

SUPPLEMENTAL PROVISIONS

DIVISION I

GENERAL REQUIREMENTS

1. CONTRACTOR'S DUTIES

The Contractor shall provide and pay for all labor, materials and equipment, tools, construction equipment, machinery, fuel, and other facilities and services as necessary for the proper execution and completion of this work.

All required notices shall be given by the Contractor. The Contractor shall comply with all codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities which bear on the performance of this work.

2. WORKING HOURS

Except in the event of an emergency, no work (including equipment warm-up) shall be done between the weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on weekends or holidays observed by the Owner. Any work that requires construction inspection beyond the normal working hours listed above or beyond the Owner's typical inspection hours must be approved by the Owner or the overtime cost of inspection services will be paid for by the Contractor.

3. TRAFFIC CONTROL

Appendix B of the Specifications includes standard WSDOT K-series traffic control plans which have been approved for use on the project by the Permitting Agency. These plans represent the minimum requirements that shall apply. The Contractor shall provide a detailed traffic control and detour plan to the Engineer and Permitting Agency for approval. Traffic shall be restored according to the approved plan at the end of each working day.

The Contractor shall furnish all necessary flagging, barricades, traffic signs and other devices to control traffic during construction operations. All traffic signs barricades and devices shall conform to the "Manual on Uniform Traffic Control Devices". The Contractor shall be responsible for directing and controlling traffic including all approved temporary re-routing at all times during construction activity.

While work is in progress, posting of warning signs shall be provided as required for re-routing and regulating traffic. The Contractor, at his expense, shall be required to maintain sufficient warning signs and adequate barricades at all open excavation to protect moving vehicles and pedestrians. This shall include not only open excavation, but also recently filled and/or paved areas which have not yet been fully compacted and rolled to return the surface to a state required to withstand normal use.

All necessary flagmen, barricades, and detour signs must be furnished by the Contractor both during working hours and also when the work is suspended during the construction period. The Contractor shall provide such additional barricades and protective devices as will be required to reasonably protect workmen and others, as well as animals, from injury resulting from excavation and other site work during the construction period.

Upon failure of the Contractor to provide immediately and maintain adequate suitable barricades, lights, and detour signs when ordered to do so, the owner shall be at the liberty, without further notice to the Contractor or the surety, to provide the same and to deduct the costs thereto from any monies or payment due or to become due the Contractor, and the Owner assumes no liability connected therewith.

No road detours shall be made by the contractor without specific permission of the owner as to the location, date and the duration of the detours.

All requests for detours must be made in writing at least 24 hours in advance of the proposed date of detour and shall be accompanied by an approved detour plan.

Access shall be provided to cross roads and driveways on the same calendar day as excavation was started. All work shall be carried on with due regard for the safety and convenience of the public.

All safety instructions from the Engineer and the Owner shall be strictly observed, but following of such instructions shall in no way relieve the Contractor of his responsibility or liability.

4. CONSTRUCTION ON EASEMENTS

All work on easements shall be performed strictly in accordance with easement provisions. Easements shall be restored equal to or better than their original condition. The Contractor shall do no work on easement areas until specifically authorized by the owner. The Contractor shall secure a written approval of easement restoration from each owner of land which is crossed by an easement. Copies of the release form may be obtained from the Engineer.

5. SUBMITTALS

Data and samples shall be submitted showing the location of each item by drawing number and paragraph of the specifications shall be shown on the form of the product or material being submitted. The Contractor shall review and stamp with his approval and submit with such promptness as to cause no delay in his work or that of any other Contractor, the required number of copies of all schedules, data, and samples required for the work of the various trade determined necessary by the Engineer, required in the general conditions, and described elsewhere in the project. On each submittal, there shall be provided a clear space for the Engineer's and/or Owner's review and approval stamp and comments. Two copies of manufacturer's literature, brochures, catalog cuts, and other pertinent printed matter or data shall be submitted in addition to the number of copies the Contractor wishes returned to him.

The Engineer shall review the submittals with notations as required. When submittals are required to be revised and/or corrected and resubmitted, the contractor shall make such revisions and/or corrections and re-submit the drawings or other materials in the same manner as specified above.

