



REQUEST FOR QUALIFICATIONS

CITY OF NAPLES
PURCHASING DIVISION
CITY HALL 735 8TH STREET SOUTH
NAPLES, FL 34102

PH: 239-213-7100 FX: 239-213-7105

NOTIFICATION DATE: 12/06/11	Pavement Management Services	NUMBER: 009-12	OPENING DATE & TIME: 12/30/11 2:00 PM
PRE-PROPOSAL CONFERENCE: DATE, TIME AND LOCATION:			

NAME OF PARTNERSHIP, CORPORATION OR INDIVIDUAL:	
MAILING ADDRESS:	
CITY-STATE-ZIP:	
PH:	EMAIL:
FX:	WEB ADDRESS:

I certify that this proposal is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a proposal for the same materials, supplies, or equipment or services and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this proposal and certify that I am authorized to sign this proposal for the proposer. In submitting a proposal to the City of Naples the proposer offers and agrees that if the proposal is accepted, the proposer will convey, sell, assign or transfer to the City of Naples all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the Anti-trust laws of the United States and the State of FL for price fixing relating to the particular commodities or services purchased or acquired by the City of Naples. At the City's discretion, such assignment shall be made and become effective at the time the City tenders final payment to the proposer.

AUTHORIZED SIGNATURE	DATE	PRINTED NAME/TITLE
Please initial by all that apply I acknowledge receipt of the following addendum		
____Addendum #1	____Addendum #2	____Addendum #3
____Addendum #4		

PLEASE NOTE THE FOLLOWING:

- > **This page must be completed and returned with your proposal.**
- > **Proposals must be submitted in a sealed envelope, with the proposal number & closing date.**
- > **Proposals received after the above closing date and time will not be accepted.**
- > **Proposal tabulations will be available on the City of Naples web site www.naplesgov.com.**

GENERAL CONDITIONS

TO INSURE ACCEPTANCE OF THE PROPOSAL, PLEASE FOLLOW THESE INSTRUCTIONS. ANY AND ALL SPECIAL CONDITIONS, ATTACHED HERETO, HAVE PRECEDENCE.

1. SEALED PROPOSAL: All proposals must be submitted in a sealed envelope. The face of the envelope shall contain the proposal name and proposal number. Proposals not submitted on attached proposal form shall be rejected. All proposals are subject to the conditions specified herein. Those which do not comply with these conditions are subject to rejection.

2. EXECUTION OF PROPOSAL: Proposal must contain a manual signature of authorized representative in the proposal section. Proposal must be typed or printed in ink. Use of erasable ink is not permitted. All corrections made by proposer to his proposal must be initialed.

3. NO PROPOSAL: If not submitting a proposal, respond by returning the Statement of No Proposal and explain the reason in the spaces provided. Failure to respond 3 times in succession without justification shall be cause for removal of the supplier's name from the proposal mailing list. NOTE: To qualify as a respondent, proposer must submit a "NO PROPOSAL," and it must be received no later than the stated proposal opening date and hour.

4. PROPOSAL OPENING: Shall be public, on the date and at the time specified on the proposal form. It is the proposer's responsibility to assure that his proposal is delivered at the proper time and place of the proposal opening. Proposals which for any reason are not so delivered will not be considered. Offers by telegram; telephone; or fax are not acceptable. Proposal files may be examined during normal working hours.

5. WITHDRAWAL OF PROPOSALS: Withdrawal of a proposal within sixty (60) days after the opening of proposals is subject to suspension or debarment in accordance with Policy 7-4 for up to three years.

6. PRICES, TERMS and PAYMENT: Prices shall be proposed if required by this request for proposal and include all packing, handling, shipping charges and delivery to the destination shown herein. Proposer is encouraged to offer cash discount for prompt invoice payment. Terms of less than 20 days will not be considered.

A. TAXES: The City of Naples does not pay Federal Excise and Sales taxes on direct purchases of tangible personal property. See exemption number on face of purchase order. This exemption does not apply to purchases of tangible personal property made by contractors who use the tangible personal property in the performance of contracts for the improvement of City-owned real property.

B. MISTAKES: Proposers are expected to examine the specifications, delivery schedule, proposal prices, extensions, and all instructions pertaining to supplies and services. Failure to do so will be at proposer's risk. In case of mistake in extension, the unit price will govern.

C. CONDITION AND PACKAGING: It is understood and agreed that any item offered or shipped as a result of this proposal shall be a new, current standard production model available at the time of this proposal. All containers shall be suitable for storage or shipment, and all prices shall include standard commercial packaging.

D. SAFETY STANDARDS: Unless otherwise stipulated in the proposal, all manufactured items and fabricated assemblies shall comply with applicable requirements of Occupational Safety and Health Act and any standards there under.

E. UNDERWRITERS' LABORATORIES: Unless otherwise stipulated in the proposal, all manufactured items and fabricated assemblies shall carry U.L. approval and re-examination listing where such has been established.

F. PAYMENT: Payment will be made by the buyer after the items awarded to a vendor have been received, inspected, and found to comply with award specifications, free of damage or defect and properly invoiced. All invoices shall bear the purchase order number. Payment for partial shipments shall not be made unless specified in the proposal. Failure to follow these instructions may result in delay in processing invoices for payment. In addition, the purchase order number must appear on bills of lading, packages, cases, delivery lists and correspondence.

7. DELIVERY: Unless actual date of delivery is specified (or if specified delivery cannot be met), show number of days required to make delivery after receipt of purchase order in space provided. Delivery time may become a basis for making an award (see Special Conditions). Delivery shall be within the normal working hours of the user, Monday through Friday, unless otherwise specified.

8. MANUFACTURERS' NAMES AND APPROVED EQUIVALENTS: Any manufacturers' names, trade names, brand names, information and/or catalog numbers listed in a specification are for information and not intended to limit competition. The proposer may offer any brand for which he is an authorized representative, which meets or exceeds the specification for any item(s). If proposals are based on equivalent products, indicate on the proposal form the manufacturer's name and number. Proposer shall submit with his proposal, cuts, sketches, and descriptive literature, and/or complete specifications. Reference to literature submitted with a previous proposal will not satisfy this provision. The proposer shall also explain in detail the reason(s) why the proposed equivalent will meet the specifications and not be considered an exception thereto. Proposals which do not comply with these requirements are subject to rejection. Proposals lacking any written indication of intent to quote an alternate brand will be received and considered in complete compliance with the specifications as listed on the proposal form.

9. INTERPRETATIONS: Any questions concerning conditions and specifications shall be directed in writing to this office for receipt no later than ten (10) days prior to the proposal opening. Inquiries must reference the date of proposal opening and proposal number. Failure to comply with this condition will result in proposer waiving his right to dispute the proposal.

10. CONFLICT OF INTEREST: All proposal awards are subject to Section 2-72 Conflict of Interest, City of Naples Code of Ordinances, which states: *"No public officer or employee shall have or hold any employment or contractual relationship with any business entity or any agency which is subject to the regulation of or is doing business with the city; nor shall an officer or employee have or hold any employment or contractual relationship that will create a continuing or frequently recurring conflict between his private interests and the performance of his public duties or that would impede the full and faithful discharge of his public duties. Any member of the city council or any city officer or employee who willfully violates this section shall be guilty of malfeasance in office or position and shall forfeit his office or position. Violation of this section with the knowledge, express or implied, of the person or corporation contracting with or making a sale to the city shall render the contract or sale voidable by the city manager or the city council."*

11. AWARDS: Will be made in the best interest of the City of Naples. The City reserves the right to reject any and all proposals or waive any minor irregularity or technicality in proposals received.

12. ADDITIONAL QUANTITIES: For a period not exceeding ninety (90) days from the date of acceptance of this offer by the buyer, the right is reserved to acquire additional quantities up to but not exceeding those shown on proposal at the prices proposal in this invitation. If additional quantities are not acceptable, the proposal sheets must be noted "PROPOSAL IS FOR SPECIFIED QUANTITY ONLY." (THIS PARAGRAPH DOES NOT APPLY FOR A TERM CONTRACT.)

13. SERVICE AND WARRANTY: Unless otherwise specified, the proposer shall define any warranty service and replacements that will be provided during and subsequent to this contract. Proposers must explain on an attached sheet to what extent warranty and service facilities are provided.

14. SAMPLES: Samples of items, when called for, must be furnished free of expense, and if not destroyed may, upon request, be returned at the proposer's expense. Each individual sample must be labeled with proposer's name, manufacturer's brand name and number, proposal number and item reference. Request for return of samples shall be accompanied by instructions which include shipping authorization and name of carrier and must be received with your proposal. If instructions are not received within this time, the commodities shall be disposed of by the City of Naples.

15. PROPOSAL PROTESTS: The City of Naples has formal protest procedures that are available upon request

16. INSPECTION, ACCEPTANCE AND TITLE: Inspection and acceptance will be at destination unless otherwise provided. Title and risk of loss or damage to all items shall be the responsibility of the contract supplier until accepted by the ordering agency, unless loss or damage results from negligence by the ordering

17. DISPUTES: In case of any doubt or difference of opinion as to the items to be furnished hereunder, the decision of the buyer shall be final and binding on both parties.

18. GOVERNMENTAL RESTRICTIONS: In the event any governmental restrictions may be imposed which would necessitate alteration of the material, quality, workmanship or performance of the items offered on this proposal prior to their delivery, it shall be the responsibility of the successful proposer to notify the buyer at once, indicating in his letter the specific regulation which required an alteration. The City reserves the right to accept any such alteration, including any price adjustments occasioned thereby, or to cancel the contract at no expense to the City.

19. LEGAL REQUIREMENTS: Applicable provision of all Federal, State, county and local laws, and of all ordinances, rules, and regulations shall govern development submittal and evaluation of all proposals received in response hereto and shall govern any and all claims and disputes which may arise between person(s) submitting a proposal response hereto and the City of Naples by and through its officers, employees and authorized representatives, or any other person, natural or otherwise; and lack of knowledge by any proposer shall not constitute a cognizable defense against the legal effect thereof.

20. PATENTS AND ROYALTIES: The proposer, without exception, shall indemnify and save harmless the City of Naples and its employees from liability of any nature or kind, including cost and expenses for or on account of any copyrighted, patented, or unpatented invention, process, or article manufactured or used in the performance of the contract, including its use by the City of Naples. If the proposer uses any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the proposal prices shall include all royalties or cost arising from the use of such design, device, or materials in any way involved in the work.

21. ADVERTISING: In submitting a proposal, proposer agrees not to use the results there from as a part of any commercial advertising.

22. ASSIGNMENT: Any Purchase Order issued pursuant to this proposal invitation and the monies which may become due hereunder are not assignable except with the prior written approval of the buyer.

23. LIABILITY: The supplier shall hold and save the City of Naples, its officers, agents, and employees harmless from liability of any kind in the performance of this contract.

24. PUBLIC ENTITY CRIMES: A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a proposal on a contract to provide any goods or services to a public entity, may not submit a proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit proposals on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

25. DISCRIMINATION: An entity or affiliate who has been placed on the discriminatory vendor list may not submit a proposal on a contract to provide goods or services to a public entity, may not submit a proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit proposals on leases of real property to a public entity, may not award or perform work as a contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity.

26. COUNTY TAXES: No proposal shall be accepted from and no contract will be awarded to any person, firm or corporation that is in arrears to the government of Collier County, Florida.

27. OFFER EXTENDED TO OTHER GOVERNMENTAL ENTITIES: The City of Naples encourages and agrees to the successful proposer/proposer extending the pricing, terms and conditions of this solicitation or resultant contract to other governmental entities at the discretion of the successful proposer/proposer.

IF THIS PROPOSAL IS FOR A TERM CONTRACT, THE FOLLOWING CONDITIONS SHALL ALSO APPLY

28. ELIGIBLE USERS: All departments of the City of Naples are eligible to use this term contract. Such purchases shall be exempt from the competitive proposal requirements otherwise applying to their purchases.

