

CITY OF PORTLAND, MAINE
DEPARTMENT OF PUBLIC SERVICES

CONTRACT AND SPECIFICATIONS

for

**PORTLAND EXPOSITION BUILDING
DRAINAGE IMPROVEMENTS**

Bid Number: 5709

Dated: February 20, 2009

**PORTLAND EXPOSITION BUILDING DRAINAGE IMPROVEMENTS
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LEGAL SECTION
NOTICE

CITY OF PORTLAND, MAINE
Notice to Bidders

Sealed Bids will be received at the Purchasing Office, City Hall, Room 103, 389 Congress Street, Portland, Maine 04101, until 3:00 PM, Wednesday, March 18, 2009, at which time they will be publicly opened, for:

**Project Name: Portland Exposition Building Drainage Improvements
(Bid No. 5709)**

Abbreviated Written Summary: Briefly and without force and effect upon the contract documents, the work of the Contract can be summarized as follows:

Construction of drainage improvements including underdrain, pavement, and sidewalks

MANDATORY PRE-BID CONFERENCE

A mandatory pre-bid meeting will be held at the Portland Exposition Building, 239 Park Avenue, Portland, Maine on Wednesday, March 4, 2009, at 10:00 AM. Firms not represented at this meeting will not be allowed to bid on this project.

The above named plans, specifications, and proposal forms may be seen at the Purchasing Office, City Hall, Room 103, 389 Congress Street, Portland, Maine.

Each prospective bidder will be required to obtain from the City of Portland, upon payment in advance of \$25.00 (\$35.00 if shipped), each copy of the proposal form and each set of plans. Phone 207-874-8654, Fax 874-8652, or e-mail njm@portlandmaine.gov.

CITY OF PORTLAND, MAINE

PORTLAND EXPOSITION BUILDING DRAINAGE IMPROVEMENTS

Notice to Bidders

Sealed bids for the above project, addressed to Purchasing office, City Hall, Room 103, 389 Congress Street, Portland, Maine 04101, and clearly marked on the outside of the envelope with the name of the bidder, project title and bid number, will be received **until 3:00 PM (prevailing time) on Wednesday, March 18, 2009**, at which time they will be publicly opened.

MANDATORY PRE-BID MEETING

There will be a **mandatory pre-bid meeting on Wednesday, March 4, 2009 at 10:00 AM**. This meeting will commence at the Portland Exposition Building, 239 Park Avenue, Portland, Maine. Only those firms represented at this meeting will be allowed to submit a bid on this project.

All questions shall be directed **in writing ONLY** to the Purchasing Office at the above address and be received at least five business days prior to the bid opening date fax 207-874-8652, or email krc@portlandmaine.gov. Responses from the City that substantially alter this bid will be issued in the form of a written addendum to all bid holders registered in the Purchasing Office. Oral explanations or interpretations given before the award of the contract will not be binding.

Bids from vendors not registered with the Purchasing Office may be rejected; receipt of this document directly from the City of Portland indicates registration. Should a vendor receive this Invitation from a source other than the City, please contact 207-874-8654 to ensure that your firm is listed as a vendor for this project.

All proposals shall be submitted on the attached form and are to remain open for sixty (60) days after their opening. Late bids, bids without the required amount or form of surety, bids not signed and facsimile bids will not be accepted.

The successful bidder shall agree to defend, indemnify and save the City harmless from all losses, costs or damages caused by its acts or those of its agents, and, before signing the contract, will produce evidence satisfactory to the City's Corporation Counsel of coverage for General Public and Automobile Liability insurance in amounts not less than \$400,000 per person, for bodily injury, death and property damage, protecting the contractor and the City, and *naming the City as an additional insured* from such claims, and shall also procure Workers' Compensation insurance. The City disclaims any and all responsibility for injury to contractors, their agents or others while examining the job or at any other time.

Prior to any payment by the City, the successful bidder may be required to supply the City with a *Waiver of Lien – Material and Labor* for the total awarded contract cost, guaranteeing payment in full for all labor and materials used or required in connection with the work described in this bid. The City may also require waivers of lien, signed by individual subcontractors, with requests for progress payments.

The successful bidder shall supply the City with a Performance Bond and Labor and Material Payment Bond, each in the amount of the contract price, guaranteeing one hundred percent (100%) performance of the contract, including the guarantee period and free and clear of any and all liens, attachments and encumbrances. All bonds shall comply with the requirements of Maine state law.

Any mechanic's lien or any other lien which may be filed against the premises which are the subject of the contract by reason of the work described herein shall be defended (by counsel reasonably acceptable to the City) and promptly discharged by the Contractor at its own expense. If the successful bidder should fail either to defend the City against the lien or to discharge it, then the City may do so at the successful bidder's expense. In the event of such an undertaking by the City, the successful bidder will promptly reimburse the City for all its costs and expenses in so doing including, but not limited to, reimbursement of the City's reasonable counsel fees and costs which may be incurred by it in substituting a bond in place of the lien.

Materials and equipment purchased for permanent installation in this project are exempt from the State of Maine Sales and Use tax and from all Federal Excise taxes. Each bidder shall take this exception into account in calculating his bid price for the work.

The successful bidder shall furnish all labor, materials, fixtures, supplies, equipment and transportation necessary to do the work as specified. Bidders affirm that the equipment, or work, shall be in full compliance with any and all applicable O.S.H.A., D.O.T., ANSI, Federal, State and/or municipal regulations, including but not limited to those requirements pertaining to minimum wage, independent contractor status, equal employment opportunity, and non-discrimination. Bidders will be responsible for acquiring all necessary permits, licenses and pay all associated fees (including dump disposal fees and disposal taxes, if applicable), unless otherwise specified herein. The successful bidder shall erect and maintain, at all times, any and all safeguards necessary for the protection of life and property of all pedestrian and vehicular traffic.

The City reserves the right to waive any informalities in bids, to accept any bid or portions thereof (bidders are advised to note this and quote accordingly) and to reject any or all bids should it be deemed for the best interest of the City to do so. The City reserves the right to substantiate the Bidder's qualifications, capability to perform, availability, past performance record and to verify that the bidder is current in its obligations to the City, as follows:

Pursuant to City procurement policy and ordinance, the City is unable to contract with businesses or individuals who are delinquent in their financial obligations to the City. These obligations may include but are not limited to real estate and personal property taxes and sewer user fees. Bidders who are delinquent in their financial obligations to the City must do one of the following: bring the obligation current, negotiate a payment plan with the City's Treasury office, or agree to an offset which shall be established by the contract which shall be issued to the successful bidder.

February 20, 2009

Karen C. Marston
Assistant Purchasing Agent

BID

Bid of _____

Name

Address

The name and address shown on the above lines shall be the official name and address of the person, partnership or corporation submitting this bid and shall agree with the "Signature of Bidder" in the case of an individual; the "Name of Firm or Partnership" in the case of a firm or partnership; the "Name of Bidder" in case of a corporation.

TO: Karen Marston, Assistant Purchasing Agent
City Hall, Room 103
389 Congress Street
Portland, ME 04101

The undersigned having carefully examined the site of the work; the Plans; Standard Specifications, including all current amendments or revisions there of; the Supplemental Specification, Special Provisions; Contract Agreement and Contract Bonds contained herein for the **Portland Exposition Building Drainage Improvements** on which proposals will be received until the time specified in this bid document; and in case of award, do(es) hereby bid and offer to enter into a contract to supply all the materials, tools, equipment and labor required to perform and construct the whole of the work in strict accordance with the terms and conditions of this contract at lump sum price stated in the following Bid Page submitted by the undersigned.

This Bid may be accepted by the City of Portland at any time within sixty (60) calendar days after opening of the bids.

BID

The undersigned having examined the attached document do(es) hereby bids and offer to enter into a contract to supply all the materials, tools, equipment and labor required to perform and construct the whole of the work in strict accordance with the terms and conditions of this contract at the price stated in the following Bid:

BASE BID

BID ITEM DESCRIPTION	UNIT	PRICE/UNIT	ITEM PRICE
1 – Drainage Improvements	Lump Sum	\$	\$
TOTAL		\$	\$

TOTAL BID PRICE: \$ _____
 (Award Basis)

TIME FOR COMPLETION FROM START OF WORK: _____
 (Work must be completed by June 5, 2009)

WARRANTY OF LABOR: _____

WARRANTY OF MAJOR COMPONENT PARTS: _____

The undersigned also agrees as follows:

FIRST: To do any extra work which may be ordered, and to accept as full compensation therefore such prices as may be agreed upon in writing by the Engineer and the Contractor; or in case no agreement is made, to accept as full compensation the amount determined upon a "force account" basis as provided in the M.D.O.T. Standard Specifications, Revision of December, 2002.

SECOND: To begin work on the date specified in the Engineer's "Notice to Commence Work" as mutually agreed and to prosecute said work in such a manner as to complete it by June 5, 2009.

THIRD: That this offer is to continue open to acceptance until the formal contract is executed by the successful bidder of this work, and the City may at any time without notice accept this proposal whether any other proposal has previously been accepted or not. Provided, however, that the City will accept, in writing, one of the bids made, or reject all bids made, within sixty (60) calendar days after the date of opening of the bids.

The undersigned as Bidder, declares that the only persons or parties interested in this Bid are those named herein; that the bidder is not financially interested in, or otherwise affiliated in a business way with any other bidder on this contract; and that this Proposal is made without collusion with any other person, firm or corporation.

The undersigned declares that any person(s) employed by the City of Portland, Maine, who has direct or indirect personal or financial interest in this bid or in any portion of the profits which maybe derived therefrom, has been identified and the interest disclosed by separate attachment. (Please include in your disclosure any interest which you know of. An example of a direct interest would be a City employee who would be paid to perform services under this proposal. An example of an indirect interest would be a City employee who is related to any officers, employees, principal or shareholders of your firm or you.) If in doubt as to status or interest, please disclose to the extent known.

Respectfully submitted this _____ day of _____, 2009

IF AN INDIVIDUAL, SIGN HERE

Signature of Bidder _____

Address _____

(Signatures for a Firm, Partnership or Corporation on next page.)

BID (continued)

IF A FIRM OR PARTNERSHIP, SIGN HERE

Signature of Bidder _____

Name of Firm or Partnership _____

Business Address _____

Telephone Number _____

Fax Number _____

Soc. Sec. No. or Tax I.D. Number _____

Names and Addresses of Members of Firm or Partnership:

IF A CORPORATION, SIGN HERE

Name of Bidder _____

Authorized Signature _____
(Name) (Title)

Business Address _____

Telephone Number _____

Fax Number _____

Soc. Sec. No. or Tax I.D. Number _____

Incorporated under the Laws of the State of _____

Names and Addresses of Officers of the Corporation:

President _____

Secretary _____

Treasurer _____

_____ SS

Before me, personally appeared _____ and acknowledged that the signature to the preceding bid is his/her signature in his/her official capacity.

