

CONTRACT DOCUMENTS AND SPECIFICATIONS

for

Improvements to Pine Street Park

Bid Proposal #14-10

John P. Bohenko, City Manager

City of Portsmouth, New Hampshire

Prepared by:

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Improvements to Pine Street Park
Portsmouth, NH

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Improvements to Pine Street Park
Portsmouth, NH

City of Portsmouth
Portsmouth, New Hampshire
Department of Community Development

**2009 Improvements to Pine Street Park
Bid Proposal #14-10**

INVITATION TO BID

Sealed bid proposals, **plainly marked, 2009 Improvements to Pine Street Park Project, Bid Proposal #14-10** **on the outside of the mailing envelope as well as the sealed bid envelope**, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, New Hampshire, 03801, will be accepted until **2:00 p.m. October 2, 2009**; at which time all bids will be publicly opened and read aloud. A mandatory pre-bid meeting will be held September 24, 2009 at 1:00 p.m. at the Department of Public Works, 680 Peverly Hill Road, Portsmouth, N.H.

This project consists of improvements to Pine Street Park in Portsmouth, NH. Specifically, the work includes selective demolition of existing play equipment, swings, and pavement, pruning of existing trees, minor regrading of play area, installation of new bituminous pathways, benches, and individual play elements including a climbing wall, spring animals, swings and basketball standards. .

Specifications may be obtained from the City's web site: www.cityofportsmouth.com. Plan sets can be obtained by visiting the Finance/Purchasing Department on the third floor at the above address, or by calling the Purchasing Coordinator at 603-610-7227. Questions may be addressed to the Purchasing Coordinator. Addenda to this bid document, if any, including written answers to questions, will be posted on the City of Portsmouth website under the project heading. Continue below for the complete bid document.

Work may begin in accordance with the Notice to Proceed with work completed within 120 days once commenced. Work at the park shall be completed prior to December 31, 2009. Liquidated damages shall be assessed at \$100.00 per day.

Bidders must determine the quantities of work required and the conditions under which the work will be performed.

The City reserves the right, after bid opening and prior to award of the contract, to modify the amount of the work in the event that bids exceed budgeted amounts. The City of Portsmouth further reserves the right to reject any or all bids, to waive technical or legal deficiencies, to re-bid, and to accept any bid that it may deem to be in the best interest of the City.

Each Bidder shall furnish a bid security in the amount of ten percent (10%) of the bid. The Bid Security may be in the form of a certified check drawn upon a bank within the State of New Hampshire or a bid bond executed by a surety company authorized to do business in the State of New Hampshire, made payable to the City of Portsmouth, N.H.

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INSTRUCTIONS TO BIDDERS

BIDDING REQUIREMENTS AND CONDITIONS

1. Special Notice to Bidders and Addenda

Appended to these instructions is a complete set of bidding and general contract forms. These forms may be detached and executed for the submittal of bids. The plans, specifications, and other documents designated in the proposal form will be considered as part of the proposal, whether attached or not.

The bidders must submit a statement of bidder's qualifications, if requested, subsequent to bid opening but prior to award.

Addenda to this bid document, if any, including written answers to questions, will be posted on the City of Portsmouth website at <http://www.cityofportsmouth.com/finance/purchasing.htm> under the project heading. Addenda and updates will NOT be sent directly to firms. Contractors submitting a bid should check the web site daily for addenda and updates after the release date. Firms should print out, sign and return addenda with the proposal. Failure to do so may result in disqualification.

2. Interpretation of Quantities in Bid Schedules

The quantities appearing in the bid schedule are approximate only and are prepared for the comparison of bids. Payment to the contractor will be made only for actual work performed and accepted in accordance with the contract. Any scheduled item of work to be done and materials to be furnished may be increased, decreased or omitted as hereinafter provided, and no claim for loss, anticipated profits or costs incurred in anticipation of work not ultimately performed will be allowed due to such increase or decrease.

3. Examination of Plans, Specifications and Site Work

The bidder is expected to examine carefully the site of the proposed work, the plans, standard specifications, supplemental specifications, special provisions and contract forms before submitting a proposal. The submission of a bid shall be considered conclusive evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the contract. It will be conclusive evidence that the bidder has also investigated and is satisfied with the sources of supply for all materials.

Plans, surveys, measurements, dimensions, calculations, estimates and statements as to the condition under which the work is to be performed are believed to be correct, but the contractors must examine for themselves, as no allowance will be made for any errors or inaccuracies that maybe found therein.

4. Familiarity with Laws

The bidder is assumed to have made himself or herself familiar with all federal and state laws and all local by-laws, ordinances and regulations which in any manner affect those engaged or employed on the work or affect the materials or equipment used in the work or affect the conduct of the work, and the bidder, if awarded the contract, shall be obligated to perform the work in conformity with said laws, by-laws, ordinances and regulations notwithstanding its ignorance thereof. If the bidder shall discover any provision in the plans or specifications which is in conflict with any such law, by-law, ordinance or regulation the bidder shall forthwith report it to the engineer in writing.

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5. Preparation of Proposal

a) The bidder shall submit its proposal upon the forms furnished by the Owner. The bidder shall specify a lump sum price in figures, for each pay item for which a quantity is given and shall also show the products of the respective prices and quantities written in figures in the column provided for that purpose and the total amount of the proposal obtained by adding the amount of the several items. All words and figures shall be in ink or typed. If a unit price or a lump sum bid already entered by the bidder on the proposal form is to be altered it should be crossed out with ink, the new unit price or lump sum bid entered above or below it and initialed by the bidder, also with ink.

b) The bidder's proposal must be signed with ink by the individual, by one or more general partners of a partnership, by one or more members or officers of each firm representing a joint venture; by one or more officers of a corporation, by one or more members (if member-managed) or managers (if manager-managed) of a limited liability company, or by an agent of the contractor legally qualified and acceptable to the owner. If the proposal is made by an individual, his or her name and post office address must be shown, by a partnership the name and post office address of each general and limited partner must be shown; as a joint venture, the name and post office address of each venturer must be shown; by a corporation, the name of the corporation and its business address must be shown, together with the name of the state in which it is incorporated, and the names, titles and business addresses of the president, secretary and treasurer.

6. Nonconforming Proposals

Proposals will be considered nonconforming and may be rejected in the Owner's sole discretion for any of the following reasons:

- If the proposal is on a form other than that furnished by the Owner, or if the form is altered or any portion thereof is detached;
- If there are unauthorized additions, conditional or altered bids, or irregularities of any kind which may tend to make the proposal or any portion thereof incomplete, indefinite or ambiguous as to its meaning;
- If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award; or
- If the proposal does not contain a unit price for each pay item listed except in the case of authorized alter pay items.

7. Proposal Guaranty

No proposal will be considered unless accompanied by a bid bond, surety, or similar guaranty of the types and in an amount not less than the amount indicated in the Invitation to Bid. All sureties shall be made payable to the "City of Portsmouth". If a bid bond is used by the bidder it shall be:

- In a form satisfactory to the Owner;
- With a surety company licensed, authorized to do business in, and subject to the jurisdiction of the courts of the State of New Hampshire; and
- Conditioned upon the faithful performance by the principal of the agreements contained in the sub-bid or the general bid.

In the event any irregularities are contained in the proposal guaranty, the bidder will have four business days (not counting the day of opening) to correct any irregularities. The corrected guaranty must be received by 4:00 p.m. If

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irregularities are not corrected to the satisfaction of the Owner, the Owner, in its sole discretion, may rejected the bid.

8. Delivery of Proposals

When sent by mail, the sealed proposal shall be addressed to the Owner at the address and in the care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the invitation for bids. Proposals received after the time for opening of the bids will be returned to the bidder, unopened.

9. Withdrawal of Proposals

A bidder will be permitted to withdraw his or her proposal unopened after it has been submitted if the Owner receives a request for withdrawal in writing prior to the time specified for opening the proposals.

10. Public Opening of Proposals

Proposals will be opened and read publicly at the time and place indicated in the invitation for bids. Bidders, their authorized agents, and other interested parties are invited to be present.

11. Disqualification of Bidders

Any or all of the following reasons may be deemed by Owner in its sole discretion as being sufficient for the disqualification of a bidder and the rejection of his proposal:

- More than one proposal for the same work from an individual, firm, or corporation under the same or different name;
- Evidence of collusion among bidders;
- Failure to submit all required information requested in the bid specifications;
- Unqualified to complete the work as demonstrated by previous project experience and reference checks;
- Lack of competency or of adequate machinery, plant or other equipment, as revealed by the statement of bidders qualification or otherwise;
- Uncompleted work which, in the judgment of the owner, might hinder or prevent the prompt completion of additional work if awarded;
- Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts;
- Default or unsatisfactory performance on previous contracts; or
- Such disqualification would be in the best interests of the Owner.

12. Material Guaranty and Samples

Before any contract is awarded, the bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the construction of the work, and the Owner may, in its sole discretion, reject the bid based on the contents of the statement or as a result of the failure of the bidder to submit the statement.

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AWARD AND EXECUTION OF CONTRACT

1. Consideration of Proposals

a) After the proposals are opened and read, they will be compared on the basis of the total price for all sections of work to be charged to perform the work and any such additional considerations as may be identified in the bid documents. The results of such comparisons will be immediately available to the public. In case of a discrepancy between the prices written in words and those written figures, the prices written in words shall govern. In case of a discrepancy between the total shown in the proposal and that obtained by adding the products of the quantities of items and unit bid prices, the latter shall govern.

b) The Owner reserves the right to reject any or all proposals, to waive technicalities or to advertise for new proposals, if, in the sole discretion of the Owner, the best interest of the City of Portsmouth will be promoted thereby.

2. Award of Contract

Within 30 calendar days after the opening of proposals, if a contract is to be awarded, the award will be made to the lowest responsible and qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified, in writing, mailed to the address on his or her proposal, that his or her bid has been accepted and that the bidder has been awarded the contract.

The award shall not be considered official until such time that a Purchase Order, fully executed contract or an award letter has been issued by the Finance Director. No presumption of award shall be made by the bidder until such documents are in hand. Verbal notification of award is not considered official. Any action by the bidder to assume otherwise is done so at his/her own risk and the City will not be held liable for any expense incurred by a bidder that has not received an official award.

Determination of the lowest bidder will be based on the total price for the work described on the bid proposal form. Due to fluctuating prices and possible budget limitations.

3. Cancellation of Award

The Owner reserves the right to cancel the award of any contract at any time before the execution of such contract by all parties without any liability of the Owner.

4. Return of Proposal Guaranty

All proposal guaranties, except those of the three lowest bidders, will be returned upon request following the opening and checking of the proposals. The proposal guaranties of the three lowest bidders will be returned within ten days following the award of the contract if requested.

5. Contract Bond

At the time of the execution of the contract, the successful bidder shall furnish:

- Labor and materials payment bond in the sum equal to 100 percent of the contract amount.

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At the time of project completion, the Owner may, in its sole discretion, permit the Contractor to substitute a maintenance bond in lieu of holding retainage for the entire guaranty period. If a bond is furnished it shall meet the following criteria:

- The bond shall be in an amount equal to 20 percent of the contract amount. Such bond shall guarantee the repair of all damage due to faulty materials or workmanship provided or done by the contractor. The guarantee shall remain in effect for a period of one year after the date of final acceptance of the job by the Owner.

Each bond shall be: (1) in a form satisfactory to the Owner; (2) with a surety company licensed and authorized to do business and with a resident agent designated for services of process in the State of New Hampshire; and (3) conditioned upon the faithful performance by the principal of the agreements contained in the original bid. All premiums for the contract bonds are to be paid by the contractor.

6. Execution and Approval of Contract

The successful bidder is required to present all contract bonds, to provide proof of insurance, and to execute the contract within 10 days following receipt of the City's notification of acceptance of the bid. No contract shall be considered as in effect until it has been fully executed by all parties.

7. Failure to Execute Contract

Failure to execute the contract and file an acceptable bond within 10 days after notification of acceptance of bid shall be just cause for the cancellation of the award and the forfeiture of the proposal guarantee which shall become the property of the Owner, not as a penalty, but in liquidation of damages sustained. Award may then be made to the next lowest responsible bidder, or the work may be re-advertised as the Owner may determine in its sole discretion.

PROPOSAL FORM

Improvements to Pine Street Park 2009

CITY OF PORTSMOUTH, N.H.

To the City of Portsmouth, New Hampshire, herein called the Owner.

The undersigned, as Bidder, herein referred to as singular and masculine declares as follows:

1. All interested in the Bid as Principals are named herein;
2. This bid is not made jointly, or in conjunction, cooperation or collusion with any other person, firm, corporation, or other legal entity;
3. No officer, agent or employee of the Owner is directly or indirectly interested in this Bid;
4. The bidder has carefully examined the sites of the proposed work and fully informed and satisfied himself as to the conditions there existing, the character and requirements of the proposed work, the difficulties attendant upon its execution and the accuracy of all estimated quantities stated in this Bid, and the bidder has carefully read and examined the Drawings, Agreement, Specifications and other Contract Documents therein referred to and knows and understands the terms and provisions thereof;
5. The bidder understands that the quantities of work calculated in the Bid or indicated on the Drawings or in the Specifications or other Contract Documents are approximate and are subject to increase or decrease or deletion as deemed necessary by the Portsmouth Engineer. Any such changes will not result in or be justification for any penalty or increase in contract prices; and agrees that, if the Bid is accepted the bidder will contract with the Owner, as provided in the Contract Documents, this Bid Form being part of said Contract Documents, and that the bidder will supply or perform all labor, services, plant, machinery, apparatus, appliances, tools, supplies and all other activities required by the Contract Documents in the manner and within the time therein set forth, and that the bidder will take in full payment therefore the following item prices; and
6. It is the intention of this contract that the items listed above describe completely and thoroughly the entirety of the work as shown on the plans and as described in the specifications. All other items required to accomplish the above items are considered to be subsidiary work, unless shown as a pay item.

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PROPOSAL FORM (continued)

ITEM #	EST. QTY.	ITEM DESCRIPTION & LUMP SUM PRICE IN WORDS	LUMP SUM PRICE IN FIGURES
1	LS	Pine Street Park Improvements 2009, per lump sum	

Base bid is basis of award.

ADD ALTERNATIVES

At the owner's option, and in accordance with the General Conditions, the following Alternates and Unit Prices shall be used for additions and/or deletions to the Scope of Work, and shall be inclusive of furnishing and installing of material, labor, trucking, overhead, profit, equipment, hoisting, engineering, scaffolding, power hookups, protection, shop drawings, taxes, permits, appliances, delivery and supervision and shall remain in effect until completion of the contract.

The Owner will inform the Contractor which Alternates, if any, will be to the Base Bid prior to contract execution and bonding.

ADD ALTERNATIVES:

Bid Alternate #1: Pine Street entrance plant material
\$ _____

Bid Alternate #2: Plant material at corner of Bartlett and Pine Street
\$ _____

Bid Alternate #3: Furnish and assemble two Picnic Tables
\$ _____

Bid Alternate #4: Crack repair and color sealcoat existing Basketball Court
\$ _____

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PROPOSAL FORM (continued)

UNIT PRICES

Please provide unit prices for these items, which are included in the base bid. City may require additional unit prices during its review of bids.

Site Furnishing: Bike Rack (D-1 Sheet 7 of 9)
\$ _____

Site Furnishing: Park Bench (D-2 Sheet 8 of 9)
\$ _____

The undersigned agrees that for extra work, if any, performed in accordance with the terms and provisions of the Contract Documents, the bidder will accept compensation as stipulated therein.

Date

Company

By: _____
Signature

Business Address

Title: _____

City, State, Zip Code

Telephone: _____

The Bidder has received and acknowledged Addenda No. _____ through _____.

All Bids are to be submitted on this form and in a sealed envelope, plainly marked on the outside with the Bidder's name and address and the Project name as it appears at the top of the Proposal Form.

We certify that the Company is currently pre-qualified with the State of New Hampshire for Pine Street Park Improvements 2009.

By: _____
Signature

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BID SECURITY BOND

(This format provided for convenience, actual Bid Bond is acceptable in lieu of, if compatible.)

KNOW ALL MEN BY THESE PRESENTS, that we the undersigned

_____, as Principal, and

_____, as Surety, are hereby

held and firmly bound unto _____

IN THE SUM OF _____

as liquidated damages for payment of which, well and truly to be made we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of this obligation is such that whereas the Principal has submitted to the

_____ referred to as the "AGREEMENT" and or "CONTRACT", for

NOW THEREFORE,

- (a) If said Bid shall be rejected or withdrawn as provided in the INFORMATION FOR BIDDERS attached hereto or, in the alternative,

- (b) If said Bid shall be accepted and the Principal shall duly execute and deliver the form of AGREEMENT attached hereto and shall furnish the specified bonds for the faithful performance of the AGREEMENT and/or CONTRACT and for the payment for labor and materials furnished for the performance of the AGREEMENT and or CONTRACT,

then this obligation shall be void , otherwise it shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder in no event shall exceed the amount of this obligation.

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BID SECURITY BOND (continued)

The Surety, for value received, hereby agrees that the obligation of said surety and its bond shall be in no way impaired or affected by any extensions of the time within such BID may be accepted, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the parties hereto have duly executed

this bond on the _____ day of _____, 20__.

(Name of Principal) L.S.

(SEAL)

BY _____

(Name of Surety)

BY _____

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STATEMENT OF BIDDER'S QUALIFICATIONS

Note: This is a required submittal, fill out completely.

