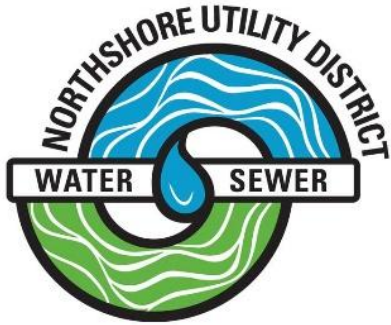




SPECIFICATIONS, PROPOSAL AND CONTRACT DOCUMENTS

Contract No. C2503; Building B Bay Door Replacement

Northshore Utility District
King County, Washington

JUNE 2026

**NORTHSHORE UTILITY DISTRICT
King County, Washington**

District Commissioners

**Trudy C. Rolla, President
Pat Sutherland, Secretary
Brent Smith
Matt Breysse
D. Bruce Gardiner**

General Manager

Ethan Maiefski

District Office

**6830 NE 185th Street
Kenmore, WA 98028
Phone (425) 398-4400
Fax (425) 398-4430
www.nud.net**

CERTIFICATE OF ENGINEER



Unless noted otherwise, these Contract Documents have been prepared or assembled by Northshore Utility District under the direction of the following registered professional engineers, licensed in accordance with the laws of the State of Washington, to practice in the State of Washington.

Specification Section(s) contained here were developed by, or under the direct supervision of Eric Delfel, of Gray and Osborne, Inc.



6/12/2026

NORTHSHORE UTILITY DISTRICT

**6830 NE 185TH STREET
KENMORE, WASHINGTON 98028-2684**

SPECIFICATIONS, PROPOSAL AND CONTRACT DOCUMENTS

**FOR
CONTRACT C2503
Building B Bay Door Replacement**

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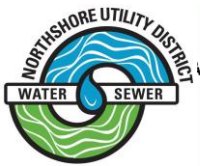
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NORTHSHORE UTILITY DISTRICT

6830 NE 185TH STREET
KENMORE, WASHINGTON 98028-2684

CALL FOR BIDS

Notice is hereby given that Northshore Utility District ("District") will receive sealed bids for the following construction project. Bids will be received at the District office, located at 6830 NE 185th Street, Kenmore, Washington, by mail or other courier up to the hour of **10:00 a.m. on Wednesday, July 08, 2026**, after which all bids will be publicly opened and read aloud.

Project Description

Contract C2503; Building B Bay Door Replacement

This project consists of the following work:

Demolition and removal of existing Building B bay door, installation of new bay door, relocation of personnel door and affected utilities within building, installation of new concrete approach slab and asphalt truck ramp, and site restoration.

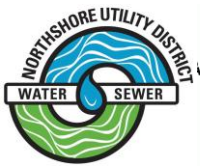
The engineer's construction cost estimate is \$235,000.00 including sales tax.

Free-of-charge access to project bid documents (plans, specifications, addenda, and Bidders List) is provided to Prime Bidders, Subcontractors, and Vendors by going to www.bxwa.com and clicking on "Posted Projects", "Public Works", and "Northshore Utility District". This online plan room provides Bidders with fully usable online documents with the ability to: download, view, print, order full/partial plan sets from numerous reprographic sources, and a free online digitizer/take-off tool. It is recommended that Bidders "Register" in order to receive automatic email notification of future addenda and to place themselves on the "Self-Registered Bidders List". Bidders that do not register will not be automatically notified of addenda and will need to periodically check the on-line plan room for addenda issued on this project. Contact Builders Exchange of Washington at (425) 258-1303 should you require assistance with access or registration.

Bid documents (in PDF format) are also directly available from the District's website at the following address:

<https://www.nud.net/permits-construction/rfp-posts-list/>

Each bid must be submitted on the "Proposal" forms provided in Section 5 of the "Specifications, Proposal and Contract Documents" and shall be accompanied by a bid proposal deposit in the form of a surety bond, postal money order, cashier's



check or certified check made payable to King County Treasurer, King County, Washington for a sum of not less than 5 percent of the total bid. A bid shall not be considered unless accompanied by such bid proposal deposit.

A Pre-Bid meeting will be held at 10:00 a.m. on Wednesday, June 24, 2026 at 6830 NE 185th Street, Kenmore, Washington 98028. Attendance is encouraged but not required. No other on-site visits will be allowed unless by appointment and attended by District staff.

CONTRACT AWARD

A contract, if awarded, will be based upon the lowest responsive and responsible bid or bids as defined in more detail in the bid documents.

Northshore Utility District reserves the right to reject any and all bids, to delete portions or all of the work, to substitute alternative bid item prices for base bid item prices, to waive any informality in bidding, and to make the award deemed to be in the best interest of the District.

Proposals received after the time announced for the opening will not be considered. No bidder may withdraw its bid after the time announced for the opening or before the award and execution of the contract(s) unless the award is delayed for a period exceeding sixty (60) calendar days.

Advertised in the Daily Journal of Commerce on Wednesday, June 17, 2026, and Wednesday, June 24, 2026.

NORTHSHORE UTILITY