Date: _____

Notary Public-Signature and Seal

**ALL CORPORATIONS MUST SIGN THIS FORM
AND SUBMIT WITH THE BID**

*(Insert copy of that part of the records of the corporation wherein authority is given
to the officer of that corporation to sign this bid on behalf of the corporation.)*

(date)

The above is a true copy of the records of the _____
Corporation, which records are in my legal custody.

Officer having custody of the records

_____ ss

Before me appeared, _____,
_____ of the _____ Corporation, and made
oath that the above statement is true.

Notary Public - Signature and Seal

NOTICE

(This Must Be Filled Out)

The full names and residences of all persons interested in this bid as principals are as follows:
(In case of Corporation, include and identify President, Treasurer, Manager)

_____	_____
_____	_____
_____	_____

**ALL CONTRACTORS SHALL FILL IN THE FOLLOWING INFORMATION
BEFORE SUBMITTING BID**

	Name and Address of Supplier	Products to be Supplied
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____
6	_____	_____

	Name and Address of Contractor	Service or Trades to be Supplied	Anticipated \$ Amount
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____

**AGREEMENT BETWEEN THE
CITY OF PORTLAND
AND**

(CONTRACTOR)

AGREEMENT entered into this _____ day of _____, 2009 by and between the **CITY OF PORTLAND**, a body politic and corporate, (hereinafter the "**CITY**"), and _____, located at _____ (hereinafter the "**CONTRACTOR**").

WITNESSETH

WHEREAS, the **CITY** did advertise by **Bid #5709**, entitled **Portland Exposition Building Drainage Improvements**, and

WHEREAS, the **CONTRACTOR** did under date March 18, 2009 submit a Bid for such work; and

WHEREAS, after due consideration of all the Bids, the **CITY** did award the Bid to the **CONTRACTOR**;

NOW THEREFORE, in consideration of the mutual promises made by each party to the other, the parties covenant and agree as follows:

1. The **CONTRACTOR** shall furnish all labor, materials, fixtures, supplies, equipment and transportation and shall perform all work required for the construction and completion of the Portland Exposition Building Drainage Improvements project in accordance with the specifications contained in the contract documents entitled Portland Exposition Building Drainage Improvements, Bid #5709, dated February 20, 2009 (hereinafter referred to as "Contract Documents") of which this Agreement is a part. All work shall be performed in strict conformance with the provisions of this Agreement, the Invitation for Bids, the **CONTRACTOR's** Bid, and any and all General and Detailed Provisions, Plans, "Supplemental Specifications", and "Special and General Provisions" of the Contract Documents which are attached hereto and made a part of this Agreement; and in conformance with the State of Maine, Department of Transportation Standard Specifications for Highways and Bridges, Revision of December, 2002 except as amended herein, and including all current amendments or revisions thereof, all of which are made a part of this Contract.
2. The restatement in this Contract of any of the terms of said Contract Documents and Standard Specifications shall not be deemed to waive any terms not so restated.
3. It is agreed that the amount given on the "Bid" in the **CONTRACTOR's** Bid Section of the Contract Documents will be used as the basis for determining the amount due under this Contract Agreement, and that the amount due under this Agreement so determined is

- (\$ _____) (hereinafter referred to as the "Contract Price"). The **CITY** will have the right to increase or decrease the amount and extent of the work by giving reasonable notice in writing to the **CONTRACTOR**. The **CITY** will pay for the work performed and the materials furnished for any such increase.
4. **CONTRACTOR** covenants and agrees that all work performed and materials used shall be free from all defects, and that all work be performed as specified.
 5. **CONTRACTOR** shall supply the **CITY** with a performance bond, and labor and materials payment bond, each in the amount of (\$ _____), guaranteeing one hundred percent (100%) performance of this Agreement, including the guarantee period and free and clear of any and all liens, attachments and encumbrances. All such bonds shall comply with the requirements of Maine State law.
 6. The **CITY** reserves the right to require Waivers of Lien from subcontractors and/or suppliers prior to each progress payment made to **CONTRACTOR** pursuant to the terms of this Agreement.
 7. Prior to the execution of this Agreement, **CONTRACTOR** shall procure and maintain Public Liability Insurance coverage and Automobile Insurance coverage in amounts of not less than Four Hundred Thousand Dollars (\$400,000.00) combined single limit and aggregate for bodily injury, death, and property damage, naming the **CITY** as an additional insured thereon, and shall also procure Workers' Compensation Insurance coverage. **CONTRACTOR** shall furnish and thereafter maintain certificates evidencing such coverage, which certificates shall guarantee thirty (30) days' notice of termination of insurance from insurance company or agent.
 8. To the fullest extent permitted by law, the **CONTRACTOR** shall defend, indemnify and hold harmless the **CITY**, its officers and employees, from and against all claims, damages, losses, and expenses, just or unjust, including but not limited to the costs of defense and attorneys' fees arising out of or resulting from the performance of the Agreement, provided that any such claims, damage, loss or expense (1) is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, including the loss of use therefrom, and (2) is caused in whole or in part by any negligent act or omission of the **CONTRACTOR**, anyone directly or indirectly employed by it, or anyone for whose act it may be liable.
 9. Upon receipt of executed contracts, bonds, and insurance as required, the **CITY** will promptly send an executed **CITY** contract and a "Notice to Commence Work" to the **CONTRACTOR**. The **CONTRACTOR** agrees to perform no work under this Agreement until it receives said Notice and to complete the work in the time specified by the contractor on the "Bid", but to complete the work by June 5, 2009. The time set for such completion may be extended only by written consent of the Portland Public Buildings Division Director (hereinafter referred to as the "**DIRECTOR**").
 10. Any mechanic's lien or any other lien which may be filed against the premises which are subject of this Contract by reason of the work described herein shall be defended (by counsel reasonably acceptable to the **CITY**) and promptly discharged by the **CONTRACTOR** at its own expense. The **CITY** may require the **CONTRACTOR** to provide a bond satisfactory to **CITY** and indemnify it against any lien and as substitution in place of a lien.
 11. If the **CONTRACTOR** should fail either to defend the **CITY** against the lien or to discharge it, then the **CITY** may do so at the **CONTRACTOR**'s expense. In the event of such an

- undertaking by the **CITY**, the **CONTRACTOR** will promptly reimburse the **CITY** for all its costs and expenses in so doing including, but not limited to, reimbursement of the **CITY's** reasonable counsel fees, as well as costs which may be incurred by it in substituting a bond in place of the lien.
12. The **CONTRACTOR** shall perform the work to the satisfaction of the responsible **CITY** official who will have the right of inspection at all times, and whose approval and acceptance of the work will be a condition precedent to payments by the **CITY** under this Contract. **CITY** inspectors will have the authority to stop work in progress if such work is being done contrary to the plans, specifications, or engineering practice.
 13. In the event that any dispute as to the amount, nature or scope of the work required under this Contract, the decision and judgment of the responsible **CITY** official will be final and binding.
 14. The **CONTRACTOR** shall guarantee the work for a period of one (1) year for the faithful remedy of any defects due to faulty materials or workmanship and payment for any damage resulting therefrom.
 15. **CONTRACTOR** shall keep accurate records of all services performed under this Agreement and shall submit such information to the **CITY** on a monthly basis. Payment for such services shall be made to **CONTRACTOR** not more than thirty (30) days after receipt of said forms and acceptance of the work by the **DIRECTOR**.
 16. The **CITY** may terminate this Agreement for cause by written Notice to the **CONTRACTOR**. In the event of such termination, **CONTRACTOR** shall not be entitled to any further payment under this Agreement from the date of receipt of said Notice.
 17. The **CITY** will have the right to terminate this Agreement at any time for its convenience on prior written Notice to **CONTRACTOR**. If Agreement is terminated by the **CITY** for convenience, the **CITY** will pay the **CONTRACTOR** for all work performed and all materials purchased pursuant to this Agreement prior to receipt of said Notice.

IN WITNESS WHEREOF, the said **CITY OF PORTLAND** has caused this Agreement to be signed and sealed by Joseph E. Gray, Jr., its City Manager, thereunto duly authorized, and _____ has caused this Agreement to be signed and sealed by _____, its _____, thereunto duly authorized, the day and year first above written.

WITNESS

CITY OF PORTLAND

By: _____
Joseph E. Gray, Jr.
Its City Manager

CONTRACTOR

By: _____

(Print or type name)

Its _____

Approved as to Form:

Approved as to funds:

Corporation Counsel's Office

Budget Office

NOTICE OF AWARD

To: _____

Project Description: Portland Exposition Building Drainage Improvements

The OWNER has considered the Bid submitted by you for the above described Work in response to its advertisement for Bids dated February 22, 2009, and Information for Bidders.

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

You are required by the Information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S Performance Bond, Payment Bond and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

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

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

Dated this the _____ day of _____, 2009.

OWNER: _____
City of Portland

By: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

by _____

Dated this the _____ day of _____, 2009.

By _____

Title _____

NOTICE TO PROCEED

To: _____

Date: _____

Project: Portland Exposition Building Drainage Improvements

You are hereby notified to commence Work in accordance with the Agreement dated _____, 2009, on _____ 2009.

The date of final completion of all Work is **June 5, 2009.**

Dated this the _____ day of _____, 2009.

OWNER: _____
City of Portland

By: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged

by _____

Dated this the _____ day of _____, 2009.

By _____

Title _____

**WAIVER OF LIEN
MATERIAL OR LABOR**

State of _____

County of _____

To all whom it may concern:

Whereas _____ the undersigned _____
has been employed to furnish for the project known as:

Portland Exposition Building Drainage Improvements

City of Portland County of Cumberland

State of Maine.

Know then for know ye that _____ the undersigned for
_____ and in consideration of the sum of

\$ _____ and other good and valuable consideration the receipt
whereof is hereby acknowledged, do hereby waive and release from any and all, or claim the
right to lien on said above described project under the status of the State of

Relating to Mechanic's Lien on account of Labor or Material or both furnished or which may be
furnished by the undersigned to or on account of said _____ for said
building and premise.

Given under _____ my hand and seal this _____ day
of _____, 20____.

Notarized: _____ this _____ day of _____, 2009.

My commission expires _____.

CERTIFICATE OF SUBSTANTIAL COMPLETION OF WORK

OWNER'S Project No. _____ ENGINEER'S Project No. _____

Project: **Portland Exposition Building Drainage Improvements**

CONTRACTOR _____ Contract Date _____

Contract for **Portland Exposition Building Drainage Improvements**

Project or Specified Part Shall Include _____

DEFINITION OF SUBSTANTIAL COMPLETION

The date of Substantial Completion of a Project or specified part of a Project is the date when the construction is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part of the Project can be utilized for the purpose for which it was intended.