29. PRICE ADJUSTMENTS: Any price decrease effectuated during the contract period by reason of market change shall be passed on to City of Naples. Price increases are not acceptable.

30. CANCELLATION: All contract obligations shall prevail for at least one hundred eighty (180) days after effective date of contract. After that period, for the protection of both parties, this contract may be cancelled in whole or in part by either party by giving thirty (30) days prior written notice to the other party.

31. RENEWAL: The City of Naples reserves the option to renew the period of this contract, or any portion thereof for up to two (2) additional periods. Renewal of the contract period shall be by mutual agreement in writing.

32. ABNORMAL QUANTITIES: While it is not anticipated, should any unusual or abnormal requirements arise, the City reserves the right to solicit separate proposals thereon.

33. FISCAL NON-FUNDING CLAUSE: In the event sufficient funds are not budgeted for a new fiscal period, the City shall notify the contractor of such occurrence and the contract shall terminate on the last day of the current fiscal year without penalty or expense to the City.

IF THIS PROPOSAL IS FOR PERFORMING A SERVICE, THE FOLLOWING CONDITIONS SHALL ALSO APPLY

34. ALTERNATIVE PROPOSALS: Proposers offering service delivery methods other than those permitted by the scope of work may submit a separate envelope clearly marked "ALTERNATIVE PROPOSAL". Alternative proposals will be deemed non-responsive and will not be considered for award. All such responses will, however, be examined prior to award. Such examination may result in cancellation of all proposals received to permit rewriting the scope of work to include the alternative method, or the alternative method may be considered for future requirements of the City of Naples.

35. ANTITRUST: By entering into a contract, the contractor conveys, sells, assigns and transfers to the City of Naples all rights, titles and interest it may now have or hereafter acquire under the antitrust laws of the United States

and the State of Florida that relate to the particular goods or services purchased or acquired by the City of Naples under said contract.

36. PROPOSER INVESTIGATIONS: Before submitting a proposal, each proposer shall make all investigations and examinations necessary to ascertain all site conditions and requirements affecting the full performance of the contract and to verify any representations made by the City of Naples upon which the proposer will rely. If the proposer receives an award as a result of its proposal submission, failure to have made such investigations and examinations will in no way relieve the proposer from its obligation to comply in every detail with all provisions and requirements of the contract documents, nor will a plea of ignorance of such conditions and requirements be accepted as a basis for any claim whatsoever by the contractor for additional compensation.

37. CERTIFICATES AND LICENSES: The Contractor, at time of proposal, shall possess the correct occupational licenses, all professional licenses or other authorizations necessary to carry out and perform the work required by the City of Naples and Collier County for this project pursuant to all applicable Federal, State and Local Laws, Statutes, Ordinances, and rules and regulations of any kind.

38. CHANGE IN SCOPE OF WORK: The City of Naples may order changes in the work consisting of additions, deletions or other revisions within the general scope of the contract. No claims may be made by the contractor that the scope of the project or of the contractor's services has been changed, requiring changes to the amount of compensation to the contractor or other adjustments to the contract unless such changes or adjustments have been made by written amendment to the contract signed by the City of Naples and the contractor. If the contractor believes that any particular work is not within the scope of the project, is a material change, or will otherwise require more compensation to the contractor, the contractor must immediately notify the City in writing of this belief. If the City believes that the particular work is within the scope of the contract as written, the contractor will be ordered to and shall continue with the work as changed and at the cost stated for the work within the scope.

39. CONTRACTOR PERSONNEL: The City of Naples shall, throughout the life of the contract, have the right of reasonable rejection and approval of staff or subcontractors assigned to the work by the contractor. If the City reasonably rejects staff or subcontractors, the contractor must provide replacement staff or subcontractors satisfactory to the City in a timely manner and at no additional cost to the City. The day-to-day supervision and control of the contractor's employees and sub-contractors is the responsibility solely of the contractor.

40. COST REIMBURSEMENT: The contractor agrees that all incidental costs, including allowances for profit and tools of the trade, must be included in the proposal rates. If an arrangement is made between the contractor and the City to reimburse the contractor for the cost of materials provided in the performance of the work, the contractor shall be reimbursed in the following manner: The City shall reimburse the contractor on completion and acceptance of each assigned job, only for those materials actually used in the performance of the work that is supported by invoices issued by the suppliers of the contractor describing the quantity and cost of the materials purchased. No surcharge shall be added to the supplier's invoices or included in the contractor's invoice submitted to the City that would increase the dollar amount indicated on the supplier's invoice for the materials purchased for the assigned job.

41. EXCEPTIONS: Proposers taking exception to any part or section of the solicitation shall indicate such exceptions on the proposal form. Failure to indicate any exception will be interpreted as the proposer's intent to comply fully with the requirements as written. Conditional or qualified proposals, unless specifically allowed, shall be subject to rejection in whole or in part.

42. FAILURE TO DELIVER: In the event of the contractor to fail to deliver services in accordance with the contract terms and conditions, the City, after due oral or written notice, may procure the services from other sources and hold the contractor responsible for any resulting purchase and administrative costs. This remedy shall be in addition to any other remedies that the City may have.

43. FAILURE TO ENFORCE: Failure by the City at any time to enforce the provisions of the contract shall not be construed as a waiver of any such provisions. Such failure to enforce shall not affect the validity of the contract or any part thereof or the right of the City to enforce any provision at any time in accordance with its terms.

44. FORCE MAJEURE: The contractor shall not be held responsible for failure to perform the duties and responsibilities imposed by the contract due to legal strikes, fires, riots, rebellions and acts of God beyond the control of the contractor, unless otherwise specified in the contract.

45. INDEPENDENT CONTRACTOR: The contractor shall be legally considered an independent contractor and neither the contractor nor its employees shall, under any circumstances, be considered servants or agents of the City of Naples and the City of Naples shall be at no time legally responsible for any negligence or any wrongdoing by the contractor, its servants or agents. The City of Naples shall not withhold from the contract payments to the contractor any federal income taxes, Social Security tax, or any other amounts for benefits to the contractor. Further, the City shall not provide to the contractor any insurance coverage or other benefits, including Workers' Compensation normally provided by the City for its employees.

46. ORAL STATEMENTS: No oral statement of any person shall modify or otherwise affect the terms, conditions or specifications stated in this contract. All modifications to the contract must be made in writing by the City of Naples.

47. QUALIFICATIONS OF PROPOSERS: The proposer may be required, before the award of any contract, to show to the complete satisfaction of the City of Naples that it has the necessary facilities, ability, and financial resources to provide the service specified therein in a satisfactory manner. The proposer may also be required to give a past history and references in order to satisfy the City in regard to the proposer's qualifications. The City may make reasonable investigations deemed necessary and proper to determine the ability of the proposer to perform the work, and the proposer shall furnish to the City all information for this purpose that may be requested. The City reserves the right to reject any proposal if the evidence submitted by, or investigation of, the proposer fails to satisfy the City that the proposer is properly qualified to carry out the obligations of the contract and to complete the work described therein. Evaluation of the proposer's qualifications shall include:

- > The ability, capacity, skill and financial resources to perform the work or service.
- > The ability to perform the work service promptly or within the time specified, without delay.
- > The character, integrity, reputation, judgment, experience, and efficiency of the proposer.
- > The quality of performance of previous contracts or services.

48. QUALITY CONTROL: The contractor shall institute and maintain throughout the contract period a properly documented quality control program designed to ensure that the services are provided at all times and in all respects in accordance with the contract. The program shall include providing daily supervision and conducting frequent inspections of the contractor's staff and ensuring that accurate records are maintained describing the disposition of all complaints. The records so created shall be open to inspection by the City.

49. RECOVERY OF MONEY: Whenever, under the contract, any sum of money shall be recoverable from or payable by the contractor to the City, the same amount may be deducted from any sum due to the contractor under the contract or under any other contract between the contractor and the City. The rights of the City are in addition and without prejudice to any other right the City may have to claim the amount of any loss or damage suffered by the City on account of the acts or omissions of the contractor.

50. REQUIREMENTS CONTRACT: During the period of the contract, the contractor shall provide all the services described in the contract. The contractor understands and agrees that this is a requirements contract and that the City shall have no obligation to the contractor if no services are required. Any quantities that are included in the scope of work reflect the current expectations of the City for the period of the contract. The amount is only an estimate and the contractor understands and agrees that the City is under no obligation to the contractor to buy any amount of services as a result of having provided this estimate or of having any typical or measurable requirement in the past. The contractor further understands and agrees that the City may require services in excess of the estimated annual contract amount and that the quantity actually used whether in excess of, or less than, the estimated annual contract amount and that the quantity actually used shall not give rise to any claim for compensation other than the total of the unit prices in the contract for the quantity actually used.

51. TERMINATION FOR CONVENIENCE: The performance of work under the contract may be terminated by the City in whole or in part whenever the City determines that termination is in the City's best interest. Any such

termination shall be effected by the delivery to the contractor of a written notice of termination of at least seven (7) days before the date of termination, specifying the extent to which performance of the work under the contract is terminated and the date upon which such termination becomes effective. After receipt of a notice of termination, except as otherwise directed, the contractor shall stop work on the date of the receipt of the notice or other date specified in the notice; place no further orders or subcontracts for materials, services or facilities except as necessary for completion of such portion of the work not terminated; terminate all vendors and subcontracts; and settle all outstanding liabilities and claims.

52. TERMINATION FOR DEFAULT: The City of Naples reserves the right to terminate the contract if the City determines that the contractor has failed to perform satisfactorily the work required, as determined by the City. In the event the City decides to terminate the contract for failure to perform satisfactorily, the City shall give to the contractor at least seven (7) days written notice before the termination takes effect. The fifteen-day period will begin upon the mailing of notice by the City. If the contractor fails to cure the default within the seven (7) days specified in the notice and the contract is terminated for failure to perform satisfactorily, the contractor shall be entitled to receive compensation for all reasonable, allocable and allowable contract services satisfactorily performed by the contractor up to the date of termination that were accepted by the City prior to the termination. In the event the City terminates the contract because of the default of the contractor, the contractor shall be liable for all excess costs that the City is required to expend to complete the work under contract.

53. STATE AND FEDERAL EMPLOYMENT LAWS: Contractors providing service to the City are required to comply with all state and federal employment laws. This includes, but is not limited to, laws resulting from the Immigration and Reform and Control Act of 1986, wherein all employers are required to verify the identity and employment eligibility of all employees. The Department of Homeland Security, U.S. Citizenship and Immigration Services require employees and employers to complete Form I-9 and the employer must examine evidence of identity and employment eligibility within three business days of the date employment begins. Non compliant contractors will be subject to contract sanctions, up to and including contract termination.

54. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY, AND VOLUNTARY EXCLUSION: The contractor agrees to comply with Executive Order 12549 "Debarment and Suspension" and 2 CFR 180 "OMB Guidelines to Agencies on Government wide Debarment and Suspension." These rules require all contractors using federal funds not be debarred or suspended from doing business with the Federal Government. This includes sub-recipients and lower tier participant for covered transactions. Signing and submitting this document certified the organization and its principals are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency, and further have not within the preceding three-year period 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.

THE CITY OF NAPLES IS AN EQUAL OPPORTUNITY EMPLOYER

GENERAL INSURANCE REQUIREMENTS

The Contractor shall not commence work until he has obtained all the insurance required under this heading, and until such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work until all similar insurance required of the subcontractor has also been obtained and approved by the Owner.

Certificates of insurance must be issued by an authorized representative of the insurance company at the request and direction of the policyholder and must include sufficient information so as to identify the coverage and the contract for Owner's improvements for which they are issued. Certificates of insurance must be issued by a nationally recognized insurance company with a Best's Rating of no less than B+VII, satisfactory to the Owner, and duly licensed to do business in the state of said Contract.