The Contractor shall obtain and provide such number of prints or copies of drawings as is required for his field distribution. It shall be the Contractor's responsibility to clearly note on the submittals and in writing specifically call to the Engineer's attention any changes that vary from the contract drawings and specifications. Review of the submittals by the Engineer shall not relieve the Contractor of full responsibility and at his own cost and expense to comply with the contract documents unless the changes are clearly noted and in writing called to the Engineer's attention as above provided, in which event subsequent acceptance by the Engineer in writing shall be authority for the change or changes proposed in the submittals.

If corrections are required, the Contractor shall make the corrections required by the Engineer and file with him the same number of corrected copies as indicated above. The Contractor shall direct specific attention in writing or on re-submitting submittals to revisions other than the corrections required on the previous submission. The Engineer will return to the Contractor copies of drawings in the same manner and number as before.

The Engineer's review and placement of the submittals is understood to be an acceptance of the character of the details and not a check of any dimensions or quantity and will not relieve the contractor from errors of any sort in submittals, data or schedules, whether or not such errors are found by the Engineer in his review of such details. The Engineer's review of submittals will not relieve the Contractor of responsibility for consequences due to deviations from the contract documents unless the Contractor has called attention to such deviations in writing by a letter accompanying the drawings at the time of submission and the Engineer accepts such deviations in writing. No changes will be made in any drawing after it has been reviewed except by the consent or direction of the Engineer in writing.

The Contractor shall provide the following submittal items in accordance with the Specifications. Additional submittal information shall be provided by the Contractor, if required by the Engineer. The material and equipment required for the project, but not listed below, shall be provided in accordance with the plans and specifications.

- Pipe and Fittings
- Gate Valves
- Fire Hydrants and Accessories
- Blow-offs
- Traffic Control Plan
- Construction Schedule
- Water Service Components
- Air/Vac's
- Fill Material
- HMA
- Concrete
- Crushed Rock

6. CONTRACTOR RESPONSIBILITY

By approving and submitting drawings and samples, the Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials,

catalog numbers, and similar data, or will do so and that he has checked and coordinated each submittal with the requirements of the work and of the contract documents.

7. SUBSTITUTIONS

As soon as possible, but not more than 30 days after the date of the contract, the Contractor shall submit to the Engineer three copies of complete lists of all products which are proposed for installation as substitutions or product options. Each list shall be tabulated in accordance with Specification sections.

For products specified only by reference standards, the Contractor shall select any products which either meets or exceed such standards, by any manufacturer. For products specified by naming two or more products, but indicating the option of selecting equivalent products by stating "or equal" after specified product, the contractor shall submit a request as required for substitution for any product not specifically named.

The Engineer shall consider formal requests from the contractor for substitution of products in place of those specified. The Contractor shall submit two copies of the request for substitution. Data to be completed shall include the necessary change of construction methods including a detailed description of the proposed method and the related drawings illustrating which product or method specified shall be provided.

In making such a request for substitution, the Contractor represents that he has personally investigated the proposed product or method and has determined that it is equal or superior to, in all respects, the product specified. He will provide the same guarantee for substitution as for the product or method specified. He will also coordinate installation of accepted substitutions into the work making such changes as may be required for the work to be complete in all respects. He waives all claims for additional costs related to substitutions which consequently becomes apparent. Cost data is completed and shall include all related costs under this contract including all engineering re-design costs.

8. COMMENCEMENT OF WORK — POLLUTION CONTROL

The Contractor shall adhere to all requirements of federal, state, and local statutes and regulations dealing with pollution. In addition, the Contractor shall provide and maintain, in a neat and sanitary condition, such accommodations for the use of his employees and engineers as may be necessary to comply with the requirements and regulations of the agencies or organizations having jurisdiction over sanitary and health conditions and of other bodies or offices having jurisdiction thereover. He shall permit no public nuisances.

Federal, state, and local statutes and regulations dealing with the prevention of environmental pollution and the preservation of public natural resources that may affect or may be affected by the project are on file at the office of the owner. These provisions are not exclusive and the Contractor must familiarize himself with all such statutes, ordinances, and regulations that apply to this contract. If the Contractor must undertake additional work due to the enactment of new or amendment of existing statutes, ordinances, rules, or regulations dealing with the prevention of environmental pollution and preservation of natural resources that may affect or may be affected by the project which enactment or amendment occurs

after the submission of his bid for this contract, such additional work as must be undertaken shall not invalidate the contract and the Contractor shall proceed to perform such additional work.