To: City of Portland, Maine

And To _____
(CONTRACTOR)

Date of Substantial Completion _____

The Work performed under this contract has been inspected by authorized representatives of the OWNER, CONTRACTOR and ENGINEER, and the Project is hereby declared to be substantially completed on the above date.

A tentative list of items to be completed or corrected is appended hereto. The failure to include an item on it does not alter the responsibility of the CONTRACTOR to complete all the Work in accordance with the Contract Documents.

City of Portland
OWNER _____ AUTHORIZED REPRESENTATIVE DATE

ENGINEER _____ AUTHORIZED REPRESENTATIVE DATE

The CONTRACTOR accepts the above Certificate of Substantial Completion and agrees to complete and correct the items on the tentative list.

CONTRACTOR	AUTHORIZED REPRESENTATIVE	DATE
------------	---------------------------	------

EXCEPTIONS AS TO GUARANTEES AND WARRANTIES:

ATTACHMENTS:

CERTIFICATE OF FINAL COMPLETION OF WORK

CONTRACT NO. _____ AGREEMENT DATE _____

CONTRACT DESCRIPTION: CERTIFICATE OF FINAL COMPLETION OF WORK

CONTRACT NO. _____ AGREEMENT DATE _____

CONTRACT DESCRIPTION: **Portland Exposition Building Drainage Improvements**

FINAL CERTIFICATION OF CONTRACTOR

I hereby certify that the Work as identified in the Final Payment Request for construction Contract Work dated _____ represents full compensation for the actual value of Work completed. All Work completed conforms to the terms of the Agreement and authorized changes.

_____	_____
Date	CONTRACTOR

	Signature

	Title

FINAL CERTIFICATION OF ENGINEER

I have reviewed the CONTRACTOR'S Final Payment Request dated _____ and hereby certify that to the best of my knowledge, the cost of the Work identified on the Final Estimate represents full compensation for the actual value of Work completed and that the Work has been completed in accordance with the terms of the Agreement and authorized changes.

_____	_____
Date	ENGINEER

	Signature

	Title

FINAL ACCEPTANCE OF OWNER

I, as representative of the OWNER, accept the above Final Certifications and authorize Final Payment in the amount of \$ _____ The guaranty for all Work completed subsequent to the date of Substantial Completion, expires one (1) year from the date of this Final Acceptance.

_____	_____
Date	City of Portland OWNER

	Authorized Representative

	Signature

****END OF SECTION****

FINAL CERTIFICATION OF CONTRACTOR

I hereby certify that the Work as identified in the Final Payment Request for construction Contract Work dated _____, represents full compensation for the actual value of Work completed. All Work completed conforms to the terms of the Agreement and authorized changes.

Date

CONTRACTOR

Signature

Title

STANDARD SPECIFICATIONS

The City of Portland, Maine has adopted for this Project the "State of Maine, Department of Transportation, Standard Specifications, Revision of December, 2002", including all current additions or modifications thereof.

The Contract Agreement, Special Provisions, and Supplemental Specifications contained hereinafter shall take precedence and shall govern in any case of conflict with the Standard Specifications.

SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS

The Special Provisions and Supplemental Specifications shall amend the "State of Maine, Department of Transportation, Standard Specifications, Revision of December, 2002". In case of conflicts with the Standard Specifications, these Supplemental Specifications and Special Provisions shall take precedence and shall govern. Supplemental Specifications are modifications, additions, and deletions to the Standard Specifications. Special Provisions are specifications in the contract that are for additional items not covered in the Standard Specifications.

SPECIAL PROVISIONS
GENERAL

1. Working Hours

No construction work shall be performed during the following hours, without prior written approval from the Commissioner.

- A. From September 1 of any year through May 31 of the following year, no construction work shall be performed between 7:00 p. m. of any day and 7:00 a. m. of the following day.
- B. From June 1 of any year through August 31 of the same year, no construction work shall be performed between 8:00 p. m. of any day and 7:00 a. m. of the following day.
- C. On Saturdays, Sundays, and legal holidays, construction work shall not be performed before 8:00 a. m.

The definition of work for the purpose of this provision shall include the starting or moving of equipment, machinery, or materials. Any day worked for four hours or more shall be considered a full working day.

2. Notification of Abutters

Abutters shall be notified by the Contractor sufficiently in advance of any construction affecting driveways, sidewalks, or utilities.

3. Existing Traffic Signs

All existing traffic signs which are to be removed during construction shall be carefully dismounted and the posts removed and shall be stacked in an area approved by the Engineer. The Contractor shall protect the signs from damage while in his possession and shall repair, at no additional cost to the City, any damages cause by his operations.

Prior to the start of any construction work, the Contractor and Engineer shall prepare a mutually acceptable inventory of all signs within the project limits which shall be used as a guide for replacement should signs be removed for construction purposes. The signs shall be inventoried by station location and approximate offset, legend of sign, and post.

4. Protection of Trees

The Contractor shall be responsible for the preservation of all trees on the project that are not called for to be removed. Any trees damaged by the Contractor's operations shall be repaired using approved tree dressing or paint in accordance with the appropriate provisions of Section 201 of the Standard Specifications, or replaced as deemed necessary by City Arborist at no additional cost to the City.

5. Maintenance and Protection of Traffic

The Contractor shall be responsible for the maintenance and protection of all vehicular and pedestrian traffic at all times during construction and shall erect suitable warning signs, flashers, barriers, or temporary lighting devices of sufficient size and number to afford protection to the traveling public. The Contractor shall be held responsible for all damage to the work due to any failure of the warning devices to properly protect the work from the traffic, pedestrians, or other causes.

Guidelines for the construction and erection of barricades, lighting devices, warning signs, etc. shall be found in the most recent edition of "Manual on Uniform Traffic Control Devices for Streets and Highways" published by the Department of Transportation of the Federal Highway Administration.

The Contractor shall maintain a passable vehicular route from the Expo/Ice Arena Parking lot to behind the Ice Arena at all times outside of normal working hours. Contractor shall not interfere

with public use of the Ice Arena or Exposition Building. The Limits of Work are delineated on the Drawings.

6. Materials

Materials shall meet the requirements specified in the specifications. Equals shall be approved only prior to the bid opening.

7. Sheeting and Bracing

Any sheeting or bracing required for the satisfactory installation of drainage structures and pipes shall be considered as incidental to the Contract Price.

8. Waste Areas

The disposal of waste and surplus materials shall be as outlined in Section 203.06 – Waste Areas of the Supplemental Specifications.

9. Occupational Safety and Health

The Contractor is hereby advised that all work to be furnished to the City shall be performed with equipment, methods, and use of personnel in conformance with the pertinent Occupational Safety and Health Act requirements of the State of Maine and with the regulations for construction as specified by the Department of Labor and Occupational Safety and Health Administration (OSHA) as currently amended.

10. Pre-construction Conference

A conference will be held at a location to be named by the City within ten (10) days after the awarding of the contract. At this time, the Contractor will be required to discuss the schedule and project activities. City officials and representatives of the various utility companies involved in the project will be present at this meeting.

It is the purpose of this meeting to inform the various agencies of the proposed work schedule, and to give them the opportunity of discussing any difficulties and offering suggestions to the Contractor concerning proposed schedule in order that full cooperation may be reached.

11. Schedule of Operations

The Contractor shall submit 3 days prior to the Pre-construction Conference a bar chart schedule showing the sequencing, critical path items, milestones, and scheduling of the work. This schedule must show sufficient detail to insure compliance with the contract completion date. Updates will be required as work progresses.

12. Setting of Pipes to Line and Grade

If laser beam equipment is used for laying pipe, frequent checks shall be made to assure close adherence to line and grade. If lasers are not used, batter boards are to be set at maximum twenty-five foot (25') intervals and grades transferred to the boards with a transit, level, or line level. Setting pipes to grade by use of "pop" levels or carpenter levels will not be permitted.

13. Extent of Open Excavation

The extent of excavation open at any one time shall be controlled by OSHA regulations and by existing conditions and location of work area.

14. Limitation of Operations

The Contractor shall conduct the work at all times in such a manner and in such sequence as will assure the least interference with adjoining parking. Contractor shall not open up work to the prejudice or detriment of work already started. The Engineer may require the Contractor to finish a section on which work is in progress before work is started on any additional sections, if finishing such section is essential to public convenience.

Waste and surplus material shall not be stockpiled, but shall be disposed of in areas as designated in Section 203.06, Waste Areas, of the Supplemental Specifications.

15. Dust Control

Calcium chloride shall be spread only on disturbed unpaved areas. Calcium chloride shall not be spread on paved areas that are covered by granular material. These areas shall be swept clean of all granular material. Dust on paved areas shall be controlled with water before sweeping.

16. Sidewalk and Pavement Replacement

The Contractor shall be responsible for repairing any sidewalk and pavement that has experienced excess settlement, cracking, or opening of joints. Repair may include overlay, removal of unacceptable material and complete replacement, joint sealing or re-cutting as required. This work may be necessary after final acceptance of the work. This work shall be done at no additional cost to the City.

17. Record Drawings

The Contractor shall keep daily records of all buried utilities, ties to all new utility connections, and elevations of all inverts. Upon completion of the project, the Contractor shall deliver to the Engineer a marked-up set of plans with all changes and required information indicated in red. The Contractor shall maintain a record of all locations of buried fittings, etc., throughout the project. Such locations shall be recorded by 3 ties from fixed permanent points. Prior to requesting final payment, the Contractor shall submit the records in triplicate bound form. The records shall be clearly legible and include the reference contract drawing number. Final payment will not be made until the Engineer receives record drawings from the Contractor.

18. Waste Material

All waste material shall be removed from the site and the area left clean upon completion of work. Any equipment or structures damaged by the Contractor shall be repaired or replaced at no additional cost to the City. The Contractor shall notify the City of the final waste disposal location and if so located in the City shall be responsible to provide evidence of all necessary local fill permits and State permits at no extra cost to the City.

19. Quality Assurance

The Contractor shall be responsible at all times for maintaining quality assurance during performance of his work. Particular attention to compaction shall be paid during backfilling operations. Strict adherence to Section 203.11 and 304.04 of the Standard Specifications will be required when backfilling trenches, preparing subgrade, and placing subbase and base gravels.

In-place density tests of the backfill material shall be conducted by an independent testing laboratory. The amount and frequency of testing shall be determined at the time of construction. A minimum of one density test per 500 square feet of pavement may be required. The Contractor shall be responsible for procuring and paying for the testing services, when provided for in contract. Satisfactory compaction shall be a minimum of 95% of the maximum density for trench backfill and embankment construction and a minimum of 95% of the maximum density for gravel base course and subbase gravel course.

The use of an independent testing laboratory, by the Contractor, shall receive prior approval from the City Inspector. The cost for this work shall be considered incidental.

