials necessary for the establishment of vegetation in all areas of the site disturbed by construction operations and all earth surfaces of embankments including rough and fine grading, topsoil if required, fertilizer, lime, seeding and mulching. The Contractor shall adapt his operations to variations in weather or soil conditions as necessary for the successful establishment and growth of the grasses or legumes.

1.03 DEFINITIONS

- A. Duff Layer: The surface layer of native topsoil that is composed of mostly decayed leaves, twigs, and detritus.
- B. Finish Grade: Elevation of finished surface of planting soil.
- C. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- D. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- E. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- F. Planting Soil: Standardized topsoil; existing, native surface topsoil; existing, in-place surface soil; imported topsoil; or manufactured topsoil that is modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- G. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or top surface of a fill or backfill before planting soil is placed.
- H. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

- I. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil, but in disturbed areas such as urban environments, the surface soil can be subsoil.

1.04 SUBMITTALS

- A. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
 - 1. Evidence of State certification of each seed mixture for turfgrass sod and plugs. Include identification of nursery source and name and telephone number of supplier.
- B. Product Certificates: For soil amendments and fertilizers, from manufacturer.
- C. Certificates of Inspection as required by law or governing authorities to accompany shipments.
- D. Source of mulch for approval and five (5) gallon bucketful physical sample.
- E. Proposed planting schedule, indicating dates for all work during normal seasons for such work. Once accepted, revise dates only as approved in writing, after documentation of reasons for delays.
- F. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of turf and grasses during a calendar year. Submit before expiration of required initial maintenance periods.

1.05 QUALITY ASSURANCE

- A. No material substitutions will be permitted without the prior written approval of the Owner.
- B. All materials shall be applied in strict accordance with manufacturer's written instructions.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Products shall be packed and shipped in a manner which will not damage them.
- B. Damaged products shall be rejected upon delivery and promptly removed from the site.
- C. Products which must be stored prior to installation shall be protected from damage and theft.
- D. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of

manufacturer, and indication of conformance with state and federal laws, as applicable. During handling and storing, the seed shall be cared for in such a manner that it will be protected from damage by heat, moisture, rodents, or other causes.

E. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk fertilizers, lime, and soil amendments with appropriate certificates.

1.07 PROJECT CONDITIONS

- A. Schedule and coordinate work with all trades involved.
- B. Verify that the areas of work have been properly contoured and brought to final grade prior to beginning work.
- C. Consult record drawings and installers to determine actual underground utility and drainage system locations in the vicinity of this work. Damage to known or unrecorded utilities will be repaired at the Contractor's expense.
- D. Notify the Owner of any unforeseen conditions which will affect plant installation or growth.
- E. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with initial maintenance periods to provide required maintenance from date of planting completion.
 1. Optimum Spring Planting: April 1 – May 1.
 2. Optimum Fall Planting: September 1 – October 1.
- F. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

1.08 MAINTENANCE SERVICE

- A. Initial Turf Maintenance Service: Provide full maintenance by skilled employees. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue for one (1) year from Owner acceptance of initial planting.

- B. Continuing Maintenance Requirements: Throughout the warranty period of the Work, excluding conditions of vandalism, theft, accident, acts of God and Owner's negligent maintenance, Contractor shall be responsible for making any and all necessary repairs to planted areas which may include or may result from, the lack of fully established growth of turfs and grasses and/or soil erosion from project areas. In such instances, Contractor shall be responsible for restoring these areas to originally accepted conditions as well as full establishment of turfs and grasses or other groundcovers in the area. The Contractor shall also be responsible for any damages to adjacent areas impacted by the lack of proper turf and grass establishment.

PART 2 - PRODUCTS

2.01 FERTILIZERS

- A. The quality of fertilizer and all operations in connection with the furnishing of this material shall comply with the requirements of the North Carolina Fertilizer Law and regulations adopted by the North Carolina Board of Agriculture.
- B. For all areas to be seeded which are not classified as lawns, but would be classified as open fields, fertilizer shall be free-flowing, ready mixed 10-10-10 grade commercial fertilizer. Upon written approval of the Owner a different grade of fertilizer may be used, provided the rate of application is adjusted to provide the same amounts of plant food.
- C. For all areas to be seeded which are classified as lawns, fertilizer shall be as follows:
 - 1. Fertilizer tablets: Agriform Planting Tablets 20-10-5 as manufactured by Scotts-Sierra Horticultural Products, or approved equal, may be used at installer's option.
 - 2. Encapsulated fertilizer: Osmocote 19-6-12 as manufactured by Scotts-Miracle Gro, or approved equal, may be used at installer's option.
- D. During handling and storing, the fertilizer shall be cared for in such a manner that it will be protected against hardening, caking, or loss of plant food values. Any hardened or caked fertilizer shall be pulverized to its original conditions before being used.

2.02 LIME

- A. Lime: The quality of lime and all operations in connection with the furnishing of this material shall comply with the requirements of ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:
 - 1. Class: O, with a minimum of 95 percent passing through No. 8 sieve and a minimum of 55 percent passing through No. 60 sieve.

2. Provide lime in the form of free-flowing ground dolomitic limestone.
- B. During the handling and storing, the lime shall be cared for in such a manner that it will be protected against hardening and caking. Any hardened or caked lime shall be pulverized to its original condition before being used.

2.03 SEED

- A. Grass seed shall be fresh, clean, dry, new-crop seed complying with the requirements of the North Carolina Seed Law and regulations adopted by the North Carolina Board of Agriculture.
- B. Seed shall have been approved by the North Carolina Department of Agriculture or any agency approved by the Owner before being sown, and no seed will be accepted with a date of test more than nine (9) months prior to the date of sowing. Such testing however, will not relieve the Contractor from responsibility for furnishing and sowing seed that meets these specifications at the time of sowing. When a low percentage of germination causes the quality of the seed to fall below the minimum pure live seed specified, the Contractor may elect, subject to the approval of the Owner, to increase the rate of seeding sufficiently to obtain the minimum pure live seed contents specified, provided that such an increase in seeding does not cause the quantity of noxious weed seed per square yard to exceed the quantity that would be allowable at the regular rate of seed.
- C. During handling and storing, the seed shall be cared for in such a manner that it will be protected from damage by heat, moisture, rodents, or other causes.
- D. Seed shall be entirely free from bulblets or seed of Johnson Grass, Nutgrass, Sandbur, Wild Onion, Wild Garlic, and Bermuda Grass. The specifications for restricted noxious weed seed refers to the number per pound, singly or collectively, of Blessed Thistle, Wild Radish, Canada Thistle, Corncockle, Field Bindweed, Quackgrass, Didders, Dock, Horsenettle, Bracted Plantain, Buckhorn or Wild Mustard; but in no case shall the number of Blessed Thistle or Wild Radish exceed 27 seeds of each per pound. No tolerance on weed seed will be allowed.
- E. Seed Purity: All seed species shall consist of seed with not less than a 95 percent germination rate, not less than 85 percent pure seed, and not more than 0.5 percent weed seed:

2.04 MULCH

- A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, threshed straw of wheat, rye, or oats which is free of noxious weeds or other species which would grow and be detrimental to the specified grass.
- B. Wood Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic and free of plant-growth or germination inhibitors; with a maximum moisture content of 10 percent (± 2 percent); organic matter 99.4 percent (± 0.2 percent); ash content 0.6 percent (± 0.2 percent) water holding capacity of 1050 grams water/100 grams dry fiber. and a pH range of 4.5 to 6.5.

2.05 TACIFIER

- A. Tackifier shall consist of an asphalt emulsion in accordance with ASTM D 977, Grade SS-1; shall be nontoxic and free of plant-growth or germination inhibitors.

2.06 WATER

- A. Water shall be clean, clear water free from any objectionable or harmful chemical qualities or organisms and shall be furnished by the Contractor.

2.07 EROSION-CONTROL MATERIAL

- A. Erosion-Control Blankets: Biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer's recommended steel wire staples, 6 inches long.
- B. Erosion-Control Mats: Cellular, non-biodegradable slope-stabilization mats designed to isolate and contain small areas of soil over steeply sloped surface. Include manufacturer's recommended anchorage system for slope conditions.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine areas to be planted for compliance with requirements and other conditions affecting performance.
 - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - 2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
 - 3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - 4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Owner and replace with new planting soil.

3.02 PROTECTION OF EXISTING STRUCTURES, UTILITIES, TREES AND VEGETATION

- A. Protect existing structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings indicated to remain in place against unnecessary cutting, breaking or skinning of roots, skinning and bruising of bark, and smothering of trees by stockpiling construction materials or excavated materials, excess foot or vehicular traffic, or parking of vehicles within drip line. Provide wood or metal stakes 48 inches in height, set on eight (8) to 10 foot centers, connected by 2-inch minimum brightly colored flagging tape or fabric fencing to protect trees and vegetation to remain. Set perimeter of protection at the drip line of trees to remain unless approved otherwise by the Owner.
- B. Provide protection for roots over 1-1/2 inch in diameter cut during construction operations. Coat cut faces with an emulsified asphalt, or other acceptable coating, formulated for use on damaged plant tissues. Temporarily cover exposed roots with wet burlap to prevent roots from drying out and cover with earth as soon as possible.
- C. The Contractor shall not remove or damage trees and shrubs which are outside the Clearing Limits established by the Owner or those within the Clearing Limits designated to remain.
- D. Repair trees scheduled to remain and damaged by construction operations in a manner acceptable to the Owner. Repair damaged trees promptly to prevent progressive deterioration caused by damage.
- E. Replace trees scheduled to remain and damaged beyond repair by construction operations, as determined by the Owner, with trees of similar size and species. Repair and replacement of trees scheduled to remain and damaged by construction operations or lack of adequate protection during construction operations shall be at the Contractor's expense.
- F. Protect adjacent and adjoining areas from hydroseeding, hydromulching, and tackifier overspray.
- G. Protect grade stakes set by others until directed to remove them.

3.03 GRADING

- A. Rough grading shall be done as soon as all excavation required in the area has been backfilled. The necessary earthwork shall be accomplished to bring the existing ground to the desired finish elevations as shown on the Contract Drawings or otherwise directed.
- B. Fine grading shall consist of shaping the final contours for drainage and removing all large rock, clumps of earth, roots and waste construction materials. It shall also include thorough loosening of the soil to a depth of 6" by plowing, discing, harrowing or other approved methods until the area is acceptable as suitable for subsequent landscaping operations. The work of landscaping shall be performed on a section by section basis immediately upon completion of earthwork.

- C. Upon failure or neglect on the part of the Contractor to coordinate his grading with seeding and mulching operations and diligently pursue the control of erosion and siltation, the Owner may suspend the Contractor's grading operations until such time as the work is coordinated in a manner acceptable to the Owner.