In addition to the foregoing requirements, the Contractor shall comply with the Washington Clean Air Act, RCW Chapter 70.94 and implementing regulations. Prior to starting any work on the contract, the Contractor shall contact the Puget Sound Air Pollution Control Authority and obtain a copy of its pollution regulations.

9. COMMENCEMENT OF WORK ON PUBLIC AND PRIVATE RIGHT-OF-WAY

Work shall not be started on any public or private right-of-way until clearance is given to the Contractor by the Owner. It will be the responsibility of the Contractor to comply with the requirements of any permit for the project.

Where Contractor elects to work on public or private right-of-way for which clearance is provided by the Owner. The Contractor shall secure the necessary permits or agreements. Prior to beginning work on such lands, the Contractor shall provide copies of the permits or agreements to the Owner.

The Owner shall, at all times, have access to all parts of the work and to the shop wherein the work is in preparation for the purpose of inspection and the Contractor shall, at all times, maintain proper facilities and provide safe access for such inspection.

10. SUPPLEMENTAL CONSTRUCTION AND RESTORATION REQUIREMENTS

General

Restoration shall be per plans, Owner requirements and the County Right-of-Way Permit.

Traffic Control

All traffic control elements shall meet the requirements of the attached Right-of-Way Construction Permit.

Backfill

The Contractor shall remove and dispose of all excavated trench materials and shall backfill with imported 1¼" minus crushed rock in accordance with WSDOT/APWA Standard Specifications Section 9-03.9(3). Backfill shall be compacted in loose lifts no greater than 1 foot, to 95% of maximum density as determined by the Modified Proctor Test.

Permanent Pavement Restoration

All cuts in existing asphalt roadways shall be by saw cutting or jack hammering. All undermined and cracked pavement shall be removed. The edge of the existing pavement shall be cut smooth to allow for uniform compaction of the base material. Pavement cuts shall typically be parallel to the water main alignment without erratic jogs in the cut (to be determined by the Engineer). Should the Engineer determine that the pavement cut contains erratic jogs in its alignment, the Contractor shall re-cut the pavement to the satisfaction of the Engineer at no additional cost to the Owner.

The minimum thickness of the pavement patch shall be 2-inch Class 1/2" PG 64-22 HMA or the existing pavement thickness plus one (1) inch (whichever is greater) to a maximum of six (6) inches. The thickness of the existing pavement is unknown.

The Contractor shall provide a permanent pavement patch per the plans and specifications. For areas of roadway requiring overlay, the Contractor shall provide a one and one-half-inch Class 1/2" PG 64-22 HMA overlay following the permanent patch. In areas where the overlay will meet with an existing asphalt surface, the Contractor shall grind and remove a two-inch depth of the existing asphalt to a point five (5) feet from the edge of the overlay.

11. TEMPORARY RESTORATION REQUIREMENTS

All trenches shall be temporarily patched with cold mix following backfill at the end of each working day. The patches shall be rolled smooth to provide a firm driving surface, and shall be maintained throughout the duration of project to prevent potholes or ruts. Potholes or ruts of 1 inch or more in depth shall be repaired.

12. MAINTENANCE OF EXISTING UTILITIES

The contractor shall take adequate precautions to maintain existing utility services to all property owners adjacent to the project area. At no time shall utility services be interrupted to a property except to transfer services or facilities as scheduled under this contract.

The location shown of the known underground utilities may vary from the actual. Neither the owner nor the engineer guarantees the accuracy or completeness of this information, and it is to be understood that other aboveground and underground utilities not shown on the drawings may be encountered during the course of construction. Prior to and during construction, the contractor shall call One Call (1-800-424-5555) for underground utility location assistance, in order to locate and protect all underground utilities.

