

SPECIFICATIONS AND CONTRACT DOCUMENTS

FOR

2016 SLURRY SEAL PROJECT

City of Tualatin, Oregon

Bert Olheiser
Street/Sewer/Storm Division Manager
503-691-3096

May 2016

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**City of Tualatin
Invitation for Price Quotes
Slurry Seal**

The City of Tualatin is requesting price quotes for Slurry Seal of multiple residential streets.

The project consists of applying a mixture of Type II Emulsified Asphalt Slurry Seal Surfacing in accordance with Section 00706 of the 2015 Oregon Department of Transportation (ODOT) Standard Specifications. The approximate surface to be sealed is 50,400 square yards. The per square yard price quote shall include mobilization, traffic control including signage, cones, barricades, and all necessary equipment, materials and personnel to complete the project.

State of Oregon Bureau of Labor and Industries (BOLI) Prevailing Wage Rate for Public Works Contracts of Oregon may apply. Download most recent version from www.oregon.gov/boli.

A complete set of solicitation documents including the scope of work, sample contract and the design specifications are available at <http://bids.tualatinoregon.gov>.

Price quotes will be accepted until 2:00 pm on May 11, 2016 at City of Tualatin's Operations Center located at 10699 SW Herman Road, Tualatin, OR 97062 or by email to bolheiser@ci.tualatin.or.us.

For additional information contact Bert Olheiser at 503-691-3096.

Dated this 27th day of April, 2016.

Published in the *Daily Journal of Commerce* on April 27, 2016 and May 4, 2016.

PROPOSAL
for work under the
2016 Slurry Seal Project

TO: CITY OF TUALATIN
(County of Washington, State of Oregon)
mailing address: 18880 SW Martinazzi Avenue
Tualatin, Oregon 97062-7092

This proposal is submitted as an offer by the undersigned to enter into contract with the City of Tualatin ("Owner") to furnish all labor, tools, equipment, and materials, and perform all work required under the 2016 Slurry Seal Project in accordance with the contract documents for the construction project, in consideration of the amounts stated in this proposal.

The undersigned agrees that within ten (10) calendar days of receipt of written notice of acceptance of this proposal by Owner, he/she will execute a contract agreement with Owner and provide corporate surety Performance and Payment Bonds, each in the amount of 100 percent of the awarded contract. The undersigned further agrees to provide the Owner within said ten (10) calendar days with proof that the undersigned has filed a Public Works Bond with the Construction Contractors Board, as required by ORS 279C.800 to 279C.870.

The undersigned declares by the signing of this proposal that the undersigned bidder agrees to be bound by and will comply with the provisions of ORS 279C. 840 or 40 U.S.C. §276a relating to prevailing wage rates. The signing of this proposal constitutes certification of compliance upon which the City is entitled to rely.

The undersigned declares by signing of this proposal that the undersigned bidder has not discriminated and will not discriminate against minority, women, or emerging small business enterprises in obtaining any required subcontracts. The signing of this proposal constitutes certification of compliance upon which the City is entitled to rely.

The bidder shall complete the following bid schedule.

Work on this schedule shall be completed by August 26, 2016.

Bidder agrees that the City may increase, decrease, or delete bid items to match the project with available funds. Payment will be based on the unit prices.

PROPOSAL FOR
2016 Slurry Seal Project

Mobilization and Demobilization - Included	
.	
Type II Slurry Seal City Roadways (sq. yd.)	
.	
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.	

The undersigned agrees that if awarded the contract, he or she will commence work within ten (10) calendar days after the date of receipt of the written notice to proceed, and that he or she will complete the work within specified schedule after receipt of the notice. The effective date of the notice to proceed will be July 11, 2016.

BUSINESS NAME OF CONTRACTOR _____

CONTRACTOR ADDRESS _____

TELEPHONE NUMBER _____

AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of _____, 20____, by and between _____ ("Contractor") and the City of Tualatin (County of Washington, State of Oregon) ("Owner").

WITNESSETH that:

WHEREAS, pursuant to the invitation of Owner, on the ____ day of _____, 20____, Contractor filed with Owner a proposal containing an offer; and

WHEREAS, Owner has determined that said offer was the best submitted;

NOW, THEREFORE, IT IS AGREED:

That Contractor shall comply in every way with the requirements of those certain documents entitled: Contract Documents for 2016 Slurry Seal Project.

That, in consideration of faithful compliance with the terms and conditions of this agreement, Owner shall pay to Contractor at the times and in the manner provided in the Contract Documents the total sum of _____, which sum is subject, to increase or decrease in such proportion as the quantities named in the proposal are so changed, all in conformance with the Contract Documents.

That the time of completion will be specified as it pertains to each schedule from date of notice to proceed.

That the Contract Documents are made a part of this agreement by actual attachment.

Contractor agrees to indemnify and hold harmless Owner from any and all defects appearing or developing in the materials furnished and the workmanship performed under this contract for a period of one (1) year after date of acceptance of the work by Owner.

Contractor agrees to fully comply with the provisions of ORS 279C.800 through 279C.870 relating to prevailing wage rates, which are made a part of this contract by reference as though fully set forth.

IN WITNESS WHEREOF, Contractor and Owner have caused this agreement to be executed on the day and year first above written.

CONTRACTOR

Name _____

By _____

(typed or printed name)

Title _____

Telephone number _____

CITY OF TUALATIN
(County of Washington, State of Oregon)

By _____

Sherilyn Lombos
(typed or printed name)

Title _____

Telephone number _____

Attested:

By _____
City Recorder

Approved as to form:

City Attorney

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____
_____ as Principal, and _____,
a corporation, duly authorized to do business in the State of Oregon as Surety, are jointly and severally held and bound unto the City of Tualatin (County of Washington, State of Oregon) in the sum of _____ for the payment of which we jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns, firmly by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT

WHEREAS _____, the Principal herein on the ____ day of _____, 20____, entered into an agreement with the City of Tualatin (County of Washington, State of Oregon), the Obligee herein, the complete terms and conditions of which are contained in the document entitled "Contract Documents for 2016 Slurry Seal Project", all as hereto attached and made a part hereof, whereby the Principal undertakes to do all labor, furnish all plant and equipment, and furnish all material in accordance with all the terms and conditions set forth in the Contract Documents; and promptly to make payment for all labor, services, and material and promptly pay sums due the Industrial Accident Fund and State Unemployment Compensation Fund and all sums required to be paid over to the Department of Revenue pursuant to the Personal Income Tax Act of 1969 as amended; and to save harmless the Obligee from any reason of the work, as set out more fully in the Contract Documents; and to do and perform all things in the Contract Documents required, in the time and manner and under the terms and conditions therein set forth; and in conformity with all laws, state and national, applicable thereto.

NOW, THEREFORE, if the Principal herein shall in the time and manner, and under the terms and conditions prescribed, well and faithfully do, perform, and furnish all matters and things as by them in the Contract undertaken, and as by law, state and national prescribed, then this obligation shall be void, but otherwise it shall remain in full force and effect.

PROVIDED, HOWEVER, that this bond is subject to the following further conditions:

- (a) In no event shall the Surety be liable for a greater sum than the penalty of this Bond, or subject to any suit, action, or proceeding thereon that is instituted later than the period of time allowed by the applicable State or Federal Regulation after the complete performance of the Contract and final settlement thereof.
- (b) The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligations on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work or to the specifications.

IN WITNESS WHEREOF, the parties hereto have caused this Bond to be executed in quadruplicate, this ____ day of _____, 20__.

PRINCIPAL

By _____

(typed or printed name)

Title _____

Telephone Number _____

SURETY

By _____

(typed or printed name)

Title _____

Telephone Number _____

Countersigned:

Resident Agent

Telephone Number _____

Address _____

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____
_____ as Principal, and _____
_____, a corporation, duly authorized to do business in the State of Oregon as Surety, are jointly and severally held and bound unto the City of Tualatin (County of Washington, State of Oregon) in the sum of: _____
_____ for the payment of which we jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns, firmly by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT

WHEREAS _____, the Principal herein on the ____ day of _____, 20____, entered into an agreement with the City of Tualatin (County of Washington, State of Oregon) the Obligee herein, the complete terms and conditions of which are contained in the document entitled: "Contract Documents for 2016 Slurry Seal Project," all as hereto attached and made a part hereof, whereby Principal undertakes to do all labor, furnish all plant and equipment, and furnish all material in accordance with all the terms and conditions set forth in the Contract Documents; and promptly to make payment for all labor, services, and material and promptly pay sums due the Industrial Accident Fund, the State Unemployment Compensation Fund and all sums required to be paid over to the Department of Revenue pursuant to the Personal Income Tax Act of 1969, as amended, and to save harmless the Obligee from any reason of the work, as set out more fully in the Contract Documents; and to do and perform all things in the Contract Documents required, in the time and manner and under the terms and conditions therein set forth; and in conformity with all laws, state and national, applicable thereto.

NOW, THEREFORE, if the Principal herein shall promptly pay all persons furnishing labor, services, material, or insurance to the Principal, or to his subcontractors, or to their assigns, on or about the work; and shall save harmless the Obligee, its officers and agents, from all claims therefore, or from any claim for damages or injury to property or persons arising by reason of the work; and shall pay all sums due the Industrial Accident Fund, the State Unemployment Compensation Fund and all sums required to be paid over to the Department of Revenue pursuant to the Personal Income Tax Act of 1969, then this obligation shall be void, but otherwise it shall remain in full force and effect.

PROVIDED, HOWEVER, that this bond is subject to the following further conditions:

- (a) All material men and all persons who shall supply such laborers, mechanics of subcontractors with material, supplies, or provisions for carrying on such work, shall have a direct right of action against the Principal and Surety on this bond, second only to the right of the Obligee under this bond, which right of action shall be asserted in proceedings instituted in the appropriate court of the State of Oregon, and insofar as permitted by the laws of Oregon, such rights of action shall be asserted in a proceeding instituted in the name of the Obligee to the use and benefit of the person, firm or corporation instituting such action and of all persons, firms, or corporations having claims hereunder shall have the right to be made a party to such proceeding (but not later than two years after the complete performance of the contract and final settlement and judgment rendered thereon).
- (b) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action, or proceeding thereon that is instituted later than the period of

SLURRY SEAL

PART 1:

1.1 SCOPE

This project shall consist of applying a mixture of Type II Emulsified Asphalt Slurry Seal Surfacing in accordance with Section 00706 of the 2015 ODOT Standard Specifications. Provide resident and/or business notification, Traffic Control per 2011 Oregon Temporary Traffic Control Handbook and to cleanup roadways and staging areas at the conclusion of the project.

1.2 SCHEDULE

The Contractor shall furnish a written schedule of expected progress, with dates of proposed street closures for the Engineer's review and approval at least 15 working days prior to beginning work. Unless otherwise directed by the Engineer, work shall conform to the schedule as approved by the Engineer. Should rescheduling become necessary, no work shall be done until the City agrees on a revised schedule and residents are notified.

Notice to Proceed July 11, 2016 Completed prior to August 26, 2016

1.3 TRAFFIC CONTROL

The Contractor shall provide and maintain suitable barricades, signs, and flaggers as are necessary to ensure the safety and convenience of the public, his employees and to protect the work.

For all bid items, a plan detailing proposed barricades, signs and flaggers to protect the work shall be submitted to the Project Manager at the preconstruction conference. Said barricades and signing shall conform to the latest edition of the Manual on Uniform Traffic Control Devices and shall meet the approval of the Project Manager prior to placement. It shall be the responsibility of the Contractor to move, replace, position, or remove any signs as required due to changes in the work schedule due to weather or other unforeseen circumstances. Signs, barricades, or other traffic control measures shall be placed on a daily basis of the project status whether or not the Contractor has a crew engaged in the slurry seal construction in the area.

The intent is to close specific areas during the course of the work and for a period thereafter until the Engineer determines that traffic may utilize the new surface. The Contractor shall remove all barricades and signs promptly when the Engineer determines the area may be reopened to traffic.

No residential area shall be sealed so as to require closing for curing past 5:00 p.m. without approval of the Engineer. The Contractor shall schedule work so that the residents of dead end or side streets are not continuously isolated for more than four (4) hours.

When the work cannot be completed as scheduled, the Contractor shall re-notify the affected property owners of the changes in the work schedule as soon as it is known that their street cannot be completed as scheduled. Property owners shall also be informed at this time of the anticipated date for rescheduling. This shall be done in a prompt and courteous manner. The

Contractor shall deliver a follow-up (24 hour) notice to affected properties when postponed streets are rescheduled. Obtain City approval of notices prior to distribution.

1.4 NOTIFICATION OF PUBLIC ENTITIES

The Contractor shall notify the following agencies 48 hours in advance of beginning construction on any street and explain to them the extent to which traffic will be interrupted. The Contractor shall also notify these agencies 24 hours in advance of schedule changes.

Police	(503) 691-4800
Fire District	(503) 649-8577
Republic Service	(503) 682-3900
US Post Office	(503) 692-0423
Tri-Met	(503) 238-7433

1.5 NOTIFICATION OF THE PUBLIC

The Contractor shall be responsible for providing the labor to notify all abutting property owners along the streets in accordance with the approved schedule or an approved revision thereto, two (2) full working days prior to the specific work. The City will provide the notification materials to the Contractor.

It shall be the responsibility of the Contractor to re-notify the public with approved written notice of changes in work schedules which are the result of weather or other uncontrollable circumstances. This shall be done in a prompt and courteous manner.

1.6 WORKMEN AND EQUIPMENT

The Contractor shall employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the terms of the contract.

All workmen shall be competent, efficient and sufficiently experienced to perform the work assigned to them. All equipment shall be of sufficient size and in such mechanical condition as to meet the requirements of the work to produce the specified product.

The Contractor shall have on the worksite at all times, as his agent, a competent supervisor (not part of the work crew) capable of reading and thoroughly understanding the plans rule specifications and thoroughly experienced in the type of work being performed. At least two (2) experienced squeegee workers shall be utilized on each slurry seal application crew.

Any person employed on the project by the Contractor or any of his subcontractors who, in the opinion of the City does not perform his work in a proper and skillful manner, or whose conduct interferes with the progress of the work, shall at the written request of the City be removed by his employer, and shall not be again employed on the project without the approval of the City.

Any equipment on the worksite which, in the opinion of the City, fails to produce a satisfactory project or result shall; at the written request of the City be removed and shall not be used again on the project without approval of the City.

Should the Contractor fail to remove persons or equipment as above provided, or fail to furnish suitable and sufficient personnel, equipment and materials for the proper prosecution of the work, the City may either suspend the work by written notice or back charge the contractor \$500.00 per day until such orders are complied with and such deficiencies are corrected.

1.7 “NO PARKING” SIGNS

On streets where parking is allowed, the Contractor shall place “No Parking” signs, at least three (3) to a block, along both sides of the street. The signs shall be posted at least two (20 full working days in advance of any contractor activity and state the date and times when parking is not allowed. The City has a supply of cardboard “No Parking” signs, which are available to the Contractor at no cost. The means of mounting and posting the signs is the responsibility of the Contractor. The Contractor shall promptly remove the signs after the street has been opened to traffic.

Section 00706 - Emulsified Asphalt Slurry Seal Surfacing

Description

00706.00 Scope - This work consists of applying one or more layers of slurry seal consisting of emulsified asphalt, water, aggregate, and additives on a prepared surface as shown or directed.

00706.02 Abbreviations:

ISSA - International Slurry Surfacing Association

Materials

00706.10 Emulsified Asphalt - Furnish CQS-1h emulsified asphalt meeting the following requirements when tested according to AASHTO T 59:

Saybolt Viscosity, seconds at 77 °F	15 - 50
Residue from Distillation, Weight %	57% minimum
Sieve Test, % Retained on No. 20 Sieve.....	0.1 maximum
Particle Charge, Electroplate.....	(informational)
Settlement (Storage Stability), 24 hour.....	1% maximum
Cement Mixing Test	(informational)

The residue shall pass the following specifications:

Penetration at 77 °F, 3.5 ounces, 5 sec	40 - 90 minimum
Solubility in CS ₂ or TCE.....	97.5 minimum
Ductility at 77 °F, inch.....	15.7 minimum

00706.11 Polymer Modified Emulsion - Furnish CQS-1h polymer modified emulsion. The polymer modifier shall be either a solid synthetic rubber or latex material. Combine the polymer modifier with the base asphalt or asphalt emulsion, prior to loading at the manufacturing plant, at the minimum rate of 2.5% to 3% polymer solids by weight of asphalt. The polymer modified emulsion shall be compatible with the mix design developed for the conventional slurry seal. Each shipment of emulsified asphalt shall be accompanied by a certificate of analysis or certificate of compliance from the manufacturer.

00706.12 Aggregate - The aggregate used shall be clean, angular, durable, well graded and uniform. The aggregate shall consist of broken stone, crushed gravel, slag or a combination of them. To assure the material is totally crushed, 100% of the parent aggregate shall be larger than the largest stone in the gradation to be used.

Aggregate gradation shall meet one of the following types:

Sieve Size	TYPE I - Parking Areas, Urban and Residential Streets, Airport Runways	TYPE II - Urban and Residential Streets, Airport Runways	TYPE III - Primary and Interstate Routes	Stockpile Tolerance
	Percent Passing	Percent Passing	Percent Passing	
3/8"	100	100	100	0
No. 4	100	90 - 100	70 - 90	± 5%
No. 8	90 - 100	65 - 90	45 - 70	± 5%
No. 16	65 - 90	45 - 70	28 - 50	± 5%
No. 30	40 - 65	30 - 50	19 - 34	± 5%
No. 50	25 - 42	18 - 30	12 - 25	± 4%
No. 100	15 - 30	10 - 21	7 - 18	± 3%
No. 200	10.0 - 20.0	5.0 - 15.0	5.0 - 15.0	± 2.0%

The job mix gradation shall be within the gradation band for the desired type. After the target gradation has been submitted then the percent passing each sieve shall not vary by more than the stockpile tolerance and still remain within the gradation band.

00706.13 Additives and Mineral Filler - Liquid retardant and mineral fillers may only be used when their quantity can be metered. The use of additives in the slurry mix, (or individual materials), shall comply initially with the quantities predetermined by the mix design, or with field adjustments if required, after approval by the engineer.

Portland cement, hydrated lime, limestone dust, fly ash or other approved filler required by the mix design shall meet the requirements of ASTM D 242, and shall be considered as part of the dry aggregate.

00706.14 Water - Water shall be potable, free of harmful salts and contaminants, and compatible with the slurry mix. Water used in mixing or curing shall be reasonably clean and free of oil, sugar, organic matter or other substance injurious to the finished product.

00706.15 Job Mix Formula (JMF) - Prior to the pre-construction conference, submit a signed slurry seal mix design for the specific materials to be used on the Project. Show the percentages of each individual material required on the mix design report. The complete mix design shall be made with the same aggregate gradation that will be used on the Project. After the mix design has been approved no substitution will be allowed unless approved. Water, not exceeding 11% by weight to asphalt emulsion, shall be used to develop a good mix.

(a) **Laboratory Evaluation** - Have the mix design prepared and tested by a laboratory which has experience in designing emulsified asphalt slurry seal surfacing. Determine the proportions of component materials and perform the tests described in 00706.15(b). The final mix design shall meet the limits described in 00706.15(b) and 00706.15(c).

(b) Mix Design Tests:

Test	Description	Specification
ISSA TB-106	Slurry Seal Consistency	
ISSA TB-139 (For quick-traffic systems)	Wet Cohesion, 30 minutes set 60 minutes set	0.10 lb.-in. min. 0.17 lb.-in. min.
ISSA TB-109 (For heavy traffic areas only)	Excess Asphalt by LWT and Sand Adhesion	1 lb./sq. yd. max.
ISSA TB-114	Wet Stripping Wet Track Abrasion Loss	Pass (90% minimum)
ISSA TB-100	One hour soak	1.5 lb./sq. yd. max.
ISSA TB-113	Mix Time *	Controllable to 180 sec. minimum

* The mixing test and set time test should be done at the highest temperatures expected during construction.

The wet track abrasion test is used to determine the minimum asphalt content.

The mixing test is used to predict how long the material can be mixed in the machine before it begins to break.

The laboratory shall also report the quantitative effects of moisture content on the unit weight of the aggregate (bulking effect). The report shall clearly show the proportions of aggregate, the minimum and maximum proportions of mineral filler and water, additive usage, and asphalt emulsion based on the dry weight of the aggregate.

All the component materials used in the mix design shall be representative of the materials proposed for use on the Project.

Show the percentages of each individual material required in the laboratory report. Adjustments may be required during the construction, based on the field conditions. The Engineer will give final approval for all such adjustments.

(c) Component Materials - The Engineer will approve the mix design, all slurry seal materials and methods prior to use. The component materials shall be within the following limits:

- **Residual Asphalt:**
 - Type I - 10% - 16%
 - Type II - 7.5% - 13.5%
 - Type III - 6.5% - 12%
 - Based on dry weight of aggregate
- **Mineral Filler:**
 - 0.5% - 2.0%
 - Based on dry weight of aggregate

- **Additives** - As needed.
- **Water** - As needed to achieve proper mix consistency. Total mix liquids shall not exceed the loose aggregate voids. Use ISSA T106 to check optimum liquids.

00706.16 Tolerances and Limits - Tolerances for individual materials as well as the slurry seal mixture during production are as follows:

- After the designed residual asphalt content is determined, a plus or minus one percentage point variation will be allowed.
- The percentage of aggregate passing each sieve shall be within the stockpile tolerance range as stated in 00706.12.
- The percentage of aggregate passing shall not go from the high end to the low end of the specified range of any two successive sieves.
- The slurry consistency shall not vary more than plus or minus 2 inches from the job mix formula after field adjustments.
- The rate of application, once determined by the Engineer, shall not vary more than plus or minus 2 pound per square yard while remaining within the design application rate.

00706.17 Quality Control - Be responsible for quality control as required by Section 00165. Perform quality control sampling and testing as follows:

(a) **QC/QA Slurry Seal Program** - Test gradation, mixture, moisture, and asphalt according to the MFTP.

(b) **Slurry Seal Production (Gradation):**

- **Stockpile** - Every 60,000 square yards.
- **Tanker** - Every 60,000 square yards.
- **Mixture** - To be taken directly out of pugmill every 60,000 square yards.

(c) **Verification Testing** - If comparisons of test results are outside the allowable differences, the Contractor and Engineer will investigate the reason. The Engineer may stop production while the investigation is in progress if the potential for pavement failure is present. The investigation may include review of calculation, testing of the remaining samples, review and observation of Contractor testing procedures and equipment, and a comparison of sample test results.

Equipment

00706.20 Equipment - Provide suitable surface preparation equipment, traffic control equipment, hand tools and any other support equipment required as necessary to perform the work.

00706.21 Mixing Equipment - The machine(s) shall be specifically designed and manufactured to lay slurry seal. Mix slurry seal in continuous pug mill mixers; a self-propelled machine specifically designed and manufactured to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, control setting additive and water to a revolving blade mixer that discharges the thoroughly mixed product on a continuous flow basis. Concrete transit mixer trucks shall not be used. Minimum slurry seal machine size shall be 7 cubic yards. In the case of equipment failure have a minimum of two machines on-site with another off site for immediate backup. The machine shall be capable of mixing materials at pre-set proportions regardless of the speed of the machine and without changing machine settings.

00706.21

The mixing machine shall be equipped with an approved fine feeder that provides an accurate metering device or method to introduce a predetermined proportion of mineral filler into the mixer at the same time and location that the aggregate is fed. Use the fine feeder whenever added mineral filler is a part of the aggregate blend.