20. Sanitary Facilities

The Contractor shall provide self-contained toilet units in sufficient numbers for use of all persons involved in the work.

21. Bids

No bids shall be withdrawn within a period of sixty (60) days after the opening of the bids.

22. Subsurface Soils Information

No subsurface soils information is available. The Contractor shall make his own investigations regarding the actual location and/or nature of such information and shall not make claims for any extra payments for unforeseen or changed conditions.

23. Unauthorized Use of Fire Hydrants

In conformance with the Maine Department of Human Services, the Portland Water District requires the use of an approved air gap or reduced pressure zone back flow prevention device to assure the protection of the public water supply when filling tank trucks, street sweepers, jet machines or any other related equipment, or any other needs that require a connection to a public or private hydrant. Contractors working for the City are required to apply to the Portland Water District for a hydrant meter and back flow prevention device. All costs associated with temporary water meters and backflow prevention devices shall be considered incidental.

PIPE FITTING & CONNECTION RECORD

Date Installed: _____ City of: _____

Type/Size of Service Pipe: _____ Street: _____

Connection/Fitting: _____ Dwelling No: _____

Depth, end of Service Pipe: _____ Occupant: _____

Length of Service Pipe Laid: _____ Owner: _____

Measured, Located by: _____

Project Contractor: _____

Location Diagram
(Provide 3 Ties to Permanent Objects)



Remarks _____

**SUPPLEMENTAL SPECIFICATION
SECTION 101
CONTRACT INTERPRETATION**

Scope of Section

This Section contains abbreviations, definitions, and general rules of interpretation and shall apply with the following additions or modifications.

101.2 Definitions

Chief Engineer

The definition in the Standard Specifications shall be deleted and replaced with the following: Chief Engineer shall mean the City Engineer, City of Portland, Maine, Public Services Department, acting directly or through his or her duly authorized representatives, who are responsible for the design of the project.

Closeout Documentation

Replace "A letter stating the amount of monies paid to DBE subcontractors to meet Contract DBE goals" with "DBE Goal Attainment Verification Form".

Commissioner

The definition in the Standard Specifications shall be deleted and replaced with the following: Commissioner shall mean the Director of Public Services, City of Portland, Maine.

Department

The definition in the Standard Specifications shall be deleted and replaced with the following: Department shall mean the Department of Public Services, City of Portland, Maine acting through its Director or through his duly authorized representative.

**SUPPLEMENTAL SPECIFICATION
SECTION 102
BIDDING**

Scope of Section

This Section includes requirements related to eligibility to Bid and the Bidding process from advertisement to Bids, through Bid Opening, to the analysis of Bids.

102.1.4 Qualifications of Bidder

The following paragraph will be added as Section 102.1.4.:

The City reserves the right to reject any bid if the evidence submitted by, or the investigation of such bidder, fails to satisfy the City that such bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein. The City reserves the right to reject any or all bids if it would be in the public interest to do so. "The City reserves the right to substantiate bidder's qualifications, capability to perform, availability, past performance record and verify that the bidder is current in its financial obligations to the City."

102.3 Examination of documents, site and other information

This subsection shall be amended by the addition of the following paragraph:

Plans, Specifications and Bid Forms may be seen at the Engineering Office, Department of Public Services, 55 Portland Street, Portland, Maine; or may be obtained at the Purchasing Office, Room 103, City Hall, upon payment as specified in the published "Notice to Contractors".

102.5.1 Questions from Bidder

This subsection shall be amended to read as follows: Bidders shall direct all technical or Engineering questions including requests for explanations or interpretation or for the use of products or methods other than those described in the specifications in writing to the Purchasing Office not later than five (5) working days prior to the date designated for the opening of the bids. All answers to such requests will be made as addenda to the contract and will be issued in writing to all Bidders.

No oral interpretation will be given to the contract documents.

102.5.2 Bidder's Duty To Notify Department If Ambiguities Discovered

Bidders shall not take advantage of any ambiguity, error, omission, conflict, or discrepancy ("ambiguity, etc.") relating to the Bid Documents, Geotechnical Information, site conditions, or any other information that may significantly affect the cost, quality, Conformity, or timeliness of the Work. If a Bidder discovers any such ambiguity, etc., it must notify the Purchasing Agent immediately in writing. Failure to provide such notice constitutes a waiver of any claim for entitlement for additional compensation or time related to such ambiguity, etc.

102.7.1 Location and Time

This subsection shall be amended to read as follows: Each Bid shall be submitted, document intact, in a sealed envelope. The envelope shall be clearly marked to indicate the name of the Bidder, project name, bid number, and be addressed to Purchasing, Room 103, City Hall, 389 Congress Street, Portland, Maine 04101. Bids may be mailed or delivered in person, but they shall be filed prior to the time and at the place specified in the "Notice to Contractors". Bids received after the time for opening of bids will be returned to the bidder unopened.

102.7.2 Effects of Signing and Delivery of Bids

This subsection shall be amended by the addition of the following: Corporations will be required to affix their corporate seal on their Bids.

**SUPPLEMENTAL SPECIFICATION
SECTION 103
AWARD AND CONTRACTING**

Scope of Section

This Section includes requirements related to the final determination of Bid responsiveness and Award and Execution of the Contract.

103.3.2 Notice of Determination

This subsection shall be amended by the addition of the following paragraph: The City reserves the right to reject any bid if the evidence submitted by, or the investigation of such bidder, fails to satisfy the City that such bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein. The City reserves the right to reject any or all bids if it would be in the public interest to do so. A proposal which includes a combination of abnormally low and abnormally high unit prices, which results in an unbalanced bid, may be rejected. "The City reserves the right to substantiate bidder's qualifications, capability to perform, availability, past performance record and then verify that the bidder is current in its financial obligations to the City."

103.4 Notice of Award

This subsection shall be amended to read as follows: The award of contract, if it be awarded, shall be made within sixty (60) days after the opening of proposals to the lowest responsible and qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified by mail at the address shown on his proposal, that his bid has been accepted and that he has been awarded the contract.

**SUPPLEMENTAL SPECIFICATION
SECTION 104
GENERAL RIGHTS AND RESPONSIBILITIES**

Scope of Section

This Section sets forth certain rights and responsibilities of the Department and the Contractor that are generally applicable to all contracts. This Section is not all inclusive and additional rights and responsibilities are set forth elsewhere in the Contract.

104.2.3 Authority of Project Manager and Resident

This subsection shall be amended by the addition of the following paragraph: The Resident Engineer or Resident Inspector will not be responsible for nor issue directions regarding the Contractor's safety precautions or programs; nor will they issue directions relative to, or assume control over any aspect of the methods, techniques or procedures of construction.

104.4.6 Utility Coordination

This subsection shall be amended by the addition of the following paragraphs: At points where the Contractor's operations are adjacent to properties of railways, telephone, gas, water and/or power companies, or are adjacent to other property, damage to which might result in considerable expense, loss or inconvenience, work shall not be commenced until all arrangements necessary for the protection thereof have been made.

The Contractor is advised to schedule its work to accommodate the possibility of utility pole and overhead wire obstructions.

The Contractor shall cooperate with the owners of any underground or overhead utility lines in their protection and rearrangement operations in order that these operations may progress in a reasonable manner, and the duplication or rearrangement work may be reduced to a minimum, and that services rendered by those parties will not be unnecessarily interrupted.

No person, firm, or corporation, including City forces, shall make or cause to be made any opening or excavation in a City Street, way, or public place until contact has been made with all utilities to locate any existing underground gas, water, telephone, power or other installations within said street, way or public place. When gas or other flammable service to buildings is discontinued, the existing service line for such service shall be terminated at a point outside the building.

In the event of interruption to water or utility services as a result of accidental breakage, or as a result of being exposed or supported, the Contractor shall promptly notify the proper authority. Contractor shall cooperate with the same authority in the restoration of such service as promptly as possible.

Water lines, gas lines, service connections, water and gas meter boxes, water and gas valve boxes, light standards, cableways, signals and all other utility appurtenances within the limits of the proposed construction are to be moved by their owners only at the request and expense to the Contractor, unless otherwise provided for, or as noted in the plans.

The Contractor shall ascertain the location of applicable existing utilities and any other necessary information by direct inquiry at the office of the following utility owners:

Electric:
Central Maine Power Company
162 Canco Road
Portland ME 04103
Attention:
Tom Atwood
Tom Bryant

Water:
Portland Water District
225 Douglass Street
Portland ME 04101
Attention:
David Coffin
Frank Meader
Jay Arnold

Telephone:
Verizon
13 Davis Farm Road
Portland ME 04103
Attention:
Sue Sarrette
Troy McDonald

Fire Alarm:
Portland Fire Department - Electric
109 Middle Street
Portland ME 04101
Attention:
Ben Diaz

Gas:
Northern Utilities, Inc.
1075 Forest Avenue
Portland ME 04103
Attention:
Rick Bellemare
Brad Buzzell
Sam Murray

Cable TV:
Time Warner Cable
118 Johnson Road
Portland ME 04102
Attention:
Deb Paiement
Don Johnson

Railroad:
Maine Central Railroad
P. O. Box 9701
Portland ME 04104
Attention:
Mr. Robert Hough

Sewer:
Dept. of Public Services
55 Portland Street
Portland ME 04101
Attention:
Steve Earley
Cliff Farris

The completeness of the above listing is not guaranteed by the City of Portland

104.5.10 Warranty and Maintenance Bonds (If Required)

This subsection shall be amended to read as follows: Warranty and Maintenance Bonds may be required of the Contractor or the subcontractor for specified items that the Department deems appropriate. The Bond must name the "City of Portland" as an obligee. The Contractor shall provide a copy of said bond to the Department as part of the projects closeout documentation prior to final acceptance. Should the subcontractor be required to provide a Warranty or Maintenance Bond, the Contractor hereby authorizes the Department to directly contact Landscape Subcontractor and/or its Surety in the event of a failure of the bonded item to perform as specified. The amount and duration of the Warranty and Maintenance bond for each project will be stated in the contract agreement.

**SUPPLEMENTAL SPECIFICATION
SECTION 107
TIME**

Work on this project shall be completed by June 5, 2009.

**SUPPLEMENTAL SPECIFICATION
SECTION 108
PAYMENT**

Scope of Section

This Section contains general provisions related to payment including progress payment, retainage, the right to withhold payment, and other payment-related items.

108.1 Measurement of Quantities for Payment

Delete this section shall be deleted and replaced with the following: "The Work included for payment under this Contract shall be paid for as a Lump Sum for the Contract. No measurement or payment shall be made on an item basis."

108.2 Progress Payments

Delete this section shall be deleted and replaced with the following: "Progress payments shall be made to the Contractor based upon an agreed to percentage of work completed on a monthly basis."