The Contractor shall procure and maintain, during the life of this Contract, Workmen's Compensation Insurance for all of his employees to be engaged in work under this Contract, and he shall require any subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work, unless such employees are covered by the protection afforded by the Contractor's insurance. In case any employees are to be engaged in hazardous work under this Contract, and are not protected under this Workmen's Compensation statute, the Contractor shall provide, and shall cause each subcontractor to provide, adequate coverage for the protection of such employees. It is acceptable to use a State-approved Workmen's Compensation Self-Insurance fund.

The Contractor shall take out and maintain during the life of this Contract, Public Liability and Property Damage and shall include Contractual Liability, Personal Injury, Libel, Slander, False Arrest, Malicious Prosecution, Wrongful Entry or Eviction, Broad Form Property Damage, Products, Completed Operations and XCU Coverage to be included on an occurrence basis, and to the full extent of the Contract to protect him, the Owner, and any subcontractor performing work covered by this Contract from damages for personal injury, including accidental death, as well as from claims for property damage, which may arise from operations under this contract, whether such operations be by himself or by a subcontractor, or by anyone directly or indirectly employed by either of them. The Contractor shall also maintain automobile liability insurance including "non-owned and hired" coverage. The entire cost of this insurance shall be borne by the Contractor.

The amount of such insurance shall be no less than \$1,000,000 annual aggregate for bodily injury and property damage combined per occurrence.

The City of Naples must be named as Additional Insured on the insurance certificate and the following must also be stated on the certificate. "These coverage's are primary to all other coverage's the City possesses for this contract only." The City of Naples shall be named as the Certificate Holder. The Certificate Holder shall read as follows:

The City of Naples
735 Eighth Street South
Naples, Florida 34102

No City Division, Department, or individual name should appear on the Certificate.
No other format will be acceptable.

The Certificate must state the proposal number and title.

When using the "Accord"- 25 Certificate of Insurance only the most current version will be accepted.

The City of Naples requires a copy of a cancellation notice in the event the policy is cancelled. The City of Naples shall be expressly endorsed onto the policy as a cancellation notice recipient.

STATEMENT OF NO PROPOSAL

If you will not be proposing on this product/service, please help us by completing and returning only this page to:

City of Naples, Purchasing Division
City Hall 735 8th Street South
Naples, FL 34102
Fax 239-213-7105

Proposal# _____ and Description: _____

We, the undersigned, decline to propose on the above project for the following reason(s):

- ___ We are not able to respond to the Invitation to Proposal or Request for Proposals by the specified deadline.
- ___ Our Company does not offer this product or service.
- ___ Our current work schedule will not permit us to perform the required services.
- ___ Specifications are incomplete or information is unclear
(Please explain below).

Other (Please specify below)

Company Name _____ PH _____

Name and Title of individual completing this form:

(Printed Name) (Title)

(Signature) (Date)

REFERENCES

THIS SHEET MUST BE COMPLETED AND RETURNED WITH PROPOSAL

PROVIDE AT LEAST THREE REFERENCES FOR WHOM YOUR COMPANY HAS PROVIDED SAME OR SIMILAR SERVICES WITHIN THE LAST 2 YEARS.

COMPANY NAME: _____

ADDRESS: _____

TELEPHONE: _____

CONTACT PERSON: _____

COMPANY NAME: _____

ADDRESS: _____

TELEPHONE: _____

CONTACT PERSON: _____

COMPANY NAME: _____

ADDRESS: _____

TELEPHONE: _____

CONTACT PERSON: _____

SPECIAL CONDITIONS

A. TERMS OF CONTRACT

The resulting contract will commence upon award and be in effect for a three year agreement with the City's option to renew for two additional one-year renewal periods.

B. PROHIBITION OF CONTACT

Under no circumstances should any prospective organization or individual, or anyone acting for or on behalf of a prospective organization or individual, seek to influence or gain the support of any member of the City Council, public official or City staff favorable to the interest of any prospective organization or individual. Likewise, contact with City Council, any public official or city staff against the interests of other prospective organization (s) and or individual(s) is prohibited. Any such activities will result in the exclusion of the prospective organization or individual from consideration by the City.

C. PROPOSAL PERFORMANCE & PAYMENT BONDS (NOT APPLICABLE)

A Proposal Security Bond shall be submitted with the final proposal, if the total proposal is greater than \$125,000.00, in an amount equal to at least five percent (5%) of the total amount of the final proposal, or the equivalent in the form of a certified check or money order made payable to the City of Naples, Florida. Upon the award of the proposal to the successful proposer, both proposal performance bond and the payment bond will be required in the amount of one hundred percent (100%) of the price specified in the contract. **Also proof of insurance from the successful proposer is required at the time of award as well.**

D. QUESTIONS

Questions regarding this proposer packet must be received in writing in the Purchasing Division, **NO LATER THAN TEN CALENDAR DAYS PRIOR TO THE PROPOSAL CLOSING DATE TO ENSURE AN ANSWER IS PROVIDED PRIOR TO CLOSING.**

Direct all questions to:

Janice Vermillion, CPPB

City of Naples, Purchasing Division

City Hall, 735 8th Street South

Naples, Florida 34102

PH: (239) 213-710x FX: (239) 213-7105

jvermillion@naplesgov.com

SPECIFICATIONS

SECTION 1. SCOPE OF WORK:

The City of Naples desires to enter into a contractual relationship with vendors capable of providing general street and right-of-way maintenance, repair and rehabilitation capable of undertaking and completing street resurfacing and construction projects of a defined scope and capable of providing a combination of manpower, equipment and materials to perform general emergency street repairs. It is the City's intent to award to multiple contractors. Contractors may be designated in terms of primary service providers and standby service providers based on the selection committees' overall ranking. The general routine maintenance work, capital improvement work and/or emergency repair work will be included under one or more of the following areas of work. Each Contractor's submitted qualifications, experience and compensation schedule will be utilized in determining the most responsive firms.

SECTION 2. CONTRACT WORK - STREET MAINTENANCE, RESURFACING & REHABILITATION (SECTION A OF COMPENSATION SCHEDULE)

Annual road resurfacing and reconstruction typically begins in May of each year in accordance with the City's Pavement Management Program (PMP), while other road maintenance occurs throughout the year. In regards to the PMP, the City will provide the Contractor a list of streets to be serviced, as well as the proposed method of maintenance resurfacing, repair or reconstruction. The total quantity of work associated with the PMP for any given year at any one time is not expected to be below 15,000 SY of area. More likely, the total quantity will be well above this minimum level. Contractors do not need to be qualified in all of the maintenance and repair items described in Section 1A, and in that case, the Contractor shall omit a unit price for that item. Although the bulk of the consolidated PMP work shall be performed between May and September of each year, there may be resurfacing projects that will be required outside of this time frame, primarily

alley resurfacing and emergency repairs involving large areas of asphalt. Other road maintenance work such as pot hole repairs, utility patches, and sidewalk and curb repairs will occur on an as needed basis throughout the year, see Section 3.

- A. Mobilization for any and all contract work shall be included in unit pricing for all projects and type of work.
- B. Maintenance of traffic cost shall be included in unit pricing for all projects and type of work.

2.1 FULL DEPTH RECLAMATION

Work items under this section may include: (1) Mobilization for reclaiming, (2) Reclaimed Asphalt Base Course, (3) Furnishing and Applying a Stabilizing Agent, (4) grading and compaction.

Reclaiming

The work item for Reclaimed Asphalt Base Course shall consist of pulverizing an existing bituminous pavement and its base course and mixing them together, adding water and new base material as the Public Works/Engineering Department may require; injecting the specified stabilizing agent directly into the mixing chamber of the reclaiming machine and uniformly mixing it with the pulverized material at the rate and depth specified; and watering, shaping, grading, and compacting the blended material to produce a stabilized base course, true to the established line and grade of the road. Areas to be widened shall be excavated and filled with new base material prior to the reclaiming operation and the Contractor shall apply the reclaiming machine to mix and stabilize the widening area with the existing layers in the same operations.

The Contractor may be required to perform reclaiming work while traffic is maintained in another lane or lanes of the road. The work item for Reclaimed Asphalt Base Course shall include all necessary traffic control services provided during the reclaiming operation which are not covered under other work items in the Contract. All traffic control and maintenance of traffic is to be performed in conformity with Agency standards with Roadway and Traffic Design Standards, published by the Florida DOT, and with the Manual for Traffic Control Devices, published by the U.S. Department of Transportation.

Materials

a. References: the abbreviated title, "FDOT Specifications," used herein refers to the Standard Specifications for Roads and Bridges, 1999, of the Florida Department of Transportation.

b. Stabilizing Agent: Stabilizing agent shall consist of emulsified asphalt as indicated in the specifications Sheet. The contractor shall manufacture its own emulsion.

When asphalt emulsion treatment is specified, asphalt emulsion, type CSS-1h or CMS-2h mod., meeting the requirements of ASTM D2397-98, shall be injected in the base material.

c. Asphalt Emulsion mix design: Asphalt emulsion is to be used as the stabilizing agent, the Contractor shall obtain a mix design study based on the material in the existing layers. Prior to scheduling the work, the Contractor shall obtain the services of a laboratory which shall sample the pavement, base, subgrade and shall perform a modified Marshall Stability Test and a recommendation as the depth of mixing and the rate and depth of emulsion treatment. The design study and recommendations shall be forwarded to the Public Works/Engineering Department at least five work days prior to starting operation.

Equipment

a. General: The Contractor shall accomplish the work utilizing a road reclaimer, a motor grader, a vibratory roller or three-wheeled roller, a water truck with spray bar and such additional equipment as may be necessary to the operation. The required equipment shall be subject to the Public Works/Engineering Department's approval, and the Department may, at any time during the work, disapprove the use of a particular machine for unsafe, erratic, or inadequate performance. Utilization of a proper road reclaimer and compaction equipment as specified herein is of the essence of this work, and substitution of other equipment or a different technique shall not be acceptable.

b. Reclaimer: The work shall be performed utilizing a road reclaimer machine originally designed for pavement reclaiming. The road reclaimer shall be a CAT 350, larger or a comparable model of equal or greater horsepower and

rotor size, produced by another manufacturer. The reclaimer shall be capable of pulverizing and mixing pavement, base materials, and subgrade soil to depth of 0.40m , (16 inches). It shall be capable of injecting asphalt emulsion into the rotor chamber at an accurately controlled rate and of doing so in confined areas inaccessible to a tanker truck.

c. Compacting equipment: The Contractor shall compact the reclaimed base material with a vibratory roller weighing not less than 6.0 metric tons (13,000 lbs.) or by a three wheeled roller weighing not less than 10.0 metric tons (11 tons). The vibrator must be fully operable at maximum amplitude throughout the compacting process.

Construction Procedure

a. General: When the work is to be performed under traffic, each lane shall be completed in segments, the lengths and limits of which shall be approved by the Public Works/Engineering Department may limit the length of the work zone to avoid causing a traffic hazard or undue delay. Before commencing the reclaiming operations, the Agency shall set alignment stakes (laths) at intervals of 60 meters (200 feet) or less on both sides of the road, offset at least 1.2 meters (4 feet) from the proposed edge of pavement for use in preparing the base and placing the new pavement. The setting of laths shall be in addition to any other markers or reference points required under the Contract, and the placing of surveying markers or other references elsewhere shall not substitute for the required laths along the existing pavement.