The mixing machine shall be equipped with a water pressure system and fog type spray bar adequate for complete fogging of the surface preceding spreading equipment.

(a) **Proportioning Devices** - Provide and properly mark individual volume or weight controls, such as revolution counters or similar devices, for proportioning each material to be added to the mix (for example; aggregate, mineral filler, additive, emulsified asphalt and water). Instruct the Engineer how to calculate the application rate per square yard utilizing the Contractor's proportioning devices.

(b) **Calibration** - Calibrate, in the presence of the Engineer, each slurry mixing unit to be used on the Project prior to construction. Previous calibration documentation covering the exact materials to be used may be accepted by the Engineer provided they were made during the calendar year. The documentation shall include an individual calibration of each material at various settings, which can be related to the machines metering devices. No machine will be allowed to work on the Project until the calibration has been completed and/or accepted.

00706.22 Spreading Equipment - Spreader Box - Attach to the mixer machine a mechanical type squeegee distributor equipped with flexible material that is in contact with the pavement surface to prevent the loss of slurry from the distributor. Adjust the distributor to prevent the loss of slurry on varying grades and crown and to assure uniform spread. There shall be a steering device and a flexible strike-off. The spreader box shall have an adjustable width. Keep the spreader box reasonably clean, and do not allow buildups of asphalt and aggregate. Only one tail rubber will be allowed. Any type of drag used shall be subject to approval by the Engineer and kept in a completely flexible condition at all times.

00706.23 Rollers - If required by Special Provision, rollers shall be self-propelled, steel-wheeled or pneumatic-tired type and be equipped with a water spray system. Steel-wheeled rollers shall be capable of providing a weight of not less than 2,400 pounds per foot width of the compression roll or rolls. Pneumatic-tired rollers shall be capable of exerting a ground pressure of not less than 80 pounds per square inch of tire contact area.

Labor

00706.30 Quality Control Personnel - Provide a certified technician in the following field:

- CAT-I

Construction

00706.40 Weather Limitations - Do not apply the slurry seal if either the pavement or air temperature is below 50 °F and falling. The slurry seal may be applied when both the pavement and air temperature are above 45 °F and rising. Do not apply if there is a danger that the finished product will freeze before 24 hours. Do not apply when weather conditions prolong opening to traffic beyond a reasonable time. Do not apply in the rain. Replace slurry damaged by rain after application according to the Specifications, and as determined by Engineer, at no additional cost to the Agency. Clean the street of all remaining slurry mix materials prior to re-application.

Adjust the rate of application of the fog spray during the day to suit temperatures, surface texture, humidity and dryness of pavement surface. Do not spray additional water into the spreader box.

00706.41 Preparation of Surface - Submit details of the proposed street cleaning for approval by the Engineer prior to the preconstruction conference.

Remove any organic materials in cracks or joints not removed during crack sealing as part of the pavement preparation.

Pavement preparation shall consist of removal of all oil spills, flushing and sweeping. Complete flushing, as needed, prior to sweeping. Finish sweeping with a vacuum sweeper no more than 24 hours prior to application of the slurry seal. If there is a delay of more than 48 hours between sweeping and slurry sealing caused by weather conditions or other unforeseen circumstances, re-sweep as determined by the Engineer, at no additional cost to the Agency.

Prepare the pavement on which the slurry seal is to be placed as follows, as directed.

(a) Base Repairs - Where determined by the Engineer, excavate and replace surfacing materials according to Section 00748.

(b) Surface Repairs - Where the pavement is severely cracked, rutted, deformed or otherwise distressed, place a leveling course or patch using 3/4 inch or 1/2 inch dense graded asphalt concrete. The class of mix to be used shall conform to Section 00745. Place the mixture according to Section 00745.

(c) Crack Sealing - Clean and fill cracks 1/8 inch and larger inside the proposed slurry seal area.

(d) Tack Coat - On old, dry bituminous pavements and on rigid pavements, the Engineer may direct that tack coats be applied prior to placing the slurry seal. The tack coat shall be a diluted asphalt emulsion of the same type and grade specified for the slurry mix. The ratio of asphalt emulsion to water shall be 1:3. Apply the diluted material uniformly with a pressure distributor at a rate between 0.05 to 0.10 gallon per square yard, as determined by the Engineer. The tack coat shall be cured thoroughly prior to the application of the slurry seal.

(e) Street Equipment and Procedure - Immediately prior to applying the slurry seal, clear the surface of all loose material, silt spots, vegetation, oil spots and other objectionable material. Any standard cleaning method will be acceptable. If water is used, allow cracks to dry thoroughly before slurry sealing. The Engineer will approve the surface preparation prior to sealing.

(f) Utility Covers - Protect manholes, valve boxes, drop inlets and other service entrances from the slurry seal by a suitable method. Clean these covers as quickly as possible after the application of the slurry seal and definitely prior to the final set. If necessary, clean slurry residual from the interior of the utilities.

(g) Pavement Markings - Cover, or remove, all reflector buttons before slurry seal is to be applied to any area, as determined by the Engineer. Cover all thermo-tape markings and do not slurry seal over, or remove and replace as directed. Remove all paint pavement markings to prevent bleeding through the slurry seal and to allow proper adhesion.

00706.42 General - The surface may be wetted by fogging ahead of the slurry box, if required by local conditions. Apply water used in wetting the surface at such a rate that the entire surface is damp with no apparent flowing water in front of the slurry box. The slurry mixture shall be of the desired consistency upon leaving the mixer. Do not add additional elements. Carry a sufficient amount of slurry in all parts of the spreader at all times so that complete coverage is obtained. Do not allow lumping, balling or unmixed aggregate in the spreader box. Do not allow segregation of the emulsion and aggregate fines from the coarse aggregates. If the coarse aggregate settles to the bottom of the mix,

00706.42

remove the slurry from the pavement. Do not allow excessive breaking of the emulsion in the spreader box. Do not leave streaks, such as caused by oversized aggregate, in the finished pavement. Maximum mixing time in the pugmill shall be four minutes.

00706.43 Application Rate - The minimum rate of application of dry aggregate per square yard will be determined by the Engineer. The depth of the slurry seal shall be sufficient to correct surface conditions, fill surface voids, and provide sealing and a minimum wearing surface. The maximum allowable vehicle speed for the rate of application shall be 180 feet per minute. Failure to demonstrate the proper rate of application will result in suspension of the work until the Contractor can demonstrate otherwise, at no additional cost to the Agency.

ISSA TB112 gives a method to determine expected application rates.

The slurry seal mixture shall be of proper consistency at all times to provide the application rate required by the surface condition. The average application rate, as measured by the Engineer, shall be according to the following table:

	Recommended Use	Application Rate
TYPE I	Parking Areas, Urban and Residential Streets, Airport Runways	6.7 - 10.0 lbs./sq. yd.
TYPE II	Urban and Residential Streets, Airport Runways	10.0 - 16.7 lbs./sq. yd.
TYPE III	Primary and Interstate Routes	15.0 - 25.0 lbs./sq. yd.

00706.44 Applying Slurry Seal Sample Strip - The strip shall consist of two panels approximately 50 feet long, placed side by side to form a typical seam between them. The width of the panels shall be the same as the Contractor plans to use on the streets. Place the strip at least 24 hours prior to the beginning of the actual work. Use the strip to calculate and monitor the rate of application in relation to weight of material per area, and to define the speed of the equipment related to the rate of application. If it is determined by the Engineer on the basis of this test strip that there are deficiencies in the mix design, method of application and rate of application, the Engineer may require the Contractor to revise the mix design, or repair or modify the equipment or application. After all changes are made, lay a new sample strip.

00706.45 Joints - Construct a uniform line along the edge and a good seal at curb lines. Construct the flow line at curbs to allow storm drainage flow to catch basins without bonding along the curb line. In the case of a concrete gutter, cover the gutter line joint with the slurry seal, but do not overlap onto the gutter. Remove any overlap, as determined by the Engineer, at no additional cost to the Agency. Streets that have been recently slurry sealed that cross this Project shall not be slurry sealed again.

The slurry joints and panels shall be straight, neat and uniform and follow the contour of the existing curb or concrete gutter. The width of the panels shall be the same as demonstrated in the sample strip. Floating (adding additional water other than what is required for the approved mix design) of the emulsion or slurry mixture in the pugmill and/or spreader box to cover or overlap missed areas will be prohibited. Keep lines straight at intersections to provide a good appearance.

00706.46 Handwork - Use approved squeegees to spread slurry in areas not accessible to the slurry mixer.

Limit handwork at the beginning and end of the panels to prevent segregation of the rock from the emulsion and to minimize cosmetic drag mop marks and/or defects in the finished product.

The same type finish as applied by the spreader box shall be required. Complete handwork prior to setting of the slurry.

00706.47 Curing - The rate of curing of the slurry seal shall be such that a street may be opened to traffic after application without tracking or damage to the surface. Protect the area for the full curing period with suitable barricades or markers.

The Agency will not be responsible for any damage to the slurry seal prior to opening the area. Repair all damage to the slurry, to the satisfaction of the Engineer, at no additional cost to the Agency.

00706.48 Rolling - If required by Special Provision, apply a minimum of two full coverage passes to the surfaced areas by the roller, or as directed.

00706.49 Cleanup - Remove all debris associated with the performance of the work on a daily basis.

Temporary

00706.51 Provision for Traffic - Be responsible for notifying all abutting property owners along the streets according to the approved schedule, or an approved revision of the schedule, 48 hours prior to the specific work.

Remove all traffic control promptly when it is determined that the street may be open to traffic. Do not seal any street that requires closing overnight without the approval of the Engineer.

If the slurry seal does not cure in a timely manner and remains trackable overnight, apply a covering of 1/4 inch minus material to prevent tracking and related property damage prior to permitting traffic on the street at no additional cost to the Agency.

Be responsible for all damage to the uncured slurry or to private or public property due to tracking of the uncured material.

Measurement

00706.80 Measurement - Crack sealing will be measured on the length basis, of material in place.

Slurry seal will be measured on the area basis and calculated to the nearest square yard.

Asphalt concrete pavement repair will be measured according to 00748.80.

Payment

00706.90 Payment - The accepted quantities of work performed under this Section will be paid for at the Contract unit price, per unit of measurement, for the following items:

Pay Item	Unit of Measurement
(a) Slurry Seal Crack Sealing	Foot
(b) Slurry Seal	Square Yard

Payment will be payment in full for furnishing and placing all materials, and for furnishing all equipment, labor, and incidentals necessary to complete the work as specified.

Asphalt concrete pavement repair will be paid for according to 00748.90.

When the Contract Schedule of Items does not indicate payment for work under this Section, no separate or additional payment will be made. Payment will be included in payment made for the appropriate items under which this work is required.

100 GENERAL SPECIFICATIONS SPECIAL PROVISIONS

102.1.00 Prequalification of Bidders

As set forth in ORS 279C.430 et seq., all bidders shall prequalify in accordance with the requirements of the Owner and the public contracting rules.

102.2.00 Form of Proposal

101 **DEFINITIONS AND ABBREVIATIONS**

Unless otherwise defined in the Contract Documents, the following definitions and abbreviations apply wherever used.

The words, "directed, required, permitted, ordered, requested, instructed, designated, considered necessary, prescribed, approved, acceptable, satisfactory," or words of like import, refer to actions, expressions and prerogative of the Engineer.

Command type sentences are used throughout the Contract Documents. In all cases the command expressed or implied is directed to the Contractor.

101.1.00 **Definitions**

Acts of God - An act of God means an earthquake, flood, cloudburst, tornado, hurricane or other phenomenon of nature of catastrophic proportions or intensity.

Advertisement - The public announcement inviting bids or requests for proposals for work to be performed or materials to be furnished.

Approved Equal - A product, component or process whose use in or on a particular project is specified as a standard for comparison purposes only. The "equal" product, component or process shall be the same or better than that named in function, performance, reliability, quality and general configuration. The Engineer shall make the determination of equality in reference to the project design requirements.

As Built Drawings - The drawings made or revised by the Contractor during progress of construction and approved by the Engineer, that illustrate how various elements of the work were actually installed.

Attorney - The attorney representing the Owner.

Bid Bond - The bond required to be submitted with each proposal as a proposal guarantee.

Bidder - An individual, firm, co-partnership or corporation submitting a proposal in response to the advertisement calling for bids on the work contemplated.

Calendar Day - A day shown on the calendar beginning and ending at midnight. Unless expressly stated otherwise, "day" means calendar day.

Change Order - A written order, approved by the Owner, and issued by the Engineer to the Contractor, covering changes in either the plans, specifications, or quantities within the scope of the contract.

City - The City of Tualatin, Oregon, a municipal corporation organized and operating pursuant to the City of Tualatin Charter of 1967, as amended, the Oregon Constitution, Article XI, Section 2 and municipal ordinances and resolutions. Also the "Owner", but see Urban Renewal Agency.

Complimentary Bid - A bid that has the meaning commonly associated with that term in the bidding process, and includes the knowing submission of bids higher than the bid of another firm, any intentionally high or noncompetitive bid, and any other form of bid submitted for the purpose of giving a false appearance of competition.

Contract - A part of the Contract Documents that stipulates conditions on which the work is agreed to be performed, executed by the Owner and the Contractor.

Contract Cost - The aggregate amount of price promised to be paid by the Owner to the Contractor upon fulfillment of the contract.

Contract Documents - The written agreement covering the performance of the work, the advertisement calling for the bids, the information for bidders, the proposal, the proposal guarantee, plans, all specifications, addenda, permits, contract, performance payment bonds, general conditions, special conditions, technical specifications, change orders in the course of the work, and any approved revisions made during the performance of the work to any of the above listed documents.

Contract Item - A specific unit of work for which a price or basis of payment is provided in the contract.

Contractor - An individual, firm, co-partnership, corporation or a combination of them who has entered into the contract with the Owner. In the case of work being done under permit issued by the Owner, the permittee shall be construed to be the Contractor.

Easement - The right to use a defined area of property for a specific purpose or purposes as set forth in a document which has been made a part of the Contract Documents.

Engineer - The Engineer or Engineer's designee, who represents the Owner either directly or through the Owner's authorized representatives and designated to supervise the work during its execution.

Extra Work - An item of work not provided for in the contract as awarded but determined by the Engineer as essential to the proper completion of the contract within its intended scope.

Field Order - An order issued by the Engineer to the Contractor to carry out minor revisions in the work.

Final Completion - The completion of all of the work called for under the contract including but not limited to, if applicable, satisfactory operation of all equipment, by means of acceptance tests, correction of all punch list items to the satisfaction of the Owner and the Engineer, settlement of all claims, if any, payment and release of records of all construction and like liens, delivery of all guarantees, equipment operation and maintenance manuals, as-built drawings, building certificate required prior to occupancy, electrical certificates, mechanical certificates, plumbing certificates, all other required approvals and acceptances by city, county and state governments, or other authority having jurisdiction, and removal of all rubbish, tools, scaffolding, equipment, and surplus materials and equipment from job site.

Highway - The whole area within the boundaries of a public right-of-way that is reserved for and secured for public use in constructing and maintaining a roadway and its appurtenances.

Inspector - The authorized representative of the Engineer entrusted with making detailed inspections of the work or materials.

Legal Holiday - Those days declared as holidays by ORS Chapter 279C.540.

Lump Sum - A method of payment providing for one all-inclusive cost for the work or for a particular portion of the work.

Mobilization - Mobilization consists of preparatory work and operations, including but not limited to those necessary for movement of personnel, equipment, supplies and incidentals to the project site; for establishment of offices, buildings and other facilities necessary for work on the project; for premiums on bond and insurance for the project and for other work and operations which the Contractor must perform or costs it must incur before beginning work on the project.

Notice - A written communication delivered to the authorized individual, member of the firm or officer of the corporation for which it is intended. If delivered or sent by mail, it shall be addressed to the business address of the individual, firm or corporation as specified in the Contract Documents. In the case of a contract with two (2) or more persons, firms or corporations, notice to one shall be deemed notice to all.

Notice to Proceed - A written notice to the Contractor from the Engineer or Owner, designating the date the contract term is begun and the date for the final completion of the contract.

Owner - The legal entity or contracting agency for which the work is being performed. The City of Tualatin or where the work is performed as an urban renewal project, the Tualatin Development Commission.

Payment Bond - The form of security approved by the Owner, furnished by the Contractor and the Contractor's surety, guaranteeing prompt payment of all persons who supply material, labor, or services on the project and pay all sums due the Industrial Accident Fund, the State Unemployment Compensation Fund and all sums required to be paid to the Department of Revenue.

Performance Bond - The form of security approved by the Owner, furnished by the Contractor and the Contractor's surety, guaranteeing the complete and faithful performance of all the obligations and conditions placed upon the Contractor by the contract.

Plans - The official plans, profiles, cross sections, elevations, details and other working, supplementary and detail drawings, or reproductions, signed by the Engineer, that show the location, character, dimensions and details of the work to be performed. Plans may either be bound in the same book as the balance of the Contract Documents or bound in separate sets, and are a part of the Contract Documents, regardless of the method of binding.

Prequalification - See definition and provisions Section 102.1.00.

Proposal - The offer of the bidder to perform work at the prices quoted, submitted on the Owner's official proposal form, properly signed and guaranteed.

Proposal Guaranty - The security furnished with a proposal to assure that the bidder will enter into the contract if the proposal is accepted. It consists of the Bid Bond Guarantee Agreement and a Bidder's Bond, cash or certified check.

Provide - When related to an item of work, "provide" means furnish and install the work complete in place, so that the work is functional.

Public Works Bond - The bond required to be filed with the Construction Contractors Board pursuant to the provisions of ORS 279C.800 to 279C.870 to assure that the contractor or subcontractor will pay claims ordered by the Bureau of Labor and Industries to workers performing labor upon public works projects.

Public Works Construction Code or Construction Code - Unless the context clearly indicates otherwise, the current edition of the City of Tualatin Public Works Construction Code.

Punch List - A list prepared by the Engineer and/or the Owner of the Contractor's incompleting or uncorrected work.

Reference Specifications - Bulletins, standards, rules, methods of analysis or testing, codes and specifications of other agencies, engineering societies, or industrial associations referred to in the Contract Documents. All such references specified refer to the latest edition, including amendments that are in effect and published at the time of advertising for bids or of issuing the permit for the project.

Responsible and Responsive Bidder - A bidder who has the capability in all respects to perform fully the contract who meet the standards of responsibility as provided in the City of Tualatin's public contracting rules and who has submitted a bid under a competitive sealed bid which conforms in all respects to the invitation for bids.

Right-of-Way - A general term denoting land, property, or interest in property acquired for or devoted to public use.

Road - Every road or roadway, thoroughfare, and place including bridges, viaducts and other structures used or intended for use of vehicles.

Shown - Refers to work shown on the plans in the Contract Documents.

Special Specifications or (Special Provisions) - Requirements peculiar to the project and changes and modifications of the standard specifications. Special specifications are used interchangeably with special provisions.

Specified - "Specified", or "as specified" means as required by the Contract Documents.

Standard Plans or Drawings - Details of structures, devices, or instructions adopted by the Owner as a standard and referred to in the Contract Documents by title or number.

Standard Specifications - The terms, directions, provisions and requirements set forth in the Contract Documents.

Station - A distance of 100 feet measured horizontally along a surveyed centerline.

Street - A road, highway, parkway, freeway, avenue, alley, walk, or way, including sidewalks, bike lanes, parking strips and all other structures including utilities above and below the surface, land and improvements within the public right-of-way between property lines.

Stop Work Order - A written notice, signed by the Engineer, that directs cessation of all work.

Subcontractor - An individual, partnership, firm, corporation, or any acceptable combination of them, or joint venture to whom the Contractor, with the written consent of the Owner, sublets a part of the contract, by furnishing or performing a portion of the work, labor or material.

Substantial Completion - The completion of the work to the extent that the Owner may have uninterrupted occupancy and use of the facility or specified portion of the facility for the purpose

for which intended. Substantial completion shall not be construed as acceptance of the work or any part of the work by the Owner.

Surety - The corporate body which is bound with and for the Contractor, for the acceptable performance of the contract, and for the Contractor's payment of all obligations arising out of the contract. Where applying to the "Proposal Guaranty," it refers to the corporate body which engages to be responsible for the bidder's execution of a satisfactory contract when and if the Contractor's bid is accepted by the Owner.

Ton - The short ton of 2,000 pounds avoirdupois.

Tualatin Development Commission - Where the contract work is bid and performed as a project of the Tualatin Development Commission, the City of Tualatin is not the owner.

Unit Price - A contract item of work providing for payment based on a specified unit of measurement; e.g. linear foot or cubic yard.

Use of Pronoun -The singular includes the plural, and the plural the singular; a masculine pronoun shall include the feminine or neuter gender; and "person" includes natural person or persons, firm, co-partnership, corporation or association or a combination of them.

Utility - Tracks, overhead or underground wires, pipelines, conduits, ducts, or structures, owned, operated, or maintained in or across a public right-of-way or easement.

Work - That which is proposed to be constructed or performed under the contract or permit, including the furnishing of all material, labor, tools, machinery and appurtenances necessary to complete the contract, and such additional items not specifically indicated or described that can be reasonably inferred as belonging to the item described or indicated as required by good practice to provide a complete and satisfactory system or structure.

Working Day - Every calendar day excluding Saturday, Sundays, and legal holidays.

Working Drawings - Stress sheets, shop drawings, erection plans, falsework plans, framework plans, cofferdam plans, bending diagrams for reinforcing steel, or any other supplementary plans or similar data which the Contractor is required to submit to the Engineer for approval.

101.2.00 Abbreviations

AAN	American Association of Nurserymen
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGA	American Gas Association
AGC	Associated General Contractors of America
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
APWA	American Public Works Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWS	American Welding Society
AWWA	American Water Works Association
BLI	Oregon Bureau of Labor and Industries
CRSI	Concrete Reinforcing Steel Institute
CWS	Clean Water Services
DEQ	Department of Environmental Quality
DFPA	Division for Product Approval of American Plywood Association
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
ITE	Institute of Traffic Engineers
JIC	Joint Industry Conferences of Hydraulic Manufacturers
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NLMA	National Lumber Manufacturer's Association
ORS	Oregon Revised Statutes
OSHA	Occupational Safety and Health Administration
OSHD	Oregon State Highway Division
PCA	Portland Cement Association
UBC	Uniform Building Code
UL	Underwriter's Laboratories, Inc.
WWPA	Western Wood Products Association

102 PROPOSAL REQUIREMENTS

102.1.00 Pregualification of Bidders

As set forth in ORS 279C.430 et seq., all bidders shall prequalify in accordance with the requirements of the Owner and the public contracting rules.

102.2.00 Form of Proposal

Bidders shall enclose the proposal, bid bond guarantee and bid bond, or cash, certified check or cashier's check in a sealed envelope, labeled and addressed as required in the Invitation to Bid, and file as required in the advertisement.

All proposals shall be clearly and distinctly typed or written. Changes may be made provided the change is initialed.

All proposals shall be on the form furnished by the Owner. In addition to the necessary unit price items and total prices in the column of totals to make a complete bid, all applicable blanks giving general information must be filled in and the bid signed by the contractor or a duly authorized agent. Any statement accompanying and tending to qualify a bid may cause rejection of such bid, unless such statement is required or permitted.

Unless otherwise specified, bidders shall bid on all bid items included in the proposal and the lower bidder shall be determined in accordance with subsection 103.1.00 and the public contracting rules.