108.3 Retainage

The first paragraph of this section shall be deleted and replaced with the following: "The City shall deduct 10 percent of the amount of each approved progress payment from the beginning of the project until the work is 50 percent complete. Thereafter, the City shall pay 100 percent of each approved progress payment. Upon substantial completion, the Contractor may request that retainage be reduced to 2 percent. Upon final completion, the City shall pay all outstanding retainage."

108.8 Final Payment

This subsection is revised by adding the following paragraphs: Prior to final payment the following shall be accomplished:

- A. Contractor and the Engineer shall jointly inspect the project to assure completion of all items including Punch List.
- B. Contractor shall submit Record Drawings indicating all changes and additions made during construction.
- C. Waivers of Lien shall be provided to the City for the project.
- D. Contractor shall submit the Warranty and Maintenance Bonds in the amount specified in the contract.
- E. Contractor shall submit all Pipe Fitting and Connection Records.
- F. Final Clean-up shall be completed. No payment will be made for the final clean-up and the cost thereof shall be considered incidental to the appropriate item.
- G. Final Acceptance Notification will be prepared by the City and forwarded to the Contractor for the project along with Final Payment.

**SUPPLEMENTAL SPECIFICATION
SECTION 110
INDEMNIFICATION, BONDING, AND INSURANCE**

Scope of Section

This Section contains general requirements for indemnification, bonding, and insurance by the Contractor.

110.2 Bonding

This subsection is amended by the addition of the following: whenever the word "Treasurer of the State of Maine" appears in the Standard Specifications, it shall mean the City of Portland, Maine.

110.3 Insurance

This subsection shall be amended to read as follows: Before work is started under the contract, the Contractor will be required to file with the City of Portland, a Certificate of Insurance, executed by an insurance company or companies satisfactory to the City and licensed by the State of Maine Insurance Department to do business in the State of Maine, stating that the Contractor carries insurance in accordance with the following requirements and stipulations:

- A. Workers' Compensation Insurance: With respect to all the operations the Contractor performs and all those performed for him by subcontractors, the Contractor or the subcontractor shall carry Workers' Compensation Insurance or shall qualify as a self-insurer with the State of Maine Industrial Accident Commission, all in accordance with the requirements of the laws of the State of Maine.
- B. Commercial General Liability: With respect to the operations Contractor performs and also those performed for him by subcontractors, the Contractor shall carry regular Contractor's Public Liability Insurance, and Contractor's Protective Public Liability Insurance, including underground hazard and collapse each covering bodily injury liability of not less than four hundred thousand dollars (\$400,000.). The insurance certificate shall also name the City as additional insured on Liability portions (not W/C).
- C. Automobile Liability Insurance: The Contractor shall carry Automobile Liability Insurance covering the operation of all motor vehicles, including those hired or borrowed, used in connection with the contract, covering bodily injury liability of not less than four hundred thousand dollars (\$400,000.) for all damages arising out of bodily injuries to or death of one person, and covering property damage liability for a limit of not less than four hundred thousand dollars (\$400,000.) for all damages arising out of injury to or destruction of property in one accident or occurrence.
- D. Blasting: When explosives are to be used in the prosecution of the work, the insurance required under paragraphs (a), (b), and (c) above shall also contain provisions for protection, in the amounts stated, against damage claims due to such use of explosives. (No blasting will be required under this Contract. This provision is not applicable.)
- E. Execution and Limitation: Each policy shall be signed by the President and Secretary of the insurance company and shall be countersigned by a licensed resident agent in the State of Maine as an authorized representative of the company.
- F. Claims: Each insurance policy shall state that the insurance company shall agree to investigate and defend the insured against all claims for damages, even if groundless.

- G. Compliance: with the requirements of this subsection may be met by procurement of insurance covering all work under contract with the City or may be met by procurement of separate insurance for each individual contract. In either case a Certificate of Insurance shall be filed for each contract to show evidence that all required insurance has been obtained.
- H. Termination or Change of Insurance: Each insurance policy shall be endorsed to provide that the insurance company shall notify the City by certified mail at least 30 days in advance of cancellations or of any change in the policy. No change shall be made without prior written approval of the City. The Contractor shall keep all the required insurances in continuous effect until 31 days after the date of final acceptance of the project or until such time as may be established by the City.
- I. Contractual Liability Insurance: The Contractor shall carry Contractual Liability Insurance covering the liability Contractor has assumed under the contract to indemnify and save harmless the City of Portland, its officers and employees with respect to bodily injuries in or death of any person or persons or injury to or destruction of property. The limits for such insurance shall be not less than those specified for Commercial General Liability Insurance in paragraph (b) above.

**SUPPLEMENTAL SPECIFICATION
SECTION 202
REMOVING STRUCTURES AND OBSTRUCTIONS**

The provisions of Section 202 of the Standard Specifications shall apply with the following additions and modifications:

202.011 Depth of Removal

All structures and obstructions shall be removed to a depth as required to allow construction of the project as presented in the construction documents. In roadway areas, removal shall be to depth below all subbase gravel. In areas of utility piping or structures removal will be to a depth sufficient to allow placement of said piping and structures, including supportive materials such as bedding layers, antifoatation slabs and foundations.

202.03 Removing Existing Superstructure, Structural Concrete, Railings, Curbs, Sidewalks and Bridges

This section is modified by adding the following sentence to the first paragraph: All granite curbing, sidewalk brick, and cobblestones removed and not reused in construction of the proposed project shall be delivered to the City stockyard as directed and cost considered incidental to contract.

202.05 Removing Manholes or Catch Basins

The first sentence of this subsection shall be modified by deleting "600 mm [2 feet] below subgrade" and substituting the following: "4 feet below finish grade."

202.06 Removing Bituminous Concrete Pavement

Prior to the removal of bituminous pavement the limit of the removal area shall be saw cut to the appropriate depth for this given location where new pavement will be matched to existing pavement. Existing bituminous asphalt or Portland Cement Concrete pavement areas to be totally removed shall be saw cut to the full existing pavement depth. The preparation of a butt joint will not require saw cutting.

The cutting equipment used shall be exclusively designed for the purpose. It shall be capable of establishing a straight and vertical cut and to minimize chipping of the edge of the existing surface to remain.

202.07 Method of Measurement

Butt joints are incidental to the contract. Saw cutting pavement is incidental to the contract.

202.08 Basis of Payment

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATION
SECTION 203
EXCAVATION AND EMBANKMENT**

The provisions of Section 203 of the Standard Specifications shall apply with the following additions and modifications:

203.04 General:

The Contractor shall excavate rock if encountered to the lines and grades indicated on the drawings, shall dispose of the excavated material, and shall furnish acceptable material for backfill in place of the excavated rock, if required.

In general, rock in pipe trenches shall be excavated so as to be not less than six inches (6") from the pipe after it has been laid. If needed, before the pipe is laid, the trench shall be backfilled to the established trench profile with thoroughly compacted, suitable material or, when so specified or indicated on the drawings, with the same material as that required for bedding the pipe, furnished and placed at no additional cost to the City.

The Contractor shall remove all dirt and loose rock from the designated areas and shall clean the surface of the rock thoroughly, using steam to melt snow and ice, if necessary. Water in depressions shall then be removed as required so that the whole surface of the designated area can be inspected to determine whether seams or other defects exist.

The surface of rock foundations shall be left sufficiently rough to bond well with the masonry and embankments to be built thereon; and, if required, shall be cut to rough benches or steps. Before any masonry or embankment is built on or against the rock, the rock shall be scrupulously freed from all vegetation, dirt, sand, clay, boulders, scale, excessively cracked rock, loose fragments, ice, snow, and other objectionable substances. Picking, barring, wedging, streams of water under sufficient pressure, stiff brushes, hammers, steam jets, and other effective means shall be used to accomplish this cleaning. All free water left on the surface of the rock shall be removed.

203.042 Explosives:

Blasting to remove rock is not anticipated for this project.

**SUPPLEMENTAL SPECIFICATION
SECTION 206
STRUCTURAL EXCAVATION**

The provisions of Section 206 of the Standard Specifications shall apply with the following additions and modifications:

206.01 Description:

For Structural Earth Excavation, only that trench excavation for pipe below the established trench profile as indicated on the Typical Trench Detail shall be included under this section. Trench excavation to the established profile shall be considered as incidental to the appropriate pipe item.

For Structural Rock Excavation, the trench shall be excavated to the established trench profile as indicated on the Typical Trench Detail.

- (a) Drainage and Minor Structures shall include sewer and storm drain pipes, culverts, manholes and catch basins, structural plate culverts, box and pipe culverts, underdrains, berm ditches, cut slope down spout ditches, culvert end walls, concrete steps and other minor structures.
- (b) Special Backfill. The Contractor shall furnish, place and compact special backfill material as indicated on the plans or as required.

The special backfill shall be a sandy, granular material and shall meet the requirements of Section 703.06 (b) Aggregated Subbase - Sand of the Supplemental and Standard Specifications.

The special backfill shall be spread in layers of uniform thickness not exceeding eight inches (8") before compaction and moistened and allowed to dry. Then it shall be thoroughly compacted by means of suitable power driven tampers or other power driven equipment to a uniform density of 95% of maximum density.

206.02 Construction Methods:

The fourth (4th) paragraph of the Standard Specifications shall be modified to read as follows:

When the foundation is to be placed on solid rock, the rock shall be excavated to a firm surface, either level, stepped or serrated. In trenches for sewer and storm drain pipes, culverts, manholes, and catch basins, box and pipe culverts, structural plate pipes and structural plate pipe arches, when solid or disintegrated rock or boulders are encountered, the rock shall be excavated to a minimum depth of six inches (6") below the bottom of the proposed pipe or structure, unless otherwise indicated on the plans or ordered. The six inch (6") level below the bottom of the proposed pipe shall be defined as "Established Trench Profile". For installation of underdrain, the rock shall be excavated to a minimum of three inches (3") below the bottom of the proposed pipe, unless otherwise ordered. Underdrain shall be installed at the proper elevation in accordance with Section 605 and the typical underdrain detail.

206.04 Method of Measurement:

Paragraph (a) of the Standard Specifications shall be deleted and the following paragraphs added;

There will be no measurement for earth excavation except excavation required below a plane parallel with and 6 in below the bottom of the structure or trench, hereinafter referred to as Earth Excavation, Below Grade.

When Structural Rock is encountered for sewer and storm drains, the quantity to be measured for payment will be the amount actually excavated to the "Established Trench Profile" as defined in the fourth (4) paragraph of Section 206.02 of the Supplemental Specifications, provided the maximum

allowable horizontal dimensions do not exceed the payment limit, dimension "A", as indicated on the Typical Trench Detail.