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. Add separate sheets if necessary

1. Name of Bidder
2. Permanent Main Office Address
3. Form of Entity
4. When Organized
5. Where Organized
6. How many years have you been engaged in the contracting business under your present name; also state names and dates of previous firm names, if any.
7. Contracts on hand; (schedule these, showing gross amount of each contract and the approximate anticipated dates of completion).
8. General character of work performed by your company.
9. Have you ever failed to complete any work awarded to you? _____(no)_____(yes). If so, where and why?
10. Have you ever defaulted on a contract?
_____ (no)_____ (yes). If so, where and why?
11. Have you ever failed to complete a project in the time allotment according to the _____ Contract Documents?
_____ (no)_____ (yes). If so, where and why?
12. List the most important contracts recently executed by your company, stating approximate cost for each, and the month and year completed.
13. List your major equipment available for this contract.
14. List your key personnel such as project superintendent and foremen available for this contract.

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STATEMENT OF BIDDERS QUALIFICATIONS (continued)

15. List any subcontractors whom you will use for the following (unless this work is to be done by your own organization, if so please state).
- a. Tree Pruning _____
 - b. Play Equipment Installation _____
 - c. Site work & Paving _____
 - d. Planting _____
 - e. Signage Production _____
- (The City reserves the right to approve subcontractors for this project)

16. With what banks do you do business?
- a. Do you grant the Owner permission to contact this/these institutions?
____(yes) ____ (no).

b. Latest Financial Statements, certified audited if available, prepared by an independent certified public accountant, may be requested by Owner. If requested, such statements must be provided within five (5) business days or the bid proposal will be rejected. Certified Audited Statement are preferred. Internal statements may be attached only if independent statements were not prepared.

Dated at _____ this _____ day of _____, 20____.

Name of Bidder

BY _____

TITLE _____

State of _____

County of _____

_____ being duly sworn, deposes and

says that the bidder is _____ of _____
(Name of Organization)

and answers to the foregoing questions and all statements contained therein are true and correct.

Sworn to before me this _____ day of _____, 20__.

Notary of Public

My Commission expires _____

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CONTRACT AGREEMENT

Pine Street Park Improvements 2009

THIS AGREEMENT made as of the ____th day of _____ in the year **2009**, by and between the City of Portsmouth, New Hampshire (hereinafter call the Owner) and _____ (hereinafter called the Contractor),

WITNESSETH; that the Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE I - Work - The Contractor shall perform all work as specified or indicated in the Contract Documents. The Contractor shall provide, at his expense, all labor, materials, equipment and incidentals as may be necessary for the expeditious and proper execution of the Project.

ARTICLE II - ENGINEER - The Director of Public Works or his authorized representative will act as Engineer in connection with completion of the Project in accordance with the Contract Documents.

ARTICLE III - CONTRACT TIME - Work will begin in accordance with the Notice to Proceed and work shall be completed within 75 days.

ARTICLE IV - CONTRACT PRICE - Owner shall pay Contractor for performance of the work in accordance with the Contract Documents as shown under item prices in the Bid Proposal.

ARTICLE V - PAYMENT - Partial payments will be made in accordance with the Contract Documents. Upon final acceptance of the work and settlement of all claims, Owner shall pay the Contractor the unpaid balance of the Contract Price, subject to additions and deductions provided for in the Contract Documents.

ARTICLE VI - RETAINAGE - To insure the proper performance of this Contract, the Owner shall retain certain amounts in the percentage of the Contract Price and for the time specified as provided in the Contract Documents.

ARTICLE VII - LIQUIDATED DAMAGES - In event the Contractor fails to successfully execute the work within the specified contract time the Owner shall assess the Contractor liquidated damages in the amount of **one hundred dollars (\$100)** for each calendar day beyond the specified completion date for each section of work. Liquidated damages shall be deducted from the Contract Price prior to final payment of the Contractor.

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CONTRACT AGREEMENT (continued)

ARTICLE VIII – CONTRACT DOCUMENTS – The Contract Documents which comprise the contract between Owner and Contractor are attached hereto and made a part hereof and consist of the following:

- 8.1 This Agreement
- 8.2 Contractor’s Bid and Bonds
- 8.3 Notice of Intent to Award, Notice to Proceed
- 8.4 Instruction to Bidders
- 8.5 General Requirements, Control of Work, Temporary Facilities, Measurement and Payment, Standard Specifications
- 8.6 Insurance Requirements
- 8.7 Standard and Technical Specifications
- 8.8 Drawings
- 8.9 Special Provisions
- 8.10 Stormwater Pollution Prevention Plan
- 8.11 Any modifications, including change orders, duly delivered after execution of this Agreement.

ARTICLE IX – TERMINATION FOR DEFAULT – Should contractor at any time refuse, neglect, or otherwise fail to supply a sufficient number or amount of properly skilled workers, materials, or equipment, or fail in any respect to prosecute the work with promptness and diligence, or fail to perform any of its obligations set forth in the Contract, Owner may, at its election, terminate the employment of Contractor, giving notice to Contractor in writing of such election, and enter on the premises and take possession, for the purpose of completing the work included under this Agreement, of all the materials, tools and appliances belonging to Contractor, and to employ any other persons to finish the work and to provide the materials therefore at the expense of the Contractor.

ARTICLE X – INDEMNIFICATION OF OWNER – Contractor will indemnify Owner against all suits, claims, judgments, awards, loss, cost or expense (including without limitation attorneys fees) arising in any way out of the Contractor’s negligent performance or non-performance of its obligations under this Contract. Contractor will defend all such actions with counsel satisfactory to Owner at its own expense, including attorney’s fees, and will satisfy any judgment rendered against Owner in such action.

ARTICLE XI – PERMITS – The Contractor will secure at its own expense, all permits and consents required by law as necessary to perform the work and will give all notices and pay all fees and otherwise comply with all applicable City, State, and Federal laws, ordinances, rules and regulations.

ARTICLE XII – INSURANCE – The Contractor shall secure and maintain, until acceptance of the work, insurance with limits not less than those specified in the Contract.

ARTICLE XIII – MISCELLANEOUS –

- A. Neither Owner nor Contractor shall, without the prior written consent of the other, assign, sublet or delegate, in whole or in part, any of its rights or obligations under any

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of the Contract Documents; and, specifically not assign any monies due, or to become due, without the prior written consent of Owner.

- B. Owner and Contractor each binds himself, his partners, successors, assigns and legal representatives, to the other party hereto in respect to all covenants, agreements and obligations contained in the Contract Documents.
- C. The Contract Documents constitute the entire Agreement between Owner and Contractor and may only be altered amended or repealed by a duly executed written instrument.
- D. The laws of the State of New Hampshire shall govern this Contract without reference to the conflict of law principles thereof.
- E. Venue for any dispute shall be the Rockingham County Superior Court unless the parties otherwise agree.

IN WITNESS WHEREOF, the parties hereunto executed this
AGREEMENT the day and year first above written.

BIDDER:

BY: _____

TITLE: _____

CITY OF PORTSMOUTH, N.H.

BY: _____

John P. Bohenko

TITLE: City Manager

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NOTICE OF INTENT TO AWARD

Date:

TO:

IN AS MUCH as you were the low responsible bidder for work entitled:

**Pine Street Park Improvements 2009
Bid Proposal #14-10**

You are hereby notified that the City intends to award the aforesaid project to you.

Immediately take the necessary steps to execute the Contract and to provide required bonds and proof of insurance within ten (10) calendar days from the date of this Notice.

The City reserves the right to revoke this Notice if you fail to take the necessary steps to execute this Contract.

City of Portsmouth
Portsmouth, New Hampshire

Judie Belanger,
Finance Director

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NOTICE TO PROCEED

DATE:

PROJECT: **Pine Street Park Improvements 2009**

TO:

YOU ARE HEREBY NOTIFIED TO COMMENCE WORK IN ACCORDANCE
WITH THE AGREEMENT DATED, ON _____

WORK SHALL BE COMPLETED PRIOR TO DECEMBER 31, 2009.

CITY OF PORTSMOUTH, N.H.

BY: _____
Steven F. Parkinson, PE

TITLE: Public Works Director

ACCEPTANCE OF NOTICE

RECEIPT OF THE ABOVE NOTICE TO
PROCEED IS HEREBY ACKNOWLEDGED BY

This the _____ day of _____ 20__

By: _____

Title: _____

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CHANGE ORDER

Change Order # 1

Date of Issuance:

Owner: CITY OF PORTSMOUTH, N.H

Contractor:

You are directed to make the following changes in the
Contract Documents:

Description:

Purpose of Change Order:

Attachments:

CHANGE IN CONTRACT PRICE

CHANGE IN CONTRACT TIME

Original Contract Price:
\$

Original Completion Date:

Contract Price prior to this
Change Order:
\$

Contract Time prior to this
Change Order:

Net Increase of
this Change Order:
\$

Net Increase or Decrease of
this Change Order:

Contract Price with all
approved Change Orders:
\$

Contract Time with all
approved Change Orders:

RECOMMENDED:

APPROVED:

APPROVED:

by _____ by _____ by _____ by _____

CD Director

City Finance

City Manager

Contractor

Improvements to Pine Street Park
Portsmouth, NH

LABOR AND MATERIAL PAYMENT BOND

(This format provided for convenience, actual Labor and Material Bond is acceptable in lieu, if compatible)

Bond Number _____

KNOW ALL MEN BY THESE PRESENTS:

that _____

as Principal, hereinafter called Contractor, and _____ (Surety Company) a corporation organized and existing under the laws of the State of

_____ and authorized to do business in the State of New Hampshire hereinafter called Surety, are held and firmly bound unto the City of Portsmouth, N.H. Obligee, hereinafter called Owner, for the use and benefit of claimants as herein below defined, in the

amount of _____ Dollars (\$ _____), for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated _____ entered into a

contract with Owner for _____ in accordance with drawings and specifications prepared by the Public Works Department, 680 Peverly Hill Road, Portsmouth, N.H. 03801 and the Community Development, 1 Junkins Aveue, Portsmouth, NH 03801, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract and for the hire of all equipment, tools, and all other things contracted for or used in connection therewith, then this obligation shall be void, otherwise it shall remain in full force and effect, subject however, to the following conditions:

(1) A claimant is defined as one having a direct contract with the Principal or, with a subcontractor of the Principal for labor, material, equipment, or other things used or reasonably required for use in the performance of the Contract. "Labor and material" shall include but not be limited to that part of water, gas, power, light, heat, oil and gasoline, telephone service or rental of equipment applicable to the Contract.

(2) The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such a claimant, may sue on this bond for the use of such claimant, prosecute the suit by final judgment for such sum or sums as may be

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LABOR AND MATERIAL PAYMENT BOND (continued)

justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any such suit or any costs or expenses of any such suit, and principal and surety shall jointly and severally indemnify, defend and hold the Owner harmless for any such suit, costs or expenses.

(3) No suit or action shall be commenced hereunder by any claimant:

(a) Unless Claimant, other than one having a direct contract with the Principal, shall have given notice to all the following:

The Principal, the Owner and the Surety above named, within six (6) calendar months after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner, and Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State of New Hampshire save that such service need not be made by a public officer.

(b) After the expiration of one (1) year following the date on which Principal ceased all work on said contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

(c) Other than in a State court of competent jurisdiction in and for the county or other political subdivision of the State in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere. (4) The amount of this bond may be reduced by and to the extent of any payment of payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed on record against said improvement, whether or not claim for the amount of such lien by presented under and against this bond.

Signed and sealed this _____ day of _____, 20____. In the presence of:

(Witness) BY: _____
(Principal) (Seal)

(Surety Company)

(Witness) BY: _____
(Title) (Seal)

Improvements to Pine Street Park
Portsmouth, NH

LABOR AND MATERIAL PAYMENT BOND (continued)

Note:

If the Principal (Contractor) is a partnership, the Bond should be signed by each of the partners.

If the Principal (Contractor) is a corporation, the Bond should be signed in its correct corporate name by its duly authorized Officer or Officers.

If this bond is signed on behalf of the Surety by an attorney-in-fact, there should be attached to it a duly certified copy of his Power of Attorney showing his authority to sign such Bonds.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Agreement.

MAINTENANCE BOND

At the Owner's election, a maintenance bond may be substituted for retainage at the completion of the project. If the Owner permits a maintenance bond, it shall be in the amount of Twenty **Percent (20%)** of the contract price with a corporate surety approved by the Owner. Such bond shall be provided at the time of Contract completion and shall guarantee the repair of all damage due to faulty materials or workmanship provided or done by the Contractor. This guarantee shall remain in effect for a period of one year after the date of final acceptance of the job by the Owner.

CONTRACTOR'S AFFIDAVIT

STATE OF _____:

COUNTY OF _____:

Before me, the undersigned, a _____
(Notary Public, Justice of the Peace)

in and for said County and State personally appeared, _____
(Individual, Partner, or duly authorized representative of Corporate)

who, being duly sworn, according to law deposes and says that the cost of labor, material, and equipment and outstanding claims and indebtedness of whatever nature arising out of the performance of the Contract between

CITY OF PORTSMOUTH, NEW HAMPSHIRE

and _____
(Contractor)

of _____

Dated: _____

has been paid in full for Construction of: **Pine Street Park Improvements 2009**

(Individual, Partner, or
duly authorized
representative of
Corporate Contractor)

Sworn to and subscribed
before me this _____ day
of _____ 20____

Improvements to Pine Street Park
Portsmouth, NH

CONTRACTOR'S RELEASE

KNOW ALL MEN BY THESE PRESENTS that

_____ (Contractor) of _____, County of _____
and State of _____

does hereby acknowledge that _____ (Contractor)

has on this day had, and received from the CITY OF PORTSMOUTH NEW HAMPSHIRE, final and completed payment for the Construction of:

Pine Street Park Improvements 2009

NOW THEREFORE, the said _____

(Contractor)

for myself, my heirs, executors, and administrators) (for itself, its successors and assigns) do/does by these presents remise, release, quit-claim and forever discharge the City of Portsmouth, New Hampshire, its successors and assigns, of and from all claims and demands arising from or in connection with the said Contract dated _____, and of and from all, and all manners of action and actions, cause and causes of action and actions, suits, debts, dues, duties, sum and sums of money, accounts, reckonings, bonds, bills, specifications, covenants, contracts, agreements, promises, variances, damages, judgments, extents, executions, claims and demand, whatsoever in law of equity, or otherwise, against the City of Portsmouth, New Hampshire, its successors and assigns, which (I, my heirs, executors, or administrators) (it, its successors and assigns) ever had, now have or which (I, my heirs, executors, or administrators) (it, its successors and assigns) hereafter can shall or may have, for, upon or by reason of any matter, cause, or thing whatsoever; from the beginning of record time to the date of these presents.

IN WITNESS WHEREOF,

Contractor:

print name of witness: _____

By: _____
Its Duly Authorized _____

Dated: _____

Improvements to Pine Street Park
Portsmouth, NH

GENERAL REQUIREMENTS

SCOPE OF WORK

1. INTENT OF CONTRACT

The intent of the Contract is to provide for the construction and completion in every detail of the work described. The Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the terms of the Contract. The Contractor shall be required to conform to the intent of the plans and specifications. No extra claims shall be allowed for portions of the work not specifically addressed in the plans and specifications but required to produce a whole and complete project, such work will be considered subsidiary to the bid items.

2. INCIDENTAL WORK

Incidental work items for which separate payment is not measured includes, but is not limited to, the following items:

- a. Clearing, grubbing and stripping (unless otherwise paid for)
- b. Clean up
- c. Cutting and Capping existing water lines
- d. Signs
- e. Mobilization/Demobilization (unless otherwise paid for)
- f. Restoration of property
- g. Cooperation with other contractors, abutters and utilities.
- h. Utility crossings, (unless otherwise paid for)
- i. Minor items - such as replacement of fences, guardrails, rock wall, etc.
- j. Steel and/or wood sheeting as required.
- k. Accessories and fasteners or components required to make items paid for under unit prices or lump sum items complete and functional.

3. ALTERATION OF PLANS OR OF CHARACTER OF WORK

The Owner reserves the right, without notice to Surety, to make such alterations of the plans or of the character of the work as may be necessary or desirable to complete fully and acceptably the proposed construction; provided that such alterations do not increase or decrease the contract cost. Within these cost limits, the alterations authorized in writing by the Owner shall not impair or affect any provisions of the Contract or bond and such increases or decreases of the quantities as a result from these alterations or deletions of certain items, shall not be the basis of claim for loss or for anticipated profits by the contractor. The contractor shall perform the work as altered at the contract unit price or prices.

4. EXTRA WORK ITEMS

Extra work shall be performed by the Contractor in accordance with the specifications and as directed, and will be paid for at a price as provided in the Contract documents or if such pay items are not applicable than at a price negotiated between the contractor and the Owner or at the unit bid price. If the Owner determines that extra work is to be performed, a change order will be issued.

Improvements to Pine Street Park
Portsmouth, NH

5. CHANGE ORDERS

The Owner reserves the right to issue a formal change order for any increase, decrease, deletion, or addition of work or any increase in contract time or price. The contractor shall be required to sign the change order and it shall be considered as part of the Contract documents.

6. FINAL CLEANING UP

Before acceptance of the work, the contractor shall remove from the site all machinery, equipment, surplus materials, rubbish, temporary buildings, barricades and signs. All parts of the work shall be left in a neat and presentable condition. On all areas used or occupied by the contractor, regardless of the contract limits, the bidder shall clean-up all sites and storage grounds.

The items prescribed herein will not be paid for separately, but shall be paid for as part of the total contract price.

7. ERRORS AND INCONSISTENCY IN CONTRACT DOCUMENTS

Any provisions in any of the Contract Documents that may be in conflict with the paragraphs in these General Requirements shall be subject to the following order of precedence for interpretation.

1. Technical Specifications will govern General Requirements.
2. Plans will govern Technical Specifications, and General Requirements.

CONTROL OF WORK

1. AUTHORITY OF ENGINEER

(a) All work shall be done under supervision of the Engineer and to his satisfaction. The Engineer will decide all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the rate of progress of the work; all questions that may arise as to the interpretation of the plans and specifications; and all questions as to the acceptable fulfillment of the Contract by the Contractor.