13. STREET CLEANING, DUST, MUD, EROSION AND SILTATION CONTROL

The Contractor shall be responsible for controlling dust and mud within the project limits, and all streets used by the Contractor during the execution of this contract shall be maintained in a clean condition. The Contractor shall be prepared to use watering trucks equipped with high-velocity water jets and low-head sprinkling devices, street sweepers (not power brooms), and any other pieces of equipment necessary to render the streets free of all mud, debris, and foreign materials. Any damage caused by dust and/or mud accumulation on the streets or in the storm sewer system shall be the sole responsibility of the Contractor.

Cut slopes or embankment areas shall be restored per the plans and details shown thereon.

The Contractor shall provide silt fence, filter fabric straw and/or straw bales as required to control erosion and siltation.

Watering trucks may be used on paved streets with an adequate storm drainage system. Watering trucks shall not be used on streets where, in the opinion of the engineer, mud is created, causing a nuisance. Where water flushing is not allowed, street sweepers (not power brooms) shall be used.

The Contractor shall provide for sweeping, or flushing all surfaced roadways upon completion of each day's activities. Equipment required for this operation shall be on the job site or available at all times. Failure to have this equipment on the job site or available will necessitate a shutdown of the project.

Payment for street cleaning, dust, mud, erosion and siltation control will be considered incidental to the project and as such included in the various bid items, and no separate payment will be made.

14. TEMPORARY FACILITIES

The Contractor shall be responsible for construction and location of all field offices, all necessary water for construction-related fire protection, all necessary gates and barricades, fences, handrails, guard rails, and securities required by this contract, or by laws and regulations. Sanitary facilities adequate for all workers shall comply with all codes and regulations and there shall be shelters and dry facilities for the workmen as required. The Contractor shall insure that all guards, marks, shields, protective clothing, rain gear, and other equipment required by law, ordinance, labor contracts, OSHA regulations, and other regulations for the maintenance of health and safety be supplied. First aid kits and equipment as required by law shall also be supplied.

15. TEMPORARY UTILITIES

The Contractor shall make arrangements for and provide all necessary facilities for temporary utilities for his construction at his own expense unless otherwise provided.

16. FINAL INSPECTION — TESTING

A. *Schedule*

Prior to the placing of any section of the project in service, each section shall be tested to the satisfaction of the engineer. Not less than 7 days before the anticipated time for beginning the testing, the contractor will submit to the engineer for approval a complete plan for the following:

1. Schedules for tests.
2. Detail procedures for accomplishing the testing.
3. Complete schedule of events to be accomplished during testing.
4. An outline of work remaining under the contract that will be carried out concurrently with the operation phases.

B. *Contractor's Responsibility*

All testing, startup, and operation shall not be cause for claims for delay by the contractor and all expenses accruing there from shall be deemed to be incidental to this contract. The

contractor shall make arrangement for all materials, supplies, and labor necessary to efficiently complete the testing.

C. Testing

Where the specifications require work to be specifically tested or reviewed, it shall not be tested or covered up without timely notice to the engineer of its readiness for inspection, unless the engineer waives such notice. Should any such work be covered up without such notice, approval, or consent, it must, if required by the engineer, be uncovered for examination at the contractor's expense. Where work is to be tested, all necessary equipment shall be set up and the work given a preliminary test so that any and all defects may be discovered and repaired prior to calling out the engineer for the test.

All piping shall be tested as required by specifications and applicable codes. Tests on individual items of equipment, such as pipelines, structures, controls and other items shall be as described in various sections describing such items. Testing will be done by the contractor in the presence of the engineer. Records of all official tests will be made by the engineer. During these tests, the contractor shall correct any defective work discovered or that is not in first class operating condition.

D. Use of Facility

Use of the facility shall be immediately after completion of testing and after satisfactory repairs and adjustments have been made.

17. CONTRACTOR-PROVIDED STAKING AND "AS-BUILT" INFORMATION

Where the Contractor is required to provide construction staking, he shall be responsible for securing the services of a professional land surveyor or qualified engineer who shall provide all survey staking needed in conjunction with the project.

The Contractor shall provide the original field notes and a set of the field notes shall contain as a minimum the centerline station and offset and cut to each connection fitting, valve, water service, and all other changes in alignment or grade as may be needed to draw accurate as-constructed records of the project. These notes shall be kept legibly, in a format conforming to good engineering practice in a hard covered field book.