When Structural Rock is encountered for manholes and catch basins, headwalls, steps, structural plate pipes and arches and other drainage structures, other than sewer and storm drains and underdrains, the quantity to be measured for payment will be the amount actually excavated to the "Established Trench Profile", provided the maximum allowable horizontal dimensions do not exceed those bounded by vertical surfaces eighteen inches (18") outside the lines of the base as shown on the plans.

206.05 Basis of Payment:

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATION
SECTION 304
AGGREGATE BASE AND SUBBASE COURSE**

The provisions of Section 304 of the Standard Specifications shall apply with the following additions and modifications:

304.02 Aggregate:

Sources of aggregate and preliminary test results shall be submitted 10 working days prior to any placement of material on the job. Failure of these preliminary tests will be grounds for rejection of material from that source. Aggregates will be tested on the job and shall meet these specifications as the material is incorporated into the work.

304.07 Basis of Payment:

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATION
SECTION 401
PLANT MIX PAVEMENTS - GENERAL**

The provisions of Section 401 of the "State of Maine, Department of Transportation, Standard Specifications (for) Highways and Bridges, Revisions of April 1995" shall apply with the following additions and modifications:

401.11 Preparation of Existing Surfaces:

All streets to be paved shall be swept of all debris (sand, grass, etc.) prior to paving. Any grass or other vegetation growing in the street shall be removed prior to paving. Tack coat shall be applied per section 409.

Where pavement placed under this Contract joins an existing pavement, the existing pavement, when directed by the Engineer, shall be removed a minimum of 1' wide and 1 ½" deep in order to provide a vertical butt joint. The butt joint shall also be tack coated.

All streets to be shimmed shall be reviewed with Engineer prior to placement to determine depth or grade to be achieved.

All vertical cuts in existing pavements shall be treated with an approved asphaltic tack coat material. The surface of the joint once completed shall be flush with the existing pavement.

Specified compaction of bituminous pavement in all work included in this contract shall be achieved without the assistance of vibratory action of the roller unless otherwise directed.

All work under this section shall be considered incidental.

**SUPPLEMENTAL SPECIFICATIONS
SECTION 403
HOT BITUMINOUS PAVEMENT**

The provisions of Section 403 of the "State of Maine, Department of Transportation, Standard Specifications (for) Highways and Bridges, Revisions of April 1995" shall apply with the following additions and modifications:

403.01 Description:

This work shall consist of construction of machine placed bituminous pavement, and hand placed bituminous pavement in brick sidewalks, in accordance with these specifications.

403.05 Basis of Payment:

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATION
SECTION 409
BITUMINOUS TACK COAT**

The provisions of Section 409 of the Standard Specifications shall apply with the following additions or modifications:

409.07 Application of Bituminous Material:

The rate of application shall be 0.02 gallons per square yard. During application, care shall be taken to assure curbing shall not be discolored. Curbing discolored by tack coat shall be cleaned by CONTRACTOR at no cost to the CITY.

409.09 Basis of Payment:

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATION
SECTION 603
PIPE CULVERTS AND STORM DRAINS**

The provisions of Section 603 of the Standard Specifications shall apply with the following additions and modifications:

603.011 Description:

This work shall consist of the construction of storm drains and sewer pipes hereinafter referred to as "pipe" as shown on the plans, details, and specified herein.

The Contractor shall install locating/warning tape over the centerline of all sanitary, storm, and combined sewer pipes including main lines, service leads and catch basin laterals both within the Limit of Work. Both a green warning tape and a number 10 or 12 gauge single strand coated wire shall be installed at a maximum of 24 inches below finish surface grade for the entire length of the pipe. Magnetic warning tape may be used in place of the separate warning tape and wire. The end of all services stubs shall be recorded on the included sheet entitled Storm Sewer Service Location and submitted to the City upon completion of the work.

603.012 Materials:

Pipe materials shall be limited to and meet the requirements specified for the various subsections of the specifications listed below:

Reinforced Concrete Pipe-----	Stand. Spec.-----	706.02
P.V.C. Ring Type Sewer Pipe - (SDR 35 or Equal)-----	ASTM-----	D3034

603.013 Construction Requirements:

Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings:

Open ends of pipe shall be closed by suitable temporary bulkheads to prevent entrance of earth and other materials when pipe laying is not in progress. Contractor shall take all necessary precautions to prevent floatation of the pipe as a result of the water in the trench.

Each pipe length shall be inspected before being laid. Pipe shall be laid to conform to the lines and grades indicated on the drawings. Each pipe shall be so laid as to form a close joint with the next adjoining pipe and bring the inverts continuously to the required grade.

Bell holes shall be excavated or provided in the base material to receive the bell or coupling so that only the barrel of the pipe receives bearing pressure from the supporting material.

When each pipe has been properly bedded, enough of the backfill material shall be placed and compacted between the pipe and the sides of the trench to hold the pipe in correct alignment.

No pipe or fitting shall be permanently supported on blocks, wedges, boards or stones.

All joints shall be made in a dry trench and in accordance with the manufacturer's recommendations.

All PVC Gravity Sewer Pipe supplied shall conform to all aspects of ASTM specification D3034-73A and/or ASTM Spec. F789 for PVC sewer pipe, joints and fittings. Joints shall be rubber gasketed "Bell and Spigot" type. Installation of materials shall be as suggested in ASTM D2321. Minimum "pipe stiffness" at 4% deflection shall be 46 psi for all sizes when tested in accordance with ASTM D2421.

It is the responsibility of the Contractor to assure that the trench and the backfill around the pipe has been compacted sufficiently to limit deflection in the pipe to no more than 4%. All flexible pipe installed under this contract shall be tested by a "go-no-go" mandrel permitting no greater than 4% deflection. Testing of the pipe shall be done in the presence of a City inspector. The inspector shall be given a minimum of 24 hour advance notice before testing is to take place. All pipe not passing the 4% deflection limit test shall be removed and replaced at no additional cost to the City.

Pipe bundles shall be stored on a flat surface so as to support the barrels evenly. This is important as in hot weather PVC pipe will deflect or warp causing installing problems in line and grade. If a warped section is found, the Contractor shall not use such length of pipe.

In order to ensure proper compaction, alignment, and grade, and eliminate any construction problems that may be encountered, the Contractor shall be required to use only the 12-1/2 foot lengths of PVC pipe.

Pipe shall remain stacked in the original shipping bundles, and only pipe taken off the bundle for one day's laying shall be distributed along the trench.

PVC pipe will not bond to concrete or mortar and therefore connection to a cast-in-place or brick manhole and catch basin shall be made as shown on the pipe connection detail of the project plans.

Reinforced Concrete Pipe (If used):

Reinforced concrete pipe shall be obtained only from a manufacturer of established good reputation in the industry. The pipe shall have a smooth and even interior surface, free from projections, indentations, or irregularities of any kind.

The joint shall be such that when joined the pipes will form a continuous and uniform line without projections, off-sets or irregularities and be capable of satisfying the specified leakage requirements.

Pipes shall be joined with rubber or rubber type gaskets that conform to the requirements established in ASTM Designation 443-67.

Each length of pipe shall be provided with proper ends made either of concrete formed on machined rings to ensure accurate joint surfaces or of metal rings. The diameters of the joints surface, depended upon to compress the gasket, shall not vary from the theoretical diameters by more than 1/16 inch. The joint shall be sealed by the rubber gasket so that the joint will remain tight under all conditions of service.

The rubber gasket shall be applied in accordance with the manufacturer's recommendations.

After the pipes are aligned in the trench and are ready to be jointed, all joint surfaces shall be cleaned. Immediately before jointing the pipe, the inside surface of the groove shall be thoroughly lubricated with a recommended lubricant. Pipe shall then be coupled immediately by carefully pushing each pipe into place without damage to pipe or gasket. The position of the gasket in the joint shall then be inspected to be sure it is properly put together and is tight.

Pipes shall be coupled by any suitable arrangement of come-along, winch, jack, or other power equipment that can exert sufficient force to couple pipe to its tightest position.

All pipe thirty-six inches in diameter or larger shall be sealed on the inside with cement mortar or with gunite by the grout-weld method using a pneumatic machine of the Nicholson, Bondactor, or equal type. Cement mortar if used shall be applied by trowel and the joint shall be thoroughly filled and

finished smoothly with the inside surface of the pipe. The grout-weld seal shall be applied only by experienced and skilled workmen in accordance with the instructions of the manufacturers of the machine.

The pipe shall be laid accurately to line and grade. Pipe bedded in compacted crushed stone shall not be supported on blocking, wedges, brick, or anything except the bedding material. Pipe on concrete cradle shall be supported on solid concrete blocks or precast concrete saddles which become part of the completed cradle.

Each length of pipe shall be shoved home against the pipe previously laid, and held securely in position. Joints shall not be "pulled" or "cramped". Holes provided for jointing shall be filled and compacted.

Pipe from which a core has been cut and the resulting hole repaired, shall be placed with the cored hole located forty-five degrees above or below the horizontal centerline of the pipe.

To prevent the entrance of earth and other materials when pipe laying is not actually in progress, the open ends of pipe shall be closed by suitable temporary bulkheads. The Contractor shall take all necessary precautions to prevent floatation of the pipe because of flooding of the trench. If water is in the trench when work is resumed, the bulkheads shall not be removed until the danger of earth and other materials entering the pipe has passed.

All pipe joints and structures shall be made water tight. There shall be no visible leakage, spurting or gushing of water, sand, silt, clay or soil of any description entering the pipe lines at the joints or structures. Where there is evidence of water or soil entering the pipeline, connecting pipes or structures, defects shall be repaired.

603.033 Testing:

All pipes shall be tested by one of the following methods:

- A. Low pressure air
- B. Infiltration
- C. Exfiltration

Approval of method will be made by the Engineer with due consideration for subsurface conditions and size and type of pipe.

The Contractor shall have the proper plugs, weirs, and other equipment to perform all required tests.

A. Low Pressure Air:

When low pressure air test is used, it shall be conducted in compliance with the following:

After completing backfill of the pipeline, the Contractor shall, at no additional cost to the City, conduct a pipeline acceptance test using low pressure air. The test shall be performed according to stated procedures and in the presence of the Engineer.

Procedures:

All pneumatic plugs shall be seal tested before being used in the actual test installation. One (1) length of pipe shall be laid on the ground and sealed at both ends with the pneumatic plugs to be checked. Air shall be introduced into the plugs at 25 psig. The sealed pipe shall be pressured to 5 psig. The plugs shall hold against this pressure without bracing and without movement of the plugs out of the pipes.

After a manhole to manhole reach of pipe has been backfilled and cleaned, and the pneumatic plugs are checked by the above procedure, the plugs shall be placed in the line at each manhole and inflated to 25 psig. Low pressure air shall be introduced into this sealed line until the internal air pressure reaches 4 psig greater than the average back pressure off any ground water that may be over the pipe. At least two minutes shall be allowed for the air pressure to stabilize.