Prior to beginning work, the Contractor shall relocate all mailboxes, newspaper boxes, signs, and other appurtenances which are located within such proximity to the roadway as to risk damage or to interfere with the work. Before this work may begin, residents shall be notified of the impending relocations by means of printed flyers. After all other work items are complete, the removed items shall be replaced in their original locations, except that the distance from the proposed edge of pavement shall be as prescribed in the Department of Public Works/Engineering Design Guidelines.

b. Reclaiming: The Contractor shall pulverize the existing pavement in multiple passes of the reclaimer, applying sufficient mechanical effort to reduce the fragments to a maximum size of 75 mm (3 inches). In this

process the pulverized material shall be combined uniformly with the base and subgrade to a depth which the Public Works/Engineering Department may specify. Following the reclaimer, a roller shall be applied to compact the blended material sufficiently to support traffic temporarily. The depth of material to be compacted shall not exceed .150 m (6 in). The Public Works/Engineering Department may require removal of up to 50 mm (2 in) of pulverized material prior to addition of the stabilizing agent. When the pulverizing and mixing step is complete, the material shall be graded, watered, remixed, shaped, and compacted as necessary to establish proper grade and uniform thickness and to support traffic temporarily. Water shall be applied if necessary to obtain uniform moisture content as the Public Works/Engineering Department may specify. The Contractor shall apply additional water at frequent intervals as needed to suppress dust, preserve the surface, and maintain the specified moisture content. The stabilizing agent shall then be applied and mixed to the depth specified by the Public Works/Engineering Department, and grading and compaction of the combined base material shall proceed immediately behind the mixing of the stabilizing agent.

Before final grading and the addition of the emulsion, when directed by the Public Works/Engineering Department, the Contractor shall adjust the cross-slope, super elevation, and profile grade by adding granular base material in areas the Public Works/Engineering Department may designate.

c. Compaction: The Contractor may employ other compaction equipment and methods in addition to the vibratory roller to accomplish the final grading and to compact and finish the surface. Transverse joints shall be compacted by cross-rolling parallel to the joint. After the material has been compacted to load-bearing strength, the Contractor shall proof-roll the prepared base in the presence of the Inspector. The Public Works/Engineering Department may, as it deems necessary, direct the Contractor to correct areas of weakness and excess moisture in the base by scarifying, aerating, and reworking shore sessions to the full depth of the layer. If, after an area has been reworked and recompacted, it remains soft or does not attain the required density, the Public Works/Engineering Department may direct the Contractor to remove the material and replace it with Granular Base Material meeting the requirements of these specifications. This material shall be counted for payment under the pay item for Excavation and Granular Base Material.

Basis of Payment

a. Mobilization for Reclaiming: Mobilization shall be included within the unit price for Full Depth Reclamation set forth in the compensation schedule.

b. Reclaimed Asphalt Base, in place and accepted, shall be paid for at the contract unit price per square yard, as indicated in the Compensation Schedule. The area of work for the purpose of payment shall be the overall length of each reclaimed lane times the specified total base width for the lane. The total base width shall include the widening width, if any, in which the reclaimer is to be used to blend new base material with the pulverized layers. Payment under this item shall be full compensation for all work included in or incidental to the reclaiming operation, for the grading, shaping, and compacting of the Reclaimed Asphalt Base, for the mix design study, for furnishing, delivering, and applying water, for applying and mixing and furnishing asphalt emulsion or other stabilizing agent as specified, and for all other work incidental to the reclaiming operation. Also this item shall include all work and expenses involved in wasting or hauling and disposing of excess material off site, and including reshaping of the shoulders as the Public Works/Engineering Department may direct. Payment shall be full compensation for this work, including incidentals.

d. Limerock base material shall be paid for at the contract price per ton as determined from load tickets, which the Contractor shall collect and deliver to the Public Works/Engineering Department. Payment shall be full compensation, including hauling, spreading, mixing, and incidentals. Where a substantial quantity of material is lost because of the Contractor's placement methods or lack of care and if the quantity delivered exceeds the calculated quantity by ten percent or more, the full quantity of lost material shall be estimated and deducted from the pay quantity.

e. Asphalt Emulsion type CSS-1h or CMS-2h mod., uniformly incorporated in the layer at the rate specified by the Certified Mix Design, shall be measured according to the volume (gallons) delivered from the tanker. Payment under this pay item shall be full compensation for furnishing and delivering this material, including demurrage charges and all incidentals.

f. Manholes: Prior to reclamation process, each manhole shall be lowered to a depth of at least 2" below the initial pulverizing depth. After final pass of reclaimer and final compaction, manholes shall be readjusted to the appropriate height to accommodate the final overlay.

g. Water Shutoffs: Water shutoffs shall be adjusted to accommodate the reclamation process. After final pass of reclaimer and final compaction, water shutoffs shall be adjusted to the appropriate height to accommodate the final overlay.

h. Material/Removal: When directed by the owner, material shall be removed from the roadway area in order to prepare for a desired final grade or removal of unsuitable material. Up to 2" removal shall be allowed off the top after initial pulverization. When over 2" of removal is required, the initial pulverized material shall be winnowed into a lane and sub-base shall be removed. It is the intention of this specification to maximize the reclaimed asphalt pavement in the final reclaimed asphalt base course.

2.2 MICRO-SURFACING

OPENING TO TRAFFIC

Micro-Surfacing shall be capable of producing an emulsified asphalt paving mixture that will cure at a rate which will permit traffic on the pavement within one hour after application without damaging the pavement surface. Any damage done by traffic to the Micro-surfacing shall be repaired by the contractor at his/her expense.

MATERIALS

EMULSIFIED ASPHALT:

GENERAL

The emulsified asphalt shall be quick-set latex modified cationic type CSS-1h emulsion with natural or synthetic latex and shall conform to the requirements specified in AASHTO M208 or ASTM D2397. It shall pass all applicable storage and settlement tests. The Contractor shall manufacture it own emulsion. The cement mixing test shall be waived for this emulsion.

The polymer material shall be milled or blended into the asphalt or emulsifier solution prior to the emulsification process.

The minimum amount and type of polymer modifier shall be determined by the laboratory performing the mix design. The minimum amount required will be based on asphalt weight content and will be certified by the emulsion supplier. In general, a three percent (3%) polymer solids, based on asphalt weight, is considered minimum.

The five-day (5) settlement test may be waived, provided job stored emulsion is used within thirty-six (36) hours from the time of the shipment, or the stored material has had additional emulsion blended into it prior to use.

QUALITY TESTS

When tested according to the following tests, the emulsion shall meet the requirements of AASHTO M208 or ASTM D2397 for CSS-1h, plus the following:

AASHTO TEST NO.	ASTM TEST NO.	QUALITY	SPECIFICATION
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AASHTO T59	ASTM D244	Residue after Distillation	62% Minimum
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The temperature for this test should be held below 280°F (138°C). Higher temperatures may cause the polymers to break down.

AASHTO TEST NO.	ASTM TEST NO.	TESTS ON RESIDUE	SPECIFICATION
AASHTO T53	ASTM D36	Softening Point	135°F (57°C) Minimum
AASHTO T49	ASTM 2397	Penetration at 77°F (25°C)	40 - 90*
	ASTM 2170	Kinematic Viscosity @ 275 °F (135°C)	650 cSt/sec. Minimum °F

Climate conditions should be considered when establishing this band.

Each load of emulsified asphalt shall be accompanied with a Certificate of Analysis/ Compliance to assure that it is the same as that used in the mix design.

AGGREGATE

GENERAL

The mineral aggregate used shall be of the type and grade specified for the particular use of the Micro-Surfacing. The aggregate shall be a manufactured crushed stone such as granite, slag, limestone, chat, or other high-quality aggregate, or combination thereof. To assure the material is totally crushed, one-hundred percent (100%) of the parent aggregate will be larger than the largest stone in the gradation to be used.

QUALITY TESTS

When aggregate is tested according to the following test, it should meet these minimum requirements:

AASHTO TEST NO.	ASTM TEST NO.	QUALITY	SPECIFICATION
AASHTO T176	ASTM D2419	Sand Equivalent	65 Minimum
AASHTO T104	ASTM C88	Soundness	15% Maximum

			using NA2 SO4 or 25% Maximum using MgSO4
AASHTO T96	ASTM C131	Abrasion Resistance	30% Maximum

The abrasion test is to be run on the parent aggregate. The aggregate should meet state-approved polishing values. Proven performance may justify the use of aggregates that may not pass all of the above tests.

GRADING

When tested in accordance with AASHTO T27 (ASTM C136) and AASHTO T11 (ASTM C117), the target (mix design) aggregate gradation (including the mineral filler) shall be within one of the following bands.

SIEVE SIZE		TYPE II PERCENT PASSING	TYPE III PERCENT PASSING	STOCKPILE TOLERANCE
$\frac{3}{8}$ mm)	(9.5	100	100	
#4 mm)	(4.75	90 - 100	70 - 90	± 5 %
#8 mm)	(2.36	65 - 90	45 - 70	± 5 %
#16 mm)	(1.18	45 - 70	28 - 50	± 5 %
#30 um)	(600	30 - 50	19 - 34	± 5 %
#50 um)	(330	18 - 30	12 - 25	± 4 %
#100 um)	(150	10 - 21	7 - 18	± 3 %
#200	(75 um)	5 - 15	5 - 15	± 2 %

The job mix (target) gradation shall be within the gradation band for the desired type. After the target gradation has been submitted (this should be the gradation that the mix design is based on), then the percent passing each sieve shall not vary by more than the stockpile tolerance shown in the above table for each individual sieve, and still remain within the gradation band. It is recommended that the percent passing shall not go from the high end to the low end of the range for any two consecutive screens.

The aggregate will be accepted at the job location stockpile or when loading into the support units for delivery to the lay-down machine. The stockpile shall be accepted based on five gradation tests according to AASHTO T2 (ASTM D75). If the average of the five tests is within the gradation tolerances, then the materials will be accepted. If the tests show the material to be out, the contractor will be given the choice to either remove the material or blend other aggregate with the stockpiled material to bring it into specification. Materials used in blending must meet the quality tests before blending and must be blended in a manner to produce a consistent gradation. If blending is used, it will require that a new mix design be performed.

Screening shall be required at the stockpile prior to delivery to the paving machine if there are any problems created by having oversize material in the mix.

Mineral filler

Mineral filler, if required, shall be any recognized brand of non-air entrained Portland cement or hydrated lime that is free from lumps. It may be accepted upon visual inspection. The type and amount of mineral filler needed shall be determined by a laboratory mix design and will be considered as part of the aggregate gradation. An increase or decrease of less than one percent (1%) may be permitted when the Micro-Surfacing is being placed if it is found to be necessary for better consistency or set times.

Water:

Water shall be potable and free of harmful or deleterious materials.

Additives

Additives may be added to the emulsion mix or any of the component materials to provide the control of the quick-traffic properties. They must be included as part of the mix design and be compatible with the other components of the mix.

RATE OF APPLICATION

The Micro-Surfacing mixture shall be of the proper consistency at all times, so as to provide the application

rate required by the surface condition. The average single application rate, as measured by the Project Manager, shall be in accordance with the following table:

AGGREGATE TYPE	LOCATION	SUGGESTED APPLICATION RATE
TYPE II	Urban and Residential Streets	10 - 20 lb/yd ² (5.4 - 10.8 kg/m ²)
TYPE II	Primary and Interstate Routes	15 - 30 lb/yd ² (8.1 - 16.3 kg/m ²)
	Wheel Ruts	As Required

Suggested application rates are based upon the weight of dry aggregate in the mixture. Application rates are affected by the unit weight of the aggregate.

Micro-Surfacing is often put down in two full-width passes in place of rut-filling when the rutting or deformation is not severe. When two passes are used, the first pass (scratch course) is made using a metal or stiff rubber strike-off and applying only what the surface demands for leveling. The second course is applied at 15 - 30 lb/yd² (8.1 - 16.3 kg/m²).

EQUIPMENT

GENERAL

All equipment, tools, and machines used in the performance of this work shall be maintained in satisfactory working condition at all times to ensure a high-quality product.

MIXING EQUIPMENT

The machine shall be specifically designed and manufactured to lay Micro-Surfacing. The material shall be mixed by an automatic-sequenced, self-propelled Micro-Surfacing mixing machine, which shall be a continuous-flow mixing unit able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, control setting additive, and water to a revolving multi-blade, double-shafted mixer and to discharge the mixed product on a continuous-flow basis.