(b) The Engineer will have the authority to suspend the work wholly or in part for such periods as he may deem necessary due to the failure of the Contractor to correct conditions unsafe for workers or the general public; for failure to carry out provisions of the Contract; for failure to carry out orders; for conditions considered unsuitable for the prosecution of the work, including unfit weather; or for any other condition or reason deemed to be in the public interest. The Contractor shall not be entitled any additional payments arising out of any such suspensions.

(c) The Owner reserves the right to demand a certificate of compliance for a material or product used on the project. When the certificate of compliance is determined to be unacceptable to the Engineer the Contractor may be required to provide engineering and testing services to guarantee that the material or product is suitable for use in the project, at its expense (see Sample of Certificate of Compliance).

2. PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPES

(a) The Contractor shall use every precaution to prevent injury or damage to wires, poles, or other property of public utilities; trees, shrubbery, crops, and fences along and adjacent to the right-of-way, all underground structures such as pipes and conduits, within or outside of the right-of-way; and the Contractor shall protect and carefully preserve all property marks until an authorized agent has witnessed or otherwise referenced their location.

(b) The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the work, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.

(c) When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or as a result of the failure to perform work by the Contractor, the Contractor shall restore, at its own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing rebuilding, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

(d) The Contractor shall paint with tree paint all scars made on fruit or ornamental trees by equipment, construction operations, or the removal of limbs larger than one inch in diameter. Damaged trees must be replaced if so determined by the City Arborist, in his or her sole discretion.

(e) If the Contractor fails to repair, rebuild or otherwise restore such property as may be deemed necessary, the Owner, after 48 hours notice, may proceed to do so, and the cost thereof may be deducted from any money due or which may become due the Contractor under the contract.

(f) It is the intent of the Parties that the Contractor preserve, to as great an extent as possible, the natural features of the site.

Improvements to Pine Street Park
Portsmouth, NH

CONTROL OF WORK (continued)

(g) Manhole and/or catch basin castings, frames, covers, and grates shall be protected and preserved during construction. A careful inventory shall be kept regarding which frames and covers/grates were removed so they can be replaced in the proper location. Any damaged or missing frames, covers, or grates shall be replaced by the contractor at no cost to the owner.

3. MAINTENANCE DURING CONSTRUCTION

The Contractor shall maintain the work during construction and until the project is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and workers to ensure that the structure is kept in satisfactory conditions at all times.

4. SAFETY PRECAUTIONS

Upon commencement of work, the Contractor shall be responsible for initiating, maintaining and supervising all safety precautions necessary to ensure the safety of employees on the site, other persons who may be affected thereby, including the public, and other property at the site or adjacent thereto.

5. PERMITS

It will be the responsibility of the Contractor to obtain all permits required for the operation of equipment in, or on, all city streets and public ways.

6. BARRICADES, WARNING SIGNS AND TRAFFIC OFFICERS

(a) The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of the public. Roadway closed to traffic shall be protected by effective barricades. Obstructions shall be illuminated during hours of darkness. Suitable warning signs shall be provided to control and direct traffic in a proper manner, as approved by the engineer.

(b) The Contractor will be held responsible for all damage to the work from traffic, pedestrians, animals or any other cause due to lack of adequate controlling devices.

(c) The Contractor shall provide such police officers as the Engineer deems necessary for the direction and control of traffic within the site of project.

The work prescribed herein will not be paid for separately but will be paid for as part of the Contract Price unless specifically appearing as a bid item.

TEMPORARY FACILITIES

1. STORAGE FACILITIES

(a) The Contractor shall not store materials or equipment in a public right-of-way beyond the needs of one working day. Equipment and materials shall be stored in an approved location.

(b) The Contractor shall protect all stored materials from damage by weather or accident and shall insure adequate drainage at and about the storage location.

(c) Prior to final acceptance of the work all temporary storage facilities and surplus stored materials shall be removed from the site.

2. SANITARY FACILITIES

(a) The Contractor shall provide for toilet facilities for the use of the workers employed on the work.

(b) Temporary toilet facilities may be installed provided that the installation and maintenance conform with all State and local laws, codes, regulations and ordinances governing such work. They shall be properly lit and ventilated, and shall be kept clean at all times.

(c) Prior to final acceptance of the work all temporary toilet facilities shall be removed from the site.

3. TEMPORARY WATER

The Contractor shall make all arrangements with the local water department for obtaining water connections to provide the water necessary for construction operations and shall pay all costs.

4. TEMPORARY ELECTRICITY

The Contractor shall make all arrangements with the Public Service Company for obtaining electrical connections to provide the electrical power necessary for construction operations and security lighting and shall pay all electrical connection and power costs.

The Contractor shall be responsible with obtaining an electrical permit from the City Electrical Inspector.

INSURANCE REQUIREMENTS

Insurance shall be in such form as will protect the Contractor from all claims and liabilities for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this contract whether such operation by himself or by anyone directly or indirectly employed by him.

AMOUNT OF INSURANCE

- A) Comprehensive General Liability:
Bodily injury or Property Damage - \$2,000,000
Per occurrence and general aggregate
- B) Automobile and Truck Liability:
Bodily Injury or Property Damage - \$2,000,000
Per occurrence and general aggregate

Additionally, the Contractor shall purchase and maintain the following types of insurance:

- A) Full Workers Comprehensive Insurance coverage for all people employed by the Contractor to perform work on this project. This insurance shall at a minimum meet the requirements of the most current laws of the State of New Hampshire.
- B) Contractual Liability Insurance coverage in the amounts specified above under Comprehensive General Liability.
- C) Product and Completed Operations coverage to be included in the amounts specified above under Comprehensive General Liability.

ADDITIONAL INSURED

All liability policies (including any excess policies used to meet coverage requirements) shall include the City of Portsmouth, New Hampshire as named Additional Insured.

- 1) The contractor's insurance shall be primary in the event of a loss.
- 2) The Additional Insured endorsement must include language specifically stating that the entity is to be covered for all activities performed by, or on behalf of, the contractor, including the City of Portsmouth's general supervision of the contractor.
- 3) City of Portsmouth shall be listed as a Certificate Holder. The City shall be identified as follows:

City of Portsmouth
Attn: Legal Department
1 Junkins Avenue
Portsmouth, NH 03801

Improvements to Pine Street Park
Portsmouth, NH

MEASUREMENT AND PAYMENT

1. MEASUREMENT OF QUANTITIES

- (a) All work completed under the contract will be measured according to the United States standard measure.
- (b) The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice. Unless otherwise stated all quantities measured for payment shall be computed or adjusted for "in place" conditions.
- (c) Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures having an area of 9 square feet or less. Unless otherwise specified, transverse measurements for area computations will be the dimensions shown on the plans or ordered in writing.
- (d) Structures will be measured according to lines shown on the plans or as ordered unless otherwise provided for elsewhere in the specifications.
- (e) In computing volumes of excavation, embankment, and borrow, the average end area method will be used. Where it is impracticable to measure by the cross-section method, acceptable methods involving three-dimensional measurement may be used. When measurement of borrow in vehicles is permitted, the quantity will be determined as 80 percent of the loose volume.
- (f) In computing volumes of concrete, stone and masonry, the prismatic method will be used. The term "ton" will mean the short ton consisting of 2,000 pounds avoirdupois.
- (g) Except as specified below, all materials that are measured or proportioned by weight shall be weighed on scales which the Contractor has had sealed by the State or by a repairman registered by the Commissioner of Agriculture. All weighing shall be performed in a manner prescribed under the Rules and Regulations of the Bureau of Weights and Measures of the New Hampshire Department of Agriculture.
- (h) Weighing of materials on scales located outside New Hampshire will be permitted for materials produced or stored outside the state, when requested by the Contractor and approved. Out-of-state weighing in order to be approved, must be performed by a licensed public weigh master or a person of equal authority in the state concerned on scales accepted in the concerned state.
- (i) Each truck used to haul material being paid for by weight shall bear a plainly legible identification mark, and if required, shall be weighed empty daily at such times as directed.
- (j) When material is weighed, the individual weight slips, which shall be furnished by the Contractor, for trucks, trailers, or distributors, shall show the following information: the date; the project; the material or commodity; the dealer or vendor; the Contractor or Subcontractor; the location of the scales; the vehicle registration number or other approved legible identification mark; the tare and net weights, with gross weights when applicable; and the weigher's signature or his signed initials.

MEASUREMENT AND PAYMENT (continued)

(k) The right is reserved to weight any truck, trailer, or distributor, at locations designated, before and after making deliveries to the project.

(l) Bituminous materials will be measured by the gallon or ton.

(m) When material is specified to be measured by the cubic yard but measurement by weight is approved, such material may be weighed and the weight converted to cubic yards for payment purposes. Necessary conversion factors will be determined by the Owner.

(n) The term "lump sum" when used as an item of payment will mean complete payment for the work described in the item.

(o) When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories, so as to provide the item complete and functional. Except as may be otherwise provided, partial payments for lump sum items will be made approximately in proportion to the amount of the work completed on those items.

(p) Material wasted without authority will not be included in the final estimate.

2. SCOPE OF PAYMENT

(a) The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials and for performing all work under the contract in a complete and acceptable manner and for all risk, loss, damage or expense of whatever character arising out of the nature of the work or the prosecution thereof.

(b) The Contractor shall be liable to the Owner for failure to repair, correct, renew or replace, at his own expense, all damage due or attributable to defects or imperfections in the construction which defects or imperfections may be discovered before or at the time of the final inspection and acceptance of the work.

(c) No monies, payable under the contract or any part thereof, except the first estimate, shall become due or payable if the Owner so elects, until the Contractor shall satisfy the Owner that the Contractor has fully settled or paid all labor performed or furnished for all equipment hired, including trucks, for all materials used, and for fuels, lubricants, power tools, hardware and supplies purchased by the Contractor and used in carrying out said contract and for labor and parts furnished upon the order of said Contractor for the repair of equipment used in carrying out said contract; and the Owner, if he so elects, may pay any and all such bills, in whole or in part, and deduct the amount of amounts so paid from any partial or final estimate, excepting the first estimate.

MEASUREMENT AND PAYMENT (continued)

3. COMPENSATION FOR ALTERED QUANTITIES

(a) Except as provided for under the particular contract item, when the accepted quantities of work vary from the quantities in the bid schedule the Contractor shall accept as payment in full, so far as contract items are concerned, at the original contract unit prices for the accepted quantities of work done. No allowance will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense on the part of the Bidder and subsequent loss of expected reimbursements therefore or from any other cause.

(b) Extra work performed will be paid for at the contract bid prices or at the price negotiated between the Owner and the Contractor if the item was not bid upon. If no agreement can be negotiated, the Contractor will accept as payment for extra work, cost plus 15% (overhead and profit). Costs shall be substantiated by invoices and certified payroll.

4. PARTIAL PAYMENTS

Partial payments will be made on a monthly basis during the contract period. From the total amount ascertained as payable, an amount equivalent to ten percent (10%) of the whole will be deducted and retained by the Owner until such time as the work receives final acceptance.

5. FINAL ACCEPTANCE

Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer will make an inspection. If all construction provided for and contemplated by the contract is found complete to his satisfaction, this inspection shall constitute the final inspection and the Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of the final inspection.

If, however, the inspection discloses any work in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of such work, and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection provided the work has been satisfactorily completed. In such event, the Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

MEASUREMENT AND PAYMENT (continued)

6. ACCEPTANCE AND FINAL PAYMENT

(a) When the project has been accepted and upon submission by the Contractor of all required reports, completed forms and certifications, the Owner will review the final estimate of the quantities of the various classes of work performed. The Contractor may be required to certify that all bills for labor and material used under this contract have been paid.

(b) The Contractor shall file with the Owner any claim that the Contractor may have regarding the final estimate at the same time the Contractor submits the final estimate. Failure to do so shall be a waiver of all such claims and shall be considered as acceptance of the final estimate. From the total amount ascertained as payable, an amount equal to ten percent (10%) of the whole will be deducted and retained by the Owner for the guaranty period. This retainage may be waived, at the discretion of the City, provided the required Maintenance Bond has been posted. After approval of the final estimate by the Owner, the Contractor will be paid the entire sum found to be due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the contract.

(c) All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

7. GENERAL GUARANTY AND WARRANTY OF TITLE

(a) Neither the final certification of payment nor any provision in the contract nor partial or entire use of the improvements embraced in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express or implied warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting there from which shall appear within a period of twelve (12) months from the date of final acceptance of the work. The Owner will give notice of defective materials and work with reasonable promptness.

(b) No material, supplies or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease purchase or other agreement by which an interest therein or in any part thereof is retained by the Seller or supplier. The Contractor shall warrant good title to all materials, supplies and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the Owner free from any claims, liens or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have the right to a lien upon any improvements or appurtenances thereon.

Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontractors and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

MEASUREMENT AND PAYMENT (continued)

8. NO WAIVER OF LEGAL RIGHTS

(a) Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or be stopped from recovering from the Contractor or his Surety, or both, such overpayment as it may sustain by failure on the part of the Contractor to fulfill his obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

(b) The Contractor, without prejudice to the Contract shall be liable to the terms of the Contract, shall be liable to the Owner for latent defects, fraud or such gross mistakes as may amount to fraud, and as regards the Owner's right under any warranty or guaranty.

9. TERMINATION OF CONTRACTOR'S RESPONSIBILITY

Whenever the improvement provided for by the Contract shall have been completely performed on the part of the Contractor and all parts of the work have been released from further obligations except as set forth in his bond and as provided in Section 8 above.

STANDARD SPECIFICATIONS

The Standard Specifications for Road and Bridge Construction of the State of New Hampshire Department of Transportation and any Addenda shall apply but without regard to Section 100 “General Conditions” of those Standard Specifications

Improvements to Pine Street Park
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SHOP DRAWINGS

Shop Drawings for this project shall be submitted under the following conditions:

1. The Contractor shall submit working and detail drawings, well in advance of the work, to the Engineer for review.
2. The Contractor's drawings shall consist of shop detail, erection and other working plans showing dimensions, sizes and quality of material, details and other information necessary for the complete fabrication and erection of the pertinent work.
3. The Contractor shall submit two (2) sets of drawings to the Engineer.
4. Prior to the approval of the drawings, any work done or materials ordered for the work involved shall be at the Contractor's risk.
5. One (1) set of the drawings will be returned to the Contractor approved or marked with corrections to be made. After approval has been given, the Contractor shall supply the Engineer with two sets of the revised detail working drawings.
6. The Engineer's approval of the Contractor's working drawings will not relieve the Contractor from responsibility for errors in dimensions or for incorrect fabrication processes, or from responsibility to complete the contract work.

TECHNICAL SPECIFICATIONS

As noted above, the Standard Technical Specifications for this project are the Standard Specifications for Road and Bridge Construction of the State of New Hampshire Department of Transportation and any Addenda shall apply but without regard to Section 100 “General Conditions” of those Standard Specifications.

Special Provision

To Section 201 (NHDOT Standard Specifications)

Amend Section 201 to read:

Section 201.31 TREE PRUNING

GENERAL

1.01 SCOPE OF WORK

- a. The work of this Section includes the following:
 1. Pruning - Class II, including the removal of all limbs necessary to execute the field, playground and fence work required under this contract.
 2. Removal of trees and stumps.
- b. Refer to the Contract Drawings for general location of trees along the site perimeter. In general, all trees are to remain and be pruned in conformance with this Specification. Tree removals shall be limited to the area denoted on the plans and shall include the removal of individual trees that would impede the construction of proposed facilities.

1.02 QUALIFICATIONS OF CONTRACTOR

- a. This work shall be limited to individuals, partnerships and corporations who are actively engaged in the field of Arboriculture, and who demonstrate competence, experience and financial capability to carry out the terms of this project. The Owner may require proof of these qualifications.
- b. All work shall be conducted by qualified and trained personnel under the direct supervision of a New Hampshire Certified Arborist in the Contractor's employ.

1.03 SPECIAL REQUIREMENTS

- a. Dutch Elm diseased wood shall be disposed of in accordance with provisions of General Laws, Chapter 87, Section 5, and Chapter 132, Sections 8 and 11 as amended; and in accordance with any additional local regulations. All wood shall be

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removed from the site and be properly disposed of in accordance with state and local regulations.

- b. No burning shall be permitted on the project site.
- c. Prior to commencing work, the Contractor shall submit a plan to the Owner for legal disposal of removed materials, in conformance with State and Federal regulations.

1.04 STANDARDS AND DEFINITIONS

- a. All pruning work shall be performed in accordance with the following:
 - 1. The ANSI A300 ‘Standard Practices for Trees, Shrubs, and Other Wood Plant Materials’ of the Secretariat: National Arborist Association, Post Office Box 1094, Amherst, New Hampshire 03031.
 - 2. American National Standards Institute (ANSI) Standard Z-133.1.
 - 3. The standards and practices of the International Society of Arborists.
 - 4. The standards and practices of the New Hampshire Arborist Association.
 - 5. The standards and practices of the American Association of Nurserymen.
- b. The term ‘Owner’ shall mean the City of Portsmouth designated representative charged with carrying out the requirements of this Project – ‘Landscape Architect’, ‘Engineer’, ‘Planner’, or ‘Tree Warden’ as referenced herein, rendering approvals for the Owner.

1.05 EXAMINATION OF SITE AND DOCUMENTS

- a. The Contractor shall be responsible for having a clear understanding of the existing site conditions and shall be responsible for fully carrying out the work of this Section, regardless of actual site conditions encountered.

1.06 ORDER OF WORK

- a. Based on the site conference, the Contractor shall submit a schedule of work for the Owner’s review and approval prior to beginning work. Unless otherwise authorized by the Owner, failure of the Contractor to comply with the approved removal schedule shall be sufficient cause to give notice that the Contractor is in default of the contract.