102.3.00 Withdrawal, Modification or Alteration of Proposal

A proposal may be withdrawn upon written request of the bidder prior to scheduled closing time for filing bids. Unless withdrawn in an acceptable manner before the scheduled closing time for filing bids, the bid shall be irrevocable for 30 days. Negligence on the part of the bidder in preparing the proposal confers no right to withdraw the proposal after the scheduled closing time for filing bids.

Change in a delivered proposal will be permitted only if a request for making such modification is made in writing, signed by the bidder, and the specific modification is stated and received prior to the scheduled closing time for filing bids.

If the intent of the bidder is not clearly identifiable, the interpretation most advantageous to Owner will prevail.

Withdrawal of bid proposals and changes in delivered proposals will not be accepted or given effect when submitted by telefax transmission, but must be delivered in an original form.

102.4.1 Late Proposals

Proposals received after the scheduled closing time for filing bids will not be opened or considered by the Owner unless such bid, if sent through the mail, shows a legible postmark or post office cancellation proving the time of mailing was at least 48 hours prior to the scheduled closing time for filing bids, and such proposal is received before the award has been made. The closing time may be extended by the Owner.

102.4.2 Subcontractor Disclosure

Within two working hours of the date and time of bid opening, a bidder shall submit a disclosure of any first tier subcontractor that will be furnishing labor or will be furnishing

labor and materials whose contract value is equal to or greater than (a) five percent of the total bid or \$15,000, whichever is larger, or (b) \$350,000 regardless of the percentage of the total bid. The disclosure shall include: (1) the name and address of each subcontractor, and (2) the category of work that each subcontractor will be performing.

102.5.00 Proposal Guaranty

No bid will be considered unless accompanied by a proposal guaranty in the form of a certified check, cash or cashier's check, payable to the order of the Owner, or a bidder's bond for the single bid submitted, in an amount equal to ten (10%) percent of the aggregate bid. Due to the difficulty in establishing damages that would result, such proposal guaranty may be forfeited as liquidated damages in case the bidder fails or neglects to furnish payment and performance bonds and insurance, as required, or to execute the contract together with a non-collusion affidavit properly notarized within ten (10) days after receiving the contract from the Owner for execution. All other bonds or checks will be returned to the unsuccessful bidders.

102.6.00 Examination of Plans, Standard Plans or Drawings, Specifications and Site of Work

Bidders shall determine for themselves all the conditions and circumstances affecting the project or the cost of the proposed work by personal examination of the site, the Contract Documents, and by such other means as they may choose. Contractor is fully responsible for unanticipated subsurface conditions and any other conditions, including, but not limited to access, weather and utilities that will materially affect the work.

Contractor releases and agrees to hold Owner harmless from liability to contractor for site conditions that result in higher than anticipated costs to the contractor or its subcontractor.

102.7.00 Interpretation of Contract Documents

If it appears to a bidder that the work to be done or matters relative to the work are not sufficiently described or explained in the Contract Documents or that the Contract Documents are not definite and clear, the bidder may submit written inquiry to the Engineer at least five (5) days before the scheduled closing time for filing bids. If in the judgment of the Engineer, additional information or interpretation is necessary, such information will be supplied in an addendum that will be delivered or mailed to all individuals, firms and corporations who have taken out Contract Documents. The addendum has the same binding effect as though contained in the main body of the Contract Documents. ORAL INSTRUCTIONS OR INFORMATION CONCERNING THE CONTRACT DOCUMENTS OR THE PROJECT GIVEN OUT BY OFFICERS, EMPLOYEES OR AGENTS OF THE OWNER TO PROSPECTIVE BIDDERS SHALL NOT BIND THE OWNER.

The contract and each of the Contract Documents are complementary and shall be interpreted so that what is called for by one shall be as binding as if called for by all. In the event of duplications or conflicts in the Contract Documents after the contract has been executed, the most expensive method of work, materials and equipment shall be construed as the requirement, with a credit for all cost savings accruing to the Owner if the least expensive method of work is directed. A duplication of work is not intended, and any duplications shall not become a basis for extra cost to Owner.

Both parties represent that there are now no other agreements between them, written or otherwise, relating to the rights and obligations of either under this contract; that this contract supersedes all prior understandings between the parties relating to the project, whether written

or oral, and that in case of a conflict between the terms of this instrument and the proposal of the contractor, this instrument shall control. No attempted modification of this contract shall be effective until reduced to writing and attached and specifically references to this contract, signed by both parties.

102.8.00 Addenda to Contract Documents

An addendum or addenda issued by the Engineer that may include changes, corrections, additions, interpretations or information, and issued seventy-two (72) hours or more before the scheduled closing time for filing bids, Saturday and legal holidays not included, shall be binding upon the bidder. Owner shall send copies of such addenda to all contractors who have obtained copies of the Contract Documents for the purpose of bidding, but failure of the contractor to receive or obtain such addenda shall not excuse the contractor from compliance with the addenda, if the contractor is awarded the contract.

102.9.00 Familiarity with Laws and Ordinances

The bidder is assumed to be familiar with all Federal, State and local laws, ordinances, and regulations that in any manner affect those engaged or employed in the work or the materials or equipment used in the proposed construction, or that affect the conduct of the work. No plea of misunderstanding will be considered on account of ignorance of such laws or regulations. If the bidder, or contractor discovers any provision in the Contract Documents that is contrary to or inconsistent with any law, ordinance, or regulation, the bidder shall report it to the Owner in writing promptly.

Contractor's work shall comply with all applicable laws, regulations, ordinances building codes, and requirements of Federal, State and local governmental authorities and agencies having jurisdiction over the project to be constructed, including those of the utility companies, and shall give notices. Unless otherwise provided, contractor shall obtain all licenses and permits required. Contractors shall comply with registration requirements of ORS 701.035 to 701.137.

102.10.00 Amount of Work to be Done

Owner reserves the right to increase or decrease the amount of any class or portion of the work. No such change in the work shall be considered as a waiver of any condition of the contract nor shall such change invalidate any of its provisions.

The estimate of quantities of work to be done under unit price bids is approximate and is given only as a basis of calculation for comparison of bids and award of the contract. Owner does not by implication agree that the actual amount of work will correspond precisely to the amount as shown or estimated.

The scheduled quantities of work to be done and materials to be furnished may each be increased, decreased, or omitted. Payment will be made at unit prices under the contract only for the work performed or materials furnished.

102.11.00 Bid Prices to Cover Entire Work

Unless expressly stipulated otherwise, contractor shall provide and pay for all services, labor, overtime labor, standby labor, methods, materials, equipment, transportation, power, fuel, water, taxes and all other facilities and services, including operating costs of checking out equipment and all other items and facilities of every kind necessary to complete the intent of the contract for the contract cost within the contract time.

It is understood and agreed that there is included in each lump sum or unit price bid the entire cost of materials and labor incidental or necessary to the completion of that portion of the work covered, unless such incidental work is expressly included in other lump sum or unit price bids in the proposal.

102.12.00 Rejection of Proposals

Owner may reject any bid not in compliance with all prescribed bidding procedures and requirements and may reject for good cause any or all bids upon a finding by the Owner, it is in the public interest to do so. Furthermore, Owner reserves the right to waive any irregularities or informalities in the contractor's bid.

This invitation to bid does not commit the City to pay any costs incurred by bidder in the submission of a proposal, or in making necessary studies or designs for the preparation of the bid, or for procuring or contracting for the items to be furnished under the invitation for bid. Bidder hereby waives and relinquishes any right to recover back from City any and all costs and expenses incurred or suffered by bidder.

102.13.00 Standard of Performance

Contractor shall perform his or her services under this contract in a skillful and competent manner in accordance with the highest standards of the construction industry. Contractor shall be responsible to Owner for errors and omissions in construction and failure to perform this contract.

Contractor shall not divulge information concerning this project to anyone without Owner's prior written authorization. Contractor shall obtain similar agreements from persons, firms, contractors, subcontractors and material suppliers employed by the contractor. This requirement shall survive the expiration of this contract.

In submitting the bid, bidder certifies that the bidder is not ineligible to receive a contract for a public work, as set forth in ORS 279C.440 and agrees, if awarded a contract, that every subcontractor will be required to certify compliance with that statute. The subcontractor's certification shall be filed with the Owner prior to the subcontractor commencing any work under the contract.

102.14.00 Non-Collusion Affidavit

A non-collusion affidavit is material to any contract awarded.

This non-collusion affidavit must be executed by a member, officer or employee of the bidder who makes the final decision on prices and the amount quoted in the bid.

Bid rigging and other efforts to restrain competition and the making of false sworn statements in connection with the submission of bids are unlawful and may be subject to criminal prosecution. The person who signs the Affidavit should examine it carefully before signing and assure himself or herself that each statement is true and accurate, making diligent inquiry, as necessary, of all other persons employed by or associated with the bidder with responsibilities for the preparation, approval or submission of the bid.

In the case of a bid submitted by a joint venture, each party to the venture must be identified in the bid documents, and an Affidavit must be submitted separately on behalf of each party.

Failure to file an Affidavit in compliance with this section will result in disqualification of the bid.

102.15.00 Assignment of Antitrust Rights

By entering into this contract, contractor, for consideration paid to the contractor under the contract, does irrevocably assign to Owner any claim for relief or cause of action which the contractor now has or which may accrue to the contractor in the future, including, at the Owner's option, the right to control any such litigation on such claim for relief or cause of action, by reason of a violation of 15 USC Sec. 1-15 or ORS 646.725 or ORS 646.730, in connection with any goods or services provided to contractor by any person, which goods or services are used, in whole or in part, for the purpose of carrying out the contractor's obligations under this contract.

If the contractor hires subcontractors to perform any of the contractor's duties under the contract, the contractor shall require the subcontractor to irrevocably assign to the Owner, as a third party beneficiary any right, title or interest that has accrued or may accrue to the subcontractor by reason of a violation of 15 USC Sec. 1-15, ORS 646.725 or ORS 646.730, including, at the Owner's option, the rights to control litigation arising there under, in connection with any goods or services provided to the subcontractor by any person, in whole or in part, for the purpose of carrying out the subcontractor's obligations as agreed to be the contractor in pursuance of the completion of the contract.

In connection with this assignment, it is an express obligation of the contractor that it will take no action that will in any way diminish the value of the rights conveyed or assigned under this section to the Owner. It is an express obligation of the contractor to advise the Owner's attorney:

1. In advance, of its intention to commence an action on its own behalf regarding such claims for relief or causes of action;
2. Immediately, upon becoming aware of the fact that an action has been commenced on its own behalf by some other person or persons, of the pendency of such action; and
3. The date on which it notified the obliger(s) of such claims for relief or causes of action of the fact of its assignment to the Owner.

Furthermore, it is understood or agreed that if a payment under such claim is made to the contractor, it shall promptly pay the Owner its proportionate share, if any, assigned to the Owner under this section.

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103 AWARD AND EXECUTION OF CONTRACT

103.1.00 Award of Contract

The award will be made by the Owner to the bidder submitting the lowest responsible bid. In determining the lowest responsible bid, the Owner may take into account, among other factors: the prices bid, discounts if any, the time of completion or delivery proposed as compared to equal bids, the relative merits and performance of any item specifically proposed by the bidder, any variation in maintenance and guaranty period specially proposed by the bidder in excess of any minimums specified, the realistic balance of prices in the proposals for various parts or units of the work, and the experience and ability of the bidder to perform the work.

While price extensions are required as a matter of convenience, in the event of error in extensions the unit prices bid shall govern. In the event of discrepancy between the written and numerical amounts, the written prices will govern. Determination of the lowest responsible bidder and award may be subject to review and determination by the attorney as to legal sufficiency of any bid submitted.

The award of contract, if it be awarded, shall be made within thirty (30) calendar days after the date of opening of bids.

103.2.00 Execution of Contract

Within ten (10) days after the date the bidder receives notification of award of contract as evidenced by receipt from the Owner of properly prepared Contract Documents, the bidder to whom award is made shall execute and return the contract in the required number of copies, and shall furnish a performance bond and other required bonds and insurance in a form satisfactory to the Owner. The successful bidder shall also submit an affidavit in a form satisfactory to the Owner that no collusion in the preparation or submittal of bids has taken place.

103.3.00 Failure to Execute Contract

Failure on the part of the bidder to whom the contract is awarded to execute the contract and to deliver the contract and required performance and payment bonds as described in subsection 103.6.00, satisfactory proof of insurance and the non-collusion affidavit, shall be just cause for cancellation of the award, withdrawal of the contract and forfeiture of the proposal guaranty. The forfeited proposal guaranty shall become the property of the Owner. Award may then be made to the next lowest responsible bidder, or the work may be re-advertised, or it may be constructed under contract or otherwise, as the Owner may decide.

103.4.00 Return of Proposal Guaranty

Upon the execution of the contract and bonds by the successful bidder, its proposal guaranty shall be returned to the bidder. The bidder who is awarded a contract and who fails promptly and properly to execute the contract or bonds shall forfeit the proposal guaranty that accompanied bid. The successful bidder recognizes that failure to execute and deliver the contract and other documents referred to in subsection 103.3.00 in a timely manner will result in the Owner incurring additional expenses in obtaining a substitute bidder and delaying the Owner's project time frame. The amount of damages is extremely difficult and impractical to ascertain. The proposal guaranty shall be taken and considered as liquidated damages and not as a penalty for failure of the bidder to execute the contract and bonds. The proposal guaranty of unsuccessful bidders will be returned after the bids have been opened and the contract has been awarded, and shall not be retained after the contract has been duly signed. Owner

reserves the right to retain the bid security of the three (3) lowest bidders until the awarded contract has been signed and returned.

103.5.00 Assignments

Neither the contract nor any interest in the contract shall be transferred to any other party or parties without the prior written consent of the Owner. In case of an attempted transfer without permission, the Owner may refuse to carry out the contract either with the transferor or the transferee, but all rights of action for any breach of the contract by the Contractor are reserved to the Owner. No officer or employee of the Owner is permitted a share or any part of the contract or benefit from the contract. Any assignment of money shall be subject to all proper set-offs and withholdings in favor of Owner and to all deductions provided for in the contract, and particularly all money withheld, whether assigned or not, shall be subject to being used by Owner for completion of the work if Contractor is in default.

103.6.00 Bonds

Upon acceptance of this contract, or as a condition to continue performance under the contract, Contractor, at the option of the Owner, shall execute and deliver two bonds, a Performance Bond, and a Payment Bond each in an amount equal to the total contract sum, and fully executed by a surety company or companies, authorized to do business in the State of Oregon and approved by the Owner. The bonds shall be conditioned upon a compliance with and fulfillment of all terms and provisions of the contract. Contractor shall pay the costs of any bond. The Attorney-in-Fact (Registered Agent) who executes a bond must file with each bond a notarized and effectively dated copy of his or her power of attorney with each bond. Both the Performance Bond and Payment Bond shall be issued by a surety company or companies included on the current list of financially acceptable sureties published by the United States Treasury Department.

Upon acceptance of this contract, or as a condition to continue performance under this contract, Contractor and each subcontractor, unless exempt under the provisions of ORS 279C.800 to 279C.870, must have a Public Works Bond filed with the Construction Contractors Board. Contractor shall include in every subcontract a provision requiring the subcontractor to have a Public Works Bond filed with the Construction Contractors Board before starting work under this contract, unless exempt under the provisions of ORS 279C.800 to 279C.870.

Before final acceptance of the project, Contractor shall provide a maintenance and warranty bond in an amount equal to the total amount paid on the contract, together with any amendments in a form approved by the Owner. Such maintenance and warranty bond shall be conditioned upon the final project being completed and guaranteed against defects in materials and workmanship. The maintenance and warranty bond shall continue in effect during the full term of any warranty period and any extension of the warranty period.

103.7.00 Owner's Immunity from Liability

Contractor shall defend, indemnify and save Owner, as well as its officers, employees and agents, harmless from liability and loss because of injury, including death, to any person, or damage to any property that may occur or may be alleged to have arisen out of, connected with, or related to performance of the work, as a result, directly or indirectly, of Contractor's or its subcontractors' or material-men's acts or omissions, or of their servants, agents, and employees, regardless of whether such injury or damage is jointly attributable to Owner's fault or negligence. This section shall survive acceptance of the work and completion of the contract, including any applicable warranty period.

In all claims against Owner or its agents or employees these indemnification obligations shall not be limited in any way by a limitation in the amount or type of damages, the amount or type of insurance, compensation or benefits payable by or for Contractor's worker's compensation acts, disability acts or other employee benefits.

103.8.00 Proof of Carriage of Insurance

Work shall not commence until all insurance required in the contract has been obtained nor until such insurance has been approved by the Owner, nor shall any subcontractor commence work until the subcontractor also has first obtained insurance applicable to such work. Contractor shall maintain insurance throughout the life of the contract that will hold the Owner harmless and indemnify the Owner for all losses to third persons or to the Owner arising out of the operations, including a contingent liability arising from them.

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103.9.00 Certificates of Compliance

Prior to the final acceptance of the work, the Owner may require a certificate in form substantially as follows:

Certificate of Compliance

I, _____, _____
(name or signatory party) (title)

do hereby certify:

- (1) That all work has been performed and materials supplied in accordance with the Contract Documents for the above work, and that;
- (2) Not less than the prevailing wage has been paid to laborers, workers and mechanics employed on this work;
- (3) There has been no unauthorized substitutions of subcontractors; nor have any subcontracts been entered into without the names of the subcontractors having been submitted to the Engineer prior to the start of such subcontract work;
- (4) That no subcontract was assigned or transferred or performed by any subcontractor other than the original subcontractor, without prior notice having been submitted to the Engineer together with the names of all subcontractors;
- (5) That all claims for material and labor and other service performed in connection with these specifications have been paid;
- (6) That all monies due to the State Industrial Accident Fund (ORS 656), the State Unemployment Compensation Trust Fund (ORS 657), the State Tax Commission (ORS 315.575, 316.575, or 316.711 and 316.714), hospitals and other health care providers (ORS 279C.530) have been paid;
- (7) That the signing party has read such statement, knows and understands the contents hereof and verifies the truthfulness of each statement and the whole thereof.

Date

Contractor (authorized signature)

(print name)

103.10.00 Severance

If any provision of this contract is void, invalid or unenforceable under the laws of the State of Oregon or the United States, the balance of the contract shall remain in effect and binding on the parties.

103.11.00 Environmental and Natural Resources Laws and Rules

The following is a list of federal, state and local agencies of which the Owner has knowledge that have enacted ordinances or regulations dealing with the prevention of environmental pollution and the preservation of natural resources that may affect the performance of the contract:

Federal Agencies

Department of Agriculture
Forest Service, Soil Conservation Service
Department of Defense
Army Corps of Engineers
Environmental Protection Agency
Department of Interior
Bureaus: Sport Fisheries and Wildlife, Outdoor Recreation, Land Management, Indian Affairs,
Reclamation
Department of Labor
Occupational Safety and Health Administration
Department of Transportation
Coast Guard
Federal Highway Administration

State Agencies

Department of Agriculture
Department of Environmental Quality
Department of Fish and Wildlife
Department of Forestry
Department of Geology and Mineral Industries
Department of Human Resources
Department of Land Conservation and Development
State Engineer
State Land Board
Water Resources Board

Local Agencies

City Council
Clackamas County
Board of County Commissioners
Port of Portland
Metropolitan Service District
Tualatin Valley Fire & Rescue
Clean Water Services
Washington County
Water Districts

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104 SCOPE OF WORK

104.1.00 Intent of Contract

The intent of the contract is to provide for construction and completion of the work described. Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with plans, specifications and terms of the contract.

Contractor shall perform all work in accordance with the lines, grades, typical cross sections, dimensions and other data shown on the plans or as modified by written orders of the Engineer, and all other work determined by the Engineer as necessary to proper prosecution and completion of the project.

104.2.00 Plans and Specifications

The plans, specifications and other Contract Documents will govern the work. The Contract Documents are intended to be complementary and cooperative and to describe and provide for a complete project. Anything in the specifications and not on the plans, or on the plans and not in the specifications, shall be as though shown or mentioned in both. Reference specifications and standard plans are a part of the Contract Documents.

While much of the information pertaining to conditions that may affect the cost of the proposed work will be shown on the plans or indicated in the specifications, the Owner does not warrant the completeness, accuracy, interpretation or deductions of such information. Contractor is responsible for ascertaining the existence of any conditions affecting the cost of the work which would have been disclosed by reasonable diligent examination of the site. Failure of the Contractor to make an examination necessary to determine general and local conditions and all other conditions that may affect the work under this contract shall not release the Contractor from the obligations of this contract and shall not entitle the Contractor to additional compensation for extra work or to an extension of time for completion.

Upon discovering any error, omission or inconsistency in the plans or specifications, the Contractor shall immediately call it to the attention of the Engineer. Contractor shall have no cause for a claim where Contractor had reason to believe defects in the plans or specifications existed and failed to present a timely objection.

104.3.00 Precedence of Contract Documents

If there is a conflict between Contract Documents, the document highest in precedence shall control. The precedence shall be: First: Addenda, Second: Permits from other agencies as may be required by law, Third: Special provisions, Fourth: Plans, Fifth: Standard plans, Sixth: Standard specifications, Seventh: Reference specifications.

Change orders, supplemental agreements and approved revisions to plans and specifications will take precedence over documents listed above. Detailed plans have precedence over general plans.

104.4.00 Shop Drawings

When shop drawings or other drawings are required by the Engineer, they shall be prepared in accordance with current modern engineering practice and at the Contractor's expense. Drawings shall be of a size and scale to show clearly all necessary details and shall be

transmitted by letter to the Engineer for approval or correcting before commencing the work.

Materials shall not be furnished or fabricated nor any work done for which drawings are required, before approval of the drawings by the Engineer.

Approval of drawings by the Engineer shall not relieve the Contractor from the responsibility for errors or omissions in the drawings or from deviations from the Contract Documents unless such deviations were specifically called to the attention of the Engineer in the letter of transmittal submitted with the drawings.

The review by the Engineer of shop drawings, construction methods and equipment or other submittals is only for conformance with the general design concepts of the project and does not extend to consideration of structural integrity, safety, detailed compliance with contract requirements, or any other obligation of the Contractor. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for confirming and correlating all dimensions; fabricating and construction techniques; coordinating his work with that of all other trades; and the satisfactory performance of his entire work in strict accordance with the Contract Documents. The review does not relieve Contractor from Contractor's obligation fully to perform all contract requirements, nor shall such review give rise to any right-of-action or suits in favor of Contractor or third persons, against Engineer or Owner.

104.5.1 Changes in Work

104.5.2 Changes Requested by the Contractor

Changes in specified methods of construction may be made at the Contractor's request when approved in writing by the Engineer.

Changes in the plans and specifications, requested in writing by the Contractor, which do not materially affect the work and which are not detrimental to the work or to the interests of the Owner, may be granted by the Engineer. Payment to be made per section 109 of these specifications.

104.5.3 Changes Initiated by the Owner

Owner may change the plans, specifications, character of the work or quantity of work. Changes which do not substantially alter the nature or extent of the work may be made without a supplemental agreement. Changes which materially alter the scope or nature of the project shall not be made without a supplemental agreement where the aggregate cost change resulting from all amendments creating such new obligations exceeds 10 percent of the original contract.

Change orders shall be in writing and state the dollar value of the change or establish method of payment, any adjustments in contract time and, when negotiated prices are involved, shall provide for the Contractor's signature indicating acceptance. Payment for all work is to be made per Section 109 of these specifications.

104.6.00 Changed Conditions

Contractor shall notify the Engineer in writing of the following work site conditions, ("changed conditions") promptly upon their discovery and before they are disturbed:

1. Subsurface or latent physical conditions differing materially from those represented in the

contract, however this section shall not be construed as relieving the Contractor of diligently investigating all of the conditions and circumstances affecting the project;

2. Unknown physical conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in work of the character being performed; and
3. Conditions affecting the cost of the work which would not have been disclosed by reasonable examination of the site.