3.04 SECURING AND PLACING TOPSOIL

- A. Topsoil shall be secured from areas from which topsoil has not been previously removed, either by erosion or mechanical methods. Topsoil shall not be removed to a depth in excess of the depth approved by the Owner.
- B. The area or areas from which topsoil is secured shall possess such uniformity of soil depth, color, texture, drainage and other characteristics as to offer assurance that, when removed the product, will be homogeneous in nature and will conform to the requirements of these specifications.
- C. All areas from which topsoil is to be secured, shall be cleaned of all sticks, boards, stones, lime, cement, ashes, cinders, slag, concrete, bitumen or its residue and any other effuse which will hinder or prevent growth.
- D. In securing topsoil from a designated pit, or elsewhere, should strata or seams of material occur which do not come under the requirements for topsoil, such material shall be removed from the topsoil or if required by the Owner, the pit shall be abandoned.
- E. Before placing or depositing topsoil upon any areas, all improvement within the area shall be completed, unless otherwise approved by the Owner. The areas in which topsoil is to be placed or incorporated shall be prepared before securing topsoil for use.
- F. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.05 SEEDBED PREPARATION

- A. The Contractor shall cut and satisfactorily dispose of weeds or other unacceptable growth on the areas to be seeded. Uneven and rough areas outside of the graded section, such as crop rows, farm contours, ditches and ditch spoil banks, fence line and hedgerow soil accumulations, and other minor irregularities which cannot be obliterated by normal seedbed preparation operations, shall be shaped and smoothed as directed by the Owner to provide for more effective seeding and for ease of subsequent mowing operations.
- B. The soil shall then be scarified or otherwise loosened to a depth of not less than 6 inches except as otherwise provided below or otherwise directed by the Owner. Clods shall be broken and the top 2 to 3 inches of soil shall be worked into an acceptable seedbed by the use of soil pulverizers, drags, or harrows; or by other methods approved by the Owner.

- C. On 2:1 slopes a seedbed preparation will be required that is the same depth as that required on flatter areas, although the degree of smoothness may be reduced from that required on the flatter areas if so permitted by the Owner.
- D. On cut slopes that are steeper than 2:1, both the depth of preparation and the degree of smoothness of the seedbed may be reduced as permitted by the Owner, but in all cases the slope surface shall be scarified, grooved, trenched, or punctured so as to provide pockets, ridges, or trenches in which the seeding materials can lodge.
- E. On cut slopes that are either 2:1 or steeper, the Owner may permit the preparation of a partial or complete seedbed during the grading of the slope. If at the time of seeding and mulching operations such preparation is still in a condition acceptable to the Owner, additional seedbed preparation may be reduced or eliminated.
- F. The preparation of seedbeds shall not be done when the soil is frozen, extremely wet, or when the Owner determines that it is in an otherwise unfavorable working condition.
- G. Limestone may be applied at the rate described below as a part of the seedbed preparation, provided it is immediately worked into the soil. If not so applied, limestone and fertilizer shall be applied as described below.

3.06 APPLICATION OF LIMESTONE, FERTILIZER, SEED, AND MULCH (GENERAL)

- A. Equipment to be used for the application, covering or compaction of limestone, fertilizer, and seed shall have been approved by the Owner before being used on the project. Approval may be revoked at any time if equipment is not maintained in satisfactory working condition, or if the equipment operation damages the seed.
- B. Limestone, fertilizer, seed and mulch shall be applied within 24 hours after completion of seedbed preparation unless otherwise permitted by the Owner, but no limestone or fertilizer shall be distributed and no seed shall be sown when the Owner determines that weather and soil conditions are unfavorable for such operations.

3.07 FERTILIZATION AND LIMING

- A. Following seedbed preparation, fertilizer shall be applied to all areas to be seeded so as to achieve the application rates shown below. Fertilizer shall be spread evenly over the seedbed and shall be lightly harrowed, raked, or otherwise incorporated into the soil for a depth of ½ inch.
- B. Fertilizer need not be incorporated in the soil as specified above when mixed with seed in water and applied with power sprayer equipment. The seed shall not remain in water containing fertilizer for more than 30 minutes when a hydraulic seeder is used.

- C. Agricultural limestone shall be thoroughly mixed into the soil according to the rates indicated below. The specified rate of limestone application may be reduced by the Owner if pH tests indicate this to be desirable. It is the responsibility of the Contractor to obtain such tests and submit the results to the Owner for adjustment in rates.
- D. In the absence of a soil test, the following rates of application of fertilizer and lime shall be to all areas to be seeded which are not classified as lawns, but would be classified as open fields:
 - 1. Lime: 4,000 pounds per acre
 - 2. Fertilizer: 1,000 pounds per acre
- E. For all areas to be seeded which are classified as lawns, fertilizer and lime shall be applied at the following rates:
 - 1. Lime: 92 pounds per 1,000 square feet
 - 2. Fertilizer: 23 pounds per 1,000 square feet
- F. When adverse seeding conditions are encountered due to steepness of slope, height of slope, or soil conditions, the Owner may direct or permit that modifications be made in the above requirements which pertain to incorporating limestone into the seedbed; covering limestone, seed, and fertilizer; and compacting the seedbed. Such modifications may include but not be limited to the following:
 - 1. The incorporation of limestone into the seedbed may be omitted on:
 - a. Cut slopes steeper than 2:1;
 - b. On 2:1 cut slopes when a seedbed has been prepared during the excavation of the cut and is still in an acceptable condition; or
 - c. On areas of slopes where the surface of the area is too rocky to permit the incorporation of the limestone.
- G. It shall be the responsibility of the Contractor to make an additional application of maintenance fertilizer in the amount of 650 pounds per acre (15 pounds per 1,000 square feet) following the initial establishment of groundcover. This application shall occur when vegetation is three (3) inches in height or 45 days after initial seeding, whichever comes first.

3.08 SEEDING

- A. Seeding shall commence as soon as preparation of the seedbed has been completed. Do not broadcast or drop seed when wind velocity exceeds 5 mph or until the surface is suitable for working and is in proper condition. Seed mixtures may be sown together provided they are kept in a thoroughly mixed condition during the seeding operation.

- B. All disturbed areas shall be seeded unless specifically indicated to receive other types of plantings or groundcovers.
- C. Seed may be uniformly sown over the seedbed by a mechanical method suitable for the slopes and size of the areas to be seeded. Broadcast type seeders, windmill hand seeder or approved mechanical power drawn seed drills may be utilized.
 - 1. Do not use wet seed or seed that is moldy or otherwise damaged.
 - 2. Do not seed against existing trees.
- D. For all areas to be seeded which are not classified as lawns, but would be classified as open fields, seed species and application rates shall be as follows:
 - 1. Spring/Summer (Normally April 1 to August 31):
100 pounds of Ky-31 tall fescue per acre.
 - 2. Fall and Winter (Normally September 1 to March 31):
85 pounds of Ky-31 tall fescue and 15 pounds of rye grain per acre.
 - 3. On cut and fill slopes having 2:1 or steeper slopes, add 15 pounds of sudangrass to the planned seeding in summer seeding or 25 pounds of rye cereal per acre in fall and winter seeding, if seeded September to February.
 - 4. These seeding rates are prescribed for all sites with less than 50 percent ground cover and for sites with more than 50 percent ground cover where complete seeding is necessary to establish effective erosion control vegetative cover. On sites having 50 to 80 percent ground cover where complete seeding is not necessary to establish vegetative cover, reduce the seeding rate at least one-half the normal rate.
- E. For all areas to be seeded which are classified as lawns, seed species and application rates shall be as follows:
 - 1. "Rebel" turftype fescue3 pounds per 1,000 square feet
 - 2. "Falcon" turftype fescue3 pounds per 1,000 square feet

Total Mix 6 pounds per 1,000 square feet
- F. Care shall be taken to adjust the seeder for seeding at the proper rate before seeding operations are started and to maintain their adjustment during seeding. Seed in hoppers shall be agitated to prevent segregation of the various seeds in the mixture.
- G. Immediately after application, harrow, drag, rake, or otherwise work seedbed so as to cover the seed with a layer of soil. The depth of covering shall be as

directed by the Owner. If two kinds of seed are to be used which require different depths of covering, they shall be sown separately.

- H. When a combination seed and fertilizer drill is used, fertilizer may be drilled in with the seed after limestone has been applied and worked into the soil. If two kinds of seed are being used which require different depths of cover, the seed requiring the lighter cover may be sown broadcast or with a special attachment to the drill, or drilled lightly following the initial drilling operation.
 - 1. The rates of application of limestone, fertilizer, and seed on slopes 2:1 or steeper or on rocky surfaces may be reduced or eliminated.
 - 2. Compaction after seeding may be reduced or eliminated on slopes 2:1 or steeper, on rocky surfaces, or on other areas where soil conditions would make compaction undesirable.
- I. Protect seeded areas with erosion-control mats where shown on Drawings; install and anchor according to manufacturer's written instructions.

3.09 MULCHING

- A. All seeded areas shall be uniformly mulched in a continuous blanket immediately after seeding. The mulch shall be applied so as to permit some sunlight to penetrate and the air to circulate and at the same time, shade the grounds, reduce erosion and conserve soil moisture. Approximately 25 percent of the ground shall be visible through the mulch blanket.
- B. To achieve the coverage described above, it will be necessary to apply straw mulch to seeded areas at a rate of approximately 4,000 pounds per acre (92 pounds per 1,000 square feet) or wood fiber mulch at a rate of 1,600 pounds per acre (37 pounds per 1,000 square feet).
- C. Mulch shall be uniformly spread by hand or by approved mechanical spreaders or blowers which will provide an acceptable application as described above.
- D. Before mulch is applied on cut or fill slopes which are 3:1 or flatter, and ditch slopes, the Contractor shall remove and dispose of all exposed stones in excess of 3 inches in diameter and all roots or other debris which will prevent proper contact of the mulch with the soil.
- E. Care shall be exercised to prevent displacement of soil or seed or other damage to the seeded area during the mulching operations.
- F. The Contractor shall take sufficient precautions to prevent mulch from entering drainage structures through displacement by wind, water, or other causes and shall promptly remove any blockage to drainage facilities which may occur.

3.10 TACKIFIER

- A. Emulsified asphalt or organic tackifier shall be sprayed uniformly on mulch as it is ejected from blower or immediately thereafter. Tackifier shall be applied evenly

over area creating uniform appearance. Application rates and method of application will vary with conditions, be approved by the Owner, and shall be applied in sufficient amount to assure that the mulch is properly held in place. Where the binding material is not applied directly with the mulch it shall be applied immediately following the mulch operation.

B. The Contractor shall cover/protect structures, poles, fences and other appurtenances if mulch binder is applied in such a way that it may come in contact with or discolor those structures or appurtenances. Mulch and binder shall be applied by suitable blowing equipment at closely controlled application rates in a manner acceptable to the Owner.

C. Asphalt shall not be used in freezing weather.

3.11 HYDROSEEDING

A. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseeding applications. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.

1. Mix slurry with fiber-mulch tackifier in accordance with manufacturer's recommendations.
2. Fiber mulch shall be mixed into the slurry such that the application rate of the fiber mulch is 1,500 to 2,000 pounds per acre.
3. Apply slurry uniformly to all areas to be seeded in a one-step process in accordance with the application rates described herein.

B. When a hydraulic seeder is used for application of seed and fertilizer, the seed shall not remain in water containing fertilizer for more than 30 minutes prior to application unless otherwise permitted by the Owner.

3.12 EROSION CONTROL MATERIALS

A. Install all erosion control materials in accordance with manufacturer's recommendations and as shown on Drawings.

3.13 TURF RENOVATION

A. Renovate existing turf damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.

1. Reestablish turf where settlement or washouts occur or where minor regrading is required.
2. Install new planting soil as required.

- B. Remove sod and vegetation from diseased or unsatisfactory turf areas; do not bury in soil.
- C. Remove topsoil containing foreign materials such as oil drippings, fuel spills, stones, gravel, and other construction materials resulting from Contractor's operations, and replace with new planting soil.
- D. Mow, dethatch, core aerate, and rake existing turf.
- E. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.
- F. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.
- G. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches.
- H. Apply soil amendments and initial fertilizers required for establishing new turf and mix thoroughly into top 4 inches of existing soil. Install new planting soil to fill low spots and meet finish grades.
- I. Apply seed and protect with straw mulch as required for new turf.
- J. Water newly planted areas and keep moist until new turf is established.