1.07 PROTECTION OF THE VEGETATION TO BE PRESERVED

- a. The Contractor shall protect all existing trees, shrubs, lawns and other site features designated to remain. The placement of protection devices, such as snow fence enclosures, shall, however, be at the Contractor's discretion.
- b. Damage no plant to remain by burning, pumping water, cutting of live roots or branches, or any other means. Neither vehicles nor equipment shall be parked within the dripline of trees to remain, or where ever damage may result to trees to be saved. Construction material shall not be stored beneath trees to be saved.
- c. The Contractor shall be liable for any damage to any trees, shrub, lawn or other site features to remain, and shall immediately report to the Owner. Damaged shrubs or lawns shall be restored or replaced to match existing to remain to the satisfaction of the Owner.
- d. The Contractor shall compensate the Owner for damages by installing replacement tree(s) of the size and species approved by the City and of sufficient quantity such that the sum of the Diameter at Breast Height (DBH) inches for replacement trees equals the total DBH inches of the damaged tree(s). Damaged shrubs shall be replaced with shrubs(s) of the same size, species, and quantity, unless determined otherwise by the Owner.

1.08 USE AND CARE OF THE SITE

- a. The Contractor shall leave the work site at the end of each working period in a condition satisfactory to the Owner.
- b. Pavements shall be swept and lawns or other surfaces raked and/or otherwise cleaned of all material related to the work operation. Degree of clean-up required will be described by the Owner and will be based upon the character of the work area.
- c. All trimmings or any other form of debris (except diseased materials or trimmings from Elms) shall be collected and chipped. The Contractor shall remove all materials and shall dispose of such materials off site in a legal manner.
- d. Vehicles may be stored on site with the approval of the Owner in a pre-determined area. The Contractor shall be fully and solely responsible for any damage to equipment or vehicles left at the site of the work. All necessary permits shall be obtained by the Contractor.

PART II - MATERIALS

2.01 EQUIPMENT

- a. Equipment necessary for this Contract shall be properly maintained and in good operating condition to the City's satisfaction. The Contractor shall promptly remove and replace any equipment which the Owner deems to be in unsatisfactory condition or otherwise unsuitable.
- b. Cutting tools shall be kept well sharpened to provide clean smooth cuts. Any tools utilized on any tree suspected to have cankers or other fungal, bacterial or viral diseases shall be sterilized or not used on any other specimen.
- c. A disc chipper shall be used which will process material up to twelve (12) inches in diameter.

2.03 PERSONNEL

- a. The Contractor shall submit each employee's name and title prior to the commencement of work. The Contractor shall advise the Owner of any changes in roster assigned to this Contract.
- b. The crew foreman shall have a minimum of five (5) years climbing/pruning experience. At least one (1) crew person shall be an MCA and shall be certified in CPR.
- c. Each trimmer shall be experienced and highly qualified with the necessary tree worker skills to successfully complete the work of this Section, including the ability and training to perform aerial rescue. Said skill shall also include worker safety and ability in compliance with current OSHA and ANSI Z-133.1 Standards.

PART III - EXECUTION OF PRUNING

3.01 PRUNING

- a. Under this Section, the Contractor shall furnish all labor, materials, equipment and transportation required to complete all aspects of the work in accordance with all local, state and federal regulations in force at the same time of this Contract and in accordance with tree pruning as specified herein.

- b. The work of this Section consists of all pruning work and related items as specified herein and includes, but is not limited to:
 - 1. Pruning - Class II throughout the designated areas and limb removal required to allow for the proper installation of all signs, play equipment and new guardrail sections.

Class II pruning is defined as medium pruning and shall consist of the removal of dead, dying, diseased, interfering, objectionable and weak branches on the main trunks as well as those within the leaf area. An occasional branch one (1) inch or less in diameter may remain within the main leaf area where it is not practical to remove it.

3.02 DESCRIPTION OF PRUNING WORK

- a. Pruning and trimming are generally described as the removal and disposal of limbs, branches and stubs which are either dead, potentially detrimental to the health of the tree or dangerous to pedestrians, visually deficient, interfering or otherwise objectionable as determined by the Owner.
- b. The all existing trees on site are to be pruned. The trees immediately along Bartlett Avenue will be limbed up to a minimum of 6' clear height from surrounding grades.
- c. Vehicle access shall be controlled and approved by the City Representative.
- d. If the Contractor discovers tree(s) which have not been marked for pruning, but whose condition is such that removal is warranted, whether due to death, disease, decay, or structural weakness, such tree(s) shall not be pruned and the Contractor shall immediately report these findings in writing to the Owner and await the Owner's direction before proceeding with work on the particular tree(s) in question.
- e. All pruning shall be performed in a manner that maintains the natural aesthetic characteristics of the species and variety of trees. No topping or dehorning of trees or stubbing back of branches shall be permitted. All cuts shall be made to a lateral branch that is a minimum of one third (1/3) the size of the branch being removed, unless otherwise instructed by the Owner.
- f. The use of climbing spurs or spiked shoes shall not be permitted and their use will result in the immediate cancellation of the contract.
- g. All cuts shall be made sufficiently close to the parent stem so that wound closure can be readily started under normal conditions. Cuts shall, however, never be made

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through the branch collar. Slab cuts and rip cuts will result in cancellation of the contract.

- h. All limbs over two (2) inches in diameter to be removed shall be precut to prevent splitting. Any branches that by falling would injure existing trees to remain or other objects shall be lowered to the ground by proper ropes.
- i. On trees known to be diseased and where there is known to be danger of transmitting the disease on tools, tools shall be disinfected with alcohol or bleach after each cut between trees.
- j. Lateral branches as well as occasional branch suckers (“water sprouts”) may be retained. Complete removal of secondary laterals and branch suckers resulting in the stripping of major limbs, (“lion tailing”) will not be permitted.
- k. Tree paint to seal pruning cuts shall not be used.
- l. All branches and limbs shall be manually lowered to the ground via rope and pulley. This practice must be consistent with the National Arborist Association Standards for Pruning. All grade-level artifacts and landscaping must be protected from damage.
- m. All equipment to be used and all work to be performed must be in full compliance with all standards as promulgated by OSHA at the time of bidding, including, but not limited to those regulations concerning noise levels, protective devices and operator safety.
- n. The Contractor shall be solely responsible for pedestrian and vehicular safety and control within the work site and shall protect the public and its property from injury or damage that could be caused by the progress of the work. To this end the Contractor shall provide, erect, and maintain protective devices acceptable to the Owner, including but not limited to barricades, lights and warning signs.
- o. Any practice employed by the Contractor that is obviously hazardous as determined by the Owner shall be immediately discontinued by the Contractor upon receipt of either written or oral notice from the Owner to discontinue such practice.

- - - END OF SECTION - - -

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Special Provision

To Section 202 (NHDOT Standard Specifications) Demolition

Amend Section 202 to read:

Section 202.0 Selective Demolition

PART I - GENERAL

1.01 SCOPE OF WORK

- a. Work under this Section shall consist of the careful removal, storage for reuse, transportation off-site, or demolition, of all structures and site features encountered or noted to be removed or abandoned to three feet below finished grade, and the removal and disposal of all materials not called for to be reused or salvaged, in accordance with the contract drawings, these specifications, and the directions of the Engineer. Provide all labor, equipment, materials and transportation necessary to complete the work.
- b. Items plan referenced to be removed and stored shall be carefully removed and stored on site in a manner and location designated by the Engineer for reinstallation later as shown on the plans or as directed by the Engineer.
- c. Items plan referenced, or as directed by the Engineer to be removed and disposed of shall be removed from the site and properly and legally disposed of by the Contractor.
- d. Items indicated on the contract drawings or in the specifications to be removed and salvaged, or other items directed to be removed by the Engineer, shall be transported to a municipal storage facility, located within the City confines, and unloaded and stacked as directed by the Engineer.
- e. The following scope describes the general work/demolition requirements of this Section.
 1. Cement concrete and bituminous concrete pavements.
 2. Selected play equipment to be confirmed in field by Owner's Representative prior to removal.

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3. Play area edging and curbing.
4. Other features as indicated on the drawings.

1.02 PROTECTION

- a. The Contractor shall assume complete responsibility and liability for the safety and structural integrity of all work and utilities to remain during demolition.
- b. Provide safeguards including, but not limited to, warning signs, barricades, temporary fences, warning lights and other items required for protection of personnel and the general public during performance of all work. Secure construction fence of 5' minimum height to be installed and maintained until park opening date.
- c. All features related to protection shall be maintained until that work has been completed to the point when such safeguards are no longer required.

1.03 SPECIAL REQUIREMENTS

- a. Removal of pavement within dripline of trees to remain is required to be done by hand tools or an air spade.

PART II - MATERIALS

2.01 BACKFILL

- a. The Contractor shall provide suitable backfill as specified, to fill voids left by removal or abandonment of site features, and shall provide all pipe cap ends needed to cap off or plug the existing water line.
- b. Suitable materials shall be used as base course fill and topsoil to the depth as specified herein. Restore disturbed areas with similar materials blended to match the line and grades of adjacent surfaces.

PART III - EXECUTION

3.01 ABANDONED PIPES OR CONDUITS

- a. Abandon discontinued water supplies that are encountered during the execution of this contract in accordance with City requirements.

b. Notify Owner's Representative of location of abandoned pipes and conduits,

- - - END OF SECTION - - -

Special Provision

To Section 411(NHDOT Standard Specifications) Bituminous Concrete

Amend Section 411 to read:

Section 411.1 Bituminous Concrete

GENERAL

1.01 SCOPE OF WORK

- a. Under this Section, the Contractor shall furnish all necessary labor, materials, equipment, and transportation necessary to construct the following:
 1. The bituminous concrete pavement for the courts and walks shall be composed of materials as specified herein and shall be constructed on a prepared base course to the depth, grade and cross-section shown on the plans, as specified herein and as directed by the Engineer.
 2. Unless otherwise specified in the Contract Drawings, bituminous concrete pavement shall be composed of a one and a half (1.5) inch bituminous concrete binder course, and a one and a half (1.5) inch bituminous concrete dense mix course.
 3. Where an overlay is proposed, the depth of the bituminous concrete dense mix shall be typically one and one-half (1 ½) inches except that it shall be of greater depth in places to eliminate puddling. Tack coat shall be applied utilizing Type SS-1 asphalt emulsion.
 4. Crack repair of existing bituminous concrete pavements prior to installation of overlay pavement.
 5. Color sealcoating of bituminous concrete pavements as shown on the plans and as specified herein.

1.02 REFERENCE STANDARDS AND SPECIFICATIONS

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- a. Reference to the standards, specifications and tests of technical societies, organizations and governmental bodies are made in the Contract Documents.
 - 1. AASHTO - American Association of State Highway and Transportation Officials (tests or specifications).
 - 2. ASTM - American Society for Testing and Materials.
 - 3. NH. Standard Specs. - Latest edition of the Standard Specifications for Highways and Bridges, New Hampshire Transportation Department, hereinafter referred to as the "New Hampshire Standard Specifications."

1.03 SUBMITTALS

- a. Asphalt emulsion Type SS-1 product and application specification.
- b. Color Sealcoat ALTERNATE #4: Contractor shall submit catalog cuts, manufacturer's specifications and color chips or charts.
- c. Field layout of color sealcoat must be approved by Landscape Architect prior to installation.
- d. Submit catalog cuts and manufacturer's specifications for Airport Grade Asphalt Emulsion Mix and Aggregate.
- e. Submit catalog cuts and manufacturer's specifications for Airport Grade Asphalt Emulsion Mix and Aggregate.
- f. Compaction tests are required on all bituminous concrete base surfaces on a 5' grid interval or per Owner's direction. At the Contractor's expense, an independent testing agency must perform the work and submit the results directly to the Landscape Architect.

1.04 QUALIFICATIONS/SPECIAL REQUIREMENTS – COLOR SEALCOAT APPLICATION – ALTERNATE #4

- a. The Contractor shall engage the manufacturer's representative to inspect and monitor the application of the initial filler coat upon the prepared surfaces of all pavements to receive color sealcoat.

- b. If a latex-ite acrylic sealer/surfacer is to be utilized, the addition of silica by mechanical agitation on-site shall be inspected and monitored by the manufacturer's representative who is to be engaged by the Contractor at the Contractor's cost.
- c. Adequate means shall be provided to protect the color seal coating(s) from damage until such time that each layer has cured sufficiently and no seal will adhere to and be picked up by the tires of vehicles or by pedestrian traffic.
- d. No color seal coating shall be applied during any period within which rain or sub-application temperatures are predicted within forty-eight (48) hours, unless otherwise specified by the manufacturer.

PART II - MATERIALS

2.01 BITUMINOUS CONCRETE PAVEMENT

a. Bituminous Concrete Pavement shall consist of binder mix and dense mix courses constructed to the thicknesses shown on the plans and shall conform to the relevant provisions of Sections 460 and (M3.11.03) of the New Hampshire Transportation Department, Standard Specifications for Highways and Bridges, Latest Edition, unless specified otherwise hereinafter.

b. Base/Binder Courses

1. Base/Binder Courses shall be Bituminous Concrete Pavement, Dense Finish Course Type I-1.

c. Leveling/Overlay Courses

1. Leveling/Overlay Courses may conform to "Surface Treatment" mix, Table A, Section M3.11.03 of the MHD Standard Specifications, comprised of Class I Dense Bituminous Concrete, Type St or Sense Mix Type I-1, at the Contractor's option.

2. The general composition of the bituminous concrete mixture (the proportion of asphalt cement to mineral aggregate) shall be in accordance with NHDOT requirements.

3. The mineral aggregate composition for Type St shall be as follows:

TYPE ST SIEVE ANALYSIS	MINERAL AGGREGATE
U.S. Standard Sieve No.	Percent Passing by Weight (per ASTM C-136)

<u>Size</u>	<u>Minimum</u>	<u>Maximum</u>
3/8	100	-
4	96	100
8	85	100
16	55	85
30	25	60
50	15	40
100	3	15
200	2	7

2.02 ASPHALT EMULSION

- a. Asphalt emulsion tack coat shall be Type SS-1 or SS-1H as specified by the Asphalt Institute.

2.03 TROWELABLE ASPHALT FILLER/PATCH

- a. Airport grade asphalt emulsion mix and aggregate shall be used to repair gouges or cracks which can then be brought to grade to receive an overlay or color sealcoat.

2.04 ADHESIVE FABRIC FOR CRACK PATCHING – ALTERNATE #4

- a. Fabric shall be the Armor crack repair system as manufactured by Armor Corporation, Farmingdale, NJ, 1.877.99.ARMOR or approved equal.

2.05 COLOR SEALCOAT – ALTERNATE #4

- a. The layout and design of color sealcoating shall be installed per contract drawings.

The two (2) filler coats shall be Plexipave as manufactured by California Products Corporation, 169 Waverly Street, Cambridge, Massachusetts, or approved equal. Colors shall be as indicated on the plans. The two (2) Plexipave filler coats shall be applied to the cleaned bituminous pavement as specified hereunder. It shall be non-flammable upon exposure to flame. The filler coats shall contain a minimum of 9 lb./gal. of Silica, 100 percent (100%) passing a 100% mesh as pre-mixed at the manufacturer's plant. No sand or silica shall be added to the emulsion in the field. The bituminous pavement shall cure for fourteen (14) days prior to applying the Plexipave Acrylic Color System.

- b. Water, if approved, may be added to the Plexipave emulsion mixes. In no case may the quantity of water in the filler coat emulsion mix exceed thirty-three

percent (33%) of the emulsion volume. (One (1) part water: two (2) parts filler coat). In no case may the quantity of water in the finish coat emulsion mix exceed fifty percent (50%) of the emulsion volume. (One (1) part water: one (1) part finish coat). Water shall be potable and its temperature above forty degrees F (40°F) upon addition to the emulsions.

- c. The color emulsion coating shall be California Products Company's "Plexichrome" or an approved equal emulsion product. Colors shall match those of the Plexipave filler coats. The Plexichrome shall be applied lengthwise of the court with a wide type pushbroom.
- d. The base vehicle for the finish coat shall be an acrylic polymer dispersed in water and which has the ability to withstand extremes in temperature and general weathering. The film former shall provide a non-skid surface upon drying and under all weather conditions. Pigment dispersions in the color coating are to be of the best quality chrome oxides so as to obtain a permanent true color. The coating shall contain no material, which will cause cracking due to extremes in temperatures and is to be factory mixed and consistent in color. It shall be a one hundred percent (100%) acrylic emulsion containing no alkyds, butadiene styrene, or vinyls and shall be thinned with water. It shall not chalk or discolor any equipment.
- e. The finished surface shall be smooth and uniform, true to required grade and cross section, and free of depressions, ridges, or other irregularities.

PART III - EXECUTION

3.01 BITUMINOUS CONCRETE PAVEMENT

- a. Bituminous concrete pavements shall be constructed on a prepared foundation of gravel in accordance with the New Hampshire Standard Specifications, except where overlayment is over existing pavement.
- b. The bituminous mixtures shall be placed on the approved base only when, in the opinion of the Engineer, the course is sufficiently dry and weather conditions are suitable.
- c. Where walls, curbing, or other suitable permanent supports are not present, the Contractor shall secure proper alignment and adequate compaction of the binder and surface courses as shown on the Contract Drawings and finish all edges with a neat tamped edge.
- d. The mixture shall be placed in two (2) courses as shown on the Contract Drawings. Each course shall be spread and finished as required in the New

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Hampshire Transportation Department, Standard Specifications for Highways and Bridges, latest edition.