The Engineer will promptly investigate conditions of which notified or any conditions discovered by the Engineer that appear to be changed conditions. If the Engineer determines that the conditions are changed conditions and that they will materially increase or decrease the costs of any portion of the work, the Engineer shall issue a change order adjusting the compensation for that portion of the work. If the Engineer determines that such conditions do not justify an adjustment in compensation, the Engineer shall advise the Contractor in writing. If the Contractor disagrees with such determination, a notice of potential claim may be submitted to the Engineer. No claim of Contractor under this clause and no equitable adjustment shall be allowed unless:

1. the Contractor has given the notice required by this section, and
2. the Contractor has not received final payment under this contract.

104.7.00 Disputed Work

If unable to reach agreement under the foregoing procedures, the Owner may direct the Contractor to proceed with the work. Payment shall be as later determined by an appeals board when such a procedure is provided for by the Owner, or in the absence of an appeals board, as fixed in a court of law. Although not to be construed as proceeding under extra work provisions, the Contractor shall keep and furnish records of all disputed work.

104.8.00 Records

At all times during the term of this contract and for three years thereafter the Contractor shall maintain accurate records in a manner that provides a clear distinction between the direct cost of extra work paid for on the force account basis and the costs of other operations performed in connection with the contract.

Contractor shall furnish to the Engineer daily reports in duplicate of the extra work to be paid for on a force account basis. The reports shall itemize the materials used and shall set forth the direct cost of labor and the charges for equipment rental whether furnished by the Contractor, or subcontractor. The reports shall provide names, or identifications and classifications of workers, the hourly rate of pay and hours worked together with the size, type and identification number of equipment and hours of equipment operation.

Material charges shall be submitted by vendors' invoices. Such invoices shall be submitted with the reports; or, if not available, they shall be submitted with subsequent reports. If the vendors' invoices are not submitted within 15 days after acceptance of the work, the Owner reserves the right to establish the cost of such materials at the lowest current price at which the materials are available in the appropriate quantities delivered to the location of the work.

All reports shall be signed by the Contractor or an authorized representative.

The Engineer will compare records with the reports furnished by the Contractor, make any necessary adjustments and then compile the costs of extra work paid for on a force account basis on forms furnished by the Owner. When these extra work reports are agreed upon and signed by both parties, they shall become the basis of payment for the work performed.

104.9.1 Extra Work

New or unforeseen work will be classed as "extra work" when the Engineer determines that it is not covered by contract unit prices or stipulated unit prices and the character of the work is substantially different from that which the Contractor bid.

Contractor shall perform work on a force account basis upon written notice by the Engineer. If the Engineer determines the work increases the amount due under the contract, payment will be made pursuant to subsection 109.6.00.

104.9.2 Payment

Payment for extra work will be established by agreement between the Contractor and the Owner. If no agreement can be reached, payment will be made on the following basis:

Contractor shall maintain records sufficient to distinguish the direct cost of extra work from the cost of other operations. If Contractor fails to keep such records, all work shall be deemed to have been performed at Contractor's own expense.

Contractor shall furnish reports of extra work daily, on forms provided by the Owner. The reports shall itemize all costs for labor, materials, equipment rental, overhead and profit. The reports shall include for workers; hours worked, rates of pay, names and classifications; and for equipment shall include size, type, identification number and hours of operation. All records and reports shall be made immediately available to the Engineer upon request.

All reports shall be signed by the Contractor or an authorized representative.

The Engineer's records will be compared with the Contractor's reports, and the necessary adjustments and compilation of the costs of extra work will be made. When extra work reports are agreed upon and signed by both parties, they shall become the basis of payment.

104.10.00 Owner's Representatives on the Site

Owner may, but is not obligated to, appoint an agent or representative other than the Engineer on the site where the work is performed. The presence of or inspections by Owner's agent or representative is strictly for purposes of determining the progress of the work and shall not be construed as relieving the Contractor of its obligations under this contract. Owner's agent or representative shall have no authority to accept work that varies from the required plans and specifications.

105 CONTROL OF WORK

105.1.00 Authority of the Engineer

Subject to the authority delegated by the Owner, the Engineer will decide all questions which may arise as to the quantity, quality and acceptability of materials furnished and work performed, the rate of progress of the work; change orders and time extensions; interpretation of the plans and specifications; the measurement of all quantities, the acceptable fulfillment of the contract on the part of the Contractor. The Engineer's estimates and decisions in these matters shall be final, binding and conclusive upon all parties to the contract.

No work to be done under the contract will be considered completed until it has passed final inspection by the Engineer and is accepted by the Owner. Contractor understands that the Engineer has the authority to direct the work to be done under the contract and that the Contractor shall at all times carry out and fulfill the instructions and directions of the Engineer as they concern the work to be done under the contract.

If the Contractor fails to comply with an order made under this subsection, the Engineer may cause unacceptable work to be remedied or removed and replaced, unauthorized work to be removed, and to deduct the costs from any monies due or to become due the Contractor.

The Engineer may suspend the work for cause as set forth in section 108.

The Engineer's approval signifies favorable opinion and qualified consent. It does not constitute certification, assurance of completeness, assurance of quality, assurance of accuracy concerning details, dimensions and quantities. Such approval will not relieve the Contractor from responsibility for errors, improper fabrication, nonconformance to requirements or deficiencies within the Contractor's control.

Neither the Engineer nor Owner has a responsibility to notify Contractor when to begin, cease or resume work, to give early notice of rejection of faulty work, nor to superintend so as to relieve Contractor of any responsibility or consequences for neglect or carelessness by Contractor or the Contractor's subordinates.

105.2.00 Authority and Duties of Inspectors

The Engineer may appoint assistants to inspect all materials used and all work done. Such inspection may extend to any or all parts of the work and to preparation or manufacture of the materials to be used. Inspectors may not revoke, alter, enlarge or relax the provisions of these specifications. An inspector is placed on the work to set necessary lines and grades and to keep the Engineer informed as to the progress of the work and the manner in which it is being done; and to call the attention of the Contractor to any infringements upon plans or specifications.

However, failure of the inspector or the Engineer to call the attention of the Contractor to faulty work or infringements upon the plans or specifications shall not constitute acceptance of the work. Visits, observations, and inspections by the Engineer or inspector shall not relieve the Contractor of its obligation to conduct comprehensive inspections of the work and to furnish materials and perform acceptable work and to provide acceptable safety precautions, in conformance with the intent of the contract.

An inspector is not authorized to approve or accept any portion of the work or to issue instructions contrary to the plans and specifications. The inspector may reject defective material and to suspend any work that is being improperly done, subject to the final decision of the

Engineer. The inspector will exercise such additional authority as may, from time to time, be specifically delegated to him or her by the Engineer.

105.3.00 Disputed Work

If the Contractor considers any work demanded of it to be outside the scope of the contract or considers a ruling of the Engineer to be unfair, the Contractor shall proceed without delay to perform the work or to conform to the ruling. Contractor shall within ten (10) days after date of receipt of the instructions or ruling, file a written protest with the Engineer, stating clearly and in detail the basis of objection, and include an itemized statement of any extra costs that may have resulted. Except for such protests or objections that are made of record in the manner specified and within the time limit stated, the records, rulings, instructions or decisions of the Engineer will be final and conclusive. Contractor expressly waives any protest or objection for which written protest is not filed within ten (10) days after date of receipt of Engineer's instructions or ruling.

105.4.00 Responsibility of the Contractor

Contractor shall do all the work and furnish all labor, materials, supervision, inspections, equipment, tools and machines necessary for the performance and completion of the project in accordance with the Contract Documents within the specified time.

Contractor shall do all cutting, fitting and patching of its work that may be required to make the work's general parts come together properly and fit it to receive or be received by work of other Contractors shown upon or reasonably implied by the Contract Documents. Requirements for additional cutting, fitting and patching, resulting from Contractor's defective or ill-timed work shall not be a basis for additional cost to Owner.

If any part of the contract work depends for proper execution or maximum durability upon the work of any other firm, Contractor or its subcontractors shall inspect the work before commencing its own work and shall make known for approval by Owner any departures from drawings and specifications. Similarly, Contractor shall provide comprehensive and continuous supervision of personnel and inspections of the work and materials. Contractor shall not assert that Contractor was in any manner relieved of such obligations due to the presence of or involvement of other parties, such as the Owner's representative, the Engineer or an inspector.

Failure of Contractor to observe these requirements shall bar the Contractor from claiming that defects in its own work are due to defects in the work of others, unless the Contractor submits clear and convincing evidence that a thorough inspection of the other work was made before the Contractor's work went forward and that tests which were reasonable and customary failed to disclose the defects which later appeared.

Contractor shall employ only competent, skillful persons to do the work. Contractor shall keep competent, supervisory personnel on the work during its progress. Contractor shall give efficient supervision to the work using the highest level of skill and attention.

Material and construction details of plans, forms, shoring, falsework and other structures built by the Contractor but not a part of the permanent project shall meet the approval of the Engineer, but such approval shall not relieve Contractor from responsibility for their safety and sufficiency.

Contractor shall be responsible for all expense involved in making any required changes in plans or specifications to accommodate a substitution approved by the Engineer for the convenience of the Contractor or to circumvent an unforeseen difficulty in obtaining a specified article.

Contractor shall assume all responsibility for the work. As between the Contractor and Owner, the Contractor shall bear all losses and damages directly or indirectly resulting to the Contractor, to the Owner or to others on account of the character or performance of the work, unforeseen difficulties, accidents or any other cause whatsoever. Contractor shall assume the defense of, indemnify and save harmless the Owner, its officers, employees, the Engineer and inspector from all claims, liability, loss, damage and injury of every kind, nature and description, directly or indirectly resulting from the Contractor's activities in the performance of the contract, the ownership, maintenance or use of motor vehicles in connection with this contract, or the acts, omissions, operations, or conduct of the Contractor or subcontractor under the contract, or in any way arising out of the contract, irrespective of whether fault is the basis of the liability or claim, and irrespective of whether any act, omission or conduct of the Owner connected with the contract is a condition or contributory cause of the claimed liability, loss, damage or injury and irrespective of whether act, omission or conduct of the Contractor or subcontractor is merely a condition rather than a cause of the claim, liability, loss, damage or injury.

If at any time during the performance of this contract, or at any time in the future, the Contractor becomes aware of actual or potential problems, faults or defects in the site conditions, the contract work, any non-conformance with the project construction contract, federal, state or local law, rule or regulation, or has an objection to a decision made by or on behalf of the Owner or the Engineer with respect to such condition, contract, rules or regulations, Contractor shall give prompt written notice thereof to Owner. Any delay or failure on the part of the Owner to provide a response to Contractor shall neither constitute agreement with nor acquiescence to Contractor's statement of claim not constitute a waiver of any of Owner's rights.

105.5.00 Notifications Relative to Contractor's Activities

Contractor shall obtain prior approval from the Engineer or the Owner for the closing or partial closing of any road, street, alley or other public thoroughfare. Contractor shall give advance notice of such closure to all agencies providing public services including, but not limited to, the sheriff, police, fire, ambulance services, Tri-Met and the school district transportation services.

Contractor shall notify all utilities before commencing work including, but not limited to, gas, communications, cable, telecommunications, power, water, sanitary and storm sewers.

Utilities may not be located as shown or marked as the location may have been established from records and not from on-site inspection. Contractor shall notify utilities at least two (2) working days prior to commencing work of the date on which work will commence, in order to give the utilities a reasonable opportunity to establish the location of utilities by on-site examination prior to commencing the work. Contractor shall adhere to the above notification requirements during the progress of the work where the location of utilities is necessary as the work progresses.

Contractor shall notify all agencies affected by the operations so as to properly coordinate and expedite the work in such a manner as to cause the least amount of conflict and interference between such operations and those of other agencies.

Notification shall include, but not be limited to, the time of commencement and completion of work, names of streets or location of alleys to be closed, schedule of operations and routes of detours where possible.

Damages or claims resulting from improper or insufficient notification of the affected agencies shall be the responsibility of the Contractor.

105.6.00 Utilities and Existing Improvements

Any information shown as to the location of existing water courses, drains, sewer lines or utility lines which cross or are adjacent to the project, has been compiled from the best available sources, but is not guaranteed to be accurate.

Contractor shall provide for the flow of sewers, drains or water courses interrupted during the progress of the work, and shall restore such drains or water courses as approved by the Engineer. Contractor shall make excavations and borings ahead of work as necessary, to determine the exact location of interfering utilities or underground structures.

Ordinarily, utility companies responsible for facilities located within the right of way will be required to complete any installation, relocation, repair, or replacement prior to the commencement of work by the Contractor. However, when this is not feasible or practicable or the need for such work was not foreseen, such utility owners or the Owner have the right to enter upon the right-of-way and upon any structure in the right-of-way to make new installations, changes or repairs. Contractor shall conduct operations so as to provide the time needed for such work to be accomplished during the progress of the improvement.

Contractor shall be responsible for all costs for the repair of damage to the contract work or to any utility, previously known or disclosed during the work, as may be caused by operations. Contractor shall maintain in place utilities not shown on the drawing to be relocated or altered by others and shall maintain utilities that are relocated by others in their relocated positions in order to avoid interference with structures which cross the project work. All costs for such work shall be included in the prices bid for the various items of work.

In the event of a sewage overflow or spill, the Contractor shall immediately notify Owner, Clean Water Services, and DEQ. Contractor shall be responsible for all costs, including but not limited to, repair, cleanup, fines and penalties, caused by Contractor's operations or negligence.

Where it is necessary to connect to existing facilities, Contractor shall not interrupt Owner's operations to make such connections, but the work shall be done on a scheduled time basis convenient to Owner. Any overtime necessary for such connections shall be at Contractor's expense.

105.7.00 Survey Service

Contractor shall give notice to the Engineer not less than two working days in advance of when survey services will be required in connection with the laying out of any portion of the work.

Owner will furnish and set construction stakes establishing lines and grades as determined necessary by the Engineer for all work under the contract, including lines and grades for street excavation and fill, finished subgrade, finished base material, curbs and gutters, walks, structures and utilities, and will furnish the Contractor all the necessary information relative to the lines and grades.

Owner will furnish appropriate offset lines and grades for all projects involving trenching operations. The Engineer will not transfer the offset lines or grades into the ditch, to batterboards, or any other point within the work which is provided by the Contractor.

105.8.00 Protection of Survey Markers

Permanent Survey Markers - Contractor shall notify the Engineer not less than seven (7) days prior to starting work so that the Engineer may take necessary measures to insure the preservation of survey monuments, stakes and bench marks. Contractor shall not disturb permanent survey monuments, stakes, or bench marks without consent of the Engineer, and shall notify the Engineer and bear the expense of replacing any that may be disturbed without permission. Replacement shall be done by a registered land surveyor at no expense to Owner.

When a change is made in the finished elevation of the pavement of any roadway in which a permanent survey monument is located, the monument cover shall be adjusted to the new grade.

Lines and Grades - Contractor shall preserve construction survey stakes and marks for the duration of their usefulness during construction. If any construction survey stakes are lost or disturbed and, in the judgment of the Engineer, need to be replaced, the Contractor shall replace them at no expense to the Owner. The cost of replacement shall be charged against, and shall be deducted from, the payment for the work.

Lot Stakes - Unless otherwise directed by the Engineer or shown in the plans, the Contractor shall preserve existing survey stakes that mark property lines and corners. Any stakes other than those that are in direct conflict with the proposed work, that become lost, or disturbed by the Contractor's operations shall be replaced by a registered land surveyor at no expense to Owner.

105.9.00 Other Surveyors

Surveying by private land surveyors on permit projects or any other work under the control of the Owner shall conform in all respects to the quality and practice required of the Owner's surveyors as set forth in subsection 105.7.00.

105.10.00 Protection of Property

Contractor shall protect all public and private property and take every reasonable precaution to avoid damage to the property.

Site-parked mobile equipment, operable machinery, and hazardous parts on the new construction site, subject to mischief shall be kept locked or otherwise made inoperable whenever left unattended.

Wastes shall not be buried or burned on the site or disposed of into storm drains, sanitary sewers, streams or waterways. All wastes shall be removed from the site and disposed in a manner complying with local ordinances, state and federal anti-pollution laws.

Contractor shall restore and bear the cost of any public or private improvement, facility or structure within the right-of-way that is damaged or injured directly or indirectly by an act, omission or neglect in the execution of the work that is not designated for removal. Contractor shall be responsible for any injury, loss, or damage to any presently existing improvements on the premises caused by the Contractor or his or her employees, agents or subcontractors, and in the event of such injury, loss or damage shall promptly make such repairs or replacements as required by Owner without additional cost to Owner.

Contractor shall give reasonable notice to occupants of buildings on property adjacent to the work to permit the occupants to remove vehicles, trailers and other possessions as well as salvage or relocate plants, trees, fences, sprinkler systems or other improvements in the right-of-way that are designated for removal or might be destroyed or damaged by work operations.

Contractor shall protect all designated trees and planted areas within the right-of-way or easements, and shall exercise care and conduct operations to minimize damages to other planted areas.

Contractor shall review the location, limits and methods to be used prior to clearing work with the Engineer. Clearing and grubbing shall be performed in strict compliance with all local, state, and federal laws.

Completed work shall include all necessary permanent safety devices such as machinery guards and similar ordinary safety items required by state and federal (OSHA) industrial authorities and applicable local and national code. Any features of the work (owner selected equipment) subject to such safety regulations shall be fabricated, furnished and installed in compliance with these requirements.

105.11.00 Temporary Traffic Control

Contractor shall provide and be responsible at all times for such flaggers, signs and other devices not otherwise specified to be furnished by the Owner. Contractor shall erect and maintain all barricades, guards, standard construction signs, warning signs and detour signs, as necessary to warn and protect the public at all times from injury or damage as a result of the work operations on highways, roads or streets affected by operations.

Upon failure to immediately provide the necessary flaggers or to provide, erect, maintain and remove barricades, lights and standard signs when so ordered, without further notice to the Contractor or the Contractor's surety, the Engineer may do so and deduct all the costs from payments due or coming due the Contractor.

See Section 201 of the Technical Specifications for additional traffic control requirements.

105.12.00 Protection of Work

Until acceptance of the project, the Contractor shall at all times protect from damage all public property and private property that may be affected by the work and preserve all materials, supplies, equipment of any description, and all work already performed, from the nature of the work, the action of the elements, and damage by persons or from any other cause whatsoever. Any work or materials lost, removed or damaged by any cause or for any reason shall be the responsibility of Contractor until such time as Owner has indicated acceptance and approval of same, according to Contract Documents.

105.13.00 Maintenance of Work After Partial Acceptance

Upon request of the Contractor and with the approval of the Engineer, or upon the order of the Engineer, the Contractor will be relieved of the duty of maintaining and protecting certain portions of the work that are approved to be placed in service and have been completed in accordance with the Contract Documents, including cleanup. Such action shall not constitute acceptance of the work or any part of the work for purposes of a warranty or guarantee.

In addition, such action by the Engineer will not relieve the Contractor of responsibility for injury or damage to the completed portions of the work resulting from use by public traffic or from action of the elements or from any other cause. However, if such prior use increases the cost of, or delays the work, Contractor shall be entitled to such extra compensation or extension of time, or both, as the Engineer may determine. Contractor will not be required to again clean up such portions of the improvement prior to final acceptance, excepting for such items of work as result from Contractor's operations. Nothing in this section shall be construed as relieving Contractor from full responsibility for making good defective work or materials found to be defective.

105.14.00 Use of Light, Power and Water

Contractor shall furnish temporary light, power and water complete with connecting piping, wiring, lamps and similar equipment necessary for the work as approved. Contractor shall install, maintain and remove temporary lines upon completion of work. Contractor shall obtain all permits and bear all costs in connection with temporary services and facilities at no expense to the Owner.

105.15.00 Subsurface Data

Geotechnical investigations were not performed for this project. Known utilities and structures expected to be adjacent to or encountered in the work are shown on the plans. Such information is offered as supplementary information only. Neither the Engineer nor the Owner assumes any responsibility for the completeness or interpretation of such supplementary information.

Contractor shall examine the site and available records, as set forth in Section 102.6.00. The submission of a proposal shall be conclusive evidence that the bidder has investigated and is satisfied as to the subsurface conditions to be encountered, as to the character, quality and quantities of work to be performed and materials to be furnished and as to the requirements of the Contract Documents.

Contractor shall contact all utility companies regarding underground utilities in the area of work as set forth in Section 105.5.00. Relocation of underground utilities that lie within the construction area or trench width necessary to complete the work shall be the responsibility of the Owner. Damage to existing utilities shall be the responsibility of the Contractor.

105.16.00 Verbal Agreements

No verbal agreement or conversation with an officer, agent or employee of the Owner, either before or after execution of the contract, shall affect or modify the terms or obligations contained in the documents comprising the contract. A verbal agreement or conversation shall be considered as unofficial information and in no way binding upon the Owner.

105.17.00 Dust Control, Water and Air Pollution

During all phases of the construction work, and when directed, the Contractor shall take precautions to abate dust nuisance by cleaning up, sweeping, sprinkling with water, or other means as necessary to accomplish the suppression of dust.

During the term of the contract, Contractor's operations shall conform to applicable laws and regulations of the Oregon Department of Environmental Quality, and other agencies of the State

and Federal Government, as well as local ordinances designed to prevent, control and abate water and air pollution. Such agencies are referred to in Section 103.11.00.

105.18.00 Removal of Defective or Unauthorized Work

Work that does not conform to contract requirements shall be considered unacceptable.

Contractor shall remove all unacceptable and defective work. Contractor shall perform replacement by work and materials that conform to the Contract Documents, or remedy otherwise in an approved manner. This provision shall have full effect regardless of whether the unacceptable work may have been done or the defective materials used with the full knowledge of the inspector. Even if the inspector in charge previously overlooked defective work, that shall not constitute an acceptance of any part of the work.

Contractor shall do no work without the Engineer giving lines and grades. Work done contrary to or regardless of the instructions of the Engineer, work done beyond the lines shown or as directed, except as provided in this contract, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the contract. Such work may be ordered removed or replaced at no expense to the Owner.

If a defect in work is of a minor nature and the Engineer determines that it is not of such consequence to result in a dangerous or undesirable condition, the Owner may retain such work and make such deductions in the payment for such work as determined reasonable and in the public interest. Such determination by the Owner shall be final.

105.19.00 Cleanup

From time to time as the work progresses and immediately after completion of the work, the Contractor shall clean up and remove all refuse and unused materials of any kind resulting from the work. Upon failure to do so within twenty-four hours after directed, the work may be done by the Owner and the cost deducted from any payment due the Contractor.

After all other work embraced in the contract is completed and before final acceptance of the contract, the entire right-of-way and easement area, including, but not limited to the roadbed, planting, sidewalk, shoulders, driveways, alley and side street approaches, slopes, ditches, utility trenches, and construction areas shall be neatly finished to the lines, grades and cross sections shown and as specified.

As a condition precedent to final acceptance of the project, the Contractor shall remove all equipment and temporary structures, and all rubbish, waste and generally clean up the right-of-way and premises to conform substantially to conditions as they existed before the commencement of work.

105.20.00 Final Inspection

At such times as all construction work on the project is complete and all extra work bills, forms and documents required under the contract are submitted, the Contractor shall so notify the Engineer in writing. The Engineer will make an inspection of the project and project records within fifteen (15) days of receiving notice. At the inspection, if all construction provided for and ordered under the contract is found completed and satisfactory and all certificates, bills, forms and documents have been properly submitted, such inspection shall constitute the final inspection.