Prior to receiving final payment for the work, the contractor shall deliver a complete set of acceptable "as-built" drawings to the engineer. Drawings shall be made on clean, unmarked prints for this project in accordance with the following standards:

- Yellow markings or highlights = deleted items
- Red markings = new or modified items

It shall be the contractor's responsibility to record the location, by centerline station, offset, and depth below pavement, of all existing utilities uncovered or crossed during his work as covered under this project.

It shall be the contractor's responsibility to have his surveyor locate by centerline station, offset and elevation, each major item of work done under this contract. Major items of work shall be defined to include the following items:

- Major Changes in Design
- Water Main Fittings - tees, bends
- Valves (not attached to fittings)

After the completion of the work covered by this contract, the contractor's surveyor shall provide to the owner the hard cover field book(s) containing the construction staking and as-built notes.

18. GUARANTEES AND WARRANTIES

The contractor shall secure and deliver to the engineer all equipment warranties and other warranties and guarantees as may be required for equipment or processes required under all sections of this contract. Such delivery shall be done at one time covering all major and minor equipment warranties.

19. PRESERVATION OF MONUMENTS

Prior to construction, the contractor shall reference all survey monuments adjacent to trenching activities, to a monument outside the construction area. All monuments adjacent to construction activities shall be surveyed prior to final paving. Any monument moved as a result of construction activities shall be restored to the preconstruction location and condition. A letter certifying that the monuments have either been unaltered or restored shall be submitted to the Owner by a licensed surveyor.

20. PROJECT PHASING AND COORDINATION

The Ridge Road Water Main Replacement, Phase II project calls for the replacement of a 4-inch steel water main within Southwest 184th Street and Ridge Road Southwest with a proposed 8-inch AWWA C900 PVC water main. Contract Documents have been provided for the full project alignment. Construction of the project will be phased over multiple years and will be funded through the Owner's Capital Improvements Program. Prior to bidding, the Owner will identify the funds available for construction for the current funding cycle along with the Construction (Bidding) Limits. The Construction Limits as identified on the Plans for each of the phases is as follows:

Phase	Beginning Station	Ending Station	Description
1	0+00	7+55	Terminate east of existing gravel driveway.
2	7+55	13+75	Terminate southwest of proposed bend prior to road crossing.
3	13+75	21+87	Terminate south of proposed fire hydrant.
4	21+87	30+64	Terminate southeast proposed connection to existing.
5	30+64	40+60	Terminate southeast of proposed fire hydrant.
6	40+60	49+20	End of project.

The Contractor shall terminate each phase with a cap or plug, with blocking and 2-inch temporary blowoff assembly. The Contractor shall be responsible for providing all material, equipment, and labor necessary to complete construction of the proposed improvements within the Owner-specified Construction Limits as shown on the Plans and as necessary to test, flush, disinfect, and transfer service from the existing to the proposed water main within the Construction Limits. The Contractor shall be responsible for providing connections to the existing water system or to the previously constructed proposed water improvements and shall terminate construction of the proposed improvements within the Construction Limits in a manner that will facilitate extension of the proposed improvements in the future. All work shall be incidental to the Contract.

SUPPLEMENTAL PROVISIONS

DIVISION II

MEASUREMENT AND PAYMENT

1. INTENT

Payment for the various items of the Bid Sheets, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the Work all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Administration of the U.S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Bid Schedules, and all costs therefore shall be included in the prices named in the Bid Schedules for the various appurtenant items of Work.

The Owner shall not pay for material quantities which exceed the actual measured amount used and approved by the Engineer. The quantities for Crushed Surfacing and Hot Mix Asphalt (HMA) for Overlay and Trench Patch have been entered into the Proposal only to provide a common proposal for bidders. Actual quantities will be determined in the field as the work progresses, and will be paid at the original bid price, regardless of final quantity. These bid items shall not be subject to the provisions of 1-04.6 of the Standard Specifications

It is the intention of these Special Provisions that the performance of all Work under the bid for each item shall result in the complete construction, in an accepted operating condition, of each item.

Work and material not specifically listed in the proposal but required in the Plans, Specifications, and general construction practice, shall be included in the bid price. No separate payment will be made for these incidental items.