- e. Prior to completion of bituminous concrete overlay, the Contractor shall have the existing patched surfaces tack coated and leveled to eliminate all “birdbaths” or extreme lows which may create ponding or drainage problems. Leveling course (surface treatment) bituminous concrete applied as necessary, shall be raked and feathered and be properly rolled and compacted. The Contractor shall apply “level” lines, screeds, or use other measures to achieve the proper leveling surface suitable for overlay.

All adhesive fabric shall be in place and approved prior to completing this work.

- f. After completion, the bituminous concrete courses shall conform to the thickness shown on the Contract Drawings, smooth and even and of a dense and uniform structure. When tested with a sixteen (16) foot straight edge placed parallel to the centerline of the pavement, there shall be no deviation from a true surface in excess of one-quarter (1/4) inch.

3.02 ASPHALT EMULSION TACK COAT

- a. To all existing surfaces to be pave against or overlaid, apply a single very thin (0.05 to 0.15 gallons per square yard) application of diluted asphalt emulsion (Type SS-1) to cover the entire surface of existing pavement.
- b. Essential qualities of coverage are (1) it must be very thin and (2) uniformly cover entire surface of existing pavement.
- c. Place only that amount of tack coat which can be overlaid with new pavement by the end of each day, and; **IF RAIN IS ANTICIPATED DO NOT APPLY TACK COAT.**

3.03 COLOR SEAL COAT - ALTERNATE #4

- a. The bituminous concrete pavement shall cure for fourteen (14) days prior to applying the Color Sealcoat System where specified.
- b. The Contractor shall furnish and apply to the approved bituminous pavements so designated on the plans: two (2) filler coats and one (1) finish coat of acrylic emulsion color coating.
- c. Prior to application of the filler coats, all dirt, sand, dust, and other loose material shall be cleaned from the paved areas to be covered, by sweeping and pressure

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washing with water. All surfaces shall be dry prior to starting any color seal coating process. The Contractor shall take special precautions to assure that existing pavements are thoroughly cleaned and that all cracks or joints in existing pavements are repaired in conformance with these specifications and to the satisfaction of the Owner. Limits or areas to be color coated shall be taped with minimum two (2) inch wide tape true as to alignment prior to application of the color coating material.

- d. The two (2) filler coats shall be applied so that both coats are of a total quantity and with a uniform spread at the rate of one (1) gallon per each one hundred (100) square feet of surface area. Additional filler coating material is to be used if necessary to complete the court surfaces satisfactory to the Supervisor. The first coat shall be applied length-wise of the court or drive and the second coat cross-wise of the court or drive.
- e. After the filler coat applications have been completed and approved, apply one (1) acrylic color emulsion coating to the properly prepared surfaces with a uniform spread at the rate of one (1) gallon per each two hundred (200) square feet of surface area. The color emulsion coating shall be California Products Company's "Plexichrome" or an approved equal emulsion product. Colors shall match those of the Plexipave filler coats. The Plexichrome shall be applied lengthwise of the court with a wide type pushbroom.
- f. The entire system of two (2) filler and one (1) finish coat shall be applied with approved squeegees and hair-type pushbrooms, respectively. The material shall be thoroughly mixed by mechanical agitation and all work shall be done in a thorough and workmanlike manner. The emulsion shall be thoroughly stirred in its container as received, by stationery bucket power mixer, so that a creamy, smooth consistency of all the emulsion in the container is assured for ready application. The entire work of color coat surfacing shall be done in accordance with the recommendations of the manufacturer's representative. Special care shall be taken so as to allow none of the material to spatter or flow beyond the perimeter of areas to be covered. The filler coats and finish coat shall not be applied in foggy or rainy weather, or when ambient temperature is below forty-five degrees F (45°F), nor shall they be applied if such conditions are anticipated during the next forty-eight (48) hours.
- g. The finished surface shall be smooth and uniform, true to required grade and cross section, and free of depressions, ridges, or other irregularities.

PART IV - GUARANTEE/WARRANTY

- 4.01 The pavement and coatings shall be guaranteed against defects in workmanship or quality for a period of one (1) year after final acceptance. The Contractor shall replace, repair, recoat or otherwise make satisfactory to the Owner any unacceptable pavement and or coating at no additional cost to the Owner.

- - - END OF SECTION - - -

**Special Provision
To Section 556 (NHDOT Standard Specifications) Painting**

Amend Section 556 to read:

**Section 556
Painting and Transparent Staining**

GENERAL

1.01 RELATED DOCUMENTS

- A. All of the Contract Documents, including the General and Supplementary Conditions and Division 0 – Bidding Documents, Contract Forms, and Conditions of the Contract and Division 1 – General Requirements, apply to the work of this Section.
- B. Carefully examine all the Contract Documents for requirements which affect the work of this Section. The exact scope of this Section cannot be determined without a thorough review of all specification sections and other Contract Documents.

1.02 RELATED WORK

- A. Section 740 – Play Equipment

1.03 QUALITY ASSURANCE

- A. Codes and Standards: Comply with the standards of the following associations except as otherwise required:
 - 1. SSPC (Steel Structures Painting Council):
 - a. SSPC-PA2: Paint Thickness Measurement.
 - b. SSPC-PAL: Paint Application Specification No. 1.
 - c. SSPC-SP1: Solvent Cleaning.
 - d. SSPC-SP2: Hand Tool Cleaning.
 - e. SSPC-SP3: Power Tool Cleaning.
 - f. SSPC-SP6: Commercial Blast Cleaning.
 - g. SSPC-SP7: Brush Off Blast Cleaning.
- B. Single Source Responsibility: Provide primers and other undercoat paint produced by same manufacturer as finish coats. Use only thinners approved by paint manufacturer, within recommended limits and in accordance with manufacturer's directions.

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- C. Include on label of containers: manufacturer's name, type of paint, manufacturer's stock number, color, batch number, instruction for reducing where applicable, label analysis.
- D. Coordination of Work: Review other Sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information or characteristics of finish materials provided for use, to ensure compatible prime coats are used.
- E. Field Quality Control: Request review of first finished item of each color scheme required by Landscape Architect for color, texture and workmanship.
- F. All colors and paint finishes shall be as selected by ME O'Brien, distributors of Landscape Structures play equipment. Perform no painting until such color samples have been approved. Primer color coat shall be sufficiently different than final coat color. Obtain approval prior to purchase and delivery.

1.05 SUBMITTALS

- A. Complete list of the coating materials proposed for use, both factory and job mixed, to Landscape Architect before commencing any work. Provide manufacturer's name, product name and product line number for each material. Provide manufacturer's technical data sheet for each coating giving descriptive data, curing time, mixing, thinning, and application instructions, and shelf life.
- B. Samples of manufacturer's latest color chips for selection by Landscape Architect. Up to 2 different colors for each material may be selected for use on the project.
- C. Prepare color samples (chip) for each color and finish required. Apply finishes on identical type materials to which they will be applied on the job.
 - 1. Identify each sample as to finish, formula, color name and number, and sheen names and gloss units.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original containers with seals unbroken and labels legible and intact including instructions for mixing and /or reducing.
- B. Storage of Materials: Store only acceptable project materials on project materials on project site, in a suitable protected and ventilated location within temperature range recommended by manufacturer. Comply with health and fire regulations.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Comply with manufacturer's recommendations as to environmental conditions under which coatings and coating system can be applied. Do not apply exterior paint when the temperature weather until the surface is thoroughly dry. Do not apply urethane finishes when the temperature is below 60 degrees F.
- B. Apply coatings only when work areas are reasonably free of airborne dust at time of application and when coating drying.
- C. Protection: Cover or otherwise protect finished work of other trades and surfaces not being painted concurrently or not to be painted.
- D. Apply protective coating to dry surfaces during clear weather.

1.08 PROJECT CONDITIONS

- A. All applicators shall wear protective clothing for use with mineral spirit based materials. Avoid prolonged breathing of vapors.
- B. Limit overspray on other nearby surfaces. Prevent overspray from coming into contact with persons, motor vehicles, trees, surrounding buildings and other objects not intended for treatment.

1.09 MAINTENANCE MATERIALS

- A. Provide Owner with not less than one (1) one-gallon container of each color and material used in clean, unopened, tightly sealed and clearly labeled containers.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Paint for Play Equipment touch-up: The following products of the Sherwin Williams Company, Tnemec Company, Inc., Amercoat, Carboline, or approved substitute. Finish coat must be compatible with prime coats.
 - 1. Prime Coat material for New Cast Iron and Steel: Sherwin Williams, Primer B67R% + B67V5 (Hardener), Tnemec-Zinc, Series 90-97, Amercoat, Carboline, or approved equal conforming to the following requirements:
 - a. Type: One package organic epoxy zinc rich primer.
 - b. Metallic zinc content by weight in dry applied film: 83% minimum.

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- c. Dry time: 60 minutes @ 75 degrees F.
 - d. Recoat time: 4 hours @ 75 degrees F.
 - e. Minimum Temperature: Surface temperature of 40 degrees F. and 5 degrees F. above dew point.
2. Finish Coat material: Sherwin Williams Polane HS Plus Polyurethane Enamel, Tnemec Series 73 Endura-Shield Amercoat, Carboline, or approved equal conforming to the following requirements:
 - a. Type: 100% acrylic.
 - b. Gloss: Semi-gloss.
 - c. Dry time: 30 minutes @ 75°F.
 - d. Recoat Time: 2 hours @ 75°F.
 - e. Minimum Temperature: Surface temperature of 50° F. and 5° F. above dew point.
 3. Application: Brush or spray application. Brush application only for touch up areas for finish coat.
 4. Colors to provided by ME O'Brien, Inc..
- B. Stain for wooden guardrail: The following products of Sherwin Williams, Benjamin Moore, Behr, or approved substitute.
1. Material for new and existing wood guardrail: Sherwin Williams, Deckscapes Series, or approved equal conforming to the following requirements:
 - a. Type: Oil-based, semi-transparent
 - b. Color: to be selected by Owner's Representative from color chips.

2.02 MIXING AND THINNING

- A. Do not use any material older than manufacturer's recommended shelf life. Mix and thin material according to manufacturer's latest printed instructions. Do not use mixed material beyond manufacturer's recommended pot life.
- B. Deliver paints and enamels ready mixed to project site. Accomplish job mixing and job tinting only when acceptable to Landscape Architect. Mix only in mixing pails placed in suitably sized on-ferrous or oxide resistant metal pans. Use tinting colors recommended by manufacturer for the specific type of finish.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine surfaces to be coated for defects that cannot be corrected by the procedures specified herein and report any conditions that would adversely affect the appearance or performance of the coating systems. Do not proceed with surface preparation or material application until conditions are suitable. Commencing installation implies acceptance of surfaces and job conditions.

3.02 PROTECTION

- A. Exercise great care not to deface adjacent work. Cover or otherwise protect surfaces not being painted concurrently or not to be painted and the finished work of other trades. Remove removable device plates, escutcheons and similar items before painting and replace these items after paint has dried. Apply masking tape over UL labels before painting the item on which they occur. Remove protective covering, masking tape, etc., when painting of surfaces or items is completed.

3.03 SURFACE PREPARATION

- A. Clean surfaces free of all dust, dirt, oil, rust, wax efflorescence and any other surface contaminants that may adversely affect adhesion, penetration or appearance. Prepare specific surfaces as follows:
 1. Shop Primed Metal: Hand or Power Tool Clean field connections, welds, burned and abraded areas to remove rust and contaminants and touch up with specified primer before further rusting occurs in accordance with SSPC-SP2 and SSPC-SP3.
 2. Wood: Hand or Power Tool sand all painted surfaces to remove loose and flaking paint. Fill large surface imperfections with exterior-grade wood epoxy filler, allow to fully cure and sand flat.

3.04 MOISTURE CONTENT

- A. Do not apply coating until moisture content of surface is within limitations recommended by paint manufacturer. Test with a moisture meter.

3.05 APPLICATION FOR METALS

- A. Perform all work in a workmanlike manner by skilled mechanics. Apply at rates recommended by manufacturer. Do not exceed application rate recommended for the surface involved. Use materials without adulteration and only with thinning agents recommended by manufacturer in printed instructions.

- B. Apply materials at specified film thickness by method recommended by manufacturer. Apply materials with suitable brushes, rollers or spray equipment. Keep equipment clean, free from contaminants and suitable for the finish required.
- C. Successive coats of paint shall differ sufficiently in shade so as to be readily distinguishable.
- D. Comply with the recommendation of the material manufacturer for drying time between succeeding coats. Unless otherwise specified, allow at least 72 hours between coats.
- E. Apply samples of paint colors to surfaces on the job in sizes and locations as directed by Landscape Architect. Change samples until desired colors are obtained. Do not paint out or destroy samples without expressed permission of Landscape Architect.
- F. Sand and dust each coat to remove defects visible from a distance of 5 feet.
- G. Cut all materials in neatly to spread evenly, flow on smoothly, free from brush marks, hair, streaks, laps, pile-up of paint, runs, sags, holidays, air bubbles and excessive roller stipple. Make edges of paint adjoining other materials or colors clean and sharp with no overlapping. Apply additional finish coats to entire surface if undercoats show through and correct any defect. Make finish coats smooth and uniform in color.
- H. Measure dry film thickness using magnetic film thickness gauge in accordance with SSPC-PA2.

3.05 APPLICATION FOR WOOD SURFACES

- A. Perform all work in a workmanlike manner by skilled mechanics. Apply at rates recommended by manufacturer. Do not exceed application rate recommended for the surface involved. Use materials without adulteration and only with thinning agents recommended by manufacturer in printed instructions.
- B. Prime wood surfaces with an oil-based primer suitable for blocking staining like Kilz Brand or approved equal.
- C. Contractor shall apply a minimum of two oil-based finish coats, or more as required to provide complete coverage so that no primer is visible. Color and gloss levels to be approved by Owner's Representative prior to the purchase of any materials. Color to be Hunter Green in Satin Finish.

3.06 CLEANING

- A. Remove all equipment, materials and debris caused by work of this Section and leave the site of the work in a clean condition insofar as this work is concerned.
- B. Rectify any damage to adjacent work caused by painting operations. Touch up and restore finishes where damaged. Remove spilled, splashed or spattered paint from all surfaces. Repaint entire item where portion of finish has been damaged or is unacceptable.

3.07 COMPLETION

- A. Protect all painted surfaces against damage until the date of substantial completion. All finished work under this Section shall have perfect surfaces when completed work is ready for inspection for substantial completion. Repair or retouch all areas that do not comply with the requirements of this Section for any reason whatsoever to the satisfaction of Landscape Architect at no additional cost to Owner.

- - - END OF SECTION - - -

Special Provision

To Section 645 (NHDOT Standard Specifications)

Amend Section 645 to read:

Section 645.11 Wood Mulch Safety Surfacing

1.01 SCOPE OF WORK

- a. The Contractor shall furnish all labor, materials, equipment and transportation required for the placement and compaction of wood mulch safety surfacing at children's play lots. The surfacing shall be placed at all locations identified on the Contract Drawings to the indicated grades.
- b. Work shall include the installation of both wood mulch safety surfacing as described herein and as indicated on the construction details.

1.02 SUBMITTALS

- a. In accordance with Section 01300 of these Specifications submit manufacturer's specification and detail sheets for all materials to be utilized under this section.
- b. Provide samples as directed by the Engineer.

PART II - MATERIALS

2.01 WOOD MULCH SAFETY SURFACE

- a. The wood mulch safety surfacing shall be "Woodcarpet" as manufactured by Zeager Brothers, Inc., or approved equal. The material used to manufacture the wood mulch safety surfacing shall consist of No. American Hardwoods such as Oak, Maple, Ash, Poplar, Hickory, Beech, Birch, Locust.

All woods shall be debarked and free of soil, leaves and twig material and other contaminants which hasten decomposition. No chemical treatment or additives are permitted. Wood mulch shall be randomly sized, approximately ten (10)

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times longer than wide, and shall meet the gradation requirements of ASTM C 136:

<u>Sieve Size</u>	<u>Percent Passing Passing by Weight</u>
3/4 in.	100
3/8 in.	75
No. 4	45
No. 10	15
No. 60	1
No. 200	1

Ninety-eight percent (98%) of wood mulch dimensions shall not exceed 4.00 centimeters in length, 1.30 centimeters in width and 3.25 centimeters in depth.

PERMEABILITY: Coefficient of permeability shall be greater than 0.6 cm/sec ASTM D 2434.

Moisture absorption of wood mulch safety surface shall be no greater than one hundred fifty percent (150%) by weight.

2.02 FILTER CLOTH/FABRIC

- a. A drainage type filter cloth shall be used in conjunction with the wood mulch safety surfacing and shall conform to the requirements specified below.

PROPERTY	TEST PROCEDURE	DRAINAGE TYPE
Weight, oz./sq. yd.	ASTM D-1910	4.1
Thickness, mils	ASTM D-1777	40
Tensile Strength, lbs.	ASTM D-1682	115
Elongation, %	ASTM D-1682	6 5
Puncture Strength, lbs.	ASTM D-751 Modified	75
Mullen Burst Strength, psi	ASTM D-751	260
Coefficient of Permeability, m/sec.	Constant Head	0.10

PART III - EXECUTION

3.01 PROCEDURES

- a. The Contractor shall deliver, spread and compact or place safety surfaces to conform to the lines and grades shown on the Contract Drawings. All work shall be done in accordance with the manufacturer's installation recommendations for wood mulch or Poured-in-Place Play Surfaces.
- b. Compaction of wood mulch shall continue until the surface is true to the proposed lines and grades indicated on the Plans and the material consists of a minimum compacted depth of twelve (12) inches.
- c. Bevel all pathway edges and feature (slides etc.) exit landing areas (Base Bid Only) in accordance with manufacturer's recommendations.
- d. Any tests of materials, and/or compaction shall be as ordered by the Engineer, and paid for by the Contractor regardless of results.
- e. WARRANTY: Safety surfacing shall be free of defects due to workmanship or material for a minimum of two (2) years from date of installation.