If any work in whole or in part is found unsatisfactory, or it is found that all certificates, bills, forms, and documents have not been properly submitted, the Engineer will give the Contractor the necessary instructions as to replacement of material and performance or re-performance of construction work necessary and prerequisite to satisfactory final completion of construction work and will give the Contractor the necessary instructions for submission of bills, forms and documents. Contractor shall comply with and execute such instructions immediately. When the instructions are complied with and executed, the Contractor shall notify the Engineer in writing. The Engineer will make another inspection within fifteen (15) days after such notice. This inspection shall constitute the final inspection, if all requirements of the instructions have been met to the satisfaction of the Engineer. If the instructions are not completed to the satisfaction of the Engineer, the Engineer shall issue additional instructions and the process will be repeated until the Engineer is satisfied all requirements are complied with. When the Engineer is satisfied all requirements have been met, the inspection will be considered the final inspection.

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106 CONTROL OF MATERIALS

106.1.00 Preference for Use of Oregon Products

Preference may be given to articles or materials produced or manufactured in Oregon, if price, fitness, availability and quality are otherwise equal. These provisions do not apply to contracts on projects financed wholly or in part by federal funds.

106.2.00 Quality of Materials

Contractor shall use only new materials, parts, products and equipment in the work which conform to specified requirements. Contractor shall determine the kind of work, amount of work and other factors that may be necessary or involved in furnishing specified products and materials. Materials and products which, after approval, have become unsuitable or unacceptable for use, regardless of cause, will be rejected by the Engineer and shall not be used.

106.3.00 Sampling and Testing

Tests of materials will be made by the Owner in accordance with the methods described or designated in the applicable specifications, and at any time during the production, fabrication, preparation and use of the materials. Acceptance by Owner of test data or inspections of any portion of the work shall not relieve Contractor of the Contractor's obligation to perform the work as required by the contract.

Owner reserves the right to require samples and to test products for compliance with pertinent requirements irrespective of prior certification of the products by the manufacturer as set forth in Section 106.4.00.

When tests of materials are necessary, as determined by the Engineer, such tests will be made by, and at the expense of the Owner unless otherwise specified. Contractor shall withhold from use the materials represented by the samples until tests have been made and the materials found equal to the requirements of the specifications or to approved samples. In all cases, the Contractor shall furnish and make available the required samples without charge. Samples shall be made available in ample time to permit testing of the materials prior to use, and no claim will be allowed for any delay caused by awaiting test results. To facilitate and make safe the sampling of materials at plants, the Contractor shall provide safety measures and devices to protect those who take the samples.

In the absence of any reference specification, it shall be understood that such materials shall meet the specifications and requirements of the American Society for Testing and Materials (ASTM). When there is no pertinent coverage under ASTM, the material concerned shall meet specifications and requirements of applicable commercial standards of the Commodity Standards Division of the U.S. Department of Commerce. Lacking such coverage, the materials shall meet requirements established by reputable industry for a high quality product of the kind involved. Contractor shall furnish a copy of the test procedure used.

All testing shall be performed by or handled through the testing laboratory of the Owner or as directed by the Engineer. If the Owner requests tests and materials fail, the Contractor shall bear all costs for all subsequent testing necessary to meet the specified requirements.

The costs for inspections or tests not required by the specifications but are requested by Owner, will be borne by Owner, except where Contractor's work fails an inspection, the costs of that inspection will be paid by Contractor.

106.4.00 Certification

For commercial products inclusive of industry standardized products, in lieu of normal sampling and testing procedures by the Contractor and the Owner, the Engineer may accept from the Contractor the manufacturer's certification with respect to the product involved, under the conditions set forth as follows:

1. The certification shall state that the named product conforms to the Owner's requirements and the representative samples have been sampled and tested as specified.
2. The certification shall either be accompanied with a certified copy of the test results, or certify that the test results are on file with the manufacturer and will be furnished to the Engineer upon request.
3. The certification shall give the name and address of the manufacturer and the testing agency and the date of tests; and shall set forth the means of identification that will permit field determination of the product delivered to the project as being the product covered by the certification.
4. The certification shall be in duplicate with one copy to be sent with the shipment of the covered product to the Engineer, and with one copy sent to the Owner.
5. Owner will not be responsible for any costs of certification or for any costs of the sample and testing of products.

106.5.00 Inspection Requirements

Contractor shall permit and facilitate access to the Engineer or Engineer's representatives to all parts of the work and to the plants of producers and fabricators at all times and will furnish them with every reasonable facility for ascertaining whether work is in accordance with requirements and intent of the Contract Documents. Contractor shall furnish such samples as are customarily required for testing purposes at no expense to the Owner. If any work should be covered up without approval or consent of the Engineer, if required by the Engineer, it shall be uncovered for examination at Contractor's expense. Re-examination of work may be ordered by the Owner, and if so ordered, the work shall be uncovered by Contractor. If the work is found to be in accordance with Contract Documents, the Owner will pay the cost of re-examination and replacement. If the work is found not to be in accordance with the Contract Documents, the Contractor and the Contractor's sureties shall correct the defective work at Contractor's and surety's expense.

106.6.00 Inspection by Others

Inspection of the work by persons other than representatives of the Owner will not constitute inspection by the Owner, except as otherwise directed by Owner or Engineer.

106.7.00 Storage and Protection of Materials

Contractor shall store materials in a manner to assure the preservation of their quality and fitness for the work and in a location that will facilitate their prompt inspection. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Approved portions of the right-of-way may be used for storage purposes and for placing the Contractor's plant and equipment, but if additional space is required the Contractor shall provide it at his or her expense. Contractor shall not use private property for storage purposes without

written permission of the property Owner or lessee. When requested, the Contractor shall furnish copies of such written permission to the Engineer.

106.8.00 Trade Names, Approved Equals or Substitutions

To establish a basis of quality, certain processes, types of machinery and equipment, or kinds of materials may be specified either by well-known technical or trade meaning, description or process or by designating a manufacturer by name and referring to that brand or product designation, or by specifying a kind of material. It is not the intent of the specifications to exclude other processes, equipment or materials of equal value, utility or merit.

When a process is designated, or a manufacturer's name, brand or item designation is given, or a process or material covered by patent is designated or described, it shall be understood that the words "or approved equal" follow such name, designation or description, whether in fact they do so or not. The burden is on the Contractor to prove such equality to the satisfaction of the Owner and Engineer.

If it is desirable to furnish items of equipment or materials by manufacturers other than those specified, as a substitute after the contract is executed, the Contractor shall secure approval prior to placing a purchase order or furnishing the same. Proposed substitutions will be considered only if Owner receives the complete advantage of lesser cost with no decrease in quality, or earlier completion date, or both. If a substitution is approved, Contractor shall assume all risk and costs for redesign and adjustment of all work affected by the substitution and its effect on adjoining work, and any delays occasioned by its use.

If the proposal includes a list of equipment, materials, or articles for which the Contractor must name the manufacturer at the time of submission of the bid, no substitutions for those items will be permitted after a proposal has been accepted without the express consent of the Owner.

106.9.00 Mineral Deposits

The quality of material in specified mineral deposits will be acceptable in general, but the Contractor shall determine for itself the amount of equipment and work required to produce a material meeting the specifications. It shall be understood that it is not feasible to ascertain from samples the limit for an entire deposit, and that variations shall be considered as usual and are to be expected. The Engineer may order procurement of material from any portion of a deposit and may reject portions of the deposit as unacceptable.

Unless otherwise specified, the Owner will acquire and make available to the Contractor the right to take materials from the sources shown or described, together with the right to use such property for plant site, stockpiles and hauling roads.

If the Contractor elects to use material from sources other than those shown or described, the Contractor shall acquire the necessary rights to take materials from the sources and shall bear all related costs, including those for development and exploration, and any costs that may result from an increase in length of haul. The use of material from such sources will not be permitted until the Engineer determines, from representative samples obtained and tested at the expense of the Contractor, that an adequate amount of satisfactory materials are available in the source. Additional samples may be required of the Contractor for inspection and testing prior to approval of and authorization to use the source.

If crushed aggregate is produced from local gravel pits or quarries, all material encountered with diameter of 12 inches or less shall be crushed and used.

When work areas, gravel pits or other than commercially operated borrow pits are located in or adjacent to live streams or other bodies of water, operations at the sites shall be so controlled, both during and after completion of the work, that erosion will be minimized and sediment will not enter streams or other bodies of water. This may require segregating such areas by a dike or other barrier, treatment of pollutants by filtration, a settling basin or other means sufficient to reduce the sediment content to not more than that of the body of water into which it is discharged.

106.10.00 Owner Furnished Materials

Any material furnished by the Owner will be delivered or made available to the Contractor at the locations specified or shown. The cost of handling and placing such materials after they are delivered to the Contractor will be considered as included in the contract price for the item in connection with which they are used. Contractor will be held responsible for all material delivered to the Contractor by the Owner and deductions will be made from any monies due to make good any shortages, deficiencies, and damages which may occur after such delivery, and for any demurrage charges.

106.11.00 Failure to Reject Defective Work

Failure of Engineer or Owner during the progress of the work to discover or reject defective work or work not in accordance with the drawings and specifications shall not be deemed an acceptance nor a waiver of Owner's right to proper execution of the contract work or any part of it. Partial or final payment or partial or final occupancy or use of the project facility by Owner shall not be construed to be an acceptance of work or materials which are not strictly in accordance with the Contract Documents, nor a waiver of Owner's rights.

107 LEGAL RELATIONS AND RESPONSIBILITIES

107.1.00 Bonds

Contractor shall provide and maintain bonds as set forth in Section 103.6.00.

107.2.00 Laws and Regulations

Contractor shall keep fully informed of all federal, state and local laws, ordinances and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, that in any manner affects the conduct of the work. Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders and decrees. Contractor shall protect and indemnify the Owner and the Owner's representatives against any claim or liability arising from or based on the violation of such law, ordinance, regulation, order or decree, whether by the Contractor, subcontractors, suppliers of materials or services, or others engaged by the Contractor or the employee of any of them.

The State of Oregon statutes for public works contracts, ORS Chapter 279C, as amended, are incorporated by reference as a part of the Contract Documents.

In conformance with the requirements of ORS 279C.525, the Owner has made specific reference to federal, state, and local agencies that have enacted ordinances or regulations dealing with the prevention of environmental pollution and the preservation of natural resources that affect the performance of the contract.

Federal, state, and local agencies normally having a responsibility relating to the environment include those listed in Section 103.11.00.

107.3.00 Assignment of Contract and Subletting

No contract or portion thereof may be assigned or sublet without the consent of the Owner, except that money due the Contractor may be assigned as specified below.

Contractor may assign money due or to become due it under the contract and such assignment will be recognized by the Owner, if the Owner is given written notice, to the extent permitted by law, but any assignment of money shall be subject to all proper setoffs and withholdings in favor of the Owner and to all deductions provided for in the contract, and particularly all money withheld, whether assigned or not, shall be subject to being used by the Owner for completion of the work in the event the Contractor should be in default.

107.4.00 Subcontractors

No part of the work shall be transferred or subcontracted without prior written consent of the Owner, or approval at the time of award. No such consent or approval shall release the Contractor from any obligation to the Owner or to persons employed by the subcontractors, or to those supplying materials to the subcontractors. In all cases, subcontractors will be considered by the Owner as an employee and liable to be replaced for incompetency, neglect of duty or misconduct. Contractor agrees to be fully responsible for the acts and omissions of its subcontractors and of other persons either directly or indirectly employed by them as if they were directly employed by the Contractor. All subcontractors must be registered with the Construction Contractors Board or licensed by the State Landscape Contractors Board, as applicable, in accordance with ORS 701.035 to 701.055 before the subcontractor commences work under the contract. Nothing contained in the Contract Documents shall create or be construed as an agreement between Owner and subcontractors.

107.4.01 Subcontractor and Material Suppliers Contracts,

The following provisions shall be included and applicable to contracts between Contractor and each and every subcontractor, including all material suppliers.

- a. **Payment Clause.** Contractor shall pay subcontractor for satisfactory performance under its subcontract within 10 days out of such amounts as are paid to the Contractor by the Owner, unless payment is subject to a good faith dispute as defined in ORS 279.445.
- b. **Interest Penalty Clause.** Contractor shall pay to the subcontractor an interest penalty on amounts due in the case of each payment not made in accordance with the payment clause:
 - (i) For the period beginning on the day after the payment date and ending on the date on which payment of the amount is made; and
 - (ii) The rate of interest charged on the amount due, beginning on the day after the required payment date and ending on the date on which payment is made, shall equal three times the discount rate on 90-day commercial paper in effect at the Federal Reserve Bank in the Federal Reserve district that includes Oregon on the date that is 30 days after the date when payment was received from the Owner, but the rate of interest shall not exceed 30 percent. The amount of interest may not be waived.
- c. **Complaint.** If the Contractor fails, neglects or refuses to make payment to a subcontractor, the subcontractor may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279.445.
- d. **Sub-Contract Payment, Interest, Penalty, and Complaint Clauses.** Contractor shall include in each of its subcontracts and to require of their contractors that they also include in their subcontracts with each lower-tier subcontractor or supplier provisions conforming with the Payment, Interest Penalty, and Complaint Clauses.
- e. **Sub-Contract Public Works Bond Clause.** Contractor shall include in each of its subcontracts and to require of their contractors that they also include in their subcontracts with each lower-tier subcontractor a provision requiring the subcontractor to have a Public Works bond filed with the Construction Contractors Board before starting work under this contract, unless exempt under the provisions of ORS 279C.800 to 279C.870.
- f. **Sub-Contract Prevailing Wage Rate Clause.** Contractor shall include in each of its subcontracts and to require of their contractors that they also include in their subcontracts with each lower-tier subcontractor a provision requiring the subcontractor to pay the applicable prevailing wage rates required by ORS 279C.800 to 279C.870.
- g. **Sub-Contract Worker's Compensation Clause.** Contractor shall ensure that each of its subcontractors complies with the requirements of ORS Chapter 656.

107.5.00 No Waiver of Legal Rights

Owner shall not be precluded or stopped by any measurement, estimate, or certificate made either before or after the completion and acceptance of the work or payment for the work, from showing the true amount and character of the work performed and materials furnished by the Contractor, or from showing that any measurement, estimate, or certificate is untrue or incorrectly made, or that the work or materials do not conform in fact to the contract. Notwithstanding any

such measurement, estimate or certificate, or payment in accordance therewith, the Owner shall not be precluded or stopped from recovering from the Contractor and the Contractor's sureties such damages as may be sustained by failure to comply with the terms of the contract, or from enforcing compliance with the contract. Neither the acceptance by the Owner, nor payment for all or part of the project, shall operate as a waiver of any portion of the contract or of any power reserved, or any right to damages herein provided. A waiver of any breach of the contract shall not be held to be a waiver of any other subsequent breach.

107.6.00 Other Contracts

Owner has the right to let other contracts be coordinated with this contract. Contractor shall cooperate with and afford other contractors reasonable opportunity for introduction and storage of materials and for execution of their work. Any matter of dispute shall be decided by the Engineer, and that decision shall be binding. If part of the work depends for its proper execution upon the work of any other contractor, the Contractor shall inspect and promptly report to the Engineer any defects that affect the subsequent work. Failure to do so shall constitute an acceptance of the other contractor's work as fit and proper for the reception and attachment of the Contractor's own work and equipment, except as to defects that may develop in the other contractor's work after the execution of the Contractor's work.

Contractor shall cooperate with other firms, contractors or subcontractors on the work and with Owner so that all portions of the work may be completed in the least possible time within normal working hours. Contractor shall furnish other firms, contractors, or subcontractors, whose work is fitted into the Contractor's detail and erection drawings giving full information regarding the fabrication and assembly of Contractor's work. When possible, drawings shall show checked field measurements.

If the Contractor causes damage to a separate firm, contractor, or subcontractor on the work, Contractor agrees to use its best efforts to negotiate a settlement with such firm, contractor or subcontractor. Contractor shall defend, indemnify and save Owner harmless from all claims, losses, liability or actions arising therefrom, even if Contractor was not negligent in causing such damage.

107.7.00 Certification of Compliance with Tax Laws

As required by ORS 279B.110(2)(e), Contractor represents and warrants that Contractor has complied with the tax laws of this state, the City, and applicable political subdivisions of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317 and 318, hereafter ("Tax Laws"). Contractor further covenants to continue to comply with the Tax Laws during the term of this Agreement and Contractor covenants and acknowledges that the failure to comply with the Tax Laws is a default for which City may terminate this Agreement and seek damages.

107.8.00 Insurance

Contractor shall provide and maintain insurance as set forth in subsection 103.8.00 and this section. Except as otherwise expressly agreed to by Owner, Contractor's obligation to provide and maintain the insurance coverage provided under subsections 107.7.01, 107.7.02 and 107.7.03 and 107.7.04 shall survive termination of this contract and until the work is substantially complete. If Contractor fails, neglects or refuses to make prompt payment of any premium due on account of such insurance, Owner may pay such premium or procure replacement insurance and charge the amount of the payment against funds due or to become due the Contractor or its surety under this agreement.

107.8.01 General Liability

Contractor shall provide and continuously maintain a general liability policy or policies that provides coverage for bodily injury including personal injury and property damage insurance, including automobile, as will protect the Contractor and Owner from all things or damage that may arise from operations under or in connection with this contract, including all operations of subcontractors.

Such insurance shall provide coverage for not less than the amounts set forth below:

For bodily injury including death	\$ 550,000 for one claimant
and personal injury	\$2,000,000 for one occurrence
For property damage	\$2,000,000 for one occurrence

In lieu of the foregoing, submit a single limit policy in the sum of \$2,000,000.

The insurance shall be written on a comprehensive form with extended coverage endorsement which includes broad form property damage on an occurrence basis. Unless excluded by special specification, the general liability policy shall include, without deductible, coverage for premises operations, explosion and collapse hazard, under-ground hazard, products completed operations, contractual insurance, independent contractors. Motor vehicle liability insurance in the amount of \$2,000,000 for each occurrence shall also be maintained. Insurance shall be maintained until final acceptance of the work by the Owner and the products liability and completed operations coverage shall continue in force until the expiration of the guarantee period required by the contract.

The insurance shall be without prejudice to coverage otherwise existing, and shall name as additional insureds the Owner and all other governmental bodies with jurisdiction in the area involved in this project, their officers, agents and employees, and shall further provide that this policy shall not be terminated, modified, cancelled or coverage reduced prior to the completion of this contract without 30 days prior written notice by certified mail to the Owner which notice shall be subject to the approval of the attorney, the notice to commence to run from the date notice is actually received at the office of the Owner.

The policy shall also provide for a cross-liability endorsement and shall guarantee to the Owner the amount of coverage for which public bodies are responsible as set forth in ORS Chapter 30, notwithstanding the naming of additional insureds.

If set forth in the Special Specifications, additional insureds may be the Owners' Consultant Engineer and other governmental bodies with jurisdiction in the area involved in the project, their officers and employees and such agents as may be specified.

Notwithstanding the naming of additional insureds, the policy shall protect each insured in the same manner as though a separate policy had been issued to each; but nothing herein shall operate to increase the insurer's liability as set forth elsewhere in the policy beyond the amount or amounts for which the insurer would have been liable if only one person or interest had been named as insured. Any annual policy aggregate of insurance coverage shall be fully maintained and, if necessary, replenished in the required amounts regardless of claims that are paid or reserved against the policy and whether or not arising out of work performed under this contract.

The policy shall contain an endorsement, that requires notification to the named insureds and certificate holders of any diminution in available insurance coverage.

A certificate evidencing such insurance together with the proper endorsement shall be filed with the Owner and shall be subject to the approval of the attorney as to the adequacy of protection.

107.8.02 Builders Risk All Risk Insurance

Contractor shall provide during the life of this contract Builders Risk All Risk Insurance coverage on an increasing basis so as to cover 100% of the value of all work performed as the project progresses and to include coverage for that part of the work which has not been incorporated into the project but which has been included and paid for in a progress payment as set forth in subsection 109.9.00. The policy shall cover losses due to fire, smoke, explosion, hail, flood, lightning, vandalism, malicious mischief, wind, collapse, aircraft, landslide, faulty workmanship and earthquake. The policy shall provide for losses to be paid to the Contractor and the Owner, as their interests may appear, and provide for a waiver of subrogation between the Contractor, subcontractors and Owner, their officers, agents or employees, for any loss payable under the policy caused in whole or in part by the above-named parties and for which they may be legally liable.

A deductible in an amount that is standard to the industry at the time the policy is issued will be acceptable by Owner, subject to the Contractor's assumption of the deductible amount, without recourse against subcontractor and Owner, their officers, agents or employees, for all losses to which the deductible is applied. Such insurance shall provide that the policy shall not be terminated, modified, cancelled or coverage reduced prior to the completion of this contract without 30 days prior written notice by certified mail to the Owner. The notice period shall commence to run from the date notice is actually received at the office of the Owner.

107.8.03 Workers' Compensation Insurance

Contractor shall provide workers' compensation insurance coverage for all persons employed on the work to be done under the contract and assure that all workers will receive the compensation for compensable injuries provided in ORS Chapter 656 either by:

- a. Contributing to the State Accident Insurance Fund as a contributing employer; or
- b. Qualifying as a direct responsibility employer under ORS 656.403 to 656.443.

If the Contractor or subcontractor elects to fulfill this responsibility by qualifying as a direct responsibility employer under ORS 656.403 to 656.443, satisfactory proof of such fact shall be required. If the certification as a direct responsibility employer is withdrawn, the Contractor or any subcontractor shall on the effective date of the withdrawal of certification become a contributing employer. Contractor shall provide employer with written assurance that subject workers of Contractor and all subcontractors and their beneficiaries will receive compensation for compensable injuries as provided by ORS 656 and that Contractor and all subcontractors will perform all duties and pay other obligations required under ORS Chapter 656.

Contractor shall hold harmless and indemnify Owner for any claims, suits or actions by Contractor's and all subcontractor's employees including their dependents, and including investigations, adjusting or litigation of claims, be they valid or not occasioned by any work and/or services furnished or carried on under the terms of this contract. Contractor shall maintain workers' compensation insurance to the full extent provided by Oregon Workers' Compensation law.

107.8.04 Employer's Liability Insurance

In addition, Contractor shall provide employer's liability insurance including insurance for bodily injury caused by disease in an amount not less than \$500,000.

107.9.00 Royalties and Patents

Contractor shall pay all royalty and license fees, unless otherwise specified. Contractor shall defend, indemnify and hold harmless the Owner or Engineer from and against any suit or claim by reason of infringement of patent rights on any material, machine or appliance that may be used on the work or incorporated into the finished job, except where specifically exempted by the special provision. Unit prices named in the proposal shall include payment of royalties, if any.

107.10.00 Permits, Licenses and Taxes

Contractor shall procure all permits and licenses, pay all charges, fees and taxes and give all notices necessary and incidental to the due and lawful prosecution of the work except those listed in the special conditions.

107.11.00 Wage Rates

The minimum wage rates applicable to the work to be done under the contract are those prescribed under ORS Chapter 279C.800 through 279C.870 and as amended. If the Davis-Bacon Act (40 U.S.C. 276(a)) applies, Contractor and every subcontractor shall pay the higher of the state prevailing rate of wage or the federal prevailing rate of wage. Attached to these specifications is information showing the state and federal prevailing rates of wage and which prevailing rate of wage is higher for workers in each trade or occupation in this locality, as determined by the Commissioner of the Bureau of Labor and Industries under ORS 279C.815(2)(b) in effect at the time the initial specifications were first advertised for bid solicitations. Workers shall be paid not less than the specified minimum hourly rate of wage.