The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, control

additive and water to maintain an adequate supply to the proportioning controls. Because of the varying types of roadways; the Contractor shall have a minimum of two (2) self-loading machines capable of loading to a revolving multi-blade, double-shafted mixer and to discharge the mixed product on a continuous basis.

The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, control additive and water to maintain an adequate supply to the proportioning controls. The machine must be capable of loading materials while continuing to lay microsurfacing, thereby minimizing construction joints.

The self-loading machine shall be equipped to allow the operator to have full control of the forward and reverse speeds during applications of the Micro-Surfacing material and be equipped with opposite-side driver stations to assist in alignment. The self-loading device, opposite-side driver stations, and forward and reverse speed controls shall be original equipment manufacturer design.

PROPORTIONING DEVICES

Individual volume or weight controls for proportioning each material to be added to the mix (i.e. aggregate, mineral filler, emulsified asphalt, additive, and water) shall be provided and properly marked. These proportioning devices are used in material calibration and determining the material output at any time.

SPREADING EQUIPMENT

The mixture shall be agitated and spread uniformly in the surfacing box by means of twin-shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off. The spreader box shall have suitable means provided to side shift the box to compensate for variations in the pavement geometry.

SECONDARY STRIKE-OFF

A secondary strike-off shall be provided to improve surface texture. The secondary strike-off shall have the same adjustments as the spreader box.

RUT-FILLING BOX

When required, before the final surface course is placed, preliminary micro-surfacing material may be required to fill ruts, utility cuts, depressions in the existing surface, etc. Ruts of one-half ($\frac{1}{2}$) inch (12.7 mm) or greater in depth shall be filled independently with a rut-filling spreader box, either five foot (5) (1.5m) or six foot (6) (1.8 m) in width. For irregular or shallow rutting of less than one-half ($\frac{1}{2}$) inch (12.7 mm) in depth, a full-width scratch-coat pass may be used as directed by the Project Manager. Ruts that are in excess of one and one-half ($1\frac{1}{2}$) inches (38.1 mm) in depth may require multiple placements with the rut-filling spreader box to restore the cross-section. All rut-filling level-up material should cure under traffic for at least a twenty-four (24) hour period before additional material is placed on top of the level-up.

AUXILIARY EQUIPMENT

Suitable surface preparation equipment, traffic control equipment, hand tools, and any other support and safety equipment shall be provided by the contractor as necessary, (or as the Project Manager requires) to perform the work

CALIBRATION

Each mixing unit to be used in the performance of the work shall be calibrated in the presence of the Project Manager or his/her designee prior to construction. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than sixty (60) days have lapsed. The documentation shall include an individual calibration of each material at various settings, which can be related to the machine metering devices. No machine will be allowed to work on the project until the calibration has been completed and/or accepted.

WEATHER LIMITATIONS

Micro-Surfacing shall not be applied if either the pavement or air temperature is below 50°F (10°C) and

falling, but may be applied when both pavement and air temperatures are above 45°F (7°C) and rising. No Micro-Surfacing shall be applied when there is the possibility that the finished product will freeze within 24 hours. The mixture shall not be applied when weather conditions prolong opening to traffic beyond a reasonable time or as directed by the Project Manager.

NOTIFICATION AND TRAFFIC CONTROL

All homeowners and businesses affected by the construction shall be notified two (2) days in advance of the surfacing. Suitable signs shall be posted prior to the surfacing. Should work not occur on the specified day, a new notification will be distributed. The notification shall be in a form of a written posting, stating the time, date that the surfacing will take place. A current phone number of the contractor's on-site supervisor and a brief description of Micro-Surfacing. The contractor will be responsible for contacting any Waste Management companies, United States Mail Carriers, United Parcel Services, etc. on the day that Micro-Surfacing is planned. Failure to do so will result in the contractor repairing the roadway at his/her cost.

SURFACE PREPARATION

GENERAL

Immediately prior to applying the Micro-Surfacing, the surface shall be cleared of all loose material, silt spots, vegetation, and other objectionable material. Any standard cleaning method will be acceptable. If water is used, cracks shall be allowed to dry thoroughly before applying Micro-Surfacing. Manholes, valve boxes, drop inlets and other service entrances shall be protected from the Micro-Surfacing by a suitable method. The Project Manager or his/her designee shall approve the surface preparation prior to surfacing. No dry aggregate either spilled from the lay-down machine or existing on the road, will be permitted.

TACK COAT

Normally, tack coat is not required unless the surface to be covered is extremely dry and raveled or is concrete or brick. If required, the tack coat should consist of one part emulsified asphalt/three parts water and should be applied with a standard distributor. The emulsified

asphalt should be SS or CSS grade. The distributor shall be capable of applying the dilution evenly at a rate of 0.05 to 0.10 gal/yd² (0.23 to 0.45 l/m²). The tack coat shall be allowed to cure sufficiently before the application of Micro-Surfacing. If a tack coat is to be required, it must be noted during the Pre-Construction Meeting.

CRACKS

It is advisable to pre-treat the cracks in the surface with an acceptable crack sealer prior to the application of the Micro-Surfacing. The Project Manager or his/her designee will make the determination on a road by road basis whether pre-treatment will be required.

APPLICATION

GENERAL

If required by the Project Manager, it is recommended that a test strip be placed in conditions similar to those expected to be encountered during the project.

When required by local conditions, the surface shall be pre-wetted by fogging ahead of the spreader box. The rate of application of the fog spray shall be adjusted during the day to suit temperatures, surface texture, humidity, and dryness of the pavement.

The Micro-Surfacing shall be of the desired consistency upon leaving the mixer. A sufficient amount of material shall be carried in all parts of the spreader at all times so that a complete coverage is obtained. Overloading of the spreader shall be avoided. No lumping, balling, or unmixed aggregate shall be permitted.

No streaks, such as those caused by oversized aggregate, shall be left in the finished surface. If excess streaking develops, the job will be stopped until the contractor proves to the Project Manager or his/her designee that the situation has been corrected. Excessive streaking is defined as more than four drag marks greater than one-half ($\frac{1}{2}$) inch wide (12.7 mm) and four inches (4) long (101 mm), or one inch (1) wide (25.4 mm) and three (3) inches long (76.2 mm), in any 29.9 yd² (25 m²) area. No transverse ripples or longitudinal streaks of one-fourth ($\frac{1}{4}$) inch in depth (6.4 m²) will be permitted, when measured by placing a ten (10) foot (3 m) straight edge over the surface.

JOINTS

No excess buildup, uncovered areas, or unsightly appearance shall be permitted on longitudinal or transverse joints. The contractor shall provide suitable-width spreading equipment to produce a minimum number of longitudinal joints throughout the project. When possible, longitudinal joints shall be placed on lane lines. Half passes and odd-width passes will be used only in minimum amounts. If half passes are used, they shall not be the last pass of any paved area. A maximum of three (3) inches (76.2 mm) shall be allowed for overlap of longitudinal lane line joints. Also, the joint shall have no more than a one-fourth ($\frac{1}{4}$) inch (6.4 mm) difference in elevation when measured by placing a ten (10) foot (3 m) straight edge over the joint and measuring the elevation drop-off.

MIX STABILITY

The Micro-Surfacing shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate. Under no circumstances shall water be sprayed directly into the lay-down box while laying micro-surfacing material.

HANDWORK

Areas which cannot be reached with the mixing machine shall be surfaced using hand squeegees to provide complete and uniform coverage. If necessary, the area to be hand worked shall be lightly dampened prior to mix placement. Care shall be exercised to leave no unsightly appearance from hand work. The same type of finish as applied by the spreader box shall be required.

LINES

Care shall be taken to ensure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance. If necessary, a suitable material will be used to mask off the end of streets to provide straight lines. Edge lines shall not vary by more than ± 2 inches

(± 50 mm) horizontal variance in any 96 feet (30 m) of length.

CLEAN-UP

All areas, such as man-ways, gutters, and intersections, shall have the Micro-Surfacing mix removed as specified by the Project Manager. The contractor shall, on a daily basis, remove any debris associated with the performance of the work, completely and thoroughly to the satisfaction of the Project Manager or his/her designee. In addition, the contractor shall, at the request of the Project Manager pressure wash any area such as, curb and gutter, private driveways, etc. removing any and all stains associated with the placement of the Micro-Surfacing.

METHOD OF MEASUREMENT

AREA

The method of measurement and payment is based on the area covered, measured in square yards.

PAYMENT

The Micro-Surfacing shall be paid for by the unit area of work and accepted by the Project Manager. The price shall be full compensation for furnishing all preparation; mixing and applying these materials; and all labor, equipment, tools, test designs, cleaning, and incidentals necessary to complete the job as specified herein.

2.7 OPEN GRADED POROUS ASPHALT

3. DEFINITIONS

3.1 Porous Asphalt

Porous Asphalt is an open graded mixture of coarse and fine aggregates, mineral filler and a bituminous based binder produced hot in a mixing plant. It is delivered, spread and compacted while hot.

In this specification these types of porous asphalt are defined:

PA 15HS This mix has a lower air void content and higher shear strength than the other mixes. It can thus withstand higher traffic shear stress.

PA 20 This mix has a minimum design air void content of 20% and is intended for use in most locations. It can be used with or without polymer or additive modification.

PA 25HV This mix must have binder modification to withstand the abrasive stress of traffic. It is a high air void mix with a minimum design air void content of 23% although design air voids of approximately 30% will give enhanced noise reducing properties.

3.2 Thin Layer

In this system a layer of mix with a maximum particle size of 16 or 20mm is laid 30-50mm thick. On top of this layer a 20-30mm thick layer of a mix with a smaller top size is laid. The intention of the system is to:

- 1. Increase the void content of the surfacing to absorb noise*
- 2. Use a small sized aggregate in the surfacing to reduce noise*
- 3. Use the smaller voids on the top layer to trap detritus and use the large voids in the bottom mix to allow water to flush the detritus thus maintaining the drainage and noise properties of the system.*

3.3 Coarse Aggregate

Coarse Aggregate is comprised of aggregate components retained on a 4.75mm test sieve. The source rock from which the components are manufactured shall comply with the requirements of Table 4.1.

3.4 Fine Aggregate

Fine aggregate is the fraction of aggregate components passing the 4.75mm test sieve, excluding mineral fillers.

3.5 Mineral Filler

Mineral Filler is finely ground particles of limestone, hydrated lime, Portland cement or other non-plastic mineral matter, predominantly finer than 0.075mm that is added to the mix.

3.6 Binder

Binder is penetration grade bitumen complying with TNZ M/1 specification. If polymer modification is required then this is included in the specific contract requirements.

3.7 Specified Mix Envelope

The Specified Mix Envelope (SME) is the porous asphalt particle size distribution and bitumen content limits as set out in Table 5.1.

3.8 Job Mix Formula

The Job Mix Formula (JMF) is the combined aggregate particle size distribution and bitumen content that falls within the SME and produces a mix that complies with the volumetric and mechanical criteria of Table 5.2.

Note that particle size distribution acceptance limits derived from application of the permissible variations of Table 7.1 to the JMF particle size distribution may allow test results to fall outside the SME envelopes of Table 5.1. This is acceptable.

4. MATERIALS

4.1 Testing

All sampling and laboratory testing required demonstrating that materials used, and that the resulting mix complies with this specification shall be performed by a laboratory accredited to ISO 17025 (e.g. IANZ Accreditation).

4.2 Course Aggregate

Course aggregate shall consist of crushed stone or crushed gravel or a combination of the two, produced from hard durable rock or river boulders. Synthetic aggregates can be used as long as they comply with the requirements of this specification. The source rock from which individual components are produced shall comply with Table 4.1 and the blended course aggregate shall comply with the requirements of Table 4.2:

Table 4.1: Requirements for Course Aggregate Source Rock

Criteria	Test Method	Requirements
Crushing Resistance	NZS 4437 Test 3.10	280 kN minimum
Weathering Resistance	NZS 4437 Test 3.11	AA or BA
Polished Stone Value	BS EN 1097 Part 8	*see below

* refer to specific contract requirements for minimum Polished Stone Value

At least 85% by mass of the course aggregate shall comply with the specified minimum Polished Stone Value.