BID ITEM 1 – MOBILIZATION/DEMobilIZATION, SITE PREPARATION AND CLEAN-UP

The lump sum price shown shall cover the complete cost of furnishing and installing, complete and in-place all work and materials necessary to move and organize equipment and personnel onto the job site; provide and maintain all necessary support facilities and utilities; obtain all necessary permits and licenses; prepare the site for construction operations and maintain the site and surrounding areas during construction; provide protection of existing utilities; provide component and system testing; final clean-up of the site; move all personnel and equipment off the site after contract completion; and accomplish all other items of work not specifically listed in other divisions.

Payment shall be lump sum. No more than 50% of the bid amount will be paid prior to the final payment request. This bid item may not be more than 10% of the total amount of the total bid.

BID ITEM 2 – TRENCH SAFETY AND SHORING DESIGN, CONSTRUCTION, AND MAINTENANCE

The lump sum price shown shall cover the complete cost of furnishing, installing and removing all shoring, cribbing and coffer dams necessary to support trench and excavation walls as specified in the contract specifications and required by law including design of the shoring system as required by applicable codes and standards, whether shown on the Plans or not. The price shall also cover the complete cost to sheet and barricade the trench each night to protect the general public.

Partial payment shall be based upon percentage of open cut trench pipe installed. Payment shall be lump sum.

BID ITEM 3 – CONSTRUCTION SURVEYING AND STAKING

The lump sum price for construction survey will be full compensation for all surveying needed to construct the improvements to the line and grade per the approved plans, pavement markings indicating stationing along the alignment, locating and punching of survey monuments, locating property corners, and providing the required construction and as-constructed field notes. A copy of all cut sheets and/or similar work shall be given to the owner 24 hours in advance of construction and a copy of the survey control notes shall be given to the owner when done.

Partial payments for this item will be made in connection with the monthly pay estimates based upon work completed. Up to 75 percent of this bid item will be paid for prior to receiving as-builts from the Contractor. After receipt and approval of as-builts, the Owner shall pay the remaining 25 percent of the bid item. Payment shall be lump sum.

BID ITEM 4 – TRAFFIC CONTROL AND PEDESTRIAN SAFETY

The lump sum price shown shall cover the complete cost for providing all flagger labor and for providing all labor, materials, and equipment for installing, removing, and maintaining all temporary traffic and pedestrian control systems, signs, barricades, sequential arrow boards, delineators, striping, concrete barriers, reflectors, lights, and other traffic control devices, clean-up, and conforming to the approved Traffic Control Plan and contract documents. This bid item shall also include the complete cost for preparing a Traffic Control Plan for approval by the permitting agency.

Partial payments for this item will be made in connection with the monthly pay estimates based upon work completed. Payment shall be lump sum.

BID ITEM 5 – TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC)

The lump sum price shown shall cover the complete cost of furnishing, installing, maintaining, and removing sedimentation and erosion control devices. The price shall also include erosion control measures necessary following construction to restore areas disturbed by this project. The plans identify the minimum measures required. The price shall include additional measures as necessary to meet the specifications. Partial payment for this item will be made in connection with the monthly pay estimates based upon the work completed. Payment shall be lump sum.

BID ITEM 6 – 8-INCH AWWA C900 PVC WATER MAIN AND APPURTENANCES

The prices per lineal foot shall be full compensation for furnishing AWWA C900 PVC water main in place as shown on the plans and specified herein, including all equipment and work for trench

excavation (excavation is unclassified), disposal of displaced and excess material, placement and compaction of imported backfill materials, pipe in place, furnishing and installing all necessary fittings, concrete encasement, pipe encasement, controlled density fill, casing spacers and seals, foundation preparation, bedding and foundation material placement and compaction, flushing, cleaning, testing, sterilization, dechlorination, and restoration of: retaining walls, rockeries, lighting, existing utilities, and any other existing improvements not covered in the bid items. Price per lineal foot shall also include cutting of pavement along water main alignment, appurtenances, encasement and where necessary to construct these improvements. Measurement will be along the pipe centerline, including all fittings for each respective pipe size.