END OF SECTION

SPECIAL PROVISION
To Section 651 (NHDOT Standard Specifications) LANDSCAPING

Amend Section 651 to read:

651 – ALTERNATES # 1 & 2
LANDSCAPING AND PLANTINGS

GENERAL

1.01 SCOPE OF WORK

- a. The work to be done under this section shall require the Contractor to provide all labor, material, equipment and transportation necessary for the furnishing and planting of new trees, shrubs and groundcovers for both interior and exterior, free-standing and built-in, planters as shown on the Contract Drawings and as specified herein.

1.02 APPLICABLE SPECIFICATIONS AND STANDARDS

- a. STANDARDIZED PLANT NAMES, 1942 Edition, American Joint Committee on Horticultural Nomenclature.
- b. AMERICAN STANDARD FOR NURSERY STOCK, Z 60.1, latest edition, American Association of Nurserymen.
- c. New Hampshire Standard Specifications - Latest edition of the Standard Specifications for Highways, Bridges and Waterways, The State of New Hampshire, Department of Transportation.
- d. Standards of the Association of Official Agriculture Chemists regarding soil analysis.
- e. United States Department of Agriculture – ‘Soil Classification System’.

1.03 SUBMITTALS

- a. Inspection certificates for plant materials, as required by governmental agencies, shall be submitted to the Engineer.

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- b. Samples and manufacturer's product data, as applicable, shall be submitted for the following materials:
1. Prepared planting mix.
 2. Commercial Fertilizer.
 3. Agricultural Limestone.
 4. Sphagnum Peat Moss.
 5. Humus.
 6. Organic Compost.
 7. Mulch.
 8. Zinc Planters.
 9. Stakes.
 10. Flexible Nylon Braided Webbing.

1.04 SOILS TESTING

a. Loam Borrow

1. Representative samples of loam borrow shall be sent to a testing laboratory for analysis. Test results with recommended treatments shall be submitted to the Engineer. Deficiencies in the loam and stockpiled topsoil shall be corrected by the Contractor as directed by the testing agency and shall include the use of soil additives listed below. The Contractor shall bear any and all costs for this analysis.
2. Mechanical and chemical (pH soluble salts) analysis shall be by a public extension service agency or a private certified testing lab in accordance with the current 'Standards' of the Association of Official Agriculture Chemists.
3. Soils test report shall be submitted at least one (1) month before any loaming is to be done. Soils tests shall include Nitrate Nitrogen, Ammonium Nitrogen, Phosphorous, Potassium, Calcium, Aluminum, Magnesium, Manganese, Ferric Iron, Sulfate, Soluble Salts (1:2 soil-water

ratio) and pH (1:1 soil water ratio), percent organic matter content, and mechanical gradation (sieve analysis) which shall be compared to the USDA Soil Classification System.

1.05 PERSONNEL QUALIFICATIONS

- a. The planting shall be done by contractors regularly engaged in landscape construction work, specifically planting installation, and by skilled workers, trained and experienced in accepted horticultural/nursery practices. The work shall be done under the supervision of a qualified planting foreman. Plant installer shall have a minimum of three (3) years of experience in the landscape contracting profession and be able to provide references to the Owner of past related project work.

1.06 PLANTING SEASON

- a. Deciduous plants shall be planted only when dormant, either prior to bud break, before leaves appear in the spring, or subsequent to their loss in the fall, unless otherwise directed by the Owner's Representative.
- b. Plants may be planted either in the spring until new growth appears or at any time between September 15 and November 30.
- c. If the construction completion date prohibits in-season planting, the Contractor shall complete his work within the project date and prepare himself for out-of-season planting, including application of anti-transpirant and extra water. Plant guarantee periods remain as stated below. Frozen ground planting shall not be permitted.

1.07 TRANSPORTATION, DELIVERY, STORAGE AND HANDLING

- a. Each plant shall be handled and packed in the approved manner for that species or variety and all necessary precautions shall be taken to insure that the plants arrive on-site in proper condition for successful growth. Trucks used for transporting plants shall be equipped with covers to protect plants from windburn during transport.
- b. No plants shall be transported to the planting site that are not thoroughly wet through the ball of earth surrounding the roots. Any plants that are dry or in a wilted condition when delivered to the site will not be accepted and shall be replaced by the Contractor at his expense.
- c. Plants shall be delivered only after preparations for planting have been completed. They shall be planted immediately upon arrival to the site. If planting is delayed

more than six (6) hours after delivery, plants shall be heeled in, protected from sun, wind, weather and mechanical damage, and kept watered.

- d. Packaged materials shall be delivered to the site in original unopened packaging showing weight, analysis and the name of the manufacturer.

PART II – MATERIALS

2.01 LOAM BORROW

- a. Loam shall be of a uniform composition throughout without admixture of subsoil, and shall be clean and reasonably free from clay, lumps, stones, roots two (2) inches or more in diameter, or other similar substances. Loam shall not contain toxic substances harmful to plant growth. It shall be free of weeds, weed seeds and debris, or other objects that might hinder planting operations.
- b. Loam shall have a pH value range between 5.0 and 7.0. If the soil does not fall within the pH range specified, it may be amended to bring it within the specified limit.
- c. Loam shall not contain less than four percent (4%) nor more than twenty percent (20%) organic matter, as determined by the loss ignition of samples oven-dried at a constant weight at a temperature of 230°F, ± 9°F.
- d. Loam shall not be worked, excavated or delivered while in a frozen or muddy state.

2.02 PREPARED PLANTING MIX

- a. The prepared planting soil mix for all plant bed areas shall consist of the following materials and quantities:
 - 1. Seven (7) parts loam borrow.
 - 2. One (1) part organic compost, humus, or peat borrow as specified in the NH Standard Spec
 - 3. To this mixture add fertilizer and/or soil amendments in accordance with the recommendations of the soils testing laboratory.

2.03 SOIL AMENDMENTS

- a. The Contractor shall be encouraged to use materials that are naturally occurring, derived from renewable resources, and non-toxic. Alternative materials and products shall be permitted provided that the specifications and application

information are submitted to the Engineer for approval prior to use.

b. Limestone

1. Limestone shall be an approved agricultural limestone containing no less than fifty percent (50%) total carbonates and twenty-five percent (25%) total magnesium, with a neutralizing value of at least one-hundred percent (100%). The material shall be ground to such fineness that forty percent (40%) will pass through a No. 100 U.S. Standard Sieve and ninety-eight percent (98%) will pass through a No. 20 U.S. Standard Sieve. The lime shall be uniform in composition, dry, and free flowing, and shall be delivered to the site in the original, unopened containers, each bearing the manufacturer's guaranteed analysis. Any lime that becomes caked or otherwise damaged, making it unsuitable for use, will be rejected.

c. Fertilizer

1. Commercial Fertilizer shall be a complete, standard product complying with State and Federal Fertilizer Laws. The fertilizer shall be uniform in composition, dry and free flowing, and shall be delivered to the site in the original, unopened containers, each bearing the manufacturer's guaranteed analysis. Fertilizer shall contain the following minimum percentage of available plant nutrients by weight in which fifty percent (50%) minimum of the nitrogenous elements shall be derived from organic sources or Urea-form. The following fertilizer analysis shall be used for all tree and shrub plantings.

Nitrogen	Phosphorous	Potash
10%	10%	10%

2. As an option for tree plantings, a slow-release, root contact fertilizer packet, "Easy Grow" (16-8-16), or approved equal product complying with State and Federal Fertilizer Laws, may be used in place of the above, at the discretion of the Engineer.

d. Organic Compost

1. Compost shall be a standard commercial product comprised of fully decomposed, one hundred percent (100%) plant derived, natural organic matter. Its composition shall furnish ample water holding capacity and cation exchange capacity for the retention of plant nutrients. Compost shall be free of sticks, stones, weed seeds, roots, mineral or other foreign matter and delivered air dry. It shall be free from excessive soluble salts,

heavy metals, phytotoxic compounds, and/or substances harmful to plant growth and viability. Organic compost shall have an acidity range of 4.5 to 7.0 pH, as determined in accordance with the testing methods of the AOAC, latest edition.

e. Sphagnum Peat Moss

1. Sphagnum peat moss shall be a standard, commercial product. Its composition shall furnish ample water holding capacity and cation exchange capacity for the retention of plant nutrients. Peat moss shall be free of sticks, stones, weeds or weed seeds, roots, mineral or other foreign matter. It shall be free from toxic substances and/or compounds harmful to plant growth and viability. It shall be delivered air dry in standard bales and shall have an acidity range of 3.5 to 5.5 pH, as determined in accordance with the testing methods of the AOAC, latest edition.

f. Humus

1. Humus shall be natural humus, reed peat, or sedge peat. Its composition shall furnish ample water holding capacity and cation exchange capacity for the retention of plant nutrients. Humus shall be free of sticks, stones, weeds, roots, mineral or other foreign matter and/or toxic substances harmful to plant growth and viability. It shall be low in wood content, free from hard lumps and excessive amounts of zinc and delivered air dry in a shredded or granular form. According to the testing methods of the AOAC, latest edition, the acidity range shall be 5.5 to 7.5 pH, and the organic matter content shall be not less than eighty-five percent (85%), as determined by loss on ignition. The minimum water holding capacity shall be two hundred percent (200%) by weight on an oven-dry basis.

2.04 WATER

- a. Water shall be is available at the site for use, but costs associated with use of the water shall be born solely by the contractor. Hose and other equipment required for application of water shall be furnished by the Contractor.

2.05 MULCH

- a. Shredded softwood bark mulch shall be fibrous pliable slices, not exceeding one half (½) inch in width. It shall be ninety-eight percent (98%) organic matter with a pH range of 3.5 to 4.5 and a moisture content not to exceed thirty-five percent (35%). It shall be free of weeds, weed seeds, debris, phytotoxic compounds and materials harmful to plant growth and viability. Organic mulch shall be aged not

longer than two (2) years.

- b. Contractor to supply sample to Owner's Representative for approval. Dark, undyed, mulch color is preferred.

2.06 PLANT MATERIALS

a. Selection of Nursery Stock

1. At least twenty (20) days prior to the expected planting date, the Contractor shall request in writing, that the Engineer provide a representative to select and tag stock to be planted under this Section. This request shall be made ten (10) days prior to the date on which stock selections are to be made. The Contractor shall arrange for and bear the cost of transportation, meals in transit, and overnight accommodations, if necessary, for the Engineer's representative during the period of time required to select and tag the required number of sized stock.
 2. The letter of request shall also have attached a letter of certification from the supplier attesting to the availability of the required plants in specified sizes prior to requesting the Engineer to make plant source inspections.
 3. Plants shall be selected by the Engineer's representative at the place of growth for conformity to specification requirements as to quality, size and variety. Such approval shall not impair the right of inspection and rejection upon delivery at the site or during the progress of work. Any material so rejected shall be removed from the site immediately. Costs of replacements will be borne by the Contractor.
 4. All plants shall be legibly tagged with their proper latin name (i.e., genus, species and cultivar) and size. The Contractor shall supply the necessary tags or seals which shall be durable and capable of accepting weather-resistant ink or an embossed process. The tags or seals shall be attached directly and securely to each selected plant.
- b. The Contractor shall furnish and plant all plants shown on the drawings, as specified, and in quantities and sizes as designated on the PLANT LIST. No substitutions will be permitted without approval.
 - c. All plants shall be grown in nurseries that have been inspected by the appropriate State agency and have complied with the regulations thereof. All plants shall comply with Federal and State Laws requiring inspection for plant diseases and pest infestations. Inspection certification, as required by law, shall accompany

each shipment of plants, and certificates shall be submitted to the Engineer. The Contractor shall obtain clearance from the applicable Governing Agency, as required by law, before planting any plants delivered from outside the state in which they are to be planted. Evidence that such clearance has been obtained shall be submitted to the Engineer.

- d. All plants shall conform to the American Standard for Nursery Stock of the American Association of Nurserymen, publication Z60.1. All trees and shrubs shall be typical of their species or variety and shall have a normal habit of growth.
- e. The root system of each plant shall be well provided with fibrous roots. All parts shall be sound, healthy, and vigorous, well branched and densely foliated when in leaf. They shall be free of disease, insect pests, eggs or larvae.
- f. The Contractor shall take note that only plant stock grown specifically for hardiness in Zone 4 of the Hardiness Zones established by the Arnold Arboretum, Jamaica Plain, Massachusetts, will be accepted. The Contractor's suppliers must certify in writing that the stock has actually been grown under Zone 4 conditions and is hardy, or that the stock was asexually propagated from and grafted onto stock from a strain proven hardy to Zone 4 conditions. Trees and shrubs not so certified may not be accepted.
- g. Balled and Burlapped Plants
 - 1. All plants designated balled and burlapped or 'B & B' must be moved with the root systems as solid units with balls of earth firmly wrapped with biodegradable burlap and bound carefully with twine or cord. The diameter and depth of the balls of earth must be sufficient to encompass the fibrous root feeding system necessary for the healthy development of the plant. No plant shall be accepted when the ball of earth surrounding its roots has been badly cracked or broken preparatory to or during the process of planting, or after the burlap, staves, ropes or platform required in connection with its transplanting have been removed. The plants and root balls shall remain intact as a unit during all planting operations. All plants shall be freshly dug. No plants from cold storage or previously heeled-in will be accepted.
 - 2. Soil characteristics (i.e., composition, texture, pH, etc.) of all field-grown balled and burlapped plants shall closely match that of the soil where plant materials are to be planted.
 - 3. All balled and burlapped plants that cannot be planted at once must be heeled in, protected and watered

h. Container Grown Plants

1. All container grown plants shall be well established in the container in which they are sold and shall have been have acclimatized for at least one (1) growing season. Plants shall have a fibrous, healthy root system with sufficient roots to hold earth intact after removal from the container. Plants shall have no girdling roots and shall not be in a root bound condition. Plants shall remain in their container until planted.
2. Container plants shall not be broken up prior to installation unless approved by Landscape Architect, container plants must match planting schedule on Sheet PL-1 and installed one to one.

2.07 STAKING MATERIALS

- a. Stakes for trees shall be wooden, as shown in the contract drawing details.
- b. Flexible braided nylon webbing shall be 'Arbortie', or approved equal. Nylon webbing shall be three-quarters ($\frac{3}{4}$) inch wide and have a tensile strength of nine hundred (900) pounds.

2.08 ANTITRANSPIRANTS

- a. Antitranspirant shall be 'Wilt-Pruf', manufactured by Nursery Specialty Products, Inc., Groton Falls, New York, or approved equal. It shall be delivered in the manufacturer's containers and used in accordance with the manufacturer's instructions.

2.09 PESTICIDES

- a. No pesticide shall be used on-site without the knowledge and prior approval of the Engineer. Pesticides shall be E.P.A. registered and approved for use in public open spaces. All pesticides shall be handled by State licensed operators only, delivered in the manufacturer's containers, and used in accordance with the manufacturer's instructions.

2.11 HERBICIDES

- a. Herbicide shall be glyphosate contact, 'Roundup', manufactured by Monsanto, Inc., or approved equal. It shall be delivered in the manufacturer's containers, and used in accordance with the manufacturer's instructions.

PART III – EXECUTION

3.01 PLANT LOCATIONS

- a. All plant locations and outlines for planting beds shall be staked out on the ground and approved by the Engineer before any excavation is begun. If it is necessary to adjust any of the locations, because of unforeseen problems, the changes shall be under the direction of the Engineer and there shall be no extra charges for these adjustments.

3.02 PLANTING HOLE EXCAVATIONS

- a. Planting holes for shrubs shall be at least one (1) foot greater in diameter than the root ball. Planting holes shall not be deeper than the height of the root ball. The walls of the hole shall be sloped, wider at the top than at the bottom, and shall be scarified to eliminate glazing.

3.03 PLANTING TREES, SHRUBS AND GROWDCOVERS

- a. All ties, tags, rope, twine and/or other materials that would potentially girdle plant stems, trunks or branches shall be removed prior to planting.
- b. Plants shall be moved being lifted by their root ball masses and shall be set to the lines and grades as shown in the contract drawings. All trees and shrubs shall be faced properly, plumbed straight and planted at the center of the planting pits, at the same level as they had been previously grown. Owner's Representative shall inspect final resting height and exposed trunk flare of all trees and shrubs prior to backfilling planting pits. Contractor shall make any necessary adjustments to meet approval of Owner's Representative.
- c. Balled and Burlapped Trees and Shrubs
 1. Root ball masses of balled and burlapped (B&B) plants shall not be disturbed, loosened, broken or otherwise damaged during planting operations. All tying materials, twine and ropes shall be cut off and removed. Biodegradable burlap shall be laid back and/or cut away from the top half of the ball. No burlap shall be pulled out from under the ball. Any and all non-biodegradable materials, synthetic and/or treated burlap, shall be entirely removed prior to planting. If a wire basket is present, the upper two-thirds (2/3) of the metal basket shall be cut away and removed. Do not remove the entire basket.

d. Container Grown Plants

1. Container plants shall be removed from the grow container before planting. If roots are densely matted, the outer root mass shall be scored, sliced vertically with a sharp knife to separate roots.

e. Groundcover Planting

1. All groundcover plants shall be evenly spaced to produce a uniform effect, and staggered in rows at intervals detailed in the contract drawings. Groundcover plants shall not be installed individually, but per container or as instructed by Landscape Architect. Landscape Architect shall inspect all groundcover layout prior to planting.

- f. Planting pits shall be backfilled with the existing, unamended soil removed from the hole, or prepared soil mix, as specified in the contract drawings, in layers not to exceed eight (8) inches. Each layer is to be tamped firmly and watered to sufficiently settle the backfilled soil. When the pit is approximately two-thirds (2/3) backfilled, water deeply and thoroughly, allowing it to drain through undisturbed. Continue backfilling and tamping in eight (8) inch layers until soil is at the level at which the plant was formerly grown. Water thoroughly and adjust soil level.