3.14 TURF MAINTENANCE

- A. The Contractor shall keep all seeded areas in good condition, reseeding and mowing if and when necessary as directed by the Owner, until a good lawn is established over the entire area seeded and shall maintain these areas in an approved condition until final acceptance of the Contract.
- B. Grassed areas will be accepted when a 95 percent cover by permanent grasses is obtained and weeds are not dominant. On slopes, the Contractor shall provide against washouts by an approved method. Any washouts which occur shall be regraded and reseeded until a good sod is established.
- C. Areas of damage or failure due to any cause shall be corrected by repair or by being completely redone as may be directed by the Owner. Areas of damage or failure resulting either from negligence on the part of the Contractor in performing subsequent construction operations or from not taking adequate precautions to control erosion and siltation as required throughout the various sections of the specifications shall be repaired by the Contractor as directed by the Owner at no cost to the Owner.

3.15 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

- B. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.
- C. Remove nondegradable erosion-control measures after grass establishment period.

SECTION 329300 PLANTS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This section covers the furnishing of all labor, equipment and materials necessary for the installation of all trees, shrubs, ground covers, herbaceous plants and bulbs. Also included is the sodding of lawn areas.
- B. Section Includes:
 - 1. Plants.
 - 2. Planting soils.
 - 3. Tree stabilization.
 - 4. Landscape edgings.
 - 5. Tree grates.

1.03 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Balled and Burlapped Stock: Plants dug with firm, natural balls of earth in which they were grown, with ball size not less than sizes indicated; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball as recommended by ANSI Z60.1.
- C. Balled and Potted Stock: Plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required.
- D. Bare-Root Stock: Plants with a well-branched, fibrous-root system developed by transplanting or root pruning, with soil or growing medium removed, and with not less than minimum root spread according to ANSI Z60.1 for type and size of plant required.
- E. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball

shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.

- F. Duff Layer: The surface layer of native topsoil that is composed of mostly decayed leaves, twigs, and detritus.
- G. Fabric Bag-Grown Stock: Healthy, vigorous, well-rooted plants established and grown in-ground in a porous fabric bag with well-established root system reaching sides of fabric bag. Fabric bag size is not less than diameter, depth, and volume required by ANSI Z60.1 for type and size of plant.
- H. Finish Grade: Elevation of finished surface of planting soil.
- I. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- J. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- K. Pests: Living organisms that occur where they are not desired, or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- L. Planting Area: Areas to be planted.
- M. Planting Soil: Standardized topsoil; existing, native surface topsoil; existing, in-place surface soil; imported topsoil; or manufactured topsoil that is modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- N. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.
- O. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.
- P. Stem Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.
- Q. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- R. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- S. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.

1.04 SUBMITTALS

- A. Product Data: For each type of product indicated, including soils. Present to appropriate City Staff for review.
 - 1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.
 - 2. Pesticides and Herbicides: Include product label and manufacturer's application instructions specific to the Project.
- B. Samples for Verification: For each of the following:
 - 1. Source of mulch for approval and five (5) gallon bucketful physical sample.
- C. Qualification Data: For qualified landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.
- D. Product Certificates: For each type of manufactured product, from manufacturer, and complying with the following:
 - 1. Certificates of Inspection as required by law or governing authorities to accompany shipments.
 - 2. Vendor certified analysis for soil amendments, fertilizer materials, and grass seed.
 - 3. Evidence of State certification for sod.
 - 4. Certificates indicating nursery source of each plant.
- E. Material Test Reports: Soil analysis report for existing soil and proposed supply of soil, if needed. Also indicate location of source.
- F. Proposed planting schedule, indicating dates for each type of landscape work during normal seasons for such work. Once accepted by Owner, revise dates only as approved in writing, after documentation of reasons for delays.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: In addition to the requirements in Division 01 Section "Quality Requirements", the landscape installer shall have at least five (5) years of satisfactory experience in successful establishment of plants including at least two (2) completed jobs of dollar value and scope similar to this work.
 - 1. Professional Membership: Installer shall be a member in good standing of either the Professional Landcare Network or the American Nursery and Landscape Association.

2. Installer's Field Supervision: Installer shall maintain an experienced full-time supervisor on Project site when work is in progress.
 3. Chemical Applicator: Applicator must be properly trained to use all chemicals and must be licensed to purchase and use restricted chemicals, if any.
- B. Soil-Testing Laboratory Qualifications: An independent or university laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
- C. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of the soil.
1. Testing methods and written recommendations shall comply with USDA's Handbook No. 60.
 2. The soil-testing laboratory shall oversee soil sampling; with depth, location, and number of samples to be taken per instructions from Owner. A minimum of three (3) representative samples shall be taken from varied locations for each soil to be used or amended for planting purposes.
 3. Report suitability of tested soil for plant growth.
 - a. Based upon the test results, state recommendations for soil treatments and soil amendments to be incorporated. State recommendations in weight per 1,000 sq. ft. or volume per cu. yd. for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.
 - b. Report presence of problem salts, minerals, or heavy metals, including aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, and vanadium. If such problem materials are present, provide additional recommendations for corrective action.
- D. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1. Tagging of plants prior to digging at the nursery is recommended.
- E. Substitutions will be permitted only with the prior written approval of the Owner and may be granted if the installer can demonstrate that plants of a specific type, size or quality are not available within a 200-mile radius of the site.
- F. The landscape installer should be familiar with the quality of materials available from suppliers in order to minimize the likelihood that unacceptable products will be rejected.
- G. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.

1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements 6 inches above the root flare for trees up to 4-inch caliper size, and 12 inches above the root flare for larger sizes.
 2. Other Plants: Measure with stems, petioles, and foliage in their normal position.
- H. Plant Material Observation: Owner may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Owner retains right to observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
1. Notify Owner of sources of planting materials seven (7) days in advance of delivery to site.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. All products shall be packed and shipped in a manner which will not damage them.
- B. Damaged products shall be rejected upon delivery and promptly removed from the site.
- C. Products which must be stored prior to installation shall be protected from damage and theft.
- D. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws if applicable.
- E. Bulk Materials:
 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
 3. Accompany each delivery of bulk fertilizers, lime, and soil amendments with appropriate certificates.
- F. Deliver bare-root stock plants freshly dug. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.

- G. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.
- H. Handle planting stock by root ball.
- I. Store bulbs, corms, and tubers in a dry place at 60 to 65 degrees F until planting.
- J. Time delivery of sod so that it will be placed within 36 hours after harvesting. Protect sod against drying and breaking of rolled strips.
- K. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.
 - 1. Heel-in bare-root stock. Soak roots that are in dry condition in water for two hours. Reject dried-out plants.
 - 2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
 - 3. Do not remove container-grown stock from containers before time of planting.
 - 4. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly-wet condition.

1.07 PROJECT CONDITIONS

- A. Schedule and coordinate work with all trades involved.
- B. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.
- C. Consult Record Drawings and installers to determine actual underground utility and drainage system locations in the vicinity of this work. Damage to known or unrecorded utilities will be repaired at the Contractor's expense.
- D. Interruption of Existing Services or Utilities: Do not interrupt services or utilities to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary services or utilities according to requirements indicated:
 - 1. Notify Owner no fewer than three (3) days in advance of proposed interruption of each service or utility.

2. Do not proceed with interruption of services or utilities without Owner's written permission.
- E. Notify the Owner immediately of any unforeseen conditions which will affect plant installation or growth.
 - F. Test internal drainage of soils at representative planting locations by digging a hole 12 inches deep and approximately 12 inches in diameter, then filling the hole with water. If the water drains away within 24 hours, the drainage should be adequate.
 - G. The results of the soil tests may indicate recommendations which will affect the type and analysis of soil amendments.
 - H. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.
 - I. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.
 1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.

1.08 WARRANTY

- A. Following the date of acceptance by the Owner, plants shall be warranted for one (1) year excluding conditions of vandalism, theft, accident, acts of God and Owner's negligent maintenance.
- B. Replace each unacceptable plant as soon as season requirements permit.
- C. Only one (1) replacement per plant will be required, except for losses due to failure to comply with specifications.
- D. Provide extended warranty for period equal to original warranty period, for replaced plant material.

1.09 MAINTENANCE SERVICE

- A. Maintenance Service: Provide maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue for one (1) year from Owner acceptance of initial planting.

1.10 PLANT MATERIAL

- A. General: Furnish only nursery-grown plants under climatic conditions similar to the location of this project, for at least one growing season prior to this work which are true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant Schedule or Plant Legend shown on Drawings and complying with ANSI Z60.1 and any more stringent requirements which may be stated herein or on the Drawings.
- B. Furnish only plants with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
1. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than **3/4 inch** in diameter; or with stem girdling roots will be rejected.
 2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.
 3. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Owner, with a proportionate increase in size of roots or balls, but use of such plants shall not increase the contract price.
- C. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- D. Labeling: Label at least 10 percent of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant as shown on Drawings.
- E. If formal arrangements or consecutive order of plants is shown on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.
- F. Bulbs: Bulb quality will be approved by the Owner prior to planting. Bulb quality will be judged by the following characteristics:
1. Firm and free from deep blemishes, cuts or soft spots.
 2. Heavy for their size.
 3. Have a solid and firm basal plate.
- G. Annuals, Biennials, and Perennials: Provide healthy, disease-free plants of species and variety shown or listed, with well-established root systems reaching to sides of

the container to maintain a firm ball, but not with excessive root growth encircling the container. Provide only plants that are acclimated to outdoor conditions before delivery.

- H. Plant Quantity: The greater quantity shall take precedence if discrepancies occur between the quantities designated on the materials list and those indicated on the drawings.
- I. Nomenclature shall conform to "Hortus III".

1.11 INORGANIC SOIL AMENDMENTS

- A. Lime: The quality of lime and all operations in connection with the furnishing of this material shall comply with the requirements of ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:
 - 1. Class: O, with a minimum of 95 percent passing through No. 8 sieve and a minimum of 55 percent passing through No. 60 sieve.
 - 2. Provide lime in the form of free-flowing ground dolomitic limestone.
- B. During the handling and storing, the lime shall be cared for in such a manner that it will be protected against hardening and caking. Any hardened or caked lime shall be pulverized to its original condition before being used.

1.12 ORGANIC SOIL AMENDMENTS

- A. Sawdust: Well-rotted sawdust, free of chips, stones, sticks, soil or toxic substances and with 7.5 lbs. nitrogen uniformly mixed into each cubic yard.
- B. Manure: Well-rotted, unleached, stable or cattle manure not less than 8 months or more than 2 years old, containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, debris, and material harmful to plant growth.
- C. Commercial Bagged Manure Such as "Black Cow", "Baa Baa Doo", or approved equal.

1.13 FERTILIZERS

- A. The quality of fertilizer and all operations in connection with the furnishing of this material shall comply with the requirements of the North Carolina Fertilizer Law and regulations adopted by the North Carolina Board of Agriculture.
- B. Planting Tablets: Tightly compressed chip type, long-lasting, slow-release, commercial-grade planting fertilizer in tablet form. Tablets shall break down with soil bacteria, converting nutrients into a form that can be absorbed by plant roots.