These statutes require the Contractor and every subcontractor shall file with the Owner certified statements on a form prescribed by the Commissioner of the Bureau of Labor and Industries as to the wages paid. The certified statements shall set out accurately and completely the payroll records for the prior week, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, deductions made and actual wages paid. Certified statements for each week during which the Contractor or subcontractor employs a worker under this contract shall be submitted once a month by the fifth business day of the following month.

Each worker in each trade or occupation employed in the performance of the contract either by the Contractor, subcontractor or other person doing or contracting to do or contracting for the whole or any part of the work on the contract must be paid not less than the applicable state prevailing rate or wage, or the applicable federal prevailing rate of wage, whichever is higher. Contractor shall keep the prevailing wage rates posted in a conspicuous and accessible place in or about the project.

Contractor is also responsible for payment of all charges applicable to State unemployment compensation under ORS Chapter 657.

Owner shall pay a fee equal to one-tenth of one percent of the price of this contract, but no less than \$250 and no more than \$7,500, regardless of the contract price. The fee shall be paid at the time the Owner enters into the Public Works contract to the Bureau of Labor and Industries and shall be mailed or otherwise delivered to the Bureau at the following address:

Bureau of Labor and Industries
Wage and Hour Division
Prevailing Wage Unit
800 NE Oregon Street, Suite 1045
Portland, OR 97232

107.12.00 Employer's Contract for Medical Care of Employees

Contractor shall make payment promptly, as due, to any person, co-partnership, association or corporation furnishing medical, surgical and hospital care, or other needed care and attention, incident to sickness or injury, to employees, of all sums that have been agreed to be paid for such services and all monies and sums which:

1. may or shall be deducted from the wages of employees for such services pursuant to Oregon Revised Statutes Chapter 656, and any contract entered into ORS Chapter 656;
2. are collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

107.13.00 Payment of Obligations

Pursuant to ORS Chapter 279C, Contractor shall make payment promptly, as due, to all persons supplying such Contractor labor or material for the prosecution of the work provided in this contract. Contractor is subject to interest and penalties as provided in ORS 279C.515 for failure to do so (see Section 107.4.01). Contractor shall pay all contributions or amounts due the Industrial Accident Fund from such Contractor or subcontractor incurred in the performance of the contract. Contractor shall not permit any lien or claim to be filed or prosecuted against the State, County, school district, municipality, municipal corporation, or subdivision thereof, on account of any labor or material furnished. Contractor shall pay to the Department of Revenue all sums withheld for employees pursuant to ORS 316.167.

Failure to make prompt payment of any claim when due, for labor or services supplied for the prosecution of work under the contract, including labor or material supplied to subcontractors, may necessitate Owner paying such claim to the person furnishing the labor or services and charging the amount of payment against funds due or to become due to the Contractor under this contract. Such payment shall not relieve the Contractor or the Contractor's surety from obligations with respect to any unpaid claims.

107.14.00 Protection of Other Governmental Authorities

Whenever work under the contract affects or may affect public property owned by or under the jurisdiction of a governmental authority, agency or district, including a governmental subdivision other than the Owner's, the Contractor shall indemnify and save harmless such governmental authority, its officers, agents and employees from any loss, damage or claim of loss or damage to such property or the use of the property, arising from work under the contract. Contractor shall supply any bond or insurance and make any special guarantee deposit required by such governmental authority, before beginning any portion of the work that affects or may affect the property, the use of the property of such governmental authority.

107.15.00 Public Safety and Convenience

Contractor shall conduct the project with proper regard for the safety and convenience of the public. When the project involves use of public ways, Contractor shall provide flaggers when directed and install and maintain means of free access to all fire hydrants, service stations, warehouses, stores, houses, garages and other property.

Unless otherwise provided in the Contract Documents, private residential driveways shall be closed only with approval of the Engineer or specific permission of the property owner. Contractor shall not interfere with normal operation of public transit vehicles unless otherwise authorized. Contractor shall not obstruct or interfere with travel over any public street or sidewalk without approval. Where detours are necessary, they shall be maintained with good surface and shall be clearly marked. Contractor shall provide open trenches and excavations with adequate barricades of an approved type which can be seen from a reasonable distance. At night, the Contractor shall mark all open work and obstructions by lights.

Contractor shall install and maintain all necessary signs, lights, flares, barricades, railings, runways, stairs, bridges and facilities. Contractor shall observe all safety instructions received from the Engineer or governmental authorities, but following of such instructions shall not relieve the Contractor from the responsibility or liability for accidents to workers or damage or injury to person or property.

Emergency traffic such as police, fire, emergency medical, and disaster units shall be provided reasonable access to the work area at all times.

Contractor shall be liable for any damages that may result from failure to provide such reasonable access or failure to notify the appropriate authority.

107.16.00 Personal Safety

Contractor shall be responsible for conditions of the job site, including safety of all persons and property during performance of the work. Contractor shall protect the project and materials from damage due to the nature of the work, the elements, carelessness of other contractors or from any cause whatever until the completion and acceptance of the project. Contractor shall be responsible for all loss or damages arising out of the nature of the work. This requirement will apply continuously and not be limited to normal work hours. Safety provisions shall conform to the applicable federal, state, county, and local laws, ordinances and codes. Where any of these are in conflict, the more stringent requirement shall be followed.

Contractor shall maintain at the office or other well-known place at the job site, all articles necessary for giving first aid to the injured and establish the procedure for immediate removal to a hospital or a doctor's care of employees and other persons who may be injured on the job site.

The Engineer's duty to conduct construction reviews of the Contractor's performance is not intended to include a review of the adequacy of the Contractor's safety measures in, on or near the construction site.

All accidents causing death or serious injuries or damages shall be reported immediately by telephone or messenger to both Engineer and Owner. In addition, the Contractor shall promptly report in writing to the Engineer all accidents arising out of, or in connection with, performance of the work, whether on or adjacent to the site, giving full details and statements of witnesses.

If a claim is made by anyone against the Contractor or subcontractor due to an accident, the Contractor shall promptly report the facts in writing to the Engineer, giving full details of the claim.

107.17.00 Detours

Detours outside the limits of the project shall be the sole responsibility of the Owner unless otherwise provided in the special provisions. Contractor shall be responsible for detours within the limits of the project such as side street crossings, temporary bridges over freshly placed concrete, utilization of one or more lanes of the construction area for maintenance of traffic and

such related facilities for the maintenance of traffic, the costs for which shall be included in the unit contract prices unless otherwise provided in the special provisions.

Upon failure to immediately provide, maintain or remove suitable detours or detour bridges when ordered to do so by the Engineer, the Owner may without notice to the Contractor or the Contractor's surety, provide, maintain or remove the detour and deduct those costs from any payment due the Contractor.

Contractor shall construct and maintain temporary detours to provide adequate passage of public traffic and protection of the work at all times.

Contractor shall protect the work and traffic at all times regardless of flagging and pilot car services furnished by the Owner.

107.18.00 Labor

Upon notification in writing from the Engineer, the Contractor shall immediately remove from the job for its duration any laborer, worker, mechanic, foreperson, superintendent or other person employed who is found to be incompetent, intemperate, troublesome, disorderly or otherwise objectionable, or who fails or refuses to perform work properly and acceptably.

Contractor is directed to ORS Chapter 659 regarding unlawful employment practices and discrimination by employers against an employee or applicant for employment because of race, religion, color, sex or national origin. ORS 659.030 states that it is an unlawful employment practice for an employer, because of race, religion, color, sex or national origin of any individual to refuse to hire or employ or to bar or discharge from employment such individual or to discriminate against such individual in compensation or in terms, conditions or privileges of employment.

If the Contractor fails to comply with the non-discrimination clauses or with any such rules, regulations, or orders, the contract may be cancelled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further government contracts or federally assisted government contracts in accordance with the rules and procedures authorized in Executive Order number 11246 and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246, or by rule, regulation or order of the Secretary of Labor or as otherwise provided by law.

107.18.01 Employee Drug Testing Program

Contractor shall demonstrate that it has an employee drug testing program in place.

107.19.00 Working Conditions

Pursuant to ORS 279C.520, Contractor agrees to provide a written schedule to employees showing the number of hours per day and the days per week employee will work. Contractor agrees, pursuant to ORS Chapter 279C, that no person shall be required or permitted to labor more than 10 hours in any one day, or 40 hours in any one week, except in cases of necessity, emergency, or where the public policy absolutely requires it, in which event, the person or persons so employed for excessive hours shall receive at least time and a half pay: for all overtime in excess of eight hours a day or 40 hours in any one week when the work week is five consecutive days, Monday through Friday; or for all overtime in excess of 10 hours a day or 40 hours in any one week when the work week is four consecutive days, Monday through Friday; and for work performed on Saturday and on each Sunday, New Year's Day on January 1, Memorial Day on the last Monday in May, Independence Day on July 4, Labor Day on the first Monday in September, Thanksgiving Day on the fourth Thursday in November, and Christmas Day on December 25. This paragraph does not apply to labor performed in the manufacture or fabrication of any material

ordered by the Contractor or manufactured or fabricated in any plant or place other than the place where the main contract is to be performed. Contractor shall maintain continuously posted in the form and in the location as required by law a notice that any claims for overtime must be filed within 90 days from the completion of the contract.

107.20.00 Use of Explosives

Blasting or use of explosives on any of the Owner's projects requires a permit and is subject to all the provisions, laws, orders and regulations of any other governmental authority in whose jurisdiction such work may be done.

107.21.00 Railroad Crossings or Right-of-Way

Whenever the project or work involves the crossing of a railroad line or the encroachment of railroad right-of-way, the Contractor shall submit a program of proposed operations within the railroad rights-of-way area which shall be approved by the appropriate railroad officials and the Engineer before the work is started within such area. Contractor shall pay for services of flaggers and watchmen furnished by the railroad company and provide drive piling, set cribbing, build bridges or tunnels, install enclosing pipe and do all other work required by the railroad company or necessary for the safety or maintenance of railroad traffic. Contractor shall furnish any bond or insurance required of the Owner by the railroad company as a result of such intended operations and indemnify the Owner for all expenses incurred by the Owner, and assume all liability or claims imposed on the Owner as a result of operations in the railroad right-of-way area. Contractor shall bear all costs resulting from interferences, obstructions or liabilities set forth in this specification, regardless of whether specifically mentioned in this contract.

107.22.00 Right-of-Way and Easements

Contractor shall confine construction activities within property lines, limits of easements and limits of construction permits as shown or specified in the Contract Documents, unless arrangements are made with owners of adjacent private property. Prior to the use of any private property outside these specified boundaries, the Contractor shall file with the Engineer a written permission of the property owners, and upon terminating such usage, file with the Engineer a release from all damages, signed by the property owners.

Contractor shall not unreasonably encumber the specified work areas with materials and equipment, and shall obtain and bear the cost of permits for special occupancy and the use of the specified work area from the proper agencies. Contractor shall comply with the Engineer's directions regarding signs, advertisements, fires, and smoking.

107.23.00 Waste Sites

Excavated materials not suitable or not required for backfill or embankment shall be deposited on one or both of the following waste sites:

1. Predesignated waste sites contained in the Contract Documents or shown on the plans.
2. Waste sites provided by the Contractor.

All costs for disposing of this excess material shall be incidental to other items of work contained in the proposal.

Contractor shall operate either type of waste site in such a manner as to meet all safety and health requirements of state and local agencies. Sites, operations or the result of such operations

which create a nuisance problem, or which result in damage to public and private properties will not be permitted.

Owner will provide permits for dumping at waste sites designated in the Contract Documents. Contractor will be responsible for obtaining the necessary permits for dumping at waste sites provided by the Contractor.

107.24.00 Vermin Control

At the time of occupancy by the Owner, a structure or structures entirely constructed under the contract shall be free of rodents, insects, vermin and pests. Contractor shall arrange and pay for extermination work as may be necessary as part of the contract work within the contract time. Work shall be performed by a licensed agency in accordance with the requirements of governing authorities. Contractor shall assume responsibility for any injury to persons or property resulting from extermination work and for the elimination of any offensive odors resulting from extermination operations.

107.25.00 Warranty and Maintenance

Contractor shall make all necessary repairs and replacements to remedy, in a manner satisfactory to the Engineer and at no cost to the Owner, all defects, breaks, or failures of the work occurring within one (1) year following the date of final acceptance of the work or within a longer period of time as may be prescribed by law or by the terms of an applicable special warranty required by the contract document, due to faulty or inadequate materials or workmanship, and for damage or disturbances to other improvements under, within, or adjacent to the work, whether or not caused by settling, washing or slipping when such damage or disturbance is caused, in whole or in part, from activities of the Contractor in performing the duties and obligations under this contract.

When such defects or damage occur, within the time period described in part of the surface or subsurface work done under the contract, or in an adjacent surface or subsurface improvements not included in the work under the contract, the Contractor shall promptly repair the defects and damage and with regard to the repair, the one year maintenance period required shall, with relation to such required repair, be extended one year from the date of acceptance of the repair. Contractor agrees to hold the Owner and Engineer harmless from liability of any kind arising from damage due to faulty or inadequate materials or workmanship. If Contractor fails to make repairs and replacements promptly, the Owner may do the work, and the Contractor and Contractor's surety shall be liable for the cost.

107.26.00 Liability and Indemnification

Contractor shall assume all responsibility for the work, and bear all losses and damages directly or indirectly resulting to Contractor, Owner, or others due to the character or performance of the work, unforeseen difficulties, accidents, or any other cause whatsoever. To the fullest extent permitted by law, Contractor shall assume the defense if requested, indemnify and save harmless the Owner, the design engineer, the inspector or project engineer and their officers, agents and employees from all claims, liability, loss, damage and injury of every kind, nature and description, directly or indirectly resulting from activities in the performance of a contract, the ownership, maintenance or use of motor vehicles in connection with the contract, or the acts, omissions, operations, or conduct of the Contractor, subcontractor or material supplier under the contract or in any way arising out of the contract, regardless of whether fault is the basis of the liability or claim and irrespective of whether any act, omission or conduct of the Owner connected with the contract is a condition or a contributory cause of the claimed liability, loss, damage or injury and regardless of whether act, omission or conduct of the Contractor or subcontractor is merely a condition rather than a cause of the claim, liability, loss, damage or injury.

Unless otherwise set forth in the special provisions, Contractor shall not be liable for nor be required to defend or indemnify the Owner or the design engineer, the inspector or project engineer on claims for damage or damages resulting solely from acts or omissions by them or their officers, agents or employees and the obligation of the Contractor under this article shall not extend to the liability of the design engineer or Owner and their agents or employees arising out of their furnishing of maps, drawings, reports, surveys, designs, or specifications.

Any specific duty or liability imposed or assumed by the Contractor, as may be otherwise set forth in the Contract Documents, shall not be construed as a limitation or restriction of the general liability or duty imposed upon the Contractor by this section.

107.27.00 Contractor's Warranties as to Competence to Perform

Contractor represents and warrants that Contractor is, and throughout the completion of this contract shall remain, qualified on the basis of the Contractor's own or its employees specialized experience and technical competence and prepared to provide the construction result required by the Owner under this contract.

Owner specifically relies upon and is entitled to rely upon Contractor's representations and warranties regarding Contractor's experience, competence, and preparedness to perform the work.

108 PROSECUTION AND PROGRESS OF WORK

108.1.00 Contractor's Construction Schedule

Prior to beginning any work, the Contractor shall submit a written schedule to the Engineer showing the proposed order of work and indicating the time required for completion of the major items of work. This working schedule shall also take into account the passage or handling of traffic with the least practicable interference with traffic and the orderly, timely and efficient prosecution of the work.

If the work performed does not correspond to the schedule, the Contractor shall submit a revised schedule when requested by the Engineer. The schedule will be used as an indication of the sequence of the major construction operations and as a check on the progress of the work, but does not become a part of the Contract Documents.

Upon Engineer's request and as soon as practicable after the first day of each month, Contractor shall also furnish a summary report of the progress of the various parts of the work under the contract in the shops and in the field, stating the existing status, rate of progress, estimated time of completion, and cause of delay, if any.

See Section 201.2.00 of the Technical Specifications for additional scheduling requirements.

108.2.00 Preconstruction Conference

A preconstruction conference will be scheduled by the Owner or Engineer prior to the commencement of any work. The meeting is to include, but not necessarily be limited to, representatives of the following groups: Owner or Engineer, Contractor and subcontractor, affected utility companies, and other affected persons or agencies.

The purpose of the conference will be to discuss the construction schedule set forth in Section 108.1.00 and items of the work which require special coordination.

108.3.00 Notice to Proceed

Written notice to proceed will be given after the contract has been executed and the performance and payment bonds and all required insurance and other documents have been filed with and approved by the Owner.

Contractor shall notify the Owner of the time and location that work will begin at least 48 hours prior to beginning work.

108.4.00 Contract Time

The contract time shall be in terms of calendar days. Calendar days shall be defined as every day of every year subject to the exclusions. Exclusions to the definition of calendar day will be those days to the nearest one half day when the Contractor is prevented from performing work under the contract for one or another of the following causes or reasons:

1. Acts of God as such defined in Section 101.1.00;
2. Epidemics, quarantine restrictions, strikes, labor disputes, freight embargoes and acts of war or public enemy;
3. Periods when the work is temporarily suspended upon written order of the Engineer.

The contract time, unless otherwise specified, will begin with the date specified in the notice to proceed. Unless expressly set forth in the Contract Documents, time limits shall be those set forth in the Contractor's written schedule submitted under Section 108.1.00.

Time shall be considered the essence of the Contract. By executing the Contract, Contractor confirms that the contract time is a reasonable period for performing the work.

Upon initial commencement of work, Contractor shall provide adequate labor, materials and equipment, taking into account unfavorable conditions, interferences, breakdowns and other inexcusable delays that are encountered and work shall be performed vigorously and continuously in accordance with and to assure completion within the contract time.

If in the judgment of the Engineer insufficient forces are being employed, or inadequate equipment and methods are used, or if progress is unduly delayed, the Engineer may instruct the Contractor in writing to increase the workforce or equipment, or adopt improved methods to expedite the work. Contractor shall follow such instructions, but conformity with Engineer's instructions shall not relieve the Contractor of any of Contractor's responsibilities under the Contract, nor shall the Contractor be entitled to extra compensation as a result.

108.5.00 Suspension of Work

Owner may, for good and sufficient reason, temporarily suspend the Contractor's operations on the project or a part of it. In the event of such suspension, except in emergency, the Owner shall give the Contractor three (3) days notice and the work shall be resumed within five (5) days after Owner has given notice to do so. Owner shall allow the Contractor an extension of time for completion corresponding to the total period of the temporary suspension under this section, and shall reimburse the Contractor for necessary rental of unused equipment, services of security personnel, and other unavoidable expenses accruing due to the suspension without fault of Contractor. Contractor shall not be entitled to damages, intangible or overhead costs, or anticipated profits arising from such temporary suspension.

Pursuant to Sections 105.1.00 and 105.2.00, the Engineer may suspend the work wholly or in part for cause. The Engineer may suspend the work wholly or in part due to:

1. failure of the Contractor to correct conditions unsafe for the workers, the general public or the Owner's employees;
2. failure to carry out the provisions of the contract;
3. failure to carry out orders;

for such periods as the Engineer deems necessary due to conditions considered unsuitable for the performance of the work or for any reason the Engineer considers to be in the public interest.

Pursuant to Section 108.6.00, if the Contractor voluntarily suspends operations because of seasonal conditions or other unsuitable conditions, an order to suspend the work may not be required or issued. However, in all cases of suspension of construction operations, the Contractor shall not resume work until permitted by order of the Engineer. Voluntary suspension shall not extend the time in which the contract shall be performed.

At the commencement of and during suspension of the work, the Contractor shall be responsible for the care of the work performed and take every precaution to prevent damage or deterioration of the work including temporary protection devices to warn, safeguard, protect, guide and inform traffic.

If the work is suspended due to the Contractor's failure to correct conditions unsafe for workers or the general public, or to carry out orders given, or to perform any provision of the contract, then the Contractor shall be solely responsible for making suitable provisions for necessary traffic control and bear the costs of maintaining the work under the contract during the period of suspension. If the Contractor at any time fails to provide for traffic and to maintain the work, the Engineer may immediately proceed to maintain such work and deduct entire cost of this maintenance from monies due or to become due the Contractor on the contract.

Contractor's voluntary or involuntary suspension or slowdown, with or without the approval of the Engineer, or suspension of the work ordered by the Engineer shall not be grounds for claims by the Contractor for damages, idle equipment or labor, or extra compensation. No allowance or compensation will be made due to such suspensions of work except as provided in this contract and as provided in Sections 108.4.00 and 108.6.00.

Contractor shall be responsible for damage to the work that may occur during suspensions of work the same as though the damage had occurred while the work was in progress.

108.6.00 Delays and Extensions of Time

If the Contractor is significantly delayed due to court orders enjoining the prosecution of this contract or the underlying project, unavoidable strikes, acts of God, unusual and extraordinary action of the elements that are of such severity to stop all progress of the work, or act or neglect of Owner not authorized by the contract, the Contractor shall, within 48 hours of the start of the occurrence, give notice to the Engineer of the cause of the potential delay and estimate the possible time extension involved. Within ten days after the cause of delay has been remedied the Contractor shall give notice to the Engineer of any actual time extension requested as a result of the occurrence in accordance with Section 108.7.00.

No extension of time will be granted to the Contractor for delays occurring to parts of the work that have no measurable impact on the completion of the total work under the Contract, nor will an extension of time be granted for delays to parts of work that do not delay project completion. No extension of time will be considered for weather conditions normal to the area in which the work is being performed. Delays in delivery of equipment or material purchased by the Contractor or the Contractor's subcontractors (including owner-selected equipment) shall not be considered as a just cause for delay. Contractor shall be fully responsible for the timely ordering, scheduling, expediting, delivery, and installation of all equipment and materials.

Within a reasonable period after the Contractor submits to the Engineer a written request for an extension of time the Engineer will make the final decision on each request.

An adjustment of contract time as provided in this contract shall be Contractor's sole remedy for any delay in completion of the project arising from causes beyond control of Contractor. In no event shall Contractor be entitled to collect or recover damages, loss or expense incurred by reason of such delay, except for Owner-caused delays not contemplated or authorized by the contract, where Contractor may be entitled, but limited to reimbursement for expenses incurred for necessary rental of unused equipment, security services and other unavoidable expenses accruing due to the suspension, but not for intangible or overhead costs, anticipated profits or other damages. If a delay is caused partially by Owner and Contractor, (joint delay) Contractor shall not be entitled to a time extension nor to damages, loss or expense incurred due to such joint delay.

108.7.00 Claims and Demands

Contractor shall not make claims for any loss of anticipated profits because of alterations or changes made pursuant to Sections 104.9.00 and 109.6.00, or for any variation between the approximate quantities and the quantities of work as done. No allowance except as provided in Section 104.9.00 will be made for increased expense, loss of expected reimbursement or loss of anticipated profits suffered or claims by the Contractor resulting directly from such alterations or changes or resulting indirectly from unbalanced allocation among the contract items of overhead expense on the part of the Contractor as a bidder and subsequent loss of expected reimbursements therefore or from any other cause.