Note: The above “AWWA C900 PVC Water Main” Bid Item includes all water main shown on the plan sheets for which the lengths are specified. The Bid Items “Connections to Existing System” and “Fire Hydrant Assembly” includes all other water main required for connections to the existing system and fire hydrants for which the lengths are not specified on the plan sheets.

BID ITEM 7 – 8-INCH GATE VALVE ASSEMBLY

BID ITEM 8 – 6-INCH GATE VALVE ASSEMBLY

BID ITEM 9 – 4-INCH GATE VALVE ASSEMBLY

Unit price per each shall cover the complete cost of providing all materials, equipment and labor necessary for gate valves as shown on the Plans and specified herein. Work includes, but is not limited to: trenching; disposal of excess material; control of water; select bedding; gate valve; operating nut adjustment; valve box; testing; trench backfill; compaction; and all other necessary labor, equipment and materials and appurtenances necessary for gate valve. Measurement and payment shall be per gate valve installed.

BID ITEM 10 – FIRE HYDRANT ASSEMBLY

The unit price per each shall be full compensation for furnishing all materials and installing the new fire hydrant assembly. This price includes the excavation, disposal of displaced material, main line tee, valve, valve box, six-inch ductile iron pipe, thrust restraints, fire hydrant, Storz adapter, concrete bearing block, washed rock, backfill, necessary rock retaining walls for cut/fill installations, necessary storm drain pipe, rip rap, culvert pipe and backfill over culvert per plan, bollards as called for on the plans, blue reflector in pavement, flushing, testing, painting, restoration of existing improvements and any other items not covered in the other bid items for the complete fire hydrant in place. Measurement and payment for this bid item shall be based on each new fire hydrant assembly installed.

BID ITEM 11 – AIR AND VACUUM ASSEMBLY

The unit price per each shall be full compensation for furnishing all materials and installing the air and vacuum assembly. This price includes excavation, stockpiling, tap, saddle, isolation valve, valve box, pipe, fittings, air and vacuum release valve, meter box, saw dust, washed rock, filter fabric, backfill, marker post, painting, backfill, compaction, restoration of existing improvements, flushing, testing and any other items not covered in the other bid items. Measurement and payment for this bid item shall be based on each new air and vacuum assembly installed.

BID ITEM 12 – PERMANENT BLOW-OFF ASSEMBLY

The unit price per each shall be full compensation for furnishing all materials and installing a 2-inch blow-off assembly. The cost shall include the main line tee, gate valve, flange tapped 2-inches, 2-inch bronze piping and fittings (2½ -inch host adapter), valve box, meter box, paint and all other items not mentioned to make this a complete installation.

Measurement and payment for this bid item shall be based on each new permanent 2-inch blow-off assembly installed.

BID ITEM 13 – CONNECTION TO EXISTING SINGLE WATER SERVICE

BID ITEM 14 – CONNECTION TO EXISTING DOUBLE WATER SERVICE

The unit price per each shall be full compensation for furnishing all materials and equipment, and installing the new service line, installation of a new water service and connection to the existing residential service line. This price includes the customer notification of service disruption, if applicable, extension of existing service line, if applicable, boring of service lines crossing under pavement, excavation, and all other work necessary to install the water service. The unit price shall also include all costs to install locating wire for service line, backfill service and meter box, restoration of existing improvements, flushing, testing and any other items not covered in the other bid items. Measurement and payment for this bid item shall be per each water service transferred from the existing water main to the proposed water main, complete in place.

BID ITEM 15 – CONNECTION TO EXISTING WATER SYSTEM

The unit price per each shall be full compensation for furnishing the materials and completing the connections as shown on the plans and specified herein, including all equipment and work for potholing, excavation, stockpiling, disposal of displaced material, placement and compaction of imported backfill materials, pipe in place, handling and disposal of existing pipe, furnishing and installing all necessary fittings, foundation preparation, bedding and foundation material placement and compaction, temporary and permanent horizontal thrust blocking, dead man blocks, trench dewatering, flushing, cleaning, and testing, sterilization, dechlorination, installation and removal of temporary blowoffs necessary for testing, restoration of any other existing improvements not covered in the bid items and any other items necessary for the complete connection in place. This bid item includes the installation of all fittings and valves along with all sizes of pipe required to make the connection for which a length is not specifically called out on the plans and all valves which are not specifically called out on the plans. Payment for this item will be made based on each connection to the existing water system complete in place.