- g. At the time of planting, during backfill, install fertilizer at a depth of six (6) to eight (8) inches, equally spaced around the plant. Packets and/or granular applications shall be placed approximately three (3) inches away from the plant roots or root ball. Packets shall not be cut, ripped or otherwise damaged. If it becomes necessary to remove and replace dead or unhealthy plants, any damaged or broken packets shall be replaced.

1. The Contractor shall follow the manufacturer's recommendation for fertilizer packets or granular applications to trees and shrubs.

- h. The planting mixture shall be spread around the plant to form a temporary saucer, a minimum of three (3) inches deep and equal to the diameter of the planting hole. On slopes, a ridge of soil shall be formed on the downhill side to catch and hold water. Saucers shall not be formed around individual plants in planting beds.

- i. After all planting and watering, soil in planting beds shall be cultivated and raked smooth to eliminate compaction between the planting pits.

- j. All plants shall be flooded with water twice within the first twenty-four (24) hours from the time of planting.

- k. Immediately after planting operations are complete, all tree saucers and plant beds shall be covered with an approved mulch to a depth of no less than three (3) inches. Mulch shall not contact tree trunk bark, nor cover the root flare. No mulch shall be applied prior to the first watering.
- l. All thin barked, deciduous, non-evergreen trees shall be wrapped immediately after they are planted and before they are staked. Tree trunks shall wrapped spirally from the bottom to the top with the specified wrapping material and secured. The wrapping shall overlap and completely cover the trunk from the ground to the height of the first branch and shall be neat and snug. Overlap shall be approximately two (2) inches. Wrapping shall be tied securely in place with jute twine.
- m. All trees shall be staked or guyed, in accordance with standard practice. Care shall be taken to ensure that the stakes do not pierce the root ball mass and that stakes and guying will not create pedestrian or vehicular hazards. Tree trunks shall be secured at one-third (1/3) the height of the tree with wire with hose and adjustable buckle, fastened to staking apparatus, and shall be approved by owner's representative. The Contractor shall remove all staking apparatus, stakes, and guys after one (1) growing season.
- n. Immediately after planting and staking, spray all plant material with an approved antitranspirant, applied in strict accordance with the manufacturer's recommendations.

3.04 PRUNING NEW PLANTS

- a. Trees and shrubs shall be pruned in accordance with American Association of Nurserymen Standards to preserve the natural character of the plant.
- b. Trees shall be pruned only after the plant has been completely planted. All large pruning cuts, one-half (1/2) inch diameter and larger, shall be made along the bark branch ridge. Pruning cuts shall not be made to breach or otherwise interfere with the branch collar. All pruning cuts less than one-quarter (1/4) inch diameter shall be made with a sharp pair of hand pruners as close to the main stem as possible without damaging the cambium or bud.
- c. All dead or dying limbs and tips, sucker growth, water sprouts, crossing or rubbing branches, broken or damaged branches, and/or diseased or insect infested limbs shall be removed. Questionable weak limb and branch removal that may disfigure the tree should be left for final approval by the Engineer.

- d. Never cut the tree leader.
- e. Any and all pruning shall be done with clean, sharp tools.
- f. Tree paint shall not be used to cover pruning cuts.

3.07 MAINTENANCE

- a. Maintenance shall begin immediately after each plant is planted and shall continue until final acceptance of the project.
- b. Maintenance shall consist of keeping plants in a healthy viable growing condition. Plants shall be watered, mulched, weeded, pruned, sprayed, fertilized, cultivated, and otherwise maintained and protected. Settled plants shall be reset to proper grade and position, planting saucer restored and dead material removed. Stakes and guys shall be tightened and repaired. Defective work shall be corrected as soon as possible after it becomes apparent and weather and season permit.
- c. Planting beds and individual plant pits shall be kept free of weeds. Mulch shall be replaced as required to maintain a three (3) inch depth. Beds and individual pits shall be neat in appearance and maintained to the original laid out lines.
- d. Planting areas that have been compacted for any reason during planting operations and/or the maintenance period, shall be recultivated by the Contractor, at his expense.
- e. Application of pesticides shall be included during the maintenance period, as required, with approved materials, at clearly announced and safe hours, by a State licensed pesticide operator.
- f. Sidewalks and other paved areas shall be kept clean during planting and maintenance operations.
- g. Upon completion of planting, excess soil and debris shall be removed from the site, and all damage resulting from planting operations shall be repaired.
- h. Planting areas and plants shall be protected against trespassing and damage of any kind for the duration of the maintenance period. This shall include the provisions and installation of approved temporary fencing if necessary. If any plants become damaged during the maintenance period, they shall be treated or replaced as directed by the Engineer, at no additional cost to the Owner.

3.08 GUARANTEE

- a. All plant materials shall be guaranteed for a period of one (1) year after the completion of the specified maintenance period and the date of final acceptance of the entire project, in writing from the Landscape Architect. All trees over a 3" caliper at installation shall be guaranteed for a period of 1 year from date of final acceptance. Plants shall exhibit satisfactory growth and have no less than seventy-five percent (75%) of their branches alive at the end of the guarantee period. If the leader of any single-leader species is dead, the entire plant shall be considered dead.

- b. All replacements shall be plants of the same kind and size specified on the PLANT LIST. They shall be furnished and planted as specified above. The cost shall be borne by the Contractor. Replacements resulting from the removal, loss or damage, vandalism or acts of neglect on the part of others, physical damage by animals, vehicles, etc., and losses due to curtailment of water by local authorities, will be approved and paid for by the Owner.

- c. At the end of the guarantee period, inspection will be made again. Any plant required under this Contract that is dead or unsatisfactory shall be removed from the site. These shall be replaced during the normal planting season, until the plants live through one (1) year.

- - - END OF SECTION - - -

Special Provision

To Section 661 and 680 (NHDOT Standard Specifications)

Amend Section 661.16, 661.17 and 680 to read:

661.16, 661.17 and 680 SITE FURNISHINGS

GENERAL

1.01 RELATED DOCUMENTS

- A. The General Documents, as listed in the Table of Contents, and applicable parts of Division 1, General Requirements shall be included in and made a part of this Section.
- B. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.

1.02 SCOPE OF WORK

- A. The work of this Section consist of all site improvements and related items as indicated on the Drawings and/or as specified herein and includes, but is not limited to, the following:
 - 1. Benches
 - 2. Bike Racks
 - 3. Park Signage
 - 4. Basketball Backboards, Hoops and Nets
 - 5. Picnic Tables – Alternate #3

1.03 EXAMINATION OF CONDITIONS

- A. The Contractor shall fully inform himself of existing conditions of the site before submitting his bid, and shall be fully responsible for carrying out all site work required to fully and properly execute the work of the Contract, regardless of the conditions encountered in the actual work. No claim for extra compensation or extension of time will be allowed on account of actual conditions inconsistent with those assumed.
- B. Plans, surveys, measurements and dimensions under which the work is to be performed are believed to be correct to the best of the Landscape Architect's knowledge, but the Contractor shall have examined them

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for himself during the bidding period, as no allowance will be made for any errors or inaccuracies that may be found therein.

1.04 SCHEDULING

- A. The Contractor shall submit to the Landscape Architect, for approval by the Owner, a progress schedule for all work as specified herein.

1.05 QUALITY ASSURANCE

- A. Materials and methods of construction shall comply with the following standards:
 - 1. ASTM: American Society for Testing and Materials
 - 2. ANSI: American National Standards Institute
 - 3. FS: Federal Specifications
 - 4. IMI: International Masonry Institute
 - 5. PCA: Portland Cement Association
- B. Qualifications of Workers: Use adequate numbers of skilled workers who are trained in the necessary crafts and who are completely familiar with the specified requirements and methods needed for the proper performance of the work of this Section.
- C. Layout: After staking out the work, and before beginning final construction, obtain the Landscape Architect's approval for layout. Contractor shall make adjustments as determined by the Landscape Architect. Landscape Architect may make adjustments to layout as is required to meet existing and proposed conditions without additional cost to the contract price.

1.06 SUBMITTALS

- A. Shop Drawings: Submit shop drawings in accordance with Division 1 requirements.
 - 1. Benches
 - 2. Bike Racks
 - 3. Park Signage
 - 4. Basketball Backboards, Hoops and Nets
 - 5. Picnic Tables – Alternate #3
- B. Product Information: Provide manufacturer's data showing installation and limitations in use. Supply Certificates of Compliance for all materials required for fabrication and installation, certifying that each material item complies with, or exceeds, specific requirements. Work includes but is not limited to:
 - 1. Benches

2. Bike Racks
3. Park Signage
4. Basketball Backboards, Hoops and Nets
5. Picnic Tables – Alternate #3

PART 2 - PRODUCTS

2.01 BENCHES

- A. The benches shall be CFPB 018-06 with surface mounting as manufactured by, DuMor, of Mifflintown, PA, 800-598-4018 or approved equal. Benches are to be installed per manufacturer's specifications. Bench to be powder coated, color shall be black. Refer to contract drawings for quantities and locations. All final locations are to be approved in the field by the Landscape Architect.

2.02 BIKE RACKS

- A. The bike racks shall be manufactured by Bike Security Racks Co. 12 Sawyer Loop, Wentworth, NH 03282 To order, call (800) 545-2757 or (617) 876-1180.

Contractor shall order and install one (1) bike rack to meet the following specifications:

1. The racks will be Model BS-4B (AE).

2.03 PARK SIGNAGE

- A. Contractor shall order and install two (2) park name/rules signs. See details in the contract drawings.
- B. Park name signs are to be direct bury, "Upright Double In-Ground Post" (Part # UDG4) with one 24" x 36" and one 12" x 36", ½" exterior grade high-pressure laminate panels as manufactured by Fossil Graphics installed on each of the two signs, 1-800-244-9809, or approved equal.. Mounting hardware to be provided by manufacturer.
- C. Landscape Architect to supply all signage graphics in digital format required by manufacturer to Contractor during construction.
- D. Signs are to be installed in a "v" pattern as shown on the plan. Layout to be approved in field by the landscape architect or owner's representative.

2.04 BASKETBALL STANDARDS AND NETS

- B. Backboard shall XL7036 TrueBounce Backboard 36 x 54 x 1/2 (Clear) be constructed with 1/2" thick clear polycarbonate, contain 1/2" perforated holes, and measure 36" x 54". Backboard shall be framed with "E" channeled aluminum extrusion and attached with stainless steel hardware. Official sized white target and shall be silk screened on the face of the backboard and the trim shall be forest green. Goal mounting holes to be spaced as necessary to match hardware necessary for new backboards to be mounted to existing gooseneck poles.
- C. Rim shall be Model # RB7550 front mount 18" double ring goal (3/4" upper 1/2" lower), 3/16" wing plates and 5/8" x 15" brace, nylon net, powder coated finish.
- D. Backboard shall be attached to existing pole. Manufacturer to supply hardware needed to ensure a tight fit and sound installation to existing gooseneck poles.
- E. Backboard, goal, and net shall be manufactured by True Bounce, Inc. 194 Riverside Avenue, New Bedford MA 02746 • (866) 873-3715, or approved equal.

2.05 PICNIC TABLES – ALTERNATE #3

- A. The picnic tables shall be Item #63-165 with as manufactured by, DuMor of Miffltown, PA, 800-598-4018 or approved equal. Picnic tables are to be assembled per manufacturer's specifications. Picnic tables to be powder coated, color shall be black. Refer to contract drawings for quantities and locations. All final locations are to be approved in the field by the Landscape Architect.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. The installer shall examine previous work, related work, and conditions under which this work is to be performed and notify the Contractor in writing of all deficiencies and conditions detrimental to the proper completion of this work. Beginning work means installer accepts substrates, subgrades, previous work, and conditions.

3.02 SITE FURNISHINGS

- A. Install each site furnishing in accordance with the Drawings and the manufacturer's instructions.
- F. The Contractor shall be responsible for timing the delivery of site furnishings so as to minimize on-site storage time prior to installation. All stored materials must be protected from weather, careless handling and vandalism.

G. Installation Tolerances: Install bicycle racks to comply with the following maximum tolerances:

- a. Location: Plus or minus 1/2 inch.
- b. Height: Plus or minus 1/4 inch.
- c. Alignment of Adjacent Units: Plus or minus 1/2 inch in ten feet; 1 inch over total length.
- d. Plumb: Plus or minus 1/4 inch.
- e. Level: Plus or minus 1/4 inch.

- - - END OF SECTION - - -

Special Provision

To Section 740 (NHDOT Standard Specifications)

Amend Section 740 to read:

Section 740.0

PLAY EQUIPMENT

GENERAL

1.01 SCOPE OF WORK

- a. The Contractor shall furnish all labor, materials, equipment and transportation required to furnish and install the play equipment as located, described and set forth in the contract plans, specifications and details and in accordance with manufacturer's requirements and recommendations, and as specified herein.
- b. Contractor shall also power wash all existing play equipment to remain. Contractor shall prepare samples of power washing results for review and approval by Owner's Representative prior to proceeding with the cleaning of all structures to remain.
- c. Once cleaning is complete, contractor shall furnish and apply touch up paint to the painted metal components of the existing structures to remain. Paint shall be furnished by ME O'Brien and be manufactured by Landscape Structures Inc. Colors shall match existing structures and be approved by Owner's Representative. Any paint remaining after work is completed shall be delivered to Peverly Hill Road Maintenance Yard.

1.02 REFERENCE STANDARDS AND SPECIFICATIONS

- a. Playground equipment design, layout, and installation shall comply with the following standards and guidelines as applicable.
 1. CPSC - Consumer Product Safety Commission Guidelines for Playground Safety, latest edition.
 2. ASTM - American Society for Testing and Materials, Designation: F 1487, Standard Consumer Safety Performance Specification for Playground Equipment for Public Use, latest edition.

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3. ANSI - American National Standards Institute.
 4. AASHTO - American Association of State Highway and Transportation Officials (tests of specifications).
 5. NH Standard Specs. - Latest edition of the Standard Specifications for Highways, Bridges and Waterways, the State of New Hampshire, Department of Public Works, hereinafter referred to as "the New Hampshire Standard Specifications".
- b. Requirements not specifically set forth herein, but required by the agencies listed in above shall be understood to be a requirement of this contract since these standards of quality and safety are established as the industry standard(s). Any conflicts between the agency standards and the contract documents shall be brought to the attention of the Engineer, and unless otherwise directed in writing, the agency standards shall be the minimum requirement to be followed.

1.03 SHOP DRAWINGS

- a. Prior to ordering, furnishing and/or installing the play equipment as required by the Contract Documents, the following shall be submitted to the Project Representative for review and approval:
1. Certified product data, shop and fabrication drawings showing all important details of construction and dimensions showing the equipment, arrangement, footing spacing and lengths. Shop drawings shall stipulate and certify to compliance with all CPSC and ASTM standards and guidelines as applicable.
 2. Descriptive literature and technical specifications for all play equipment installations.
 3. Warranty certificates for all applicable play equipment features, components, hardware, finishes and other applicable items.
 4. In the event that it is impossible to conform to certain details of this specification due to differing manufacturing techniques or conventions, submit complete summary of all non-compliant components or elements.

1.04 SAMPLES

- a. Submit the following samples in accordance with the provisions of the GENERAL CONDITIONS.

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1. Submit samples and descriptive literature of all items specified in this Section, including treatments, finishes, colors, and test information.
2. Touch up Paint samples.
3. Power Washing of various intensities shall be sampled and approved.

1.05 QUALIFICATIONS

- a. Installer shall have a minimum of five (5) years experience with a minimum of fifteen (15) playground installations. References will be required.

PART II - MATERIALS

2.01 PLAY EQUIPMENT

Playground Equipment Summary for Pine Street Playground

Equipment to be Landscape Structures or equal
www.playlsi.com

Catalog location (See links to spec sheets or catalog page number references below)
<http://www.playlsi.com/Virtual-Catalog/Pages/Virtual-Catalog.aspx>

Please Note: EACH PRODUCT HAS MINIMUM SPACING REQUIREMENTS FOR FALL ZONES ETC., A CERTIFIED PLAYGROUND SAFETY INSPECTOR WILL NEED TO CONFIRM FALL ZONES PRIOR TO AND AFTER INSTALLATION.

O'BRIEN & SONS AREA CONSULTANT (WITH QUESTIONS REGARDING EQUIPMENT, FALL ZONES, DELIVERY TIMES ETC.):

JOEL ST. PIERRE
PARK AND PLAYGROUND CONSULTANT
O'BRIEN & SONS
67 CEMETARY ROAD
BUXTON, ME 04903
(207) 642-5713
JOEL_STPIERRE@OBRIENANDSONS.COM

All equipment to be purchased, delivered, and installed. Installation to be certified by CPSI.

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Independent play structure: Tuffrider 2-seat airplane, direct bury #120871A-B
<http://www.playlsi.com/Explore-Products/Product-Lines/Freestanding-Components/Kids-In-Motion/2-SeatAirplane/Pages/2-SeatAirplane.aspx>

Independent play structure: Tuffrider, Motorcycle, direct bury, #100013A-B Coil Spring
<http://www.playlsi.com/Explore-Products/Product-Lines/Freestanding-Components/Kids-In-Motion/Playground-TuffRiders/Pages/TuffRiders.aspx>

Climbing structure: Escalator Climber #160692A, free standing
<http://www.playlsi.com/EXPLORE-PRODUCTS/PRODUCT-LINES/FREESTANDING-COMPONENTS/PLAYGROUND-CLIMBERS/ESCALATOR-CLIMBER/Pages/Escalator-Climber-Playground-Climber.aspx>

New swing set with six swings: Three (3) belt swings, Two (2) infant seats with full bucket #100052A, and one (1) ADA molded plastic seat.
<http://www.playlsi.com/Explore-Products/Product-Lines/Freestanding-Components/Playground-Swings/Pages/Playground-Swings.aspx>

Replacement Panel for existing “spinning tile panel”: LS Model # 115223A Bubble Panel (Light Brown).