1. Nutrient Composition: 20 percent nitrogen, 10 percent phosphorous, and 5 percent potassium, by weight plus micronutrients.
 2. Manufacturer: Agriform Planting Tablets as manufactured by Scotts-Sierra Horticultural Products, or approved equal, may be used at installer's option.
- C. Encapsulated Fertilizers: Fertilizer made up of nutrient granules embedded in a synthetic resin which dissolves slowly, releasing the nutrients over an extended period of time. It is also called a slow-release fertilizer.
1. Nutrient Composition: 19 percent nitrogen, 6 percent phosphorous, and 12 percent potassium, by weight plus micronutrients.
 2. Manufacturer: Osmocote as manufactured by Scotts-Miracle Gro, or approved equal, may be used at installer's option.
- D. During handling and storing, the fertilizer shall be cared for in such a manner that it will be protected against hardening, caking, or loss of plant food values. Any hardened or caked fertilizer shall be pulverized to its original conditions before being used.

1.14 PLANTING SOILS

- A. Planting Soil: Existing, native surface topsoil formed under natural conditions with the duff layer retained during excavation process and stockpiled on-site. Verify suitability of native surface topsoil to produce viable planting soil. Clean soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
1. Supplement with another specified planting soil when quantities are insufficient.
 2. Mix existing, native surface topsoil with soil amendments of the type and quantity directed by the Owner to produce planting soil.
- B. Planting Soil: Existing, in-place surface soil. Verify suitability of existing surface soil to produce viable planting soil. Remove stones, roots, plants, sod, clods, clay lumps, pockets of coarse sand, concrete slurry, concrete layers or chunks, cement, plaster, building debris, and other extraneous materials harmful to plant growth. Mix surface soil with soil amendments of the type and quantity directed by the Owner to produce planting soil:
- C. Planting Soil: Imported topsoil or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from bogs, or marshes.
1. Additional Properties of Imported Topsoil or Manufactured Topsoil: Screened and free of stones 1 inch or larger in any dimension; free of roots, plants, sod, clods, clay lumps, pockets of coarse sand, paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar,

roofing compound, acid, and other extraneous materials harmful to plant growth; free of obnoxious weeds and invasive plants including quackgrass, Johnsongrass, poison ivy, nutsedge, nimblewill, Canada thistle, bindweed, bentgrass, wild garlic, ground ivy, perennial sorrel, and brome grass; not infested with nematodes; grubs; or other pests, pest eggs, or other undesirable organisms and disease-causing plant pathogens; friable and with sufficient structure to give good tilth and aeration. Continuous, air-filled pore space content on a volume/volume basis shall be at least 15 percent when moisture is present at field capacity. Soil shall have a field capacity of at least 15 percent on a dry weight basis.

2. Top soil shall not be delivered in a muddy or frozen condition.

1.15 MULCHES

A. Mulch Materials for Plants

1. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
 - a. Type: Shredded hardwood unless otherwise specified on drawings
 - b. Size Range: 3 inches maximum, 1/2 inch minimum.
 - c. Color: Natural.

- B. Mulch materials for seeded areas shall be as described in Division 32, "Turf and Grasses".

1.16 WATER

- A. Water shall be clean, clear water free from any objectionable or harmful chemical qualities or organisms and shall be furnished by the Contractor.

1.17 WEED-CONTROL BARRIERS

- A. Nonwoven Geotextile Filter Fabric: Polypropylene or polyester fabric, 3 oz./sq. yd. minimum, composed of fibers formed into a stable network so that fibers retain their relative position. Fabric shall be inert to biological degradation and resist naturally-encountered chemicals, alkalis, and acids.
- B. Composite Fabric: Woven, needle-punched polypropylene substrate bonded to a nonwoven polypropylene fabric, 4.8 oz./sq. yd.

1.18 PESTICIDES

- A. General: Pesticide registered and approved by EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific

problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction. No pesticide may be applied without Owner's approval.

- B. Pre-Emergent Herbicide (Selective and Non-Selective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer. Only apply environmentally safe pre-emergent products. No pre-emergent herbicide may be applied without Owner's approval.
- C. Post-Emergent Herbicide (Selective and Non-Selective): Effective for controlling weed growth that has already germinated. Only apply environmentally safe post-emergent products. No post-emergent herbicide may be applied without Owner's approval.

1.19 TREE STABILIZATION MATERIALS

A. Stakes and Guys:

- 1. Upright and Guy Stakes: Rough-sawn, sound, new lumber, free of knots, holes, cross grain, and other defects, 2-by-2-inch nominal by 8'-0" length, pointed at one end.
- 2. Flexible Ties: Wide rubber or elastic bands or straps of length required to reach stakes or compression springs.
- 3. Guys and Tie Wires: 3/4" Nylon webbing.
- 4. Tree-Tie Webbing: UV-resistant polypropylene or nylon webbing with brass grommets.
- 5. Guy Cables: 3/4" Nylon webbing
- 6. Flags: Standard surveyor's plastic flagging tape, white, 6 inches long.

B. Root-Ball Stabilization Materials:

- 1. Upright Stakes and Horizontal Hold-Down: Rough-sawn, sound, new lumber, free of knots, holes, cross grain, and other defects, 2-by-2-inch nominal by lengths necessary for proper support; stakes pointed at one end.
- 2. Wood Screws: ASME B18.6.1.
- 3. Battens or Blocks and Struts: Rough-sawn, sound, new lumber, free of knots, holes, cross grain, and other defects, 2-by-4-inch nominal by lengths necessary for proper support.
- 4. Straps: Adjustable steel or plastic package banding straps.
- 5. Padding: Burlap.

1.20 MISCELLANEOUS PRODUCTS

- A. Wood Pressure-Preservative Treatment: AWPAC2, with waterborne preservative for soil and freshwater use, acceptable to authorities having jurisdiction, and containing no arsenic; including ammoniacal copper arsenate, ammoniacal copper zinc arsenate, and chromated copper arsenate.
- B. Root Barrier: Black, molded, modular panels manufactured with 50 percent recycled polyethylene plastic with ultraviolet inhibitors, 85 mils thick, with vertical root deflecting ribs protruding 3/4 inch out from panel, and each panel 18 inches wide.
- C. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.
- D. Burlap: Non-synthetic, biodegradable.
- E. Planter Drainage Gravel: Washed, sound crushed stone or gravel complying with ASTM D 448 for Size No. 8.
- F. Planter Filter Fabric Nonwoven geotextile manufactured for separation applications and made of polypropylene, polyolefin, or polyester fibers or combination of them.

PART 2 EXECUTION

2.01 EXAMINATION

- A. Examine areas to receive plants for compliance with requirements and conditions affecting installation and performance.
 - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - 2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
 - 3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - 4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Owner and replace with new planting soil.

2.02 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Lay out individual tree and shrub locations with stakes or flags. Flag outlines of planting beds and secure landscape architect's approval prior to beginning soil preparation. Make adjustments as directed.
- D. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.
 - 1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.
- E. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.

2.03 PLANTING AREA ESTABLISHMENT

- A. Loosen and excavate subgrade of all planting areas to a minimum depth of 12 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - 1. Apply slow release fertilizer directly to subgrade before loosening.
 - 2. Spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil.
 - a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
 - b. Mix lime with dry soil before mixing fertilizer.
 - 3. Spread planting soil to a depth of 8 inches but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - a. Spread approximately one-half the thickness of planting soil over loosened subgrade. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil.

- B. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
- C. Before planting, obtain Owner's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.
- D. Application of Mycorrhizal Fungi: At time directed by Owner, broadcast dry product uniformly over prepared soil as specified by manufacturer.

2.04 EXCAVATION FOR TREES AND SHRUBS

- A. Planting Pits and Trenches: Excavate circular planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are not acceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
 - 1. Excavate approximately three times as wide as ball diameter for balled and burlapped or container-grown or fabric bag-grown stock.
 - 2. Excavate at least 12 inches wider than root spread and deep enough to accommodate vertical roots for bare-root stock.
 - 3. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
 - 4. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.
 - 5. Maintain required angles of repose of adjacent materials as shown on the Drawings. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.
 - 6. Maintain supervision of excavations during working hours.
 - 7. Keep excavations covered or otherwise protected when unattended by Installer's personnel.
 - 8. If drain tile is shown on Drawings or required under planting areas, excavate to top of porous backfill over tile.
- B. Subsoil and topsoil removed from excavations may be used as planting soil.
- C. Obstructions: Notify Owner if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
 - 1. Hardpan Layer: Drill 6-inch-diameter holes, 24 inches apart, into free-draining strata or to a depth of 10 feet, whichever is less, and backfill with free-draining material.

- D. Drainage: Notify Owner if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.
- E. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

2.05 TREE, SHRUB, AND VINE PLANTING

- A. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.
- B. Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- C. Set balled and burlapped stock plumb and in center of planting pit or trench with root flare 1 inch above adjacent finish grades.
 - 1. Use planting soil free of weed seed or contaminants for backfill.
 - 2. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 - 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 - 4. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.
 - 5. Continue backfilling process. Water again after placing and tamping final layer of soil.
- D. Set balled and potted and/or container-grown stock plumb and in center of planting pit or trench with root flare 1 inch above adjacent finish grades.
 - 1. Use planting soil free from weed seed or contaminants for backfill.
 - 2. Carefully remove root ball from container without damaging root ball or plant.
 - 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.

4. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside the root ball about **1 inch** from root tips; do not place tablets in bottom of the hole.
 5. Continue backfilling process. Water again after placing and tamping final layer of soil.
- E. Set fabric bag-grown stock plumb and in center of planting pit or trench with root flare 1 inch above adjacent finish grades.
1. Use planting soil free from weed seed or contaminants for backfill.
 2. Carefully remove root ball from fabric bag without damaging root ball or plant. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 4. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.
 5. Continue backfilling process. Water again after placing and tamping final layer of soil.
- F. Set and support bare-root stock in center of planting pit or trench with root flare 1 inch above adjacent finish grade.
1. Use planting soil free from weed seed or contaminants for backfill.
 2. Spread roots without tangling or turning toward surface, and carefully work backfill around roots by hand. Puddle with water until backfill layers are completely saturated. Plumb before backfilling, and maintain plumb while working backfill around roots and placing layers above roots.
 3. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside soil-covered roots about **1 inch** from root tips; do not place tablets in bottom of the hole or touching the roots.
 4. Continue backfilling process. Water again after placing and tamping final layer of soil.
- G. When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

2.06 MECHANIZED TREE SPADE PLANTING

- A. Trees shall be planted with an approved mechanized tree spade at the designated locations. Do not use tree spade to move trees larger than the maximum size allowed for a similar field-grown, balled-and-burlapped root-ball diameter according to ANSI Z60.1, or larger than the manufacturer's maximum size recommendation for the tree spade being used, whichever is smaller.
- B. When extracting the tree, center the trunk within the tree spade and move tree with a solid ball of earth.
- C. Cut exposed roots cleanly during transplanting operations.
- D. Use the same tree spade to excavate the planting hole as was used to extract and transport the tree.
- E. Plant trees as shown on Drawings, following procedures in "Tree, Shrub, and Vine Planting" Article.
- F. Where possible, orient the tree in the same direction as in its original location.

2.07 TREE, SHRUB, AND VINE PRUNING

- A. Remove only dead, dying, or broken branches. Do not prune for shape.
- B. Prune, thin, and shape trees, shrubs, and vines as directed by Owner.
- C. Prune, thin, and shape trees, shrubs, and vines according to standard professional horticultural and arboricultural practices. Unless otherwise indicated by Owner, do not cut tree leaders; remove only injured, dying, or dead branches from trees and shrubs; and prune to retain natural character.
- D. Do not apply pruning paint to wounds.