The Cleanliness value of the combined coarse aggregate shall be measured during the mix design process. This measured value minus 5 shall form be the minimum required during production of the mix.

Table 4.2: Requirements for Blended Coarse Aggregate

Criteria	Test Method	Requirements
Particle Shape	NZS 4407 Test 3.13	2.25 maximum
Broken faces	NZS 4407 Test 3.14	98% minimum

4.3 Fine Aggregate

Fine aggregate shall consist of particles of sand, crushed stone, crushed gravel crushed synthetic aggregate or a mixture of these materials. The parent material from which any crushed fine aggregate is produced shall comply with the crushing resistance criteria of Table 4.3.

Table 4.3: Requirements for Fine Aggregate

Criteria	Test Method	Requirements
Crushing Resistance	NZS 4407 Test 3.10	130 kN minimum

4.4 Mineral Filler

Mineral Filler (if used) shall consist of finely ground particles of limestone, hydrated lime, Portland cement or other non-plastic mineral matter, complying with Table 4.4. Pumice and other similar absorbent materials are not acceptable. The mineral filler shall be thoroughly dry and free from lumps. The Mineral Filler shall predominantly be all passing the 0.075 mm sieve.

4.5 Binder

The bitumen used in the asphaltic concrete mixture shall be 80/100 or 60/70 grade compliant with TNZ M/1 Specification modified if required as detailed in the specific contract requirements. The bitumen may be modified also through the use of adhesion agent, polymers, fibres, etc. Modification of the binder is required for the HV mixes. The modifier type and content is the responsibility of the contractor.

5. MIX DESIGN

Penetration grade bitumen mixing and compaction temperatures shall be modified to attain binder viscosities of 1 Pa.s \pm 0.1 Pa.s and 2 Pa.s \pm 0.2 Pa.s respectively. The determination of the design bitumen content shall be made in accordance with the principles given in Section 4.12 of APBC report No 18 (AP-T20). The binder drain down test shall be performed at 10°C above the mixing temperature and then ensuring that the other criteria in Table 5.2 are achieved. If the time from manufacture to

laying is expected to be significantly greater than one hour then the drainage time may be increased to model the expected storage and transport time.

For polymer modified binders the design binder content will be the same as that obtained with penetration grade binder but the other criteria in Table 5.2 must be achieved with the modified binder.

The particle size distribution of the Job Mix Formula shall comply with the Specified Mix Envelopes requirements of Table 5.1.

Test specimens shall be made using the method of ASTM D6926. The specimens shall be compacted using 50 compaction blows on each side of the specimen. *Alternatively specimens can be compacted using a Serraspac compaction at 50 cycles in accordance with AS 2891.2.2.*

For polymer modified binders the mixing and compaction temperatures shall be as recommended by the manufacturer.

Specimen volume shall be determined by measurement to ASTM D3549 and air voids shall be calculated in accordance with ASTM D5203.

Retained tensile strength shall be determined in accordance with ASTM D4867, except that the air void limits for saturation are waived. Saturation shall be performed by placing the compacted specimen complete with mould in distilled or deionized water at $60 \pm 1^\circ\text{C}$ for 24 hours. When samples have been prepared using gyratory compaction samples will be required to be transferred into a suitable sleeve to prevent sample slumping in the 60°C bath. After the saturation time, the specimens shall be cooled, removed from the mould or sleeve and placed in the $25 \pm 1^\circ\text{C}$ water bath for 1 hour before testing for retained strength.

Abrasion loss shall be determined using the cantabro test at 25°C in accordance with Test method AGPT/T 236 Asphalt Particle Loss (%).

Durability of Polymer modified mixes shall be assessed using the ageing procedure given in the appendix and then testing for abrasion loss using AGPT/T 236. The volumetric and physical data of the mixture shall be provided to the Engineer prior to commencement of work.

Table 5.1: Porous Asphalt Specified Mix Envelopes

Sieve Size (mm)	FA 10 HS	PA 10	PA 14	PA 7 HV	PA 10 HV	PA 14 HV	PA 20 HV
26.5							100
9			100			100	85-100
13.2	100	100	85-100		100	85-100	
9.5	85-100	85-100	85-90	100	85-100	10-25	10-25
6.7				85-100			
4.75	30-40	20-40	12-22	10-30	10-30	7-20	7-20
3.56	10-25	5-15	5-15	5-15	5-15	5-15	5-15
10/75	2-5	2-5	2-5	1-5	1-5	1-5	1-5
Effective Binder Content % by mass min	4.5	4.5	4.0	4.5	4.0	4.0	4.0
Minimum Thickness of Asphalt (mm)	25	25	30	20	25	30	50

Table 5.2: Laboratory Mixture Design Volumetric and Physical Requirements

Criteria	PA	PA HV	PA HS
Air Voids (%)	20 - 25	25 - 30	12 - 16
Residual Tensile Strength (%)	75 min.	75 min.	75 min.
Binder drainage (%)	0.1-0.3	0.1-0.3	0.1-0.3
Cantabro loss max %	15	20	20
Max ratio of cantabro loss before and after ageing*	3	2	2

Where the mix does not comply with the durability cantabro loss ratio the mix may still be used with approval of the Engineering policy manager if other evidence of durable performance can be demonstrated. The durability criteria only apply to mixes using polymer modified binders.

6. PRODUCTION

The manufacturing plant shall be calibrated and operated to consistently produce a uniform mixture within the tolerances specified by Table 7.1.

If the period of time between production and laying exceeds 1.5 hrs the contractor shall provide details of how they will mitigate down down and segregation problems in the contract documents.

If mix is to be stored prior to transportation and laying, storage bins shall be designed and controlled to prevent segregation and minimize degradation of the mix.

Aggregates shall be stored at the plant in such a manner that each separate aggregate component and stockpile is physically separate. Conditions of storage shall be arranged so that the aggregate stockpiles are not contaminated, nor subject to deterioration.

The binder shall be heated at the plant to a temperature at which it can be properly handled by the pumping system. Any bitumen heated above 175°C, or held for more than 8 hours above 162°C shall be rejected and not used unless subsequent testing shows compliance with MFI specification. Polymer modified binder shall be handled and stored in accordance with the manufacturer's recommendations.

Where the binder is penetration grade bitumen the aggregate shall not be heated above 135°C. The temperature at which the viscosity of the bitumen is 1 Pa.s shall be the mixing temperature. For polymer modified binders the mixing temperature shall be as recommended by the manufacturer.

The temperature of the Porous Asphalt mix discharging from the mixing plant shall not be more than 15°C above the mixing temperature and the average temperature of any truck load of mix measured at the plant shall be within $\pm 10^\circ\text{C}$ of the mixing temperature.

7. TESTING

Samples of the Porous Asphalt shall be drawn from production lots and tested. Samples shall be taken in accordance with ASTM D979 or equivalent, and shall be obtained from the mixing plant.

The samples shall be tested for bitumen content and particle size distribution with test results falling within the mix control envelope, formed by applying the tolerances of Table 7.1 to the JMF.

Bitumen content shall be measured using the method of ASTM D2172 or approved alternative. Suitable alternatives include the solvent extraction method generally designated ADL 4.02/15a and Ignition using a furnace (ASTM D6307). Note that if the Ignition method is used, appropriate calibration offsets must be established.

Table 7.1: Mix Control Envelope Tolerances

Criteria	Permissible Variation from JMF (% by mass of total mixture)	
	Individual Results	Average of Three Consecutive Tests
Aggregate passing 4.75 mm and larger	± 3.0	= 3.0
Aggregate passing 3.36 mm	± 2.0	= 2.0
Aggregate passing 0.075 mm	± 2.0	= 1.0
Bitumen Content	+ 0.5	= 0.4

8. TACK COAT

Where a general tack coat or membrane seal is required, the material and rate of application are defined in the "Specific Contract Requirements" section of this specification.

Vertical surfaces against which hot mix asphalt is to be placed shall not be tack coated.

9. LAYING

The open graded porous asphalt material shall, where practical, be spread and struck off with a self-powered and propelled paving machine capable of spreading and finishing the mix true to line, grade and cross-section without the use of forms or side supports. The paving machine shall be capable of laying courses in thicknesses as specified, and it shall be equipped with a suitably controlled screed heating device. The screed shall strike off the mix to the elevation and cross-section required and shall provide a smooth and uniform texture without segregation, tearing, skiving or gouging. Equipment that leaves tracks or indented areas that cannot be corrected in normal operation or which produce flashing or other permanent blemishes or fails to produce a satisfactory surface shall not be used.

No paving shall be carried out without the prior agreement of the Engineer of the method of construction to be used. The Contractor shall set out true line markings to be closely followed by the paver in constructing longitudinal joints and edges. The Contractor shall include in the Quality Plan a detailed paving plan to be followed by the paver. This shall include details on the procedure to be used to minimize stepping of the paver.

Segregation of materials shall not be permitted. If segregation occurs, the spreading operation shall be immediately suspended until the cause is determined and corrected. Any area of segregation that is not corrected prior to rolling shall subsequently be removed and replaced with material supplied and compacted to specification requirements by the Contractor at his own expense.

10. COMPACTION

10.1 Equipment

Rolling shall be carried out with tandem non-vibrating steel tyred roller or rollers weighing not less than 5 tonnes and exerting a load of not less than 2700 kg per metre of drive roll width.

The Contractor shall include in the Quality Plan details of the rollers and rolling procedures that will be used.

10.2 Thickness and Surface Requirements

The final surface shall be of a uniform texture conforming to the lines, grades and cross-sections shown on the plans. The roughness of the completed surface shall comply with the specific contract requirements.

Thickness shall be carefully controlled during construction and shall be in full compliance with plans and specifications. During compaction, preliminary tests as an aid for controlling the thickness shall be made by inserting a flat blade or spike, correctly graduated, through the material to the top of the previously placed base, or by other means acceptable to the Engineer.

Geometric design considerations excepted, no part of the finished surface shall deviate more than 5 mm from a 3 m straight edge lying under its own weight on the road surface parallel to or perpendicular to the road centreline.

Any irregularities that vary more than 5 mm from this straight edge longitudinally or transversely shall be corrected. Irregularities that develop before the completion of rolling shall be removed by loosening the surface mix and removing or adding material as may be required. Should any irregularities, defects, surface projections or mismatched joints remain after final compaction, the material shall be removed promptly and sufficient new material laid to form a true and even surface.

To achieve a satisfactory finished surface it is essential that the pavement be checked regularly before and during the final compaction operation with the aid of a 3 m straight edge. The Contractor will be required to have such a straight edge on the site of the works and to use it in the control of the final rolling operation.

2.8 PERVIOUS PORTLAND CEMENT CONCRETE

Quality Assurance:

Prior to award the contractor shall submit references with experience in performing pervious concrete paving work or history of two successful pervious concrete pavement projects including but not limited to the following:

1. Project name and address, owner name and contact information
2. Test results including density (unit weight), void content and thickness

This requirement may be waived by the owner provided the contractor can demonstrate successful experience in the concrete industry and constructs test panel(s) for inspection and testing.

At least one member or 30% of the crew should be certified by the ACI Certified Concrete Flatwork Finisher Program.

Special Equipment: Pervious concrete requires specific equipment for compaction and jointing. The pavement shall be jointed and compacted using the methods listed.

A. Rolling compaction shall be achieved using a minimum 10-inch diameter steel pipe that spans the width of the section placed (and exerts a vertical pressure of at least 10 psi on the concrete.

B. When joints are placed in pervious pavements, they may be constructed by rolling, forming or sawing. Rolled joints shall be formed using a "salt roller" to which a beveled fin with a minimum depth of $\frac{1}{4}$ the thickness of the slab has been welded around the circumference of a steel roller. Sawed joints shall be constructed using an early entry or wet saw.