After the stabilization period (3.5 psig minimum pressure in the pipe), the air hose from the control panel to the air supply shall be disconnected. The portion of line being tested shall be termed "acceptable" if the time required in minutes for the pressure to decrease from 3.5 to 2.5 psig (greater than average back pressure of any ground water that may be over the pipe) shall not be less than the time shown for the given diameters in the following table:

<u>Pipe Diameter</u> <u>(In Inches)</u>	<u>Minutes</u>
4.....	2.0
6.....	3.0
8.....	4.0
10.....	5.0
12.....	5.5
15.....	7.5
18.....	8.5
21.....	10.0
24.....	11.5

In areas where groundwater is known to exist, the Contractor shall install a one-half inch diameter capped pipe nipple, approximately 10" long, through the manhole wall on top of one of the sewer lines entering the manhole. This shall be done at the time the sewer line is installed. Immediately prior to the performance of the Line Acceptance Test, the groundwater shall be determined by removing the pipe cap, blowing air through the pipe nipple into the ground so as to clear it, and then connecting a clear plastic tube to the nipple. The hose shall be held vertically and a measurement of the height in feet shall be divided by 2.3 to establish the pounds of pressure that will be added to all readings. (For example, if the height of the water is 11-1/2 feet, then the added pressure will be 5 psig, and the 2.5 psig to 7.5 psig. The allowable drop of one pound and the timing shall remain the same.)

If the installation fails the air test, the Contractor shall, at no additional cost to the City, determine the source of the leakage. Contractor shall then repair or replace all defective materials and/or workmanship.

B. Infiltration:

An infiltration test requires groundwater levels to be a minimum of one foot above the crown of the pipe of the high end of the section being tested. Infiltration test procedures are:

1. Engineer to determine length of pipeline to be tested.

2. With all connecting pipes plugged (other than those included in test section) install a V notch weir in downstream end of pipe. The V notch weir must be constructed accurately and installed to maintain a watertight seal between weir and pipe.
3. Allow time for water to build up behind weir until steady, uniform flow passes through V notch.
4. Readings shall be taken and recorded.

C. Ex-filtration:

Ex-filtration test procedures are:

1. Engineer to determine length of pipeline to be tested.
2. Properly cap or plug and block connections into sewer lines being tested.
3. Plug upstream and downstream ends of test section providing a water supply connection downstream and standpipe in manhole upstream.
4. Fill test section and upstream standpipe and allow time for water absorption in manholes.
5. Measure drop in upstream standpipe over 3 or 4 -15 minute periods and compute leakage. Note: The upstream manhole may be used as the standpipe. Test sections shall be kept short enough to maintain a reasonably low head to prevent excess pressures.

Leakage in gravity sewers shall not exceed 100 gallons per inch diameter, per day, per mile of pipe when tested by either internal pressure or external pressure means. Should the pipe as laid fail to meet these requirements, the Contractor shall perform the necessary work, at no additional cost to the City, to meet these requirements.

603.034 Inspection:

Pipe may be inspected at the manufacturing plant, or on the work site and shall be subject to rejection at any time, even though sample pipes may have been accepted as satisfactory at the manufacturing plant.

All pipe shall be subject to thorough inspection and tests. All tests shall be made in accordance with the methods prescribed by, and the acceptance or rejections shall be based on, applicable ASTM specifications.

Pipe will be inspected upon delivery and all pipe which does not conform to the requirements of this contract will be rejected and shall be immediately removed from the work area by the Contractor.

Unsatisfactory pipe will be either permanently rejected or minor repairs made. After delivery, any pipe will be rejected which has been damaged beyond the possibility of satisfactory repair.

If such pipe is found in the pipeline, it shall be removed and replaced or encased in a Class A concrete collar or envelope as directed, at no additional cost to the City.

An inspection of the interior of all mainline pipe and catch basin lateral connections installed as part of the project shall be completed prior to final paving of the project by experienced personnel trained in locating breaks, obstacles and service connections by closed circuit television. A video tape and suitable log shall be provided to the City for review prior to final paving.

603.12 Basis of Payment:

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATION
SECTION 604
MANHOLES, INLETS, AND CATCH BASINS**

The provisions of Section 604 of the Standard Specifications shall apply with the following additions and modifications:

604.03 Construction Requirements

Concrete Blocks shall not be used in any way in the construction or alteration of manholes or catch basins.

All manhole bases, barrel sections and top sections shall be marked, by the manufacturer, with the appropriate manhole station (and offset if applicable) and the street name, if more than one street is incorporated within a single contract.

Between the third and fourth paragraphs of the Subsection insert the following paragraphs:
Sanitary sewer inverts shall be constructed by brick masonry or approved fiberglass insert.

Special precautions shall be taken to provide adequate ventilation and attending personnel for the safety of all workers who may be required to enter existing sewers or sewers under construction.

It is emphasized to the Contractor that sanitary sewer and drainage construction under this contract shall be coordinated with existing sewer facilities so that continuous service and handling of existing flows is accomplished.

In the existing fifth paragraph, first sentence of that Subsection delete only "Metal frames and traps", and substitute therefore "Metal frames, steps, other appurtenances, and traps".

The outside surface of any masonry work for catch basins and manholes shall be plastered with mortar from 1/4 inch to 3/8 inch thick. The masonry shall be properly wetted before the plaster is applied. The plaster shall be carefully spread and troweled so that all cracks are thoroughly worked out. After hardening, the plaster shall be carefully checked by being tapped for bond and soundness.

All brick masonry surfaces with mortar shall be waterproofed with one coat of DEHYDRATINE 6 TROWEL MASTIC, DEHYDRATINE 10 SEMI-MASTIC or approved equal.

All poured concrete or precast concrete surfaces shall be waterproofed with two heavy coats of bituminous waterproofing materials. The material shall be MINWAX FIBROUS BRUSH COAT made by the Minwax Company, New York, New York; TREMCO 121 FOUNDATION COATING, made by the Tremco Manufacturing Company, Cleveland, Ohio; INERTOL NO-7 made by Inertol Company, Newark, New Jersey or approved equal.

All waterproofing material shall be applied according to the manufacturer's specifications and directions.

Catch basins shall be constructed as shown on the contract drawings. Unless otherwise indicated, catch basins shall have A-4 inlet stones, granite tipdowns and Casco traps which shall be incidental to the contract unit price of the structure.

Leakage tests may be required on each manhole. The tests, if ordered, shall be the exfiltration test made as described below:

After the manhole has been assembled in place, all lifting holes and all exterior joints shall be filled and pointed with an approved non-shrinking grout or approved bituminous mastic as shown on the construction drawings. The test shall be made prior to placing the shelf and invert and before filling and pointing the horizontal joints. If the groundwater table has been allowed to rise above the bottom of the manhole, it shall be lowered for the duration of the test. All pipes and other openings into the manhole shall be suitably plugged and the plugs braced to prevent blow out.

The manhole shall then be filled with water to the top of the cone section. If the excavation has not been backfilled and observation indicates no visible leakage, that is, no water visibly moving down the surface of the manhole, the manhole may be considered to be satisfactorily water-tight. If the test, as described above is unsatisfactory, or if the manhole excavation has been backfilled, the test shall be continued. A period of time may be permitted if the Contractor so wishes, to allow for absorption. At the end of this period, the manhole shall be refilled to the top of the cone, if necessary, and the measuring time of at least 8 hours begun. At the end of the test period, the manhole shall be refilled to the top of the cone, measuring the volume of water added. This amount shall be extrapolated to a 24-hour rate and the leakage determined on the basis of depth. The leakage for each manhole shall not exceed 1 gallon per vertical foot for a 24-hour period. If the test fails this requirement, but the leakage does not exceed 3 gallons per vertical foot per day, repairs by approved methods may be made to bring the leakage within the allowable rate of 1 gallon per foot per day.

Leakage due to a defective section or joint or exceeding the 3 gallon per vertical foot per day shall be the cause for the rejection of the manhole. It shall be the Contractor's responsibility to uncover the manhole as necessary and to disassemble, reconstruct or replace it. The manhole shall then be retested and, if satisfactory, interior joints shall be filled and pointed.

No adjustment in the leakage allowance will be made for unknown causes such as leaking plugs and absorptions. It will be assumed that all loss of water during the test is a result of leaks through the joints or through the concrete. Furthermore, the Contractor shall take any steps necessary to assure the Engineer that the water table is below the bottom of the manhole throughout the test.

604.031 Drainage Structures Abandoned or Removed

The existing castings on manholes and/or catch basins to be abandoned or removed shall be carefully removed, cleaned and delivered to the City stockyard as directed. All such castings shall become the property of the City.

Inlet stones for catch basins to be abandoned or removed shall be carefully removed, cleaned and delivered to the City Stockyard as directed and shall be considered incidental to the contract.

The inlets and outlets of structures to be abandoned shall be plugged with bricks and mortar. The upper portions of the masonry shall be removed to a depth of four (4') feet below the finished grade, and the structures shall be completely filled with selected excavated material placed in six (6") inch layers and thoroughly compacted. Prior to backfilling, the sump shall be pumped and cleared of all water and foreign materials.

The existing masonry of structures to be removed shall be completely removed. The inlets and outlets shall be fully plugged with bricks and mortar. The cavity shall be completely filled with selected excavated materials placed in six (6") inch layers and thoroughly compacted.

604.032 Remove Existing Drainage Structures and Replace with New Drainage Structures

The existing castings on manholes and/or catch basins to be removed and replaced shall be carefully removed, cleaned and delivered to a City stockyard as directed. All such castings shall become the property of the City. Existing inlet stones for catch basins to be replaced shall be carefully removed, cleaned and delivered to a City Stockyard as directed and shall be incidental to the cost of said item.

604.04 Altering, Adjusting and Rebuilding Catch Basins and Manholes

Existing manholes to be altered shall be reconstructed as indicated on the plans or as required due to field conditions. Alterations include adjustments to manhole invert channel caused by new pipe connections, waterproofing, installation of new steps and adjusting to grade.

Altering existing catch basins shall include the removal and replacement of inlet stone, frame, grate, Casco Trap, adjustment to grade, connection of underdrain to basin, and reconnection of existing inlet/outlet.

Relocating existing catch basins shall include the removal and replacement of inlet stone, frame, grate, Casco Trap, adjustment to grade, connection of underdrain to basin, and installation of new inlet/outlet.

604.06 Basis of Payment

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATION
SECTION 605
UNDERDRAINS**

The provisions of Section 605 of the Standard Specifications shall apply with the following additions and modifications:

605.01 Description

The proposed underdrain shall be 6" in diameter and shall be constructed as shown on the plans and specified herein. The type of pipe material used for this purpose shall be SDR-35 or HDPE as shown on the details. Coiled pipes shall not be used.