2.08 TREE STABILIZATION

- A. 12 feet in height and 2 inches in caliper or greater unless otherwise indicated. Securely attach no fewer than three guys to stakes a minimum of 16 inches long, driven to grade.
 - 1. Site-Fabricated Staking-and-Guying Method:
 - a. For trees 2" in caliper or greater use a minimum of three 2" x 2" wood stakes, driven into undisturbed soil a minimum of 16 inches. Space stakes equally around the tree.
 - b. Attach 3/4" nylon webbing to connect the tree to stakes. Attach webbing at 1/3 the tree height.

2. Proprietary Staking and Guying Device: Install staking and guying system sized and positioned as recommended by manufacturer unless otherwise indicated and according to manufacturer's written instructions.
- B. Root-Ball Stabilization: Install at- or below-grade stabilization system to secure each new planting by the root ball unless otherwise indicated.
1. Wood Hold-Down Method: Place vertical stakes against side of root ball and drive them into subsoil; place horizontal wood hold-down stake across top of root ball and screw at each end to one of the vertical stakes.
 - a. Install stakes of length required to penetrate at least 18 inches below bottom of backfilled excavation. Saw stakes off at horizontal stake.
 - b. Install screws through horizontal hold-down and penetrating at least 1 inch into stakes. Predrill holes if necessary to prevent splitting wood.
 - c. Install second set of stakes on other side of root trunk for larger trees as indicated.
 2. Proprietary Root-Ball Stabilization Device: Install root-ball stabilization system sized and positioned as recommended by manufacturer unless otherwise indicated and according to manufacturer's written instructions.
- C. Palm Bracing: Install bracing system at three or more places equally spaced around perimeter of trunk to secure each palm until established unless otherwise indicated.
1. Site-Fabricated Palm-Bracing Method:
 - a. Place battens over padding and secure battens in place around trunk perimeter with at least two straps, tightened to prevent displacement. Ensure that straps do not contact trunk.
 - b. Place diagonal braces and cut to length. Secure upper ends of diagonal braces with galvanized nails into battens or into nail-attached blocks on battens. Do not drive nails, screws, or other securing devices into palm trunk; do not penetrate palm trunk in any fashion. Secure lower ends of diagonal braces with stakes driven into ground to prevent outward slippage of braces.
 2. Proprietary Palm-Bracing Device: Install palm-bracing system sized and positioned as recommended by manufacturer unless otherwise indicated and according to manufacturer's written instructions.

2.09 GROUND COVER AND PLANT PLANTING

- A. Dig holes large enough to allow spreading of roots.

- B. For rooted cutting plants supplied in flats, plant each in a manner that will minimally disturb the root system but to a depth not less than two nodes.
- C. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- D. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- E. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

2.10 PLANTING AREA MULCHING

- A. Install weed-control barriers before mulching according to manufacturer's written instructions. Completely cover area to be mulched, overlapping edges a minimum of 12 inches and secure seams with galvanized pins.
- B. Mulch backfilled surfaces of planting areas and other areas indicated.
 - 1. Trees and Tree-like Shrubs in Turf Areas: Apply mulch ring of 3-inch average thickness, with 36 inch radius around trunks or stems. Do not place mulch within 6 inches of trunks or stems.
 - 2. Organic Mulch in Planting Areas: Apply 3 inch average thickness of organic mulch over whole surface of planting area, and finish level with adjacent finish grades. Do not place mulch within 6 inches of trunks or stems.

2.11 PLANT MAINTENANCE

- A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.
- B. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides (Owner approved) and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents (Owner approved).

2.12 PESTICIDE APPLICATION

- A. Apply pesticides and other chemical products and biological control agents in accordance with authorities having jurisdiction and manufacturer's written

recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. **Notify Owner before each application is performed.**

1. Use environmentally safe herbicides to eradicate vegetation before tilling plant seed and sod beds.
 2. Use environmentally safe herbicides to control emerging weeds in shrub and ground cover beds and around trees.
- B. Environmentally Safe Pre-Emergent Herbicides (Selective and Non-Selective): Apply to tree, shrub, and ground-cover areas in accordance with manufacturer's written recommendations. Do not apply to seeded areas. Only apply environmentally safe pre-emergent products. No pre-emergent herbicide may be applied without Owner's approval.
- C. Environmentally Safe Post-Emergent Herbicides (Selective and Non-Selective):
1. Only apply environmentally safe post-emergent products. No post-emergent herbicide may be applied without Owner's approval.
 2. Apply only as necessary to treat already-germinated weeds and in accordance with manufacturer's written recommendations.
 3. In buffer planting areas apply a minimum of three (3) applications of approved herbicide at two (2) week intervals.
 4. Protect adjacent property and vegetation to remain.

2.13 CLEANUP AND PROTECTION

- A. During planting, keep adjacent paving and construction clean and work area in an orderly condition.
- B. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
- C. After installation and before Final Completion, remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.
- D. Dirt, debris, leaves, etc., are not to be blown into the street but shall be blown into a central location, swept using brooms, and removed.

2.14 DISPOSAL

- A. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property. Dirt, debris, leaves, etc., are not to be blown into the street but shall be blown into a central location, swept using brooms, and removed.

Contractor Documents

Some documents have multiple versions based upon the specific ownership status of the bidder. Please only complete the version that applies to your specific ownership situation.

Instructions for Completing Contractors Sales and Use Detail Tax Report

The City of Asheville is eligible for a refund of NC sales and/or use taxes paid in North Carolina by the City's contractors ("contractors" hereinafter also refers to sub-contractors) on purchases of building materials, supplies, fixtures and equipment which become a part of or are annexed to any building or structure being erected, altered or repaired under contract with the City. Contractors shall include and must pay all taxes imposed by governmental authorities which are applicable to the contract work. Examples of property on which sales and use tax has been paid by the contractor for which the contractor shall not include on this schedule are scaffolding, forms for concrete, fuel for the operation of machinery and equipment, tools, equipment repair parts and equipment rentals, blueprints, etc, or any other items which do not become a part of or are not annexed to the building or structure being erected, altered, or repaired.

The general contractor is responsible for obtaining the Contractors Sales and Use Detail Tax Report from its subcontractors. Each payment application must be accompanied with a certified Contractors Sales and Use Detail Tax Report. If no purchases of building materials, supplies, fixtures and equipment occurred in which sales and use tax was paid for a period covering a payment application, the contractor shall file a negative report indicating "**No State or County Sales Tax Paid**".

Contractor: The name of your company.

Project: The name of the project, or the City Contract Number.

Payment Application No.: The numerical sequence associated with the pay application (i.e. 1, 2, 3, etc.)

For Period: The beginning and ending period stated as month/day/year

Invoice Date: The date the materials were purchased.

Vendor Name: The vendor's name.

Invoice Number: The vendor's invoice number.

Invoice Total: The sum of the invoice to include State Tax and County Tax.

State Tax Paid: The North Carolina State tax, currently 5.75% of the item cost.

County Tax Paid: The County tax, currently 2.00 to 2.25% of the item cost (Buncombe currently 2.00%).

Total Tax Paid: The sum of State Tax and County Tax

County Name: County where material was purchased and sales tax paid, e.g., Buncombe, Haywood, Mecklenburg, etc.

The owner or an officer of the company must certify that the statement is correct. The signature should also be notarized.

Sample copies of the contractor's sales and use tax detail tax report and application for payment follow.

Contractor's Application for Payment

Application Number:	Application Period:	Application Date:
To (Owner): City of Asheville	From (Contractor):	Via (Engineer):
Project: 2016 Median Maintenance Project	Contract:	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.: CPM-15-16-003

Change Order Summary			
Approved Change Orders			
Number	Additions	Deductions	
			1. ORIGINAL CONTRACT PRICE -
1	\$ -	\$ -	2. NET CHANGE BY CHANGE ORDERS -
2	\$ -	\$ -	3. CURRENT CONTRACT PRICE -
			4. TOTAL COMPLETED AND INSTALLED TO DATE
			5. RETAINAGE
			5% ON WORK COMPLETED -
			6. CURRENT REQUEST -
TOTALS	\$ -	\$ -	
NET CHANGE BY CHANGE ORDERS	\$ -		

Contractor's Certification The undersigned Contractor certifies that: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.	PAYMENT OF \$ _____ IS
	RECOMMENDED BY: _____ (Date)
	APPROVED BY: _____ (Date)
	APPROVED BY: _____ (Date)
By: _____ Date: _____	

Application for Payment

BID PROPOSAL

Date: _____

Gentlemen:

In compliance with your Advertisement for Bids, dated _____, _____, the undersigned hereby proposes to furnish all labor, equipment and materials and to perform all work for the construction of improvements referred to herein as:

2016 Median Maintenance Project

in strict accordance with the Contract Documents and in consideration of the amounts shown on the Bid Schedule attached hereto and totaling:

and _____/100 dollars (\$_____).

The undersigned hereby agrees that, upon written acceptance of this Bid Proposal, he will, within ten (10) days of receipt of such notice, execute a Contract with the Owner and that he will provide any bonds or guarantees and certificates of insurance required by the Contract Documents.

The undersigned agrees that, if awarded the Contract, he will commence the work within ten (10) calendar days after the date of receipt of written Notice to Proceed, and that he will complete the work within _____ calendar days thereafter.

The undersigned acknowledges receipt of the following addenda:

Respectfully submitted,

Firm Name

Attest to: _____

Address

_____ By: _____

Secretary
(Corporate Seal)

LIST OF SUBCONTRACTORS

The Prime Contractor states that his Bid is based on quantities received from the following Subcontractors. Subletting the contract shall be subject to the requirements of section 108-6 of the 2012 NCDOT Standard Specifications.

<u>Subcontractors Name (Indicate if MBE)</u>	<u>Type of Work</u>	<u>% of Contract Amount</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

THIS FORM SHALL BE SUBMITTED WITH PROPOSAL

Company

Bidder's Signature

Title

Individual Person / Sole Proprietorship

or

Partnership

or

Corporation

or

Limited Liability Corporation

City of Asheville Contract Number _____

INDIVIDUAL PERSON / SOLE PROPRIETORSHIP SIGNATURE FORM

Signature: _____

Owner

STATE OF _____

COUNTY OF _____

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

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

Notary Public

Printed Name: _____

My Commission Expires: _____

City of Asheville Contract Number _____

PARTNERSHIP SIGNATURE FORM

Signature: _____

General Partner

Name of Partnership

STATE OF _____

COUNTY OF _____

I, _____, a Notary Public for said County and State, do hereby certify that _____,
General Partner of _____ Partnership, personally appeared before me this day and acknowledged the due
execution of the foregoing instrument.

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

Notary Public

Printed Name: _____

My Commission Expires: _____

City of Asheville Contract Number _____

CORPORATION SIGNATURE FORM

IN WITNESS WHEREFORE, the parties hereto have made and executed this Agreement as of the day and year first above written.

(Insert Name of Corporation)

By: _____
(Insert signature and title of officer)

STATE OF _____

COUNTY OF _____

I, _____, Notary Public of the aforesaid County and State,

certify that _____ personally came before me this day and
(Insert Name of Person Signing)

acknowledged that he/she is _____ of _____
(Insert Title of Office) (Insert Name of Corporation)

corporation, and that he/she, as _____, being authorized to do so,
(Insert Title of Person Signing)

executed the foregoing on behalf of the said corporation.