Submittals: Prior to commencement of the work the contractor shall submit the following:

A. Concrete materials:

1. Proposed concrete mixture proportions including all material weights, volumes, density (unit weight), water cement ratio, and void content.

2. Aggregate type, source and grading.

3. Cement, fly ash and admixture manufacturer certifications

B. Qualifications: Evidence of qualifications listed under Quality Assurance.

C. Project Details: Specific plans, details, schedule, construction procedures and quality control plan.

D. Subcontractors: List all materials suppliers and subcontractors to be used on the Project.

Test Panels: Prior to construction, test panel(s) shall be placed and approved by the owner. The owner is permitted to waive this requirement based on contractor qualifications.

A. Test panel(s) shall be constructed in accordance with the plans and specifications. A minimum of 225 sq. ft panel size shall be placed, jointed and cured using materials, equipment, and personnel proposed for the project.

B. Test panel(s) cost and removal, if necessary, shall be included as a line item in the contract proposal and contract.

C. Quality: Test panels shall have acceptable surface finish, joint details, thickness, porosity and curing procedures and shall comply with the testing and acceptance standards listed in the Quality Control section of this specification.

D. If test panels placed at the site are found to be deficient in thickness, density (unit weight) or percentage of voids, or of an unacceptable appearance, they shall be removed at the contractor's expense and taken to an approved landfill or recycling facility. If test panels are found to be satisfactory, they may be left in-place and included in the completed work.

Part 2 Materials

Cement: Portland cement Type I or II conforming to ASTM C150 or Portland cement Type IP or IS conforming to ASTM C595.

Supplementary cementations Materials:

A. Class F Fly ash conforming to ASTM C618

B. Ground Iron Blast-Furnace Slag conforming to ASTM C989

Chemical Admixtures:

A. Air entraining agents shall comply with ASTM C260.

B. Chemical Admixtures shall comply with ASTM C494

C. Hydration stabilizers are permitted to be used when the concrete producer deems them necessary.

Aggregates: Coarse aggregate shall comply with ASTM C33. Size 8 (3/8" to No. 16) or Size 89 (3/8" to No. 50) shall be used unless an alternate size is approved for use based on successful history or meeting the project requirements. Fine aggregate complying with ASTM C33, if used, shall not exceed 3 cu. ft. per yard.

Water: Water shall comply with ASTM C 1602.

Mixture Proportions: The composition of the proposed concrete mixtures shall be submitted to the owner's representative for review and/or approval and shall comply with the following provisions unless an alternative composition is demonstrated to comply with the project requirements.

A. Supplementary cementations content: Fly ash: 25% maximum. Slag: 50% maximum

B. Admixtures: Admixtures shall be used in accordance with the manufacturer's instructions and recommendations.

C. Mix Water: The quantity of mixing water shall be established to produce a pervious concrete mixture of the desirable workability to facilitate placing, a compaction and finishing to the desired surface characteristics.

Part 3 Execution

Subgrade:

A. Materials: The top 6 inches shall be composed of granular or gravelly soil that is predominantly sandy with no more than a moderate amount of silt or clay. Granular sub-base may be placed over the subgrade.

B. Permeability: Subgrade shall have a minimum permeability of 0.5 inch per hour determined in accordance with ASTM D3385.

C. Compaction: Compact sub-grade to a minimum 90% and a maximum 95%. Over-compaction can inhibit subgrade percolation. Compaction shall be in accordance with ASTM D1557.

D. Fill: If fill material is required to bring the subgrade to final elevation, it shall be clean and free of deleterious materials. It shall be placed in 6-inch maximum layers, and compacted by a mechanical vibratory compactor to a minimum density of 90 and a maximum 95% in accordance with ASTM D1557.

E. Moisture: The subgrade moisture content shall be 1% - 3% above optimum as determined by ASTM D1557.

F. Verify subgrade preparation, grade, and conduct permeability & density tests for conformance to project requirements.

Formwork:

A. Form materials are permitted to be of wood or steel and shall be of width to the depth of the pavement. Forms shall be sufficient strength and stability to support mechanical equipment without deformation of plan profiles following spreading, strike-off and compaction operations. Forms may have a removable spacer of ¼" to ½" thickness placed above the depth of pavement. The spacers shall be removed following placement and vibratory strike-off to allow roller compaction.

Mixing and Hauling:

A. Production: Pervious concrete shall be manufactured and delivered in accordance with ASTM C 94.

B. Mixing: Mixtures shall be produced in central mixers or in truck mixers. When concrete is delivered in agitating or non-agitation units, the concrete shall be mixed in the central

mixer for a minimum of 1.5 minutes or until a homogenous mix is achieved. Concrete mixed in truck mixers shall be mixed at the speed designated as mixing speed by the manufacturer for 75 - 100 revolutions.

C. Transportation: The pervious concrete mixture may be transported or mixed on site and discharge of individual loads shall be completed within one (1) hour of the introduction of mix water to the cement. Delivery times may be extended to 90 minutes when a hydration stabilizer is used.

D. Discharge: Each truckload will be visually inspected for consistency of concrete mixture. Water addition is permitted at the point of discharge to obtain the required mix consistency provided a measurable quantity is used before more than 0.5 cubic yard of concrete is discharged, and the design w/c is not exceeded. A minimum of 30 revolutions at the manufacturer's designated mixing speed shall be required following the addition of any water to the mix. Discharge shall be a continuous operation and shall be completed as quickly as possible. Concrete shall be deposited as close to its final position as practical.

Placing and Finishing:

A. The contractor shall provide either slip form or vibratory form riding equipment to place the concrete unless otherwise approved by the Owner or Engineer in writing. Internal vibration shall not be permitted. Unless otherwise permitted placement procedures shall utilize a mechanical vibratory screed to strike off the concrete $\frac{1}{4}$ " to $\frac{1}{2}$ " above final height, utilizing the form spacers described in Formwork.

B. Placed concrete shall not be disturbed while in the plastic state. Low spots after the screening operation shall be filled up and tamped with hand tampers.

C. Following strike-off, remove spacers and compact the concrete to the form level, utilizing a steel roller or other method approved by the Owner. Care shall be taken during compaction that sufficient compactive force is achieved without excessively working the concrete surface that might result in sealing off the surface porosity.

D. Hand tampers shall be used to compact the concrete along the slab edges immediately adjacent to the forms. After compaction, inspection and repair, no further finishing shall be performed on the concrete. Surface curing shall begin immediately.

E. The pervious concrete pavement shall be compacted to the required cross-section and shall not deviate more than $\pm \frac{1}{2}$ inch in 10 feet from profile grade.

Jointing

A. Control (contraction) joints shall be installed at regular intervals not to exceed 15 feet, or the width of the placement. The control joints shall be installed at $\frac{1}{4}$ the depth (to a maximum depth of 1 1/2") of the thickness in pavement. These joints can be installed in the plastic concrete or saw cut after the concrete has hardened.

B. Jointing plastic concrete: Joints installed in the plastic concrete shall be constructed utilizing a small roller as described in the Special Equipment section of this specification. When this option is used it shall be performed immediately after roller compaction and prior to curing.

C. Jointing hardened concrete: Saw-cuts shall be made as soon as the pavement has hardened sufficiently to prevent raveling and uncontrolled cracking. Early entry sawing occurs later with pervious concrete than with conventional concrete. For either method, the curing cover shall be removed and the surface kept misted to prevent moisture loss. After sawing the curing cover shall be securely replaced for the remainder of the curing cycle.

D. Transverse construction joints: Transverse construction joints shall be installed whenever placing is suspended for 30 minutes or whenever concrete is no longer workable.

E. Isolation joints: Isolation joints shall be used when abutting fixed vertical structures such i.e. light pole bases, building foundations, etc. Isolation material shall be positioned before concrete is placed and shall be the depth of the pavement section.

Curing:

A. Curing procedures shall begin no later than 20 minutes after final placement operation have been completed. The pavement surface shall be covered with a minimum of six (6) mil thick polyethylene sheets or other approved covering material. The cover shall overlap all exposed edges and shall be secured to prevent dislocation due to winds or adjacent traffic conditions. For additional guidance on hot weather concreting, see ACI 305.

B. The low water/cement ratio and high amount of exposed surface of pervious concrete makes it especially susceptible to drying out. Immediately after screening, the surface shall be kept moist and evaporation prevented.

C. The curing cover shall remain securely in place for a minimum of 7 days. No vehicular traffic shall be permitted on the pavement until curing is complete and no truck traffic shall be permitted for at least 15 days. The owner has the option of permitting earlier traffic opening times.

Quality Control:

A. The owner shall employ a testing laboratory that conforms to the requirements of ASTM E329 and ASTM C1077. All personnel engaged in testing shall be certified by the American Concrete Institute as ACI Concrete Field Technicians or equivalent.

B. Traditional Portland cement pavement testing procedures based on strength and slump control are not applicable to this type of pavement material.

C. Concrete tests shall be performed for each 150 cubic yards or fraction thereof with a minimum of one test for each day's placement.

D. Plastic concrete shall be sampled in accordance with ASTM C 172 and density (unit weight) measured in accordance with ASTM C 138. The density (unit weight) of the delivered concrete shall be +/- 5 pcf of the design density (unit weight).

E. Plastic void content shall be calculated as per ASTM C138, Gravimetric Air Determination and compared to the void percentage required by the Hydraulic design. Unless otherwise specified, Void content shall be at least 15%.

F. Hardened concrete shall be tested at a rate of one set of three cores per 150 cy of concrete placed on one day or fraction thereof. The cores shall be drilled in accordance with ASTM C 42. The cores when measured for length shall not be more than ½ inch less than the specified design thickness.

G. The cores shall be tested for density (unit weight) and void content using ASTM 140. Density (unit weight) shall be +/- 5 pcf of the design unit weight. Void content shall not be less than 15%. Void content shall be calculated as follows:

$$\% \text{ Voids} = 1 - (Dd/Di) * 100$$

Where: Dd=oven dried density of core

Di=immersed density of core

Basis of Payment

A. Pervious concrete pavement shall be paid for based on the square yard.

I ROADWAY PAINTING

A. SCOPE OF WORK:

The scope of work consists of painting reflective traffic strips, including edge lines, to upgrade existing traffic markings, or initial painting applications on newly resurfaced roads in accordance with Section 710, and subsequent sections, of the current Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction.

B. MATERIALS:

1. Traffic Paint - The paint used for this work shall conform with the requirements of 971-12, or, at the contractor's option, fast dry traffic paint as specified in 971-13, may be used.
2. Glass Spheres (for reflective traffic paint) - Glass spheres shall conform with requirements of 971-14.

II THERMOPLASTIC

A. SCOPE OF WORK:

The scope of work consists of placing traffic stripes and markings by method of extrusion for upgrading existing markings and/or initial thermoplastic applications on newly resurfaced roads in accordance with Section 711 and subsequent sections of the current Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction.

III REMOVAL OF PAINT OR THERMOPLASTIC MARKINGS

A. SCOPE OF WORK:

Contractor to provide labor, equipment and material for the removal of pavement markings from various roadways to include edge lines, center lines, bike paths and symbols.

IV TRAFFIC CONTROL AND LANE CLOSURES:

The Contractor shall provide all lane closures and all maintenance of traffic. The cost of traffic control and associated lane closures shall be included in the unit prices for the pavement marking services. The standards applicable to traffic control and lane closure shall be those minimum standards set forth by the Florida Department of Transportation as set forth in the FHWA Manual on Uniform Traffic Control Devices (MUTCD).

**SECTION 3. MINOR ASPHALT REPAIRS
(SECTION B OF COMPENSATION SCHEDULE)**

This work consists of minor street repairs involving hot-mix asphalt patching due to pot holes appearing in the existing pavement and/or street repairs involving patching areas subject of utility work and drainage work wherein the street base is constructed by others up to the asphalt surface leaving the need to patch one to two inches of asphalt in depth. Quantities of work will be typically small and response shall be on a weekly basis.