BID ITEM 16 – ABANDON EXISTING WATER SYSTEM

The lump sum unit price shall be full compensation for furnishing all materials and equipment necessary to abandon the existing water system. The price shall include excavation, disposal of displaced material, removal of the existing pipe and valves necessary to make the connections of the new system to the existing, removal of existing fire hydrants, valve box tops, closing hydrant and branch valves, plugging or capping the existing water main, backfill, restoration of existing

improvements, cleaning and delivery to the Owner's Shop all salvageable valves and fire hydrants and any other items not covered in the other bid items. Partial payment for this item will be made based upon work completed as determined by the Engineer.

BID ITEM 17 – CRUSHED SURFACING

The unit price shown shall cover the complete cost of providing all labor, materials and equipment necessary to furnish and deliver to the job site imported crushed rock material including both 1 1/4" minus (crushed surfacing base course) or 5/8" minus (crushed surfacing top course) for use as trench backfill, temporary patching, shoulder and roadway restoration, and elsewhere as shown on the Plans and specified herein.

Work includes, but is not limited to: furnish, haul, and stockpile of crushed rock materials.

No payment shall be made for over-excavation and subsequent placement of crushed rock unless the Engineer determines that the over-excavation could not be avoided. Over-excavation is defined as trenching outside the limits as set forth on the Construction Plans. Additionally, no payment shall be made for necessary compaction to correct gravel areas which are not compacted in accordance with these Specifications. Crushed rock material weight shall be determined by providing a copy of certified truck tickets which accompany each truck load. Payment shall be per ton. If restoration of gravel access road includes reuse of existing crushed rock surfacing, reuse shall be considered incidental to the contract.

BID ITEM 18 – HOT MIX ASPHALT (HMA) FOR TRENCH PATCH

The unit price shown shall cover the complete cost of all labor, materials, and equipment necessary to construct a hot mix asphalt trench patch per thickness as called for on the Plans and as necessary to restore the trench surface to existing or better condition in accordance with the Plans and Specifications.

Work includes, but is not limited to, saw-cutting; removal and disposal of existing asphalt concrete pavement; installation, maintenance and removal of temporary asphalt patch (cold mix); preparation of the sub-grade including installation, compaction and testing of crushed rock; tack coat; furnishing, hauling, and placement of hot mix asphalt and roller compaction; edge and joint sealing and sanding; pavement marking; and cleanup.

Measurement and payment shall be per ton of material as measured by truck weight tickets submitted to the Engineer for payment. No additional payment will be made for work necessary to correct HMA not installed in accordance with the plans and specifications.

BID ITEM 19 – HOT MIX ASPHALT (HMA) FOR OVERLAY WITH GRIND

The unit price per ton shall be full compensation for furnishing, placing and compacting HMA paving for roadway reconstruction and overlay per the plans and specifications. The price includes all perimeter edge grinding; hauling and dumping of ground asphalt; preparation of the saw cut edges with asphalt emulsions and base preparation prior to the placement of the HMA, additional saw cutting required, sealing of pavement joints and seal coating to match existing driveways. The unit price per ton shall include joint sealing, and providing and installing monuments in cases; existing utility cover adjustment; striping and restoration of any pavement markings; and installation of new blue fire hydrant button reflector. The unit price shall also include all costs required to proof

roll water trench prior to paving. No additional payment will be made for work necessary to correct HMA not installed in accordance with the plans and specifications. Payment shall be per ton of HMA in place based on truck weight tickets.

Measurement and payment shall be per ton of material as measured by truck weight tickets submitted to the Engineer for payment. No additional payment will be made for work necessary to correct HMA not installed in accordance with the plans and specifications.

BID ITEM 20 – FINAL RESTORATION AND HYDROSEED

Lump sum price shown shall cover the complete cost of all finished grading, blading to match existing elevations; raking; top soil and hydroseed placement of all disturbed unimproved areas. Measurement and payment shall be lump sum based upon percentage of completed restoration and hydroseeding.