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

Notary Public
Printed Name: _____
My Commission Expires: _____

City of Asheville Contract Number _____

LIMITED LIABILITY CORPORATION (LLC) FORM

BY: _____

Name of Limited Liability Corporation

Signature: _____

Member/Manager

STATE OF _____

COUNTY OF _____

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

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

Notary Public

Printed Name: _____

My Commission Expires: _____

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

STATE OF _____

COUNTY OF _____

_____, of _____, being (Name)
(Bidder)

duly sworn, deposes and says that:

1. He is _____
(owner, partner, officer, representative, agent)

of _____, the Bidder that has submitted the attached Bid Proposal;

2. He is fully informed respecting the preparation and contents of the attached Bid Proposal and of all pertinent circumstances respecting such Bid Proposal;

3. Such Bid Proposal is genuine and is not a collusive or sham Bid Proposal;

4. Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid Proposal in connection with the Contract for which the attached Bid Proposal has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid Proposal or of any other Bidder, or to fix the overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Asheville, or any person interested in the proposed Contract; and

5. The price or prices quoted in the attached Bid Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owner, employees, or parties of interest including this affiant.

(Signed) _____

Title

SWORN TO AND SUBSCRIBED before me this ____ day of _____, 20__.

Notary Public
My Commission Expires: _____

DEBARMENT CERTIFICATION

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation filed with the Department, or has become erroneous because of changed circumstances.
2. The terms *covered transaction*, *debarred*, *suspended*, *ineligible*, *lower tier covered transaction*, *participant*, *person*, *primary covered transaction*, *principal*, *proposal*, and *voluntarily excluded*, as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.
3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in NCDOT contracts, unless authorized by the Department.
4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR 1273)* provided by the Department, without subsequent modification, in all lower tier covered transactions.
5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.
6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and
- d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

Check here if an explanation is attached to this certification.

DRUG-FREE WORKPLACE CERTIFICATION

_____, Contractor with the City of Asheville for
(Contractor's name)

the project known as _____, certifies that the City's

Drug-Free Workplace Policy, as set forth in the Bid Documents ("Policy"), has been

reviewed by or explained to the officers, agents and employees of _____

_____, and _____
(Contractor's name)

hereby agrees that the Policy is a part of the Contract and _____
(Contractor's name)

further certifies that _____ will comply with the
requirements thereof.

This the _____ day of _____, 20____.

Contractor's Name

Attest:

Secretary/Treasurer
(Corporate Seal)

By: _____
President / Vice President

SWORN TO AND SUBSCRIBED before me this _____ day of _____, 20____.

Notary Public
My Commission Expires: _____

The City's drug-free policy can be viewed at <http://www.ashevillenc.gov/Departments/Purchasing/DrugFreeWorkPolicy.aspx>.

Iran Divestment Act Certification Form

Bid/RFP/RFQ Number: _____

Contract Number: _____

Name of Vendor, Bidder or Contractor: _____

IRAN DIVESTMENT ACT CERTIFICATION REQUIRED BY N.C.G.S. 143C-6A-5(a)

As of the date listed below, the vendor, bidder or contractor listed above hereby certifies that he/she/it is not listed on the Final Divestment List created by the State Treasurer pursuant to N.C.G.S. 143C-6A-4.

Additionally, the vendor, bidder or contractor acknowledges and certifies that subcontractors utilized for this contract or purchase shall not be on the aforementioned Final Divestment List pursuant to N.C. G.S 143C-6A-5(b).

The undersigned hereby certifies that he or she is authorized by the vendor or bidder listed above to make the foregoing statements.

Signature

Date

Printed Name

Title

Notes to persons signing this form:

N.C.G.S. 143C-6A-5(a) requires this certification for bids or contracts with the State of North Carolina, a North Carolina local government, or any other political subdivision of the State of North Carolina. The certification is required at the following times:

- When a bid is submitted
- When a contract is entered into (if the certification was not already made when the vendor made its bid)
- When a contract is renewed or assigned

N.C.G.S. 143C-6A-5(b) requires that contractors with the State, a North Carolina local government, or any other political subdivision of the State of North Carolina must not utilize any subcontractor found on the State Treasurer's Final Divestment List.

The State Treasurer's Final Divestment List can be found on the State Treasurer's website at the address www.nctreasurer.com/Iran and will be updated every 180 days.

TIP #: N/A

Project Number: CPM-15-16-003

FORM W-9

[Rev.1-92; Rev. 10-94

Pursuant to Internal Revenue Service Regulations, vendors must furnish their **Taxpayer Identification Number (TIN)** to the State. **If this number is not provided, you may be subject to a 31% withholding on each payment.** To avoid this 31% withholding and to insure that accurate tax information is reported to the Internal Revenue Service and the State, please use this form to provide the requested information **exactly as it appears on file with the IRS.**

Legal Business Name _____

Address _____

9 Digit Taxpayer Identification Number

Social Security Number _____

Federal Employer Identification Number _____

Business Designation (Check One)

- _____ Individual (Soc.Sec. #)
- _____ Sole Proprietorship (Soc.Sec. #)
- _____ Partnership (Fed. ID)
- _____ Estate/Trust (Fed. ID)
- _____ Corporation (Fed. ID)
- _____ Public Service Corporation (Fed. ID)
- _____ Governmental/Non-Profit (Fed. ID)

Under penalties of perjury, I declare that I have examined this request and to the best of my knowledge and belief, it is true, correct, and complete. I have not been notified by the IRS that I am subject to backup withholding for failure to report income.

Name (Print or Type name of individual-not company) Title (Print or Type)

Signature Date Telephone Number

City of Asheville - Minority Business Requirements

Non-Building Construction Only

The **annual verifiable goals for the** City of Asheville in minority business participation are listed below:

CONSTRUCTION

African Americans 3%
Hispanic, Asian & Native Americans 1%
Women 8%

PROCUREMENT

African Americans 5%
Hispanic, Asian & Native Americans 2%
Women 18%

PROFESSIONAL

African Americans 7%
Hispanic, Asian & Native Americans 7%
Women 37%

The City is committed to providing minority businesses equal opportunity to participate in all City contracting opportunities. As such, the successful Bidder must provide documented proof in the form of MB (Minority Business) Form 1 (MB Utilization Commitment) or MB Form 2 (Letter of Intent to Perform Work without Subcontracting) that goals have been met or exceeded within 72-hours following the bid opening. If despite good faith efforts, the bidder was unable to provide subcontracting opportunities to minority subcontractors, the Bidder must submit MB form 1A along with the Good Faith Checklist within 72-hours following the bid opening. All three forms along with the Good Faith Checklist are attached hereto and incorporated herein by reference.

For more information regarding the City's Minority Business Program, please contact Brenda Mills, Economic Development Specialists, Community & Economic Development, P. O. Box 7148, Asheville, NC 28802-7148; (828) 259-8050 phone, (828) 350-0072 Fax, email at bmills@ashevillenc.gov.

CHECKLIST FOR REVIEW OF GOOD FAITH EFFORTS

(This form, MB Form 1A along with good faith efforts documentation due within 72 business hours of bid opening)

1. Have you attended the pre-bid conference(s) scheduled?
() Yes () No (Meeting attendance is documented by the local government agency)
2. Have you advertised at least seven (7) days in a general circulation, trade association, construction or Minority/women-focused media **within the contracting area** regarding subcontracting opportunities with your firm prior to the bid opening date? () Yes () No (Attach documentation)
3. Have you utilized the services of the City's Minority Business Program, available minority community organizations, minority contractors' group, local minority business assistance offices and other local organizations that provide assistance in the recruitment and placement of minorities and women to solicit bids for this project? Access to the website for the most current information in the Directory of Certified Businesses for each local government is on the State North Carolina's VendorLink site at www.ips.state.nc.us/ips/vendor/searchvendor.aspx?t=h (**HUB Vendor Search**). () Yes () No (Attach documentation)
4. Have you provided interested minority & women owned businesses (MB's) with **adequate and equal access** to information about the plans, specifications and requirements of the contract, insurance and licenses? () Yes () No
5. Did you provide written notice to all appropriate certified minority & women-owned businesses within the identified subcontracting / supplier / service categories that their interest in the contract was being solicited and in sufficient time to allow these certified minority & women-owned businesses to participate? Additionally, did the solicitation contain a description and location of the project, the work for which the subcontractors' bids are being solicited, date, time and location where the subcontractors' bids are to be submitted, locations where bidding documents could be reviewed? () Yes () No
6. Have you selected portions of the work to be performed by certified minority & women-owned businesses in order to increase the likelihood of meeting outreach goals including breaking it into economically feasible units where appropriate? () Yes () No
7. Have you designated someone in your firm to be the single contact for MB's that may have questions or need assistance? () Yes () No (Please indicate name of person and title)

Name: _____ Title: _____

8. Have you worked with the Minority Business Program in developing and administrating areas of technical assistance for MBs, i.e. bonding, lines of credit or insurance? () Yes () No
9. Did you follow up initial solicitations of interest by contacting MB's to determine with certainty whether they are interested in bidding? () Yes () No
10. Did you negotiate in good faith with interested MB's; not rejecting MB's as unqualified without sound reasons based on a thorough investigation of their capabilities? () Yes () No

Signature

Title

MB FORM 1 MB UTILIZATION COMMITMENT

(This form must be submitted 72 business hours following the bid if subcontracting along with The Good Faith Efforts Checklist, MB Form 1A & documentation)

We, _____, do certify that on the

(Project Name)

(Project Number)

(Dollar Amount of Bid)

We will expend a minimum of _____% of the total dollar amount of the contract with certified minority business (MB) enterprises. MB's will be employed as vendors, suppliers or providers of professional services.

Such work will be subcontracted to the following firms listed below. If the Bidder intends to subcontract, this form must be completed and submitted with the bid and documentation of good faith efforts regardless of the amount or lack of participation attained.

Name and Phone Number of Firm	Indicate MB Category	Description of Work	Dollar Value

The undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that s/he has read the terms of this commitment and is authorized to bind the Bidder to the commitment herein set forth.

Date: _____ Name of Bidder/Company: _____

By: _____

Title: _____

MB FORM 2
STATEMENT OF INTENT TO PERFORM WORK WITHOUT SUBCONTRACTING
(This form due 72 hours after bid opening - No Other MB Forms need to accompany this form)

We, _____, hereby certify that it is our intent to perform **100% of the work required** for the _____ contract
(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own work forces; and

The bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement.

The undersigned hereby certifies that s/he has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Bidder/Company: _____

Signature: _____

Title: _____

MB FORM 5

DOCUMENTATION OF CONTRACT PAYMENTS

Payments on subcontracts made to minority firms needs to be provided per project. Please provide this information to the owner's representative or directly to the Office of Economic Development (see contact information below).

The following is a list of payments made to minority and women owned firms on this project

between the dates of _____ and _____.

Project Name: _____

Company Name: _____

Company Contact (Name, phone and email): _____

ON THE ABOVE REFERENCE PROJECT, PLEASE INDICATE THE FOLLOWING:

MINORITY FIRM NAME	BLACK, HISPANIC ASIAN, INDIAN OR WOMAN	AMOUNT & DATE OF PAYMENTS

PLEASE CHECK ONE:

_____ Payment amounts represent the final total to be paid for this project.

_____ Payment amounts DO NOT represent the final total to be paid for this project.

Signature and Title of Certifying Agent

Any questions regarding this information can be directed to Brenda Mills, Economic Development Specialist, Community & Economic Development at (828) 259-8050 or bmills@ashevillenc.gov.

BID BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WE, THE UNDERSIGNED, _____
_____ as Principal, and _____
_____ as Surety, are hereby held and firmly bound unto the City of Asheville as Owner in the penal sum of _____
_____ for the payment of which, well and truly to be made,
we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns, this the _____
day of _____, _____.