In any case where the Contractor claims that it is entitled to or will be entitled to additional compensation and/or additional contract time or if the Contractor considered an interpretation or order by the Engineer to be a breach of contract, the Contractor shall immediately notify the Engineer, in writing, of its intention to make claim before beginning the work or conforming to the interpretation on which the claim is based. Contractor's written notification shall be a written statement describing:

1. the act of omission or commission by the Owner or its agents that allegedly caused damage to the Contractor,
2. the nature of the claimed damage,
3. the clauses of the contract or general legal principles upon which the claim is based, and
4. the factual occurrences upon which the Contractor bases the claim.

Submission of notice of claim as specified shall be mandatory, and failure to comply shall be a conclusive waiver to such claim for damages by the Contractor. Oral notice or statement will not be sufficient nor will notice or statement after the event since it tends to hinder, or prevent the Owner's investigation of the pertinent facts. After written notification (if the claim is not resolved or withdrawn in writing) and only upon written direction by the Engineer, the Contractor shall proceed without delay to perform the work or to conform to the ruling. While the work on an unresolved claim is being performed Contractor shall keep track of costs and maintain records in the manner set forth in Section 109.6.00, at no cost to Owner. Such notice by the Contractor and that Contractor and Engineer are keeping track of costs and maintaining records as required shall not be construed as proving the validity of the claim nor the costs of the claim.

A fully documented claims package shall be submitted in writing to the Engineer within 10 days after the completion and/or upon termination of any of the following that are a basis for the claim:

1. Completion of the work upon which the claim is based;
2. Termination of the cause for additional contract time;
3. Conformance to the Engineer's contract interpretation or order; or
4. Suspension of work by written order of the Engineer.

Each claim submitted shall include substantiating documentation with an itemized breakdown of Contractor and subcontractor's costs on a daily basis which shall include, but not be limited to labor, material, equipment, supplies, services, overhead and profit. All documentation that Contractor believes is relevant to the claim shall be provided in the claim package including without limitation, payroll records, purchase orders, quotations, invoices, estimates, profit and loss statements, daily logs, ledgers, and journals. Failure to submit the claim package in full

compliance with this requirement and maintain cost records as required in this contract, constitutes a waiver of the claim.

The requirements of this Section 108.07.00 shall apply to all claims for additional or extra compensation or time arising from any situation which may occur except for claims of error in the final estimate.

If the claims have been submitted in accordance with the requirements of this subsection, the Engineer will, as soon as possible, consider and investigate the claims of the Contractor for additional compensation. The Engineer will promptly advise the Contractor of his decision to accept or reject the claims, in full or in part.

Contractor shall commence any suit or action to collect or enforce a claim filed in accordance with this subsection within a period of one year following the mailing of the Engineer's full or partial denial. If the suit or action is not commenced in the one year period, the Contractor expressly waives all claims for additional compensation and all causes of suit or action for the enforcement that the Contractor might have had.

If Contractor makes a claim under this subsection or performs work under 104.9.00, the Owner or its designated representative shall have access and a right (at any time) to inspect, audit and copy Contractor's books, records, documents, and other evidence ("records") pertinent to performance and payment of this contract and amendments, change orders and claims made in relation to the contract. If an audit is conducted, it shall be in accordance with generally accepted auditing standards. Contractor will make its records available within the boundaries of the City of Tualatin, Oregon, or pay all additional costs for travel and per diem or other additional expenses incurred by Owner in examining, auditing, inspecting and copying Contractor's records, if the records are not being available within the City's boundaries.

Contractor agrees to the disclosure of all records and to their admission as evidence in any proceeding between the parties, involving a claim or force account work. If Contractor's records establish a discrepancy favorable to Owner, in the representations Contractor has made to Owner involving claims or force account work, Contractor shall bear all costs, incurred by Owner, in the exercise of Owner's rights. All costs referenced in this paragraph may be withheld and deducted from any sum due or that becomes due Contractor.

108.8.00 Liquidated Damages

Time shall be considered the essence of the contract. If the Contractor fails to complete the project or to deliver the supplies or perform the services within the time specified in the contract or any extension by the Owner, the actual damage to the Owner for the delay will be substantial but will be difficult or impractical to determine.

It is therefore agreed that the Contractor will pay to the Owner, not as a penalty but as liquidated damages, the per diem amount set forth in the Schedule of Liquidated Damages below or modification of the Schedule as given in the special provisions for each and every such day, as pertinent, elapsed in excess of the contract time or the final adjusted contract time applicable to the work required under the contract.

SCHEDULE OF LIQUIDATED DAMAGES			
Original Amount of Contract		Per Diem Amount of Liquidated Damages	
For More Than	Up To and Including	Calendar Day (*)	Work Day
\$ 0	\$ 25,000	\$ 30	\$ 42
25,000	50,000	50	70
50,000	100,000	75	105
100,000	500,000	100	140
500,000	1,000,000	150	210
1,000,000	2,000,000	200	280
2,000,000	----	300	420

(*) Calendar day amounts are applicable when the contract time is expressed on the calendar day, or fixed date basis.

Permitting the Contractor to continue and finish the work or part of the work after the contract time or adjusted contract time, has expired shall in no way operate as a waiver on the part of the Owner or of its rights under the contract.

Payment of liquidated damages shall not release the Contractor from obligations in respect to the fulfillment of the entire contract, nor shall the payment of liquidated damages constitute a waiver of the Owner's right to collect additional damages that may be sustained by the Contractor's failure to carry out the terms of the contract. It is the intent of the parties that the liquidated damages be full and complete payment only for failure of the Contractor to complete the work on time. Owner is authorized to deduct the amount of such damages from any monies due the Contractor for the work performed or material furnished under this contract, and the Contractor and his sureties shall be liable for any excess.

Delays caused exclusively by the Owner and are neither contemplated nor authorized by the contract shall not be a basis for liquidated damages. Liquidated damages payable by Contractor shall be reduced in proportion to the amount of fault attributed to Owner for delay caused partially by Owner and Contractor (joint delay).

108.9.00 Contractor's Representative

Before starting work, the Contractor shall designate in writing an authorized representative, who shall have complete authority to represent and to act for the Contractor in the Contractor's absence from the work site, in all directions given by the Engineer. Contractor or the authorized representative efficiently supervise the work, using the best skill and personal attention to the prosecution of the work, and shall be present on the site continually during its progress.

If called for in the contract documents, the Contractor shall maintain an office on or adjacent to the site of the project. Contractor shall keep a complete copy of the plans and specifications on or near the site at all times. If the Contractor and the authorized representative are not present on any part of the work where it may be necessary to give instructions, directions may be given by the Engineer to the superintendent or foreperson who may have charge of that particular part of the project, and such order shall be received and followed. Such directions shall not be deemed to change the status of Contractor or subcontractor, nor to make the Owner an employer, nor to give the Owner direct responsibility for the methods and manner of the work. Such directions of major importance will be confirmed in writing. Any direction will be confirmed on written request in each case from the Contractor.

Incompetent, careless or negligent employees or agents shall be immediately discharged by the Contractor upon written request of the Engineer. Failure to comply with such request shall be sufficient grounds for terminating the contract.

108.10.00 Contractor's Equipment

At all times, the Contractor shall employ sufficient and suitable equipment for prosecuting the work to full completion in the manner and time required by of the contract.

On force account work the equipment and tools used shall be adequate in all respects for efficient performance of the force account work under the direction of the Engineer. The Engineer shall have the authority to refuse the use of equipment and tools on force account work which, in the Engineer's judgment are unsuitable for the work.

If the Contractor fails to furnish suitable and sufficient equipment for the proper prosecution of the work, the Engineer may suspend the work by written notice until such orders are complied with and the deficiencies are corrected as provided in Section 108.5.00.

108.11.00 Conflicts, Errors and Omissions

Contractor shall check and compare all plans prior to construction and notify the Engineer of any discrepancies or omissions to permit correction by the Engineer. Coordination of plans and specifications is intended. Contractor shall furnish labor and materials required for the work if indicated on one and not the other as fully as if mentioned or indicated on both. If any work or materials should be reasonably required or intended for carrying the project to completion that are inadvertently omitted on the plans or specifications, the Contractor shall furnish them as fully as if particularly delineated or described.

It is understood that the Owner intends the plans and specifications to show and describe a complete project within the limits shown. Dimensions shown on the plans shall be used rather than scaled measurements. Whenever it may appear that the contract plans are not sufficiently detailed or explicit, the Engineer may furnish additional detail drawings or written instructions and the Contractor shall perform the work to such additional details or instructions. In case of conflict between the requirements set forth in the contract documents, the provisions for order of precedence in Section 104.3.00 shall apply.

108.12.00 Owner's Right to Do Work

If the Contractor neglects to prosecute the project properly, or fails or refuses to perform any of the terms or conditions of the contract or provide upon request adequate assurance of future performance, the Owner may, without prejudice to any other remedy, supply or correct a deficiency or defect. Such action by the Owner shall be taken only after three (3) days notice by the Engineer to the Contractor and its surety, unless in the judgment of the Engineer an emergency or danger to the work or to the public exists, in which event the Owner as set forth above without any notice whatsoever. Such action by the Owner shall not be construed as a waiver of any other right that the Owner may have under the contract. The cost of such action by the Owner shall be deducted from the payment then or thereafter due the Contractor. Contractor shall pay to the Owner any excess of cost over such a payment due.

108.13.00 Termination for Convenience of the Owner

Pursuant to ORS 279C it is agreed that the Owner has the right to terminate the contract:

1. If work under the contract is suspended by order of a public agency, including the Owner, for any reason considered to be in the public interest other than by a labor dispute or a third party judicial proceeding relating to the work other than a suit or action filed in regards to a labor dispute; and
2. If the circumstances or conditions are such that it is impracticable within a reasonable time to proceed with a substantial portion of the work.

If the contract is terminated pursuant to ORS 279C.550 or 279C.665, Contractor shall be entitled to a reasonable amount of compensation for preparatory work and for all costs and expenses arising out of the termination, excluding lost profits. The amount to be paid to the Contractor:

1. Shall be determined on the basis of the contract price in the case of a fully completed separate item or portion of the work for which there is a separate or unit contract price; and
2. In respect to other work, the Contractor will be paid a percent of the contract price equal to the percentage of the work completed.

Provisions for compensation set forth above shall not apply to termination of the contract that occurs as a result of Contractor's violation of federal, state or local statutes, ordinances, rules or regulations in existence at the time the contract was executed or as a result of violations of the terms of the contract.

Except as otherwise included as part of a separate item or unit of work or as a percentage of the work completed, Contractor shall not be entitled to lost or anticipated profit, or overhead expenses upon termination under this section.

108.14.00 Default by Contractor

All terms and conditions of the contract are considered material. Contractor's failure to comply with the terms or conditions shall, at Owner's option, be deemed a material breach of contract. Upon such failure, Owner shall have the right, whether an alternative right is provided or not, to declare the contract terminated. Issuance by Owner or by the Engineer of an order stating that the contract is terminated, and service by regular mail of a copy of the order upon Contractor and its surety, shall be deemed a complete termination of the Contract. Upon termination, if the surety does not complete the contract, at the election of the Owner, Contractor will assign all subcontracts and material supply contracts to Owner or Owner's designee. Upon the contract being so terminated, Owner may retain all sums due under the contract. Both the Contractor and its sureties shall be liable under the bond or bonds for all losses, expenses and damages caused to Owner by reason of its failure to complete the contract. Notwithstanding such termination, Contractor and his sureties shall remain liable under the contract for work performed prior to such termination. The Engineer will determine the payment due Contractor for work performed prior to the date of contract termination.

If the Contractor fails to commence or diligently prosecute the work as required by the contract, be adjudged bankrupt, make a general assignment for the benefit of creditors, a receiver is appointed on account of insolvency, or if at any time when work has been resumed after a Suspension of Work (pursuant to Section 108.5.00) the Contractor refuses, neglects or fails to

correct the deficiencies or reasons for the suspension, or if the Contractor abandons the work, Owner shall be entitled to request of Contractor or its successor in interest adequate assurance of future performance or the Engineer may give written notice of default to the Contractor and the Contractor's sureties, and shall discontinue or not begin the work. All payments due or that may become due the Contractor may be withheld by the Owner until the completion by the Owner, surety, or another person of all work included in the contract, and until expiration of any maintenance and/or warranty period. Notices may be hand delivered or mailed by certified mail, return receipt requested.

After service on the Contractor of such order to desist from work or part of the work, or notice of termination as set forth in Section 108.13.00, the Owner may take possession of the project or such designated part, and may use all or part of the Contractor's plant, tools, equipment, materials or other property on the project, none of which shall be removed by the Contractor as long as they may be required for the work. Owner may, by contract or otherwise, provide supervision of workers, materials, appliances and equipment necessary for the completion of, and may complete the project or such designated part. The expense incurred for completion of the project or part thereof, together with all damages, liquidated or otherwise sustained or to be sustained by the Owner shall be deducted from the fund or appropriation set aside for the purpose of the contract and shall be charged to the Contractor as if paid. If the amount of such expenses and damages exceeds the sum that would have been payable under the contract if completed entirely by the Contractor, the amount of such excess shall be paid to the Owner by the Contractor and both the Contractor and the Contractor's sureties shall be liable to the Owner.

If the amount of such expenses and damages are less than the sum that would have been payable under the contract if completed entirely by the Contractor, the Contractor shall be entitled only to payment in accordance with contract terms for the work the Contractor actually performed, subject, however, to all terms of the contract.

Contractor shall complete all work unless an order to desist as provided above has been received, and shall cooperate with and in no way hinder or interfere with forces employed by the Owner or others.

Upon completion of the project by others, the Contractor shall be entitled to the return of all material not used in the work or not been paid for, and for all plant, tools, equipment and other property. However, no claim will be allowed because of usual and ordinary depreciation, loss, wear and tear.

None of the provisions in Sections 108.13.00 or 108.14.00 shall be construed to require the Owner to complete the work, nor to waive or in any way limit or modify the provisions of the contract relating to the fixed and liquidated damages suffered by the Owner because of the Contractor's failure to complete the project within the time prescribed.

108.15.00 Completion and Acceptance

After completion of all work items specified in the contract and the final inspection as set forth in Section 105.20.00, the Engineer will recommend to the Owner that the work be accepted and payments be made as provided for in Section 109.12.00.

Failure of Engineer or Owner during the progress of the work to discover or reject defective work or work not in accordance with the drawings and specifications shall not be deemed an acceptance of the work nor a waiver of Owner's right to proper execution of the contract work. No partial or final payment, partial or final occupancy, or use of the project facility by Owner

shall be construed to be an acceptance of work or materials which are not strictly in accordance with the contract documents, nor a waiver of Owner's rights.

The parties mutually agree that a certificate of completion of the project, (1) submitted by the Engineer or other officer of the Owner, and (2) approved by the governing body of the Owner, shall constitute final acceptance of the work and materials included in the contract on the date of such approval. Such approval shall not constitute an acceptance of unauthorized work. No payment made under the contract except the final payment shall be evidence of the performance of the contract, either wholly or in part, and no payment shall constitute an acceptance of unauthorized or defective work or improper material.

The acceptance of the contract work shall not prevent the Owner from making claim against the Contractor for defective work if it is discovered within the guarantee or warranty period.

All work shall be guaranteed by the contract for a period as specified after the date of final acceptance of all the work by the Owner. If, within the guarantee or warranty period, repairs or changes are required in connection with the work, which in the opinion of the Engineer, are necessary as the result of the use of materials, equipment or workmanship that is inferior, defective, or not in accordance with the terms of the contract, the Contractor shall, promptly upon receipt of notice from the Owner or Engineer, and without expense to the Owner:

1. correct all defects and place in satisfactory condition in every particular all guaranteed or warranted work; and
2. make good all damage to the building, site, equipment and the contents, which in the opinion of the Engineer, is the result of the use of materials, equipment or workmanship which are inferior, defective, or not in accordance with the terms of the contract; and
3. make good any work or material, or the equipment and contents of any building, structure or site disturbed in fulfilling such guarantee or warranty.

If after notice, the Contractor, fails to proceed to comply with the terms of this guaranty within ten (10) days, the Owner may have the defects corrected, and the Contractor and its sureties shall be liable for all expense incurred. However, in case of an emergency where, in the opinion of the Engineer, delay would cause serious loss or damage, repairs may be made without notice being given to the Contractor and the Contractor shall pay the costs.

108.16.1 Notice of Termination

108.16.2 Upon receipt of Notice of Termination, under Sections 108.13.00 or 108.14.00, and except as otherwise directed by the Owner, the Contractor shall:

- a. stop work under the contract on the date and to the extent specified in the Notice of Termination;
- b. place no further orders or subcontracts for materials, services or facilities, except as necessary for completion of the portion of the work under the contract that is not terminated;
- c. terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination;

- d. Assign to the Owner all of the right, title, and interest of the Contractor under the orders and subcontracts so terminated in the manner, at the times, and to the extent directed by the Owner. In such a case the Owner may settle or pay all claims arising out of the termination of such orders and subcontracts;
- e. settle all outstanding liabilities and all claims arising out of the termination of orders and subcontracts, with the approval or ratification of the Owner, to the extent it may require, which approval or ratification shall be final for all the purposes of this clause;
- f. transfer title and deliver to the Owner, in the manner, at the times, and to the extent, if any, directed by the Owner:
 - (i) the fabricated or unfabricated parts, work in process, completed work supplies, and other material produced as a part of, or acquired in connection with the performance of, the work terminated by the Notice of Termination; and
 - (ii) the completed or partially completed plans, drawings, information, and other property which, if the contract had been completed, would have been required to be furnished to the Owner; and
- g. use its best efforts to sell, in the manner, at the times, to the extent, and at the price or prices directed or authorized by the Owner, any property of the types referred to in 'f' above. However, the Contractor:
 - (i) shall not be required to extend credit to a purchaser, and
 - (ii) may acquire such property under the conditions prescribed by and at a price approved by the Owner; and provided that the proceeds of such a transfer or disposition shall be applied in reduction of any payments to be made by Owner to the Contractor under this contract or paid in such other manner as the Owner may direct;
- h. complete performance of such part of the work that was not terminated by the Notice of Termination; and
- i. take such action as may be necessary, or as the Owner may direct, for the protection and preservation of the property related to this contract which is in the possession of the Contractor and in which the Owner has or may acquired an interest.

Unless otherwise provided in the Notice of Termination, transfer of title and delivery of any work, supplies or other material, whether completed or partially completed, shall not constitute acceptance of the work or part of the work for purposes of a warranty or guarantee.

Owner will not be responsible for reimbursing the Contractor for any continuing contractual commitments to subcontractors or materialmen or penalties or damages for canceling such contractual commitments. Contractor shall make all subcontractors and other commitments subject to this clause.

At any time after termination, the Contractor may submit a list to the Owner, certified as to quantity and quality, of all items of termination inventory not previously disposed of, exclusive of items the disposition of which has been directed or authorized by the Owner, and may request the Owner to remove such items or enter into a storage agreement covering them. Within fifteen (15) days of receiving the list, the Owner will accept title to such items and remove them or enter into a storage agreement covering them. The list

submitted shall be subject to verification by the Owner upon removal of the items, or if the items are stored, within forty-five (45) days from the date of submission of the list, and any necessary adjustment to correct the list as submitted shall be made prior to final settlement.

108.16.3 After receipt of a Notice of Termination, the Contractor shall submit its termination claim to the Owner, in the form and with certification prescribed by the Owner.

The claim shall be submitted promptly but in no event later than one year from the effective date of termination, unless one or more extensions in writing are granted by the Owner, upon request of the Contractor made in writing within the one year period or authorized extension. However, if the Owner determines that the facts justify such action, the Contractor may receive and act upon such termination claim at any time after the one year period or an extension of the period. Upon the Contractor's failure to submit its termination claim within the time allowed, the Owner may determine, on the basis of information available, the amount, if any, due to the Contractor because of the termination and shall pay the amount so determined to the Contractor.

108.16.4 Subject to Section 108.16.02, the Contractor and the Owner may agree upon the whole or part of the amounts to be paid to the Contractor due to the total or partial termination of work pursuant to this clause, which amounts may include a reasonable allowance for profit on work done. Such agreed amounts, exclusive of settlement costs, shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not terminated. The contract shall be amended accordingly, and the Contractor shall be paid the agreed amount. Nothing in Section 108.16.04 or this clause, prescribing the amount to be paid to the Contractor, the Contractor and the Owner fail to agree upon the whole amount to be paid to the Contractor due to the termination of work pursuant to this clause, shall limit, restrict, or otherwise determine or affect the amounts that may be agreed upon to be paid to the Contractor pursuant to this Section 108.16.03.

108.16.5 If Contractor and Owner fail to agree, as provided in Section 108.16.03, upon the amount to be paid to the Contractor due to the termination of work pursuant to this clause, the Owner shall pay to the Contractor the amounts determined by the Owner as follows, but without duplication of any amounts agreed upon in accordance with Section 108.16.03:

- a. With respect to all contract work performed prior to the effective date of the Notice of Termination, the total (without duplication of any items) of:
 - (i) the cost of such work;
 - (ii) the cost of settling and paying claims arising out of the termination of work under subcontracts or orders as provided in subsection 108.16.01(e) above, exclusive of the amounts paid or payable for supplies or materials delivered or services furnished by the subcontractor prior to the effective date of the Notice of Termination of Work under this contract which amounts shall be included in the cost on account of which payment is made under (i) above; and
 - (iii) a sum, as profit on (i) above, determined by the Owner to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, no profit shall be included or allowed under this

subdivision (iii) and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated rate of loss; and

- b. the reasonable cost of the preservation and protection of property incurred pursuant to subsection 108.16.01(i); and any other reasonable cost incidental to termination of work under this contract, including expense incidental to the determination of the amount due to the Contractor as the result of the termination of work under this contract.

The total sum to be paid to the Contractor under (a) above shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not terminated. Except for normal spoilage, and except to the extent that the Owner shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor under (a) above, the fair value, as determined by the owner of property which is destroyed, lost, stolen or damaged so as to become undeliverable to the owner, or to a buyer pursuant to Section 108.16.01(g).

108.16.6 In arriving at the amount due the Contractor under this clause, there shall be deducted:

- a. all unliquidated advance or other payments on account previously made to the Contractor, applicable to the terminated portion of this contract,
- b. any claim that the Owner may have against the Contractor in connection with this contract, and
- c. the agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired by the Contractor or sold, pursuant to this clause, and not otherwise recovered by or credited to the Owner.

108.16.7 If the termination is partial, the Contractor may file a claim with the Owner for an equitable adjustment of the price or prices specified in the contract relating to the portion not terminated by the Notice of Termination. Such equitable adjustment as agreed upon shall be made in such prices. A claim by the Contractor for an equitable adjustment under this clause must be asserted within ninety (90) days from the effective date of the termination notice, unless an extension is granted in writing by the Owner.

108.16.8 Owner may make partial payments and payments on account on Contractor-incurred costs that relate to the termination portion of this contract whenever the Owner is of the opinion that the aggregate of such payments is within the amount the Contractor will be entitled to. If the total of such payments exceeds the amount determined to be due under this clause, the Contractor shall pay the excess upon demand, with interest. Interest shall be computed at four points above the rate for the 26-week treasury notes at the most recent auction at the Federal Reserve Bank of San Francisco, from the date the Contractor received the excess to the date this excess is repaid to the Owner. No interest shall be charged on an excess payment attributable to a reduction in the Contractor's claim by retention or other disposition of termination inventory until ten (10) days after such retention or disposition, or a later date determined by the Owner because of circumstances.