605.02 Materials

Bedding material around underdrain shall conform to the requirements of Subsection 703.30 of these specifications. Material for pipe shall conform to the appropriate subsection of Section 700 of the Standard Specifications for the particular type of pipe supplied. Underdrain filter fabric material shall be equal to Mirafi 140N.

605.04 Underdrain Construction

Underdrain shall be constructed in accordance with the Standard Specifications and as shown on the plans and detail sheets of the Contract Drawings.

605.07 Basis of Payment:

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATIONS
SECTION 608
SIDEWALKS**

The provisions of Section 608 of the Standard Specifications shall apply with the following additions and modifications:

608.01 Description:

This work shall consist of the construction of both bituminous concrete and reinforced concrete sidewalks in accordance with these specifications and in reasonably close conformity to the lines and grades as shown on the plans.

608.02 Materials:

Portland cement concrete shall meet the requirements of Section 502 - Structural Concrete – of the Standard Specifications. Material for bituminous concrete base courses and surface courses for sidewalks and driveways shall conform to the requirements of Section 403 of the Standard Specifications for Hot Bituminous Pavement, Hot Mix Asphalt, 12.5 mm. Crushed gravel base shall conform to the requirements of Section 304 of these specifications for Aggregate Base Course - Crushed, Type "A".

608.03 Portland Cement Concrete Sidewalks:

- a. Excavation: Excavation shall be made to the depth and width that will permit the installation and bracing of the forms. The foundation shall be shaped and compacted to a firm even surface conforming to the section shown on the plans and typical detail. All soft and yielding material shall be removed and replaced with acceptable material.
- b. Sidewalk Construction: Concrete sidewalks shall be four (4") inches thick and reinforced with 6 x 6 10-gage wire mesh or fibrous reinforcement. Concrete sidewalks shall be laid on a thoroughly compacted eight (8") inch deep crushed gravel base.
- c. Placing Concrete: The foundation shall be thoroughly moistened immediately prior to placing concrete. The portioning, mixing and placing of the concrete shall be in accordance with the requirements of Section 502 – Structural Concrete.

608.04 Bituminous Concrete:

- a. Excavation: Excavation shall be made to the required depth and width. The foundation shall be shaped and compacted to a firm even surface conforming to the section shown on the plans and typical details. All soft and yielding material shall be removed and replaced with acceptable material.
- b. Sidewalk Construction: Sidewalks shall be constructed with a two (2") inch course of bituminous pavement, 12.5 mm laid on a thoroughly compacted six (6") inch deep crushed gravel base.
- c. Placing Bituminous Material: Bituminous material shall be placed on the compacted base course in two courses, one base and one surface, so as to give the required depth when rolled. Compaction shall be accomplished by means of a power roller having a minimum total weight of 2,000 pounds with a minimum of 65 pounds per inch of width of the drive roll or by satisfactory power vibratory compaction equipment. In areas inaccessible to other equipment, hand tamping will be permitted. In any case the bituminous material shall be uniformly compacted.

608.06 Basis of Payment:

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATION
SECTION 609
CURB**

The provisions of Section 609 of the Standard Specifications shall apply with the following additions and modifications:

609.01 Description

This work shall include all (5") straight and circular Vertical Curb Type 1 to be set including new tipdown curb and sidewalk ramp curb. Material shall be in accordance with Section 712.04 except that drill holes through the curb will not be allowed.

609.03 Vertical Stone Curb, Terminal Section and Transition Sections

All joints of the curb shall have a four inch (4") by eight and one half inch (8-1/2") pad on the back side. The pad shall be filter fabric such as that used for underdrain or for roadway stabilization. The pad shall be placed in full contact with the curb from a half inch (1/2") below top of curb to two inches (2") below gutter grade and backfilled to hold in place.

609.081 Removing and Stacking Vertical Curbing, Terminal Curbing, Transition Sections, Curb Inlets, and Curb Corners (Type 1)

The Contractor shall be responsible for the removal without damage, cleaning and stacking a City designated location, all straight and curved curbing, terminal sections and curb corners which are designated to be replaced with new curb and shall be incidental to Item 609.11. Removal of curbing so designated shall be in accordance with the requirements of Subsection 609.08.

Each section of straight curbing shall have its overall length painted legibly and plainly on one end. Each section of circular curbing shall have its overall arc length and radius painted on one end.

Removing and stacking curb or edging shall include all labor, equipment, tools and materials for excavating, removing, cleaning, backfilling, handling, stacking and any incidental work necessary.

609.10 Basis of Payment

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATION
SECTION 627
PAVEMENT MARKINGS**

The provisions of Section 627 of the Standard Specifications shall apply with the following additions or modifications:

627.10 Basis of Payment:

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATION
SECTION 652
MAINTENANCE OF TRAFFIC**

The provisions of Section 652 of the Standard Specifications shall apply with the following additions and modifications:

652.3.6 Traffic Control

The Contractor shall maintain a passable vehicular route from the Expo/Ice Arena Parking lot to behind the Ice Arena at all times outside of normal working hours. Contractor shall not interfere with public use of the Ice Arena or Exposition Building.

652.8 Basis of Payment

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATION
SECTION 654
SOIL BACKFILL COMPACTION TESTING**

654.01 Description

This work shall consist of furnishing an approved certified soil testing laboratory, to conduct in-place density tests of backfill materials in the field and all related laboratory tests.

654.02 General

Upon completion of the field test, the results shall be made available to the City Inspector on site. Copies of all test results shall be transmitted to the Engineering Department of the City of Portland.

The minimum in-place densities shall meet or exceed the laboratory maximum density as determined by ASTM D 1557 - 78 as follows:

Embankment	Ninety-five percent	(95%)
Trench Backfill	Ninety-five percent	(95%)
Aggregate Base Course and Aggregate Subbase Course	Ninety-five percent	(95%)

654.04 Basis of Payment

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATIONS
SECTION 656
TEMPORARY EROSION CONTROL**

The provisions of Section 656 of the Standard Specifications shall apply with the following additions:

656.01 Description

Provide temporary construction fence around perimeter of project site
Provide filter barrier until permanent vegetation is established.
Remove and dispose of temporary erosion control materials following construction.

656.02 Materials

Temporary construction fence shall be orange poly fence; construction fabric by E.J. Prescott or approved equal.

Filter barrier shall be Mirafi silt fence of approved equal.

656.11 Basis of Payment

All work under this section shall be considered as part of the Lump Sum price for the Contract.

**SUPPLEMENTAL SPECIFICATION
DIVISION 700 - MATERIAL DETAILS**

The following are revisions and additions to the Standard Specifications. Provisions contained herein shall be considered to supplement or supersede those portions of the Standard Specifications as they apply to the Contract.

The GENERAL STATEMENT of this Division is hereby revised to read as follows:
All materials which are to be used in the work for which there is no prescribed testing by the project inspectors or other certified laboratories, the Contractor shall, prior to final acceptance as specified in subsection 105.17(b), submit a Materials Certification Letter similar to:

Company Letterhead

Mr. _____ Resident Date _____
Address _____ Project No. _____
_____ Town _____

"This is to certify that the below listed materials, which are incorporated into the above designated project, comply with the pertinent specified material requirements of the contract. Processing, project testing and inspection control of raw materials are in conformity with the applicable drawings and/or standards of all articles furnished. (List only those items used.)

- Castings, Grates, Frames and Traps
- Concrete Blocks, Bricks, Precast Sections, Appurtenant Structures
- Culverts, Underdrain, and Storm Drain Pipe
- Regulatory Signs and Posts

All records and documents pertinent to this letter and not submitted herewith shall be maintained available by the undersigned for a period of not less than three (3) years from the date of completion of the project.

The Materials Certification letter shall be signed by a person having legal authority to bind the Contractor.

Materials for which the above Certificate is acceptable may be subject to random sampling and testing by the City. Certified materials which fail to meet specification requirements may not be accepted.

**SUPPLEMENTAL SPECIFICATION
SECTION 703 - AGGREGATES**

The provisions of Section 703 of the Standard Specifications shall apply with the following additions and modifications:

703.02 Coarse Aggregate for Concrete:

Designated Aggregate Size

Sieve Size	Percent Passing Sieve				
	2 in.	1½ in.	1 in.	¾ in.	½ in.
2 in.	95-100	100	-	-	-
1-1/2 in.	-	95-100	100	-	-
1 in.	50-70	-	90-100	100	-
¾ in.	-	50-70	-	90-100	100
½ in.	15-30	-	25-60	-	90-100
¾ in.	-	10-30	-	20-55	-
No. 4	0-5	0-5	0-10	0-10	0-15
F.M. (+0.20)	7.45	7.20	6.95	6.70	6.10

Aggregate used in concrete shall not exceed the following maximum designated sizes:

- a. 2 inches for mass concrete
- b. 1-1/2 inch for piles, pile caps, footings, foundation mats, and walls 8 inches or more thick
- c. ¾ inch for slabs, beams, and girders.
- d. ½ inch for fireproofing on steel columns and beams

1 inch for all other concrete

703.06 (a) Aggregate Base:

Aggregate base - crushed, type "A" shall not contain particles of rock which will not pass the two inch (2") square mesh sieve, and shall conform to the type "A" aggregate, as listed in the subsection of the Standard Specifications.

"Crushed" shall be defined as consisting of rock particles with at least 50 per cent of the portion retained on the 1/4 inch square mesh sieve, having a minimum of 2 fracture faces.

703.06 (b) Aggregate Subbase:

Sand subbase shall not contain particles of rock which will not pass the one inch (1") square mesh sieve, and shall conform to the type "F" Aggregate, as listed in this subsection of the Standard Specifications.

Gravel subbase shall not contain particles of rock which will not pass the three inch (3") square mesh sieve, and shall conform to type "D" Aggregate, as listed in this subsection of the Standard Specifications.

703.18 Common Borrow:

Common borrow shall not contain any particle of bituminous material.

703.19 Granular Borrow:

Granular borrow shall contain no particles which will not pass a three inch (3") square mesh sieve.

703.20 Gravel Borrow:

Gravel borrow shall not contain particles of rock which will not pass three inch ("3") square mesh sieve.

703.30 Crushed Stone for Pipe Bedding and Underdrain:

"Crushed Stone" shall be defined as rock of uniform quality and shall consist of clean, angular fragments of quarried rock, free from soft disintegrated pieces or other objectionable matter.

Crushed stone used as a bedding material for pipe and underdrain shall be uniformly graded and shall meet the follow gradations.

Sieve Designation	Percentage by Weight Passing Square Mesh Sieve
3/4 – inch-----	100
3/8 – inch-----	20 - 55
No. 4-----	0 - 10

For pipe sizes 42 inches and larger:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieve
1-1/4 – inch-----	100
3/8 – inch-----	20-55
No. 4-----	0-10

The stone shall be free from vegetable matter, lumps or balls of clay, and other deleterious substances.