The condition of the above obligation is such that whereas the Principal has submitted to the City of Asheville a certain BID which is attached hereto and hereby made a part hereof, to enter into a contract in writing for:

NOW, THEREFORE,

(a) If said BID shall be rejected, or

(b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said Contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and effect, it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Attest to:

Contractor

Secretary
(Corporate Seal)

By: _____

Attest to:

Surety

Secretary
(Corporate Seal)

By: _____

Countersigned:

N.C. Licensed Resident Agent

Name and Address – Surety Agency

Surety Company Name and N.C.
Regional or Branch Office Address

IMPORTANT – Surety companies executing BONDS must appear on the Treasury Department’s most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

PERFORMANCE BOND

Date of Execution: _____

Name of Principal:
(Contractor) _____

Name of Surety: _____

Name of Contracting Body: _____

Amount of Bond: _____

Project: _____

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the above named Contracting Body, (hereinafter referred to as "Contracting Body"), in the penal sum of 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 Contracting Body, identified 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 Contracting Body, 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 which modifications to the Surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

Whenever Principal shall be, and declared by Contracting Body to be in default under the Contract, the Contracting Body having performed Contracting Body's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

- 1) Complete a bid or bids for completing the contract in accordance with its terms and conditions; or
- 2) Obtain a bid or bids for completing the contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Contracting Body elects, upon determination by the Contracting Body and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Contracting Body, and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price, but not exceeding, including other costs and damages for which the Surety may be of liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price", as used in this paragraph shall mean the total amount payable by Contracting Body to Principal under the Contract and any amendments thereto, less the amount properly paid by Contracting Body to Contractor.

IN WITNESS WHEREOF, the above-bounden 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.

Attest to:

Secretary
(Corporate Seal)

Attest to:

Secretary
(Corporate Seal)

Countersigned:

N.C. Licensed Resident Agent

Contractor

By: _____

Surety

By: _____

Name and Address – Surety Agency

Surety Company Name and N.C.
Regional or Branch Office Address

PAYMENT BOND

Date of Execution: _____

Name of Principal:
(Contractor) _____

Name of Surety: _____

Name of Contracting
Body: _____

Amount of Bond: _____

Project: _____

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the above named Contracting Body, (hereinafter referred to as "Contracting Body"), in the penal sum of 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 Contracting Body, identified as shown above and hereto attached:

NOW, THEREFORE, if the Principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications to the Surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden 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.

Attest to:

Secretary
(Corporate Seal)

Attest to:

Secretary
(Corporate Seal)

Countersigned:

N.C. Licensed Resident Agent

Contractor

By:

Surety

By:

Name and Address – Surety Agency

Surety Company Name and N.C.
Regional or Branch Office Address

CONTRACTOR/VENDOR FINAL RELEASE AND LIEN WAIVER

The undersigned represents and warrants that it has been paid and has received (or that it will be paid and will receive via proceeds from this pay application) \$_____ as full and final settlement under the contract/agreement dated _____ (including any amendments or modifications thereto) (the "**Contract**") between the undersigned and _____ ("**Contractor/Vendor**") for the _____ Project owned by the City of Asheville ("**Owner**")

In consideration for this final payment, and other good and valuable consideration, receipt of which is acknowledged, the undersigned makes the following representations and warranties:

1. The undersigned and Owner have fully settled all terms and conditions of the Contract (including any amendments or modifications thereto), as well as any other written or oral commitments, agreements, and/or understandings in connection with the Project.
2. The undersigned has been paid in full (or it will be paid in full via proceeds from this pay application) for the labor, services, and materials in connection with the Contract, including all work performed or any materials provided by its subcontractors, vendors, suppliers, materialmen, laborers, or other persons or entities.
3. The undersigned has paid in full (or it will pay in full via proceeds from this pay application) all its subcontractors, vendors, suppliers, materialmen, laborers, and other person or entity providing services, labor, or materials to the Project; there are no outstanding claims, demands, or rights to liens against the undersigned, the Project, or the Owner in connection with the Contract on the part of any person or entity; and no claims, demands, or liens have been filed against the undersigned, the Project, or the Owner relating to the Contract.
4. The undersigned releases and discharges Owner from all claims, demands, or causes of action (including all lien claims and rights) that the undersigned has, or might have, under any present or future law, against Owner in connection with the Contract. The undersigned hereby specifically waives and releases any lien or claim or right to lien in connection with the Contract against Owner, Owner's property, and the Project, and also specifically waives, to the extent allowed by law, all liens, claims, or rights of lien in connection with the Contract by the undersigned's subcontractors, materialmen, laborers, and all other persons or entities furnishing services, labor, or materials in connection with the Contract.
5. The undersigned shall indemnify, defend, and hold harmless Owner from any action, proceeding, arbitration, claim, demand, lien, or right to lien relating to the Contract, and shall pay any costs, expenses, and/or attorneys' fees incurred by Owner in connection therewith.

The undersigned makes the foregoing representations and warranties with full knowledge that Owner shall be entitled to rely upon the truth and accuracy thereof.

DATED: _____

(CONTRACTOR/VENDOR COMPANY NAME)

By: _____
Title:

STATE OF _____
COUNTY OF _____

I, a Notary Public for the above County and State, certify that _____ personally came before me this day and acknowledged that he/she is _____ [title] of _____ [company name], and that he/she, as _____ [title], being authorized to do so, executed the foregoing on behalf of _____ [company name].

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

Notary Public
Printed Name: _____
My Commission Expires: _____

NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID.

Contractor Bid Documents

BID FORM
ASHEVILLE MEDIAN MAINTENANCE PROJECT
City of Asheville, North Carolina

AREA 1

AREA 1 - College Street					
GIS Object ID : 760 - <i>Approx. 497 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Pennisetum alopecuriodes 'Little Bunny'	50	EA	\$	\$
3	1 Gal. Juniperous horizontalis Blue Rug Juniper	125	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	5	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 1 - College Street					
GIS Object ID : (A) 759 - <i>Approx. 256 SF</i> , (B) 758 - <i>Approx. 232 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Pennisetum alopecuriodes 'Little Bunny'	55	EA	\$	\$
3	1 Gal. Juniperous horizontalis Blue Rug Juniper	110	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	5	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 1 - College Street					
GIS Object ID : (A) 764 - Approx. 109 SF, (B) 765 - Approx. 270 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Pennisetum alopecuriodes 'Little Bunny'	30	EA	\$	\$
3	1 Gal. Juniperous horizontalis Blue Rug Juniper	115	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	4	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
Contractor shall field verify all quantities

AREA 1 - College Street					
GIS Object ID : (A) 1028 - Approx. 37 SF, (B) 1029 - Approx. 50 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	4" thick stamped concrete over 4" gravel base	90	SF	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
Contractor shall field verify all quantities

AREA 1 - College Street					
GIS Object ID : 756 - Approx. 1,507 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	2" Caliper, 8' tall min. Ginkgo Tree	1	EA	\$	\$
3	1 Gal. Muhlenbergia capillaries	90	EA	\$	\$
4	1 Gal. Pennisetum alopecuriodes 'Little Bunny'	75	EA	\$	\$
5	1 Gal. Juniperus horizontalis Blue Rug Juniper	270	EA	\$	\$
6	3 Gal. Buxus microphylla var. japonica 'Winter Gem'	60	EA	\$	\$
7	3" deep Double Hammered Hardwood Mulch	14	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
Contractor shall field verify all quantities

AREA 1 - College Street					
GIS Object ID : (A) 768 - Approx. 234 SF, (B) 770 - Approx. 429 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Pennisetum alopecuriodes 'Little Bunny'	60	EA	\$	\$
3	1 Gal. Juniperus horizontalis Blue Rug Juniper	190	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	13	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016

AREA 1 - College Street					
GIS Object ID : (A) 772 - Approx. 142 sf, (B) 771 - Approx. 546 sf, (C) 773 - Approx. 296 sf, (D) 774** - Approx. 867 sf					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Muhlenbergia capillaries	20	EA	\$	\$
3	1 Gal. Pennisetum alopecuriodes 'Little Bunny'	140	EA	\$	\$
4	1 Gal. Juniperous horizontalis Blue Rug Juniper	65	EA	\$	\$
5	1 Gal. Liriope muscari 'Variegata'	285	EA	\$	\$
6	3" deep Double Hammered Hardwood Mulch	17	CY	\$	\$
TOTAL BID PRICE					\$

** Landscape Quantities for portion of Object ID # (bed).

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 1 - College Street					
GIS Object ID : 774** Approx. 1,208 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Muhlenbergia capillaries	40	EA	\$	\$
3	1 Gal. Pennisetum alopecuriodes 'Little Bunny'	188	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	11	CY	\$	\$
TOTAL BID PRICE					\$

** Landscape Quantities for portion of Object ID # (bed).

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 1 - College Street					
GIS Object ID : 758 <i>Approx. 1,660 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Muhlenbergia capillaries	65	EA	\$	\$
3	1 Gal. Pennisetum alopecuriodes 'Little Bunny'	265	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	15	CY	\$	\$
TOTAL BID PRICE					\$

** Landscape Quantities for portion of Object ID # (bed).

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 1 - College Street					
GIS Object ID : (A) 782 - <i>Approx. 83 SF</i> , (B) 781 - <i>32 SF</i> , (C) 786 - <i>Approx. 771 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Muhlenbergia capillaries	30	EA	\$	\$
3	1 Gal. Pennisetum alopecuriodes 'Little Bunny'	120	EA	\$	\$
4	1 Gal. Juniperus horizontalis Blue Rug Juniper	30	EA	\$	\$
5	3" deep Double Hammered Hardwood Mulch	8	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 1 - College Street					
GIS Object ID : (A) 746 - Approx. 34 SF, (B) 747 - Approx. 79 SF, (C) 786 - Approx. 1,175 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Muhlenbergia capillaries	40	EA	\$	\$
3	1 Gal. Pennisetum alopecuriodes 'Little Bunny'	160	EA	\$	\$
4	1 Gal. Juniperous horizontalis Blue Rug Juniper	60	EA	\$	\$
5	3" deep Double Hammered Hardwood Mulch	12	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
Contractor shall field verify all quantities

AREA 1 - College Street					
GIS Object ID : (A) 787 - Approx. 171 SF, (B) 744 - Approx. 201 SF, (C) 745 - Approx. 443 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	2" Caliper, 8' tall min. Cercis Canandensis	1	EA	\$	\$
3	1.5" Caliper, 8' tall min. Picea amarika	1	EA	\$	\$
4	1 Gal. Muhlenbergia capillaries	50	EA	\$	\$
5	1 Gal. Juniperous horizontalis Blue Rug Juniper	85	EA	\$	\$
6	1 Gal. Liriope muscari 'Variegata'	75	EA	\$	\$
7	3" deep Double Hammered Hardwood Mulch	8	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
Contractor shall field verify all quantities

AREA 1 - College Street					
GIS Object ID : (A) 748- Approx. 131sf, (B) 749 - Approx. 40sf, (C) 752 - Approx. 41sf, (D) 750 - Approx. 352sf, (E) 751 - Approx. 356sf, (F) 754** - Approx. 490sf					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1.5" Caliper, 8' Picea amarika	1	EA	\$	\$
3	1.5" Caliper, 6' Cercis Canadensis	1	EA	\$	\$
4	1 Gal. Mulhlenbergia capillaries	60	EA	\$	\$
5	1 Gal. Pennisetum alopecuriodes 'Little Bunny'	100	EA	\$	\$
6	1 Gal. Juniperous horizontalis Blue Rug Juniper	195	EA	\$	\$
7	3" deep Double Hammered Hardwood Mulch	13	CY	\$	\$
TOTAL BID PRICE					\$