Touch-Up Landscape Structures paint: Spray paints to match existing equipment colors can be ordered through Landscape Structures. All color selections to be approved via the submittal process prior to ordering.

2.03 CAST IN PLACE CONCRETE

- a. Concrete for the footings will be cast in place cement concrete as specified in the Specifications. Top of concrete footings shall be twelve (12) inches minimum below finished grade.

PART III - EXECUTION

- 3.01 The Contractor shall assemble the specified equipment under the supervision of an approved Supervisor according to the manufacturer's instructions, the contract drawings and these Specifications.
- 3.02 The Contractor shall locate the structures to the lines and grades specified in the drawings in these Specifications and according to the specifications of the manufacturer of the equipment. Adjust all equipment to suit site gradients; no sloping platforms, tracks, or members intended to be horizontal shall be accepted.

- 3.03 The excavation for the footings shall be done as specified in these Specifications and according to the Contract Drawing details.
- 3.04 The equipment shall be located and brought to the heights as shown in the drawings and as recommended by the manufacturer with vertical and horizontal members set plumb and then braced to be held in place.
- 3.05 The concrete shall be poured around the supporting pieces of the equipment to the grades detailed. Slope tops of footings to drain; set bottom of vertical members into gravel base to ensure drainage; do not encase bottom in concrete.
- 3.06 After the specified cure period of the concrete has passed the bracing may be removed.
- 3.07 The fills and surfaces shall then be placed and brought to the grades shown in the Contract Drawings.
- 3.08 All exiting play equipment to remain is to be power washed and touched-up with paint per the directions of ME O'Brien's local representative. Power washing techniques and pressures are to be approved by ME O'Brien prior to commencing work.

PART IV - GUARANTEE AND ACCEPTANCE/LIABILITY

- 4.01 All operating parts and structural elements of the play equipment and safety surface shall be guaranteed against failure or defect during normal use and operation for the entire warranty period as established by the manufacturer.
- 4.02 Any defective elements shall be replaced in part or whole by the Contractor at no cost to the Owner.
- 4.03 The Contractor and the manufacturer shall hold the Owner and Engineer harmless from any and all damages or liability resulting from negligent acts and omissions on the part of the Contractor or manufacturer, or resulting from defective parts, or improperly assembled equipment. Contractor shall provide secure storage for all equipment on job site.
- 4.04 The Contractor is responsible for securing a Certified Playground Safety Inspector to ensure ASTM and SPSC compliance. A certificate of compliance will be issued to the Owner prior to final inspection.

- - -END OF SECTION - - -

Special Provision

To Section 740 (NHDOT Standard Specifications)

Amend Section 740 to read:

**Section 740.1
ALTERNATES**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. All of the Contract Documents, including the General and Supplementary Conditions and Division 0 – Bidding Documents, Contract Forms, and Conditions of the Contract and Division 1 – General Requirements, apply to the work of this Section.
- B. Carefully examine all the Contract Documents for requirements that affect the work of this Section. The exact scope of this Section cannot be determined without a thorough review of all specification sections and other Contract Documents.

1.02 SUMMARY

- A. The Schedule of Alternates included in this Section lists all the Alternates that appear in the Contract Documents, and the Specification Sections, which are affected by each Alternate.
- B. For each of the alternates scheduled at the end of this Section, state the amount in the proposal to be added to or deducted from the Contract Sum for the work.
- C. Consult the individual Specification Sections for detailed requirements of each Alternate.

1.03 GENERAL INSTRUCTIONS

- A. Each Bidder shall be held fully responsible for examining the scope of the Alternates generally defined herein and for recognizing any modifications to his work caused by any Alternate.

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- B. The Bid Alternate Price shall be complete cost, including overhead, profit, bonds, insurance, transportation, and all other costs connected with, or incidental to the work described.
- C. Alternates listed below in the Schedule of Alternates are listed in no particular order. The Contract will be awarded on the basis of the Base Bid only or the Base Bid plus Alternate 1, Base Bid plus Alternates 1 and 2, or Base Bid plus Alternates 1, 2 and 3 in any order the City deems in it's best interest.

1.04 ALTERNATES

- A. Definition: "Alternates" are alternate products, materials, equipment, systems, methods, units of work or major elements of the construction, which may, at the Authority's option and under the terms established by the Contract or Agreement, be selected for the work in lieu of the corresponding requirements of the Contract Documents.
- B. Alternate Requirements: A Schedule of Alternates is included at the end of this Section. Each alternate is defined using abbreviated language, recognizing that the Contract Documents define the requirements. Coordinate related work to ensure that work affected by each alternate is complete and properly interfaced with work of each selected alternate.
- C. Provide written proposals for each alternate on the Bid Form for Authority's consideration. Each proposal amount shall include the entire cost of the alternate portion of the work including overhead, profit, and other costs including cost of interfacing and coordinating the alternate with related and adjacent work.

1.05 SCHEDULE OF ALTERNATES

- A. Alternate No. 1 – Pine Street Plant Materials
 - 1. Work: furnish and install plantings at the Pine Street Entrance per contract drawings. Final layout to be approved by owner's representative in field prior to installation.
 - 2. Refer to the following Specification Sections for the work of Alternate No. 1:
 - a) 651 Plantings
- B. Alternate No. 2 – Bartlett Street / Pine Street corner planting area.

1. Work: Furnish and Install plant materials as shown on contract drawings. Final layout to be approved by owner's representative in field prior to installation.

2. Refer to the following Specification Sections for the work of Alternate No. 2:

a) 651 Plantings

C. Alternate No. 3 – Picnic Tables.

1. Work: Assemble and deliver two (2) DuMor model 63-165 picnic tables in Black.

2. Refer to the following Specification Sections for the work of Alternate No. 3:

a) 661.16, 661.17 and 680 Site Furnishings

D. Alternate No. 4 – Crack repair and Color Sealcoat.

1. Work: Clean out and repair cracks in existing basketball court to remain. Color sealcoat court (grey / blue) per contract drawings.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

--- END OF SECTION ---

**Special Provision
To Section 740 (NHDOT Standard Specifications)**

Amend Section 740 to read:

**Section 740.2
DUST CONTROL**

1. General

A. This section of the specification covers the control of dust via calcium chloride and water, complete.

2. Calcium Chloride

A. Calcium chloride shall conform to the requirements of AASHTO-M 144, Type I or Type II and Specification for Calcium Chloride, ASTM D98. The calcium chloride shall be packaged in moisture proof bags or in airtight drums with the manufacturer, name of product, net weight, and percentage of calcium chloride guaranteed by the manufacturer legibly marked on each container.

B. Calcium chloride failing to meet the requirements of the aforementioned specifications or that which has become caked or sticky in shipment, may be rejected by the Engineer.

3. Water

A. Water shall not be brackish and shall be free from oil, acid, and injurious alkali or vegetable matter.

4. Application

A. Calcium chloride shall be applied when ordered by the Engineer and only in areas which will not be adversely affected by the application. See Section 740.3, ENVIRONMENTAL PROTECTION.

B. Calcium chloride shall be uniformly applied at the rate of 1-1/2 pounds per square yard or at any other rate as directed by the Engineer. Application shall be by means of a mechanical spreader, or other approved methods. The number and frequency of applications shall be determined by the Engineer.

C. Water may be sprinkler applied with equipment including a tank with gauge-equipped pressure pump and a nozzle-equipped spray bar.

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- D. Water shall be dispersed through the nozzle under a minimum pressure of 20 pounds per square inch, gauge pressure.

--- END OF SECTION ---

1.

Special Provision

To Section 740 (NHDOT Standard Specifications)

Amend Section 740 to read:

Section 740.3

ENVIRONMENTAL PROTECTION

1. Description
2. Notification
3. Implementation
4. Area of Construction Activity
5. Protection of Water Resources
6. Protecting and Minimizing Exposed Areas
7. Location of Storage Areas
8. Protection of Landscape
9. Clearing and Grubbing
10. Discharge of Dewatering Operations
11. Dust Control
12. Separation and Replacement of Topsoil
13. Baled Hay or Straw
14. Silt Fence
15. Noise Control

1. Description

The work covered by this section of the specifications consists of furnishing all labor, materials, tools and equipment and performing all work required for the prevention of environmental pollution during and as a result of construction operations under this contract.

2. Notification

The ENGINEER will notify the CONTRACTOR in writing of any non-compliance with the foregoing provisions. The CONTRACTOR shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the CONTRACTOR or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the CONTRACTOR fails to act promptly, the ENGINEER may order stoppage of all or part of the work until satisfactory corrective action has been taken. No claim for an extension of time or for excess costs or damage incurred by the CONTRACTOR as a

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result of time lost due to any stop work orders shall be made unless it was later determined that the CONTRACTOR was in compliance.

3. Implementation

- A. Prior to commencement of work, the CONTRACTOR shall meet with representatives of the ENGINEER to develop mutual understandings relative to compliance of the environmental protection program.
- B. The CONTRACTOR shall submit for approval six sets of details and literature fully describing environmental protection methods to be employed in carrying out construction activities.

4. Area of Construction Activity

Insofar as possible, the CONTRACTOR shall confine his construction activities to those areas defined by the Contract Drawings and Specifications. All land resources within the project boundaries and outside the limits of permanent work performed under this contract shall be preserved in their present condition or be restored to a condition after completion of construction at least equal to that, which existed prior to work under this contract. The CONTRACTOR shall keep the active access driveway into the site from Albion Street clear of debris, equipment and vehicles at all times for Fire Department access. All Contractor vehicles to be parked on the job site, unless authorized by City representative and Department of Traffic and Parking.

5. Protection of Water Resources

- A. The CONTRACTOR shall not pollute streams, lakes or reservoirs with fuels, oils, bitumens, calcium chloride, acids or other harmful materials. The CONTRACTOR shall also prevent the transport of soil, dirt, and salt to surface streams, wetlands, and/or catch basins. It is the CONTRACTOR 's responsibility to comply with all applicable Federal, State, County and Municipal laws regarding pollution of rivers and streams.
- B. Special measures should be taken to insure against spillage of any pollutants into public waters, and run-off of demolition site sediments into stormwater collection systems. Measures shall include placement of haybales around catchbasins and along temporary construction fencing, as indicated on Drawing SP-1 – Demolition Plan.

6. Protecting and Minimizing Exposed Areas

- A. The CONTRACTOR shall limit the area of land which is exposed and free from vegetation during construction. In areas where the period of exposure will be greater

than two (2) months, temporary vegetation, mulching or other protective measures shall be provided as specified.

- B. The CONTRACTOR shall take account of the conditions of the soil where temporary cover crop will be used to insure that materials used for temporary vegetation are adaptive to the sediment control. Materials to be used for temporary vegetation shall be approved by the ENGINEER.

7. Location of Storage Areas

- A. The location of the CONTRACTOR 's storage areas for equipment and/or materials shall be upon cleared portions of the job site or areas to be cleared as a part of this project, and shall require written approval of the ENGINEER. Plans showing storage facilities for equipment and materials shall be submitted for approval of the ENGINEER.
- B. No excavated materials or materials used in backfill operations shall be deposited within a minimum distance of one hundred (100) feet of any watercourse or any drainage facility. Adequate measures for erosion and sediment control such as the placement of baled hay or straw around the downstream perimeter of stockpiles shall be employed to protect any downstream areas from siltation.
- C. There shall be no storage of equipment or materials in areas designated on the Contract Drawings as the 100-foot wetlands buffer zone.
- D. The ENGINEER may designate a particular area or areas where the CONTRACTOR may store materials used in his operations. Temporary storage trailers shall be installed at Contractor's cost.
- E. Storage areas in cross-country locations shall be restored to pre-construction conditions with the planting of native species of trees and shrubs.

8. Protection of Landscape

- A. The CONTRACTOR shall not deface, injure, or destroy trees or shrubs nor remove or cut them without written authority from the OWNER. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorages unless specifically authorized by the ENGINEER. Excavating machinery and cranes shall be of suitable type and be operated with care to prevent injury to trees which are not to be removed, particularly overhanging branches and limbs. The CONTRACTOR shall, in any event, be responsible for any damage resulting from such use.

- B. Branches, limbs, and roots shall not be cut except by permission of the ENGINEER. All cutting shall be smoothly and neatly done without splitting or crushing. When there is unavoidable injury to branches, limbs and trunks of trees, the injured portions shall be neatly trimmed and covered with an application of grafting wax or tree healing paint as directed.
- C. Where, in the opinion of the ENGINEER, trees may possibly be defaced, bruised, injured, or otherwise damaged by the CONTRACTOR 's equipment or by his blasting or other operations, the ENGINEER may direct the CONTRACTOR to adequately protect such trees by placing boards, planks, poles or fencing around them. Any trees or landscape feature scarred or damaged by the CONTRACTOR 's equipment or operations shall be restored as nearly as possible to its original condition at the expense of the CONTRACTOR. The ENGINEER will decide what method of restoration shall be used, and whether damaged trees shall be treated and healed or removed and disposed of under the provisions of Section 02230, CLEARING AND GRUBBING.
- D. Cultivated hedges, shrubs, and plants which could be injured by the CONTRACTOR 's operations shall be protected by suitable means or shall be dug up, balled and temporarily replanted and maintained. After construction operations have been substantially completed, they shall be replanted in their original positions and cared for until growth is re-established. If cultivated hedges, shrubs, and plants are injured to such a degree as to affect their growth or diminish their beauty or usefulness, they shall be replaced by items of a kind and quality at least equal to that existing at the start of the work.

9. Clearing and Grubbing

- A. The Contractor shall clear and grub only on the Owner's land or the Owner's easements, and only the area required for demolition operations, as approved by the Engineer.

10. Discharge of Dewatering Operations

- A. Any water that is pumped and discharged from the trench and/or excavation as part of the CONTRACTOR 's water handling shall be filtered by an approved method prior to its discharge into a receiving water or drainage system.
- B. Under no circumstances shall the CONTRACTOR discharge water to the areas designated as wetlands.
- C. The pumped water shall be filtered through baled hay, a vegetative filter strip or a vegetated channel to trap sediment occurring as a result of the construction

operations. The vegetated channel shall be constructed such that the discharge flow rate shall not exceed a velocity of more than 1 foot per second. Accumulated sediment shall be cleared from the channel periodically.

- D. Water pumped or drained from excavations, water courses, or other structures encountered in the work shall be disposed of in strict compliance with pertinent federal, state and local environmental regulations. Any damage caused by or resulting from dewatering operations shall be the sole responsibility of the CONTRACTOR.

11. Dust Control

- A. During the progress of the work, the CONTRACTOR shall conduct his operations and maintain the area of his activities, including sweeping and sprinkling of streets as necessary, to minimize creation and dispersion of dust. If the ENGINEER decides it is necessary to use calcium chloride for more effective dust control, the CONTRACTOR shall furnish and spread the material, as directed. Calcium chloride shall be as specified under Section 740.2, DUST CONTROL. Dust control requirements shall be strictly enforced by the City

12. Separation and Replacement of Topsoil

Topsoil shall be carefully removed from cross-country areas where excavations are to be made, and separately stored to be used again as directed. The topsoil shall be stored in an area acceptable to the ENGINEER and adequate measures shall be employed to prevent erosion of said material.

13. Baled Hay or Straw

To trap sediment and to prevent sediment from clogging drainage systems, baled hay or straw shall be used where stormwater runs off the site. Care shall be taken to keep the bales from breaking apart. The bales should be securely staked to prevent overturning, flotation, or displacement. All deposited sediment shall be removed periodically.

14. Silt Fence

- A. Where indicated on the drawings or where directed by the ENGINEER, the CONTRACTOR shall erect and maintain a temporary silt fence. In areas designated as wetlands, the CONTRACTOR shall line the limits of the construction easement with a silt fence. The silt fence shall be used specifically to contain sediment from runoff water and to minimize environmental damage caused by construction.

- B. The silt fence shall consist of a 3-foot wide continuous length sediment control fabric, stitched to a 22-foot wide, continuous length support netting, and stapled to preweathered oak posts installed as shown on the drawings. The oak posts shall be 1½-inches by 1½-inches (Minimum Dimension) by 48 inches and shall be tapered. The support netting shall be industrial strength polypropylene. The bottom edge of the sediment control fabric shall be buried as shown on the drawings. The sediment control fabric shall conform to the following properties:

Property	Value	Test Method
1. Grab Strength (lbs.)	124	ASTM D-4632
2. Elongation (%)	15%	ASTM D-4632
3. Puncture Strength (lbs.)	65	ASTM D-4833
4. Burst Strength (psi)	300	ASTM D-3786
5. Trapezoid Tear (lbs.)	60	ASTM D-4533
6. Equivalent Opening Size (U.S. Sieve)	No. 30	ASTM D-4571
7. Permittivity (sec ⁻¹)	0.10	ASTM D-4491
8. Water Flow Rate (gal/min/sf.)	10	ASTM D-4491
9. UV Resistance (%)	70	ASTM D-4355

- C. The silt fence shall be Mirafi Envirofence manufactured by Mirafi, Inc. or approved equal.

15. Noise Control

- A. The Contractor shall adhere to the City ordinances for Noise Control, (Article VII, Division 2), throughout the construction period. Noise control will be strictly enforced by the City.
- B. No construction shall occur between 7pm-7am Monday through Saturday, or any time on Sunday. Any exemption to prohibited construction hours must be authorized by a City representative.
- C. Contractor shall not permit engine idling on the job site. This shall be enforced through random, unannounced periodic inspections by City Officials.

- - END OF SECTION - - -