108.16.9 Unless otherwise provided in this contract or statute, from the effective date of termination until the expiration of three year after final settlement under this contract the

Contractor shall preserve and make available to the Owner at all reasonable times at the Contractor's office without direct charge to the Owner, all its books, records, documents and other evidence bearing on the Contractor's costs and expenses under this contract and relating to the work terminated, or, to the extent approved by the Owner, photographs, microphotographs, or other authentic reproductions of them.

109 MEASUREMENT AND PAYMENT

109.1.00 Measurement of Quantities

Payments shall be based on measurements of the completed work in accordance with United States Standard Measures. Contractor shall show or specify units of measurement for payment. In calculating quantities, all lengths and areas will be based on horizontal and vertical measurements unless otherwise specified. Fitness, availability and quality are otherwise equal. These provisions do not apply to contracts on projects financed wholly or in part by federal funds.

“Basis” means the particular standard unit of measurement that will be applied to a particular item of work as shown.

Each basis of measurement set forth is generally applicable and will be in effect.

Pay lengths will be measured by the linear foot, measured along the line and grade of the item involved as actually placed and accepted.

Volumes of earthwork, particularly excavation and embankment, will be computed by the average end area method or by other methods of equivalent accuracy.

Volumes of materials measured in the vehicles by which they are transported, termed “Vehicle Measurement”, requires computing the volume of the vehicle to the nearest 0.1 cubic yard for its approved capacity, and identification of the vehicle and its capacity. Pay quantities will be determined by vehicle measurement at the point of delivery with no allowance for settlement of material during transit. Loads shall be level and uniform. Measurement will not be made for material in excess of the approved capacity of the vehicle and deductions will be made for loads below the approved capacity.

Volumes of concrete and masonry in structures will be measured according to neat lines as shown on the plans or as altered on order of the Engineer.

When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard may be weighed and the weights converted to cubic yards for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

When payment for materials other than bituminous cements is on a weight basis and unless otherwise set forth in the specification, the pay quantities will be determined by weighing the material on weigh scales provided by the Contractor.

The material shall be weighed in the hauling vehicle as loaded for delivery to the place of its incorporation in the work. Tare weights and the weight of loaded vehicles will be determined to the nearest ten pounds. Tare weights, will be determined by weighing empty vehicles at intervals of such frequency as the Engineer deems necessary to insure accuracy of pay load weights.

Portland Cement will be measured by the pound, hundredweight, ton, sack, bag or barrel. “Barrel of cement” means 376 pounds, avoirdupois. “Sack” and “Bag of cement” will each mean 94 pounds, avoirdupois.

The quantities of asphalt cements, liquid asphalt materials and other bituminous cements normally shipped in tank cars or tank trucks, when they are to be paid for by the gallon (U.S. Standard) or by the ton, will be determined from volume computations of the materials when at a temperature of 60 degrees F, with standard recognized correction factors applied when the materials are measured at any temperature other than 60 degrees F. Net certified scale weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When bituminous materials are shipped by truck or transport, net certified weights or volume, subject to correction for loss of foaming, may be used for computing quantities.

Weights of materials and of metallic coatings will be determined on the basis as set forth in the specification under which their use is required.

“Lump Sum”, when used as the basis of payment means complete payment for the work described to be done, complete and acceptable without further measurement, as such work is covered under the applicable lump sum pay item.

“All Required”, when used as the item of payment means that measurement for the item of work is to be on an All Required basis and that the corresponding payment is to be at a lump sum bid price. It is understood that the lump sum payment will be in effect without further measurement unless changes are ordered in writing by the Engineer. Under the All Required basis, the estimated quantities of the work to be performed there under will be listed in the Special Provisions for the purpose of providing a basis for adjustment of payment, as set forth in Section 109.3.00, if changes in the work are ordered by the Engineer. These estimated quantities are to be considered as approximate only and are made on a reasonable interpretation of plans and intent. No guarantee is made that computations based on the details and dimensions shown on the plans will equal the estimated quantities. If no changes are made in the work, no allowance will be made if the quantities based on the Contractor's computations overrun or underrun the estimated quantities.

When the contract specifies for materials that are to be measured by weighing on scales, the Contractor shall provide the scales at no expense to the Owner and shall transport the materials so they can be weighed on the scales provided.

The scales shall be of a size, capacity, kind and type suitable for the weighing to be done, and shall be properly and adequately installed. Before the scales are used, and as frequently as the Engineer deems necessary to insure accuracy, the Contractor shall, have the scales certified by the Oregon Department of Weights and Measures at its expense.

Contractor is responsible for maintaining the scales in an accurate condition at all times.

Contractor shall furnish scales and locate them so that the amount of hauling involved in the delivering of the materials is no greater than if no weighing were required. If hauling of materials is to be paid as a separate pay item, the pay distance shall include only the distance by the most direct practicable route from the place of loading to the place of deposit. No allowance will be made for extra hauling required to reach the scales.

109.2.00 Scope of Payment

Contractor shall accept the compensation, as provided in this contract, in full payment for furnishing all materials, labor, tools and equipment necessary to the complete work and for

performing all work contemplated under the contract; for loss or damage arising from the nature of the work, or from the action of the elements, or from unforeseen difficulties that may be encountered during the prosecution of the work until the final acceptance by the Owner, and for all risks of every description connected with the prosecution of the work; for all expenses incurred in consequence of the suspension or discontinuance of the work as specified; and for completing the work according to the plans and specifications.

Neither the payment of an estimate nor of retained percentage shall relieve the Contractor of any obligation to make good any defective work or material.

The unit contract prices for the various contract bid items shall be full compensation for all labor, materials, supplies, equipment, tools and all things of whatsoever nature required for the complete incorporation of the item into the work the same as though the item were to read "In Place," unless the plans and special provisions shall provide otherwise.

109.3.00 Compensation for Alteration of Contract

When the character of the work or the unit costs are materially changed, pursuant to subsection 104.6.00, compensation for such work will be made on such basis as may have been agreed to in advance of the performance of the work. When no such basis has been previously agreed upon, then an allowance may be made, either for or against the Contractor, in such amount as the Engineer may determine to be fair and equitable.

109.4.00 Eliminated Items

The Engineer may eliminate, omit or cancel (collectively termed "elimination") the portions of the contract relating to the construction of any item or part of an item by payment to the Contractor of a fair and equitable amount covering all items of actual cost incurred directly in connection with the eliminated work and prior to the date of elimination of the work by order of the Engineer. Where practicable, the work completed before elimination shall be paid for at unit prices, otherwise the Contractor will be allowed a profit percentage on the materials used and construction work actually performed at rates as provided in subsection 109.6.00 for force account work, but no allowance will be made for anticipated profits. Acceptable materials ordered by the Contractor, delivered on the work site or properly stored at sites approved by the Engineer prior to the date of elimination of the work by order of the Engineer, will be purchased from the Contractor by the Owner at actual cost, and shall become the property of the Owner.

109.5.00 Payment for Extra Work

Upon written order by the Engineer, the Contractor shall carry out such work at prices agreed upon between the Contractor and the Owner, but shall not exceed the unit prices established in the contract. When such order pertains to work of a class or classes that do not have unit prices established, then the agreed adjustment shall be based either on unit prices decided on fair and equitable grounds or a lump sum similarly decided, as the Owner may determine, or such work may be done on a force account basis. In no case shall the Contractor make a claim for extra work unless ordered as such.

109.6.00 Payment for Force Account Work

When extra work is ordered to be done on a force account basis and no unit prices for such additions or deletions to the work is made a part of the contract, such work will be paid for on the basis of cost plus certain percentage allowances.

The items of cost for which payment will be made and to which payment will be restricted, together with the percentage, allowance applicable to the respective items, are as follows:

ITEMS OF COST FOR WHICH PAYMENTS WILL BE MADE	PERCENTAGE ALLOWANCE ADDITIONAL TO ACTUAL COST
Labor, including time of foreperson, while engaged directly upon force account work	20
Industrial accident insurance, unemployment compensation contributions and social security for old age assistance contributions incurred or required under statutory law and these standard specifications	15
The amount paid to, or in behalf of, workers by reason of subsistence and travel allowances, health and welfare benefits, pension fund benefits or other benefits, when such amounts are required by collective bargaining agreement or other employment contract generally applicable to the classes of labor employed on the work	15
Materials and supplies actually used in the force account work	15
Rental on each piece of equipment having a value in excess of one hundred dollars, provided the rental rate does not exceed the current rates established by the Associated General Contractors, Oregon Chapter.	15

The payment for labor used in the work will be computed at the rates actually paid by the Contractor or subcontractor, plus the allowance set forth above, unless these rates are in excess of the current local rates, in which event the payment shall be computed at the current local rate, plus allowances. The time allowed shall be the number of hours worked directly on force account operations.

Payment for purchased materials and supplies used on force account work will be computed at the prices billed to the Contractor or subcontractor by the supplier, less all discounts plus the allowance set forth above. It is presumed that the Contractor or subcontractor has taken advantage of all possible discounts on bills for materials and supplies, and such discounts shall be subtracted from the total amounts of bills regardless of failure of the Contractor to take advantage of the discounts.

Freight and express on material and supplies are considered a part of the cost of the materials and supplies and will be paid for as materials and supplies. Materials and supplies produced by the Contractor or a subcontractor will be paid for at prices to be agreed upon between the Contractor and the Engineer.

For the use of Contractor's equipment, the Contractor will be paid at the rental rates set forth in the current edition of the "Rental Rate Blue Book for Construction Equipment" and the "Rental Rate Blue Book for Older Construction Equipment" which are published by the Equipment Guidebook Company, 2800 West Bayshore Road, Palo Alto, California 94303. Reference copies of the above publications are on file at the office of the City Engineer, the Oregon State Highway Division Region Engineer, and the area offices of the Associated General Contractors of America. While using the Blue Book to determine allowable rental rates the listed estimated operating cost will not be allowed and the hourly rate will be calculated by using the monthly rate as set forth in the book divided by 176 hours.

Compensation on equipment not owned by the Contractor will not exceed the rates actually paid by the Contractor and must be supported with an invoice that represents an arm's length transaction. Contractor and the Engineer will agree on the equipment on force account work. If

prior approval is not obtained, the Engineer will establish the rates by either comparing the available equipment and using the applicable rate for the least expensive equipment that will accomplish the work or utilizing the applicable Blue Book rates. Rental cost for equipment not owned by the Contractor will be established so as to minimize the cost to the Owner.

The hourly rate will be used unless the accumulated cost using the hourly rate exceeds the accumulated cost using the daily rate. Daily rate will be used unless the accumulated cost using the daily rate exceeds the accumulated cost using the weekly rate. This system will be expanded to utilize monthly or yearly rates as appropriate. These rental rates will be considered total compensation for all costs, including move-in, move-out, fuel, supplies, repairs, and renewals. No further allowance will be made for these items without specific approval of the Engineer before the work is commenced. Payment for rental on equipment not owned by the Contractor shall be at the rental costs so determined, plus a negotiated percentage not to exceed the allowance for materials and supplies. Individual pieces of equipment, having a value of \$1,000 or less, will be considered to be tools or small equipment, and no rental will be allowed on such. No standby charges will be considered as a compensable part of any force account work.

When a piece of equipment and equipment operators are hired, rented or furnished as a unit, the additional percentage to be allowed shall be 5 percent, and Contractor shall not be entitled to 15 percent on the time of the equipment operators or for payment for contributions made under the Worker's Compensation Act, the Unemployment Compensation Act, or the Social Security Act to cover time of operator's of equipment hired, rented or furnished on this basis.

For equipment rented on a day or hour basis, rental will be allowed for only those days or hours during which the equipment is in actual use. For equipment rented on a monthly basis, straight time rental will be allowed from the day the equipment is first used on the particular piece of force account work, until and including the last day on which it is used on that particular work, excluding the time during which the equipment is used on other work during the period, and excluding the time that the equipment is idle for a continuous period of more than six days.

The percentage allowances made to the Contractor is understood to be reimbursement and compensation for all superintendence, use of tools and small equipment, overhead expense, bond cost, record keeping expense, insurance premiums, profits, indirect costs and losses of all kinds, and all other items or cost not specifically designated as items for which payment is to be made, whether the services, costs and other items involved are furnished or incurred by the Contractor or by the subcontractor. No other reimbursement, compensation or payment shall be made for any such services, costs or other items.

If a percentage allowance or other corresponding allowance is made by the Contractor to a subcontractor in connection with force account work, such allowance shall be at the sole expense of the Contractor and the Contractor shall not be reimbursed or otherwise compensated for the same by the Owner.

All claims for extra work done in any month shall be filed in writing by the Contractor with the Engineer before the fifth of the following month. Such claims shall show the names and number of each worker employed on the extra work, the date and the number of hours employed, the character of work, and the wages paid or to be paid, the materials delivered for the extra work, the quantity and character of such materials, from whom purchased, and the net amount paid, or to be paid.

109.7.00 Advances on Materials

Allowances will be made in the partial payments to the Contractor for acceptable materials that are to become an integral part of the completed project subject to the following conditions:

1. Aggregates must be those specifically produced for the project and acceptably stockpiled and protected on the Owner's property or on property for which the Contractor has furnished a written permit from the property Owner giving the Owner the right to enter upon and remove aggregates for a period of not less than six months after completion of the project.
2. Aggregates must have a value, as determined by the Engineer, of not less than \$5,000.
3. Allowances will be made in the partial payments to the Contractor for precast structural concrete members acceptably stored in the State of Oregon on property for which the Contractor has furnished a written permit from the property Owner giving the Owner the right to enter upon and remove the members.
4. No allowances will be made in the partial payments to the Contractor for living or perishable plant materials until planted in final position as specified under the contract.
5. Allowances will be made in the partial payments to the Contractor for acceptable materials other than aggregates, precast concrete members and plant materials that are to become an integral part of the completed project, subject to the following conditions:
 - a. Contractor shall submit a list of such materials, with costs supported by invoices of suppliers to the Engineer at a regular period each month.
 - b. Materials must be acceptably stored or stockpiled and protected on the project or in close proximity on the Owner's property or on property in close proximity to the project for which the Contractor has furnished the Owner a written permit from the property Owner giving the Owner the right to enter upon and remove the materials for a period of not less than six months after completion of the project.
 - c. The total value of all materials must be at least \$5,000 and the value of any single class of materials must be at least \$1,000.
 - d. The above allowances shall be in amounts not exceeding the net cost to the Contractor of the material f.o.b. the work or approved site, and from such allowances there shall be retained the percentages regularly provided for in connection with partial payments. In cases where there is a bid price on a given material in place, the allowance shall be further limited to the difference between the bid price and the cost of incorporating the material in the completed project as estimated by the Engineer.
 - e. As a basis for estimating materials on-hand and their cost, the Contractor shall make available such invoices, freight bills, and other information concerning the materials in question to the Engineer as requested.
 - f. If the contract is terminated or canceled and the Owner elects to terminate the employment of the Contractor, as provided in Section 108.13.00, the Contractor or its surety shall provide the Owner with immediate and peaceful possession of all materials for which the Contractor has received any partial payments as provided above and if, for any reason, the Contractor or the Contractor's surety cannot provide peaceful possession of the materials, then the Contractor or the Contractor's surety shall

immediately refund to the Owner the total amount of all the partial payments which have been advanced to the Contractor by the Owner for the materials.

109.8.00 Allowance for Materials Left On-Hand

Materials delivered to the work or acceptably stored at approved sites at the order of Engineer but left unused due to changes in plans or variations in quantities will, be purchased from the Contractor by the Owner at actual cost (without percentage allowance of profit) if the material are not practicably returned for credit and shall thereupon become the property of the Owner.

Contractor or the Contractor's surety shall provide the Owner with immediate and peaceful possession of all materials purchased by the Owner as provided in this subsection.

In connection with the above provisions, the Contractor is cautioned to order or produce materials only after having received the approval of the Engineer as to the quantity of materials to be ordered or produced. Quantities shown on the plans or indicated by bid quantities and contract amounts are subject to change.

Responsibility for excess materials delivered to the work or stored at storage sites without authority from the Engineer rests with the Contractor. Any allowance that may be made to the Contractor for such excess materials will be under such conditions and at such prices as are acceptable to the Engineer.

109.9.00 Progress Payments

At a regular period each month the Contractor shall provide to the Engineer an estimate of the amount of work completed and of the value of the completed work. Contractor shall also provide to the Engineer an estimate of the amount and value of acceptable material to be incorporated in the completed work that has been delivered and acceptably stored as set forth in Section 109.7.00. Upon satisfactory review and approval by the Engineer, the sum of these values will be collectively referred to in this subsection as the "value of completed work." With these estimates as a base, a partial payment will be made to the Contractor, which shall be equal to the value of completed work, less such amounts as may have been previously paid, less such other amounts as may be deductible or as may be owing and due to the Owner for any cause, less 25% if the Contractor has failed to file the required certified prevailing wage statements pursuant to ORS 279C.845, and less an amount to be retained in protection of the Owner's interests. In lieu of the foregoing calculation the Engineer and Owner may determine the value of completed work by estimating the percentage of the project, as approved or later adjusted, which has been completed.

The amount to be retained in protection of the Owner's interest is not to include any percentage of the value of force account work. Partial payments to the Contractor are to include the full amounts earned under force account work performed during the period covered by the respective partial payments.

The amount to be retained from a given partial payment will be such that when added to the sum of amounts previously retained, will bring the total of amounts retained equal to five percent of the contract amount, unless otherwise specified or withheld pursuant to ORS 279C.845. The contract amount is the compensation for construction work as approved by the Owner.

The amount of retainage shall be withheld and retained by Owner until it is included in and paid to Contractor as part of the final payment of the contract amount. Securities in lieu of retainage will be accepted, or if the Contractor elects, retainage as accumulated will be deposited by the

Owner in an interest bearing account pursuant to ORS Chapter 279C for progress payments. After 50 percent of the work under the contract is completed, and the work is progressing satisfactorily, the Owner may elect to eliminate further retainage on any remaining monthly contract payments, except the amount required to be retained pursuant to ORS 279C.845.

Payment for mobilization will be made at the stated amount as set forth in the Contractor's Proposal. Two-thirds (2/3rds) of the amount stated, less retainage, will be paid to the Contractor as part of the first monthly partial payment, and the remaining one-third (1/3rd), less retainage, will be paid when 75% of the base contract sum has been paid.

If the Contractor fails to complete the project within the specified contract time, or any extension of the time, no additional progress payments will be made until the project is completed.

Making progress payments shall not be construed as an acceptance of the work or materials under the contract, as a waiver of a right or claim by Owner in connection with work or materials. When the progress estimate indicates that the progress payment would be less than five hundred dollars, no progress payment will be made for that estimate period.

Payments for all work under the contract will be made at the prices bid, and the prices shall include full compensation for all incidental work.

It is a condition precedent to Contractor's rights to any payment under the contract that all bills for labor and materials, including labor and materials supplied by or to Contractor, have been paid in full and, if requested by Owner, Contractor shall submit receipted invoices and/or releases as evidence of payment in full of all such accounts. As a further condition precedent to Contractor's right to any payments under this contract, if requested by Owner, Contractor shall submit a release before any payment, and a final release stating Contractor has been paid in full prior to the final payment.

109.10.00 Owner's Right to Withhold Payment

In addition to retainage of amounts due the Contractor, Owner may withhold from payments due Contractor such sums as necessary, in Owner's sole opinion, to protect Owner against any loss or damage that may result from:

1. negligence or unsatisfactory work by Contractor;
2. failure by Contractor to perform its obligations, including but not limited to failure to maintain satisfactory progress of the work;
3. third party claims filed or reasonable evidence indicating probable filing of claims;
4. damage to Owner or another not adjusted;
5. failure of Contractor to make proper payment to material suppliers or subcontractors;
6. reasonable evidence that the work will not be completed within the contract time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
7. persistent failure to carry out the work in accordance with the Contract Documents; or

8. subsequently discovered evidence or subsequent observations which nullify in whole or in part Contractor's previous payment.

109.11.00 Deferment of Payments

If a complaint or charge of unlawful employment practices pursuant to ORS Chapter 659 is filed against the Contractor with the Commission of Labor, and the Commissioner of Labor issues a cease and desist order as defined in ORS 659.010, no further payments will be made on the contract until such time as all of the provisions of the cease and desist order have been complied with by the Contractor.

109.12.00 Final Estimate and Payment

Contractor shall notify the Engineer when work is considered complete and ready for final inspection and acceptance and the Engineer shall, within fifteen (15) days after receiving the notice, either accept the work or notify the Contractor of work yet to be performed on the contract. If accepted, the Engineer shall so notify the Contractor and will make a final estimate and recommend acceptance of the work as of a certain date. Upon approval and acceptance by the Owner, and provided Contractor is not in default under any provisions of this contract, the Contractor will be paid a total payment equal to the amount due under the contract including all retainage.

Before submitting its application for final payment, Contractor shall:

1. Submit to Owner an affidavit certifying that Contractor has paid all federal, state, and local taxes including excise, use, sales and employee withholding taxes.
2. Pay for and obtain releases from all construction and materials claims that affect the project.
3. Deliver to Owner written releases in a form satisfactory to Owner, which release and holds harmless Owner, its agents and employees from all claims of any kind or nature whether known or unknown, relating to labor performed or materials furnished in connection with the project.
4. Deliver to Owner a written undertaking with sureties and in an amount acceptable to Owner. The maintenance bond shall be conditioned upon the final project being completed and guaranteed against defects in materials and workmanship. The bond shall continue in effect during the full term of any warranty period as well as any extension of the warranty period.

109.13.00 Acceptance of Final Payment

Contractor's acceptance of the final payment shall release the Owner and the Engineer as agent of the Owner from all claims and all liability to the Contractor for all things done or furnished in connection with the work, and every act of the Owner and others relating to or arising out of the work. No payment, however, final or otherwise, shall operate to release the Contractor or the Contractor's sureties from obligations under the contract and the performance, payment and other bonds and warranties, as provided in this contract. Final payment by Owner shall be conclusive proof of Owner's performance of the contract.

109.14.00 Final Guaranty

All work shall be and is guaranteed by the Contractor against defects in material and workmanship to a specified period from and after the date of final acceptance of all the work by

the Owner. "Acceptance" means final acceptance of the entire work, early partial occupancy notwithstanding.

If, within the guaranty period, repairs or changes are required in connection with guaranteed work, which, in the opinion of the Engineer is rendered necessary as the result of the use of materials, equipment or workmanship which are inferior, defective, or not in accordance with the terms of the contract, the Contractor shall promptly upon receipt of notice from the Owner; and without expense to the Owner:

1. place in satisfactory condition in every particular all of such guaranteed work, and correct all defects;
2. make good all damage to the building or site, or equipment or their contents, which in the opinion of the Engineer, is the result of the use of materials, equipment or workmanship which are inferior, defective, or not in accordance with the terms of the contract; and
3. make good any work or material, or the equipment and contents of building, structure or site disturbed in fulfilling such guarantee.

All guarantees or warranties of equipment or materials furnished to Contractor or subcontractor by manufacturer or supplier shall run to the benefit of Owner. If manufacturer or supplier of any equipment or material furnishes a guarantee or warranty for a period in excess of one (1) year from the date of acceptance, Contractor's guarantee shall be deemed to extend for a like period as to such equipment or material.

If the Contractor, after notice, fails within ten (10) days to proceed to comply with the terms of this guaranty, the Owner may have the defects corrected, and the Contractor and the Contractor's surety shall be liable for all expense incurred, provided, however, that in case of an emergency where, in the opinion of the Engineer, delay would cause serious loss or damage, repairs may be made without notice being given to the Contractor and the Contractor shall pay the cost thereof.

The guarantees and warranties shall not be construed to modify or limit in any way any rights or actions which Owner may otherwise have against Contractor or others by law or statute, or in equity.