** Landscape Quantities for portion of Object ID # (bed).

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes

Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016

Contractor shall field verify all quantities

AREA 1 - College Street					
GIS Object ID : 754** - Approx. 1,503 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	2" Caliper, 8' tall min. Cercis Canadensis	3	EA	\$	\$
3	1 Gal. Mulhlenbergia capillaries	50	EA	\$	\$
4	1 Gal. Pennisetum alopecuriodes 'Little Bunny'	220	EA	\$	\$
5	1 Gal. Liriope muscari 'Variegata'	30	EA	\$	\$
6	3" deep Double Hammered Hardwood Mulch	14	CY	\$	\$
TOTAL BID PRICE					\$

** Landscape Quantities for portion of Object ID # (bed).

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes

Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016

Contractor shall field verify all quantities

AREA 2

AREA 2 - Oak Street					
GIS Object ID : (A) 967 - <i>Approx. 109 SF</i> , (B) 966 - <i>Approx. 167 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Pennisetum alopecuriodes 'Little Bunny'	30	EA	\$	\$
3	1 Gal. Juniperus horizontalis Blue Rug Juniper	50	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	3	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 2 - Oak Street					
GIS Object ID : (A) 969 - <i>Approx. 83 SF</i> , (B) 968 - <i>Approx. 55 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Liriope muscari 'Varigata'	40	EA	\$	\$
3	1 Gal. Ajuga reptans 'Binblasca'	25	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 3

AREA 3 - Broadway					
GIS Object ID : (A) 957 - <i>Approx. 31 sf</i> , (B) 958 - <i>Approx. 31 sf</i> , (C) 956 - <i>Approx. 83 sf</i> , (D) 955 - <i>Approx. 25 sf</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Liriope muscari	32	EA	\$	\$
3	1 Gal. Ajuga reptans 'Binblasca'	30	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	2	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 4

AREA 4 - N. Lexington Avenue					
GIS Object ID : (A) 943 - <i>Approx. 74 SF</i> , (B) 944 - <i>Approx. 76 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	2" Caliper, 15' tall Cladrastis kentukea	2	EA	\$	\$
3	3 Gal. Fothergilla gardenii	4	EA	\$	\$
4	1 Gal. Liriope muscari	17	EA	\$	\$
5	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 4 - N. Lexington Avenue					
GIS Object ID : (A) 945 - <i>Approx. 135 SF</i> , (B) 946 - <i>Approx. 86 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	2" Caliper, 15' tall Cladrastis kentukea	2	EA	\$	\$
3	3 Gal. Cornus sericea 'Farrow'	12	EA	\$	\$
4	1 Gal. Liriope muscari	27	EA	\$	\$
5	3" deep Double Hammered Hardwood Mulch	2	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 4 - N. Lexington Avenue					
GIS Object ID : (A) 947 - Approx. 156 SF, (B) 954 - Approx. 58 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	3 Gal. Itea virginica 'Sprich'	5	EA	\$	\$
3	1 Gal. Liriope muscari	25	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	3	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 4 - N. Lexington Avenue					
GIS Object ID : (A) 950 - Approx. 68 SF, (B) 949 - Approx. 34 SF, (C) 948 - Approx. 64 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	2" Caliper, 15' tall Cladrastis kentukea	1	EA	\$	\$
3	1 Gal. Liriope muscari	29	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	2	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 4 - N. Lexington Avenue					
GIS Object ID : (A) 951 - Approx. 147 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	2" Caliper, 15' tall Cladrastis kentukea	1	EA	\$	\$
3	3 Gal. Cornus sericea 'Farrow'	5	EA	\$	\$
4	1 Gal. Liriope muscari	18	EA	\$	\$
5	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
Contractor shall field verify all quantities

AREA 4 - N. Lexington Avenue					
GIS Object ID : (A) 952 - Approx. 242 SF, (B) 953 - Approx. 161 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	2" Caliper, 10' tall Gingko 'Autumn Gold'	1	EA	\$	\$
3	1.5" Caliper 8' tall Cornus florida 'App. Spring'	2	EA	\$	\$
4	3 Gal. Itea virginica 'Sprich'	10	EA	\$	\$
5	1 Gal. Liriope muscari	60	EA	\$	\$
6	3 Gal. Buxus microphyllia var. japonica 'Winter Gem'	9	EA	\$	\$
7	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
Contractor shall field verify all quantities

AREA 5

AREA 5 - N. Hiwassee Street					
GIS Object ID : (A) 2355 - Approx. 65 SF, (B) 2356 - Approx. 30 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Ajuga retans 'Binblasca'	45	EA	\$	\$
3	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 5 - N. Hiwassee Street					
GIS Object ID : 2357 - Approx. 30 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Ajuga retans 'Binblasca'	15	EA	\$	\$
3	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 5 - N. Hiwassee Street					
GIS Object ID : (A) 2359 - Approx. 30 SF, (B) 2360 - Approx. 30 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Ajuga retans 'Binblasca'	30	EA	\$	\$
3	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 6

AREA 6 - Haywood Street					
GIS Object ID : 963 - <i>Approx. 40 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	5 Gal. Cornus 'Arctic Fire' Red Twig Dogwood	1	EA	\$	\$
3	1 Gal. Ajuga retans 'Binblasca'	18	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 6 - Haywood Street					
GIS Object ID : 959 - <i>Approx. 55 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	5 Gal. Cornus 'Arctic Fire' Red Twig Dogwood	1	EA	\$	\$
3	1 Gal. Ajuga retans 'Binblasca'	25	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 7

AREA 7 - Battery Park Avenue					
GIS Object ID : (A) 961 - <i>Approx. 16 SF</i> , (B) 960 - <i>Approx. 17 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	5 Gal. Taxus x media Densiformis Yew	1	EA	\$	\$
3	1 Gal. Liriope muscari 'Variegata'	14	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 7 - Battery Park Avenue					
GIS Object ID : 962 - <i>Approx. 42 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Ajuga reptans 'Binblasca'	15	EA	\$	\$
3	1 Gal. Liriope muscari 'Variegata'	10	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 8

AREA 8 - Church Street					
GIS Object ID : (A) 975 - <i>Approx. 110 SF</i> , (B) 976 - <i>Approx. 110 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	3" deep Double Hammered Hardwood Mulch	2	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 9

AREA 9 - French Broad Avenue					
GIS Object ID : 695 - Approx. 118 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	3 Gal. Buxus sinica insularis 'Winter Gem'	5	EA	\$	\$
3	1 Gal. Liriope muscari 'Variegata'	18	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 10

AREA 10 - Coxe Avenue					
GIS Object ID : (A) 1474 - Approx. 29 SF, (B) 1476 - Approx. 128 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	4" pot Liriope muscari	10	EA	\$	\$
3	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 10 - Hilliard Avenue					
GIS Object ID : (A) 1467 - Approx. 28 SF, (B) 1469 - Approx. 28 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	4" pot Liriope muscari	10	EA	\$	\$
3	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 10 - Hilliard Avenue

GIS Object ID : 1472 - Approx. 27 SF

ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	4" pot Liriope muscari	9	EA	\$	\$
3	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 11

AREA 11 - South Lexington Avenue					
GIS Object ID : (A) 979 - <i>Approx. 103 SF</i> , (B) 980 - <i>Approx. 80 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Juniperous horizontalis 'Wiltonii'	18	EA	\$	\$
3	3" deep Double Hammered Hardwood Mulch	2	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 11 - South Lexington Avenue					
GIS Object ID : (A) 981 - <i>Approx. 262 SF</i> , (B) 982- <i>Approx. 229 SF</i>					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	3 Gal. Cornus sericea 'Farrow'	10	EA	\$	\$
3	1 Gal. Juniperous horizontalis 'Wiltonii'	53	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	5	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 11 - South Lexington Avenue					
GIS Object ID : (A) 983 - Approx. 105 SF, (B) 984- Approx. 169 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	2" Caliper, 15' tall min. Acer saccharum 'Legacy'	1	EA	\$	\$
3	3 Gal. Itea virginica 'Sprich'	4	EA	\$	\$
4	4" pot Liriope muscari	52	EA	\$	\$
5	3" deep Double Hammered Hardwood Mulch	3	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 11 - South Lexington Avenue					
GIS Object ID : 985 - Approx. 95 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	4" pot Liriope muscari	24	EA	\$	\$
3	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

AREA 11 - South Lexington Avenue					
GIS Object ID : (A) 986 - Approx. 188 SF, (B) 987 - Approx. 220 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	3 Gal. Itea virginica 'Sprich'	13	EA	\$	\$
3	4" pot Liriope muscari	88	EA	\$	\$
4	3" deep Double Hammered Hardwood Mulch	4	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
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Contractor shall field verify all quantities

AREA 11 - South Lexington Avenue					
GIS Object ID : (A) 988 - Approx. 210 SF, (B) 989- Approx. 73 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	2" Caliper, 15' tall Cladrastis kentukea	1	EA	\$	\$
3	2" Caliper, 10' tall Gingko 'Autumn Gold'	1	EA	\$	\$
4	3 Gal. Itea virginica 'Sprich'	6	EA	\$	\$
5	4" pot Liriope muscari	48	EA	\$	\$
6	1 Gal. Juniperous horizontalis 'Wiltonii'	7	EA	\$	\$
7	3" deep Double Hammered Hardwood Mulch	3	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
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Contractor shall field verify all quantities

AREA 11 - South Lexington Avenue					
GIS Object ID : (A) 990 - Approx. 54 SF, (B) 991- Approx. 54 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	1 Gal. Juniperous horizontalis 'Wiltonii'	8	EA	\$	\$
3	3" deep Double Hammered Hardwood Mulch	1	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
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Contractor shall field verify all quantities

AREA 11 - South Lexington Avenue					
GIS Object ID : (A) 992 - Approx. 40 SF, (B) 993- Approx. 331 SF, (C) 994 - Approx. 619 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	3 Gal. Itea virginica 'Sprich'	30	EA	\$	\$
3	1 Gal. Pennisetum 'Little Bunny'	101	EA	\$	\$
4	1 Gal. Juniperous horizontalis 'Wiltonii'	13	EA	\$	\$
5	4" pot Liriope muscari	8	EA	\$	\$
6	3" deep Double Hammered Hardwood Mulch	9	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
Contractor shall field verify all quantities

AREA 12

AREA 12- McCormick Place					
GIS Object ID : (A) 4356 - Approx. 778 SF, (B) 4357 - Approx. 285 SF					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	All site Unclassified Bed Preparation including existing vegetation removal and disposal	1	LS	\$	\$
2	3 Gal. Itea virginica 'Sprich'	6	EA	\$	\$
3	1 Gal. Pennisetum 'Little Bunny'	55	EA	\$	\$
4	1 Gal. Juniperous horizontalis 'Wiltonii'	89	EA	\$	\$
5	3" deep Double Hammered Hardwood Mulch	10	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

MISCELLANEOUS

The following items will be used to determine pricing if the owner chooses to add additional work not shown on the Contract Drawings.					
ITEM NO.	DESCRIPTION	QTY.	UNITS	UNIT COST	TOTAL
1	Asphalt Repair	25	SY	\$	\$
2	Unsuitable Soils Replace and Repair	50	CY	\$	\$
TOTAL BID PRICE					\$

Refer to the Asheville Median Maintenance Landscaping Guide for materials to remain and other notes
 Quantities are approximations taken from the Asheville Median Maintenance Guide 1.8.2016
 Contractor shall field verify all quantities

Supporting Documents