- A. All items designated 'Pot Holes' shall consist of asphalt patching of City streets & alleys with plant-mixed mixture uniformly compacted followed by an asphalt 'tack & fill' to produce a level area. The basis of price and payment includes furnishing mixture, shaping the area to be patched, patching, compacting and MOT.
- B. All items designated 'Utility Cut Patch' shall be asphalt 'tack & fill' with a depth of up to two inches. Work in excess of two inches in depth shall be performed on a 'time & material' basis.

**SECTION 4. ROW REPAIRS/SIDEWALKS-ALLEYS-DRIVEWAY-ETC.
(SECTION C OF COMPENSATION SCHEDULE)**

This work consists of right-of-way repairs involving the removal and replacement of the identified items of work. Unless this work is part of other maintenance activities, the quantities will typically be small and response shall be, at the minimum, on a monthly basis.

- A. The basis for price and payment of all #520 and #522 items shall be 'remove and replace'.
- B. The basis for price and payment of all items under the #287 shall include the equipment, material and manpower for the removal and installation of the designated driveway area and/or the repair of concrete drainage structures.
- C. The basis for price and payment for items under #911, #913 & #901 shall include grading and compacting as necessary.

**SECTION 5. CONTRACT WORK - SPECIAL PROJECTS
(SECTION D OF COMPENSATION SCHEDULE)**

This work consists of projects involving a substantial amount of work at a single location but not more than \$50,000 in expenditures per project. The projects can include landscape, street, sidewalk, driveway, drainage and/or utility work using both unit price items identified on the compensation schedule and other items with cost to be subject of 'time & material' pricing. Timing-scheduling of projects is not known and are anticipated to be performed on an as-needed-availability basis. In addition to these special projects, the City reserves the right to negotiate with the successful bidders additional capital improvement projects of an expanded scope with successful negotiations being subject of contract amendments with the City Manager having contract authority for executing such contracts with individual amendment not exceeding \$50,000.00.

**SECTION 6. TIME AND MATERIALS COST INFORMATION
(SECTION E OF COMPENSATION SCHEDULE)**

This information is being requested for use by the City in determining the cost of work not included in the compensation schedules and for estimating the cost of contract services and project costs performed on a 'time & material' basis. This information will be taken into consideration in any contract award or awards under this annual compensation. In implementing work under a 'time & material' basis or under a 'time & rate' basis, the City reserves the right to furnish any minor materials and/or services should such action be in the City's best interest.

COMPENSATION SCHEDULE

Section A – Street Maintenance/Resurfacing

Annual street maintenance typically begins in May of each year. The City will provide the Contractor a list of streets to be maintained, repaired, and reconstructed, as well as the method of maintenance or repair. **The total quantity of work given at any one time under Section A is not expected to be below 15,000 SY of area.** The City and Contractor shall quantify the work and determine price for the work based on the following rate schedule to be completed by the Contractor. **Contractors do not need to be qualified in all of the items described below, and in that case, a unit price is not required.**

Item	Description	Unit	UNIT PRICE
102-76	Arrow/Message Boards	ED	\$
102-77	Hi-Intensity Lights	ED	\$
110-2	Standard Clearing & Grubbing	SY	\$
110-7	Existing Pavement Removal	SY	\$
120-1	Excavation	CY	\$
162-2	Topsoil (6")	SY	\$
285-911	Limerock Base	TN	\$
300	Bituminous Material (Tack Coat)		INCLUDE IN UNIT PRICES BELOW
2.1	Full Depth Reclamation 0" – 6"	SY	\$
2.1	Full Depth Reclamation 6" – 9"	SY	\$
2.1	Full Depth Reclamation 9" – 12"	SY	\$
916-4	Emulsion for Reclamation	GA	\$
2.2	Micro-Surface Single 18-22 lbs.	SY	\$
2.2	Micro-Surface Double 28-32 lbs.	SY	\$
2.4	Crack Fill / Sealing	GAL	\$
2.7	Porous Bituminous Asphalt Pavement (1.5")	TN	\$
2.8	Porous Portland Cement Concrete Pavement (6")	SY	\$
331-2.1	Asphaltic Concrete Leveling S-1	TN	\$
331-2-2	Asphaltic Concrete Overlay Type III (1")	TN	\$
331-2-2	Asphaltic Concrete Overlay Type III (1.5")	TN	\$
327	Milling	SY	\$
425-5	Manholes (Adjust)	EA	\$
425-6	Valve Boxes (Adjust)	EA	\$
425-8	Structures Miscellaneous (Adjust)	EA	\$
520-1.10	Curb & Gutter (Concrete Type F)	LF	\$
520-2.4	Curb (Concrete Type D)	LF	\$
520-3	Valley Gutter - Hand form (Concrete)	LF	\$
520-3.B	Valley Gutter - Slip Form (Concrete)	LF	\$
121	Flowable Fill	CY	\$
575	Sod - Bahia	SY	\$
575	Sod - St. Augustine	SY	\$

Section B - Street Maintenance/Asphalt Repairs

Item	Description	Unit	Unit Price
331	Pot Hole (max 5 SF area ea. location)	SF	\$
331	Utility Cut Patch (1 - 10 SF ea. location)	SF	\$
331	Utility Cut Patch (11 - 50 SF ea. location)	SF	\$
331	Utility Cut Patch (50 - 250 SF ea. location)	SF	\$
331	Utility Cut Patch (greater than 250 SF ea lo)	SF	\$

Section C - Right-of-Way Maintenance

Item	Description	Unit	Unit Price
520-2.4.1	Type "D" Curb (1 - 50 LF)	LF	\$
520-2.4.3	Type "D" Curb (Greater than 50 LF)	LF	\$
520-1.10.1	Type "F" Curb & Gutter (1 - 50 LF)	LF	\$
520-1.10.3	Type "F" Curb & Gutter (Greater than 50 LF)	LF	\$
520-3.1.1	Valley Gutter (1 - 50 LF)	LF	\$
520-3.1.3	Valley Gutter (Greater than 50 LF)	LF	\$
522-1.1	Concrete Sidewalk 4" (1 - 50 SF)	SF	\$
522-1.3	Concrete Sidewalk 4" (Greater than 50 SF)	SF	\$
522-2.1	Concrete Sidewalk 6" (1 - 50 SF)	SF	\$
522-2.3	Concrete Sidewalk 6" (Greater than 50 SF)	SF	\$
287-1	Driveway Restoration - Concrete	SY	\$
287-2	Driveway Restoration - Brick Pavers	SY	\$
121	Flowable Fill	CY	\$
287-3	Driveway Restoration - Asphalt	SY	\$
304	Detectible Warning on Curb Ramps (Handicap & Truncated Warning Dome – Brick Red)	SF	\$
911-1	Alley Restoration - Limestone	TN	\$
913-1	Alley Restoration - Shell	TN	\$
901-1	Alley Restoration-Gravel (#57 or equivalent)	TN	\$

Section D - Street Maintenance/Asphalt Repairs

Section Three - Special Projects:
Special projects are emergency and/or time sensitive work performed on a time, material and unit cost basis to be negotiated between the City and Contractor. Each project shall not exceed \$50,000.

Section E - Time and Material Only Cost Information:

Item	Description	Unit	Unit Price
1	Supervisor/Foreman	Hour	\$
2	Skilled Labor	Hour	\$
3	Labor	Hour	\$
8	Material Mark-up (Furnish Only)	%	

GA = gallon, TN = ton, LF = linear feet, SY = square Yard, ED = each day, EA = each

Section F – Pavement Markings:

I. PAINT

1. Contractor to provide labor, equipment and materials for 15 mil reflective roadway paint to be applied on various roadways.

• Lines 15 mil				
a.	6"	15 miles	LF	\$
		Under one (1) mile	LF	\$
		Over one (1) mile	LF	\$
b.	8"	15 miles	LF	\$
c.	12"	15 miles	LF	\$
d.	18"	15 miles	LF	\$
e.	24"	15 miles	LF	\$

• Symbols and Pavement Messages 15 mil				
a.	Miscellaneous Paint		SF	\$

SUBTOTAL SECTION I:				\$
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II. THERMOPLASTIC

1. Contractor to provide labor, equipment and materials for thermoplastic markings to be applied on various roadways and/or intersections, to include symbols and pavement messages.

a.	60 miles	SF	\$
b.	90 miles	SF	\$

2. Contractor to provide labor, equipment and materials for thermoplastic markings to be applied on various roadways to include edge lines, centerlines, stop bars, crosswalks lanes, and bike paths.

• 60 miles				
a.	6"	60 miles	LF	\$
		Under one (1) mile	LF	\$
		Over one (1) mile	LF	\$
b.	8"	60 miles	LF	\$
c.	12"	60 miles	LF	\$
d.	18"	60 miles	LF	\$
e.	24"	60 miles	LF	\$

• 90 miles				
a.		90 miles	SF	\$
		Under one (1) mile	LF	\$
		Over one (1) mile	LF	\$
b.	8"	90 miles	LF	\$
c.	12"	90 miles	LF	\$
d.	18"	90 miles	LF	\$

e.	24"	90 miles	LF		\$
SUBTOTAL SECTION II:					\$

III. REMOVAL OF PAINT OR THERMOPLASTIC MARKINGS

1. Contractor to provide labor, equipment and materials for the removal of pavement markings from various roadways to include edge lines, centerlines, bike paths and symbols.

a.	Paint	SF		\$
b.	Thermoplastic			
	60 miles	SF		\$
	90 miles	SF		\$

SUBTOTAL SECTION III:					\$
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IV. Raised Pavement Markers (RPMs)

1. Contractor to provide labor, equipment, materials and required maintenance of traffic for the installation of raised pavement markers.

A. Permanent RPMs, raised, reflectorized. Maximum width 5" Mono-directional with one reflective face, one-color reflectors shall be available as Amber (Yellow), Crystal (White), or Red in the following quantities per Work Order:				
a.	Less than 200	EACH		\$
b.	200 to 500	EACH		\$
c.	201 to 500	EACH		\$
d.	Greater than 1,000	EACH		\$

B. Permanent RPMs, raised reflectorized. Maximum width 5" two-color Bi-directional with two reflective faces, which shall be available in Amber (Yellow), Crystal (White), Red in the following quantities per Work Order:				
a.	Less than 200	EACH		\$
b.	200 to 500	EACH		\$
c.	201 to 500	EACH		\$
d.	Greater than 1,000	EACH		\$

2	Removal of existing RPMs at the time of installation of new RPMs	EACH	\$
3	Furnish and Install Ceramic 6" disks with internal reflectors	EACH	\$
4	Furnish and Install traffic delineator pickets	EACH	\$
5	Night/week-end differential	%	\$

SUBTOTAL SECTION IV:				\$
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Section G – Special/Additional Services

Contractors offering specific additional services assisting in the performance of work,
please provide the information here:

Item	Description	Unit	
	Service		\$
			\$
	Labor		\$
			\$
	Equipment		\$
			\$
	Material		\$

GA = gallon, TN = ton, LF = linear feet, SY = square Yard, ED = each day, EA = each

EVALUATION CRITERIA:

QUALIFICATIONS OF COMPANY

35 POINTS MAX

GIVE A STATEMENT CONCERNING THE PRICIPALS OF THE COMPANY AND THE PROJECT MANAGERS THAT WILL BE ASSIGNED TO CITY OF NAPLES PROJECTS. PLEASE STATE QUALIFICATIONS AND EXPERIENCE.

REFERENCE CHECKS

35 POINTS MAX

GIVE AT LEAST THREE REFERENCES AS REQUIRED BY THE PROPOSAL DOCUMENT. YOU MAY GIVE ADDITIONAL REFERENCES AS APPROPRIATE.

COMPENSATION SCHEDULE

30 POINTS MAX

PLEASE SUBMIT AN ORIGINAL AND 4 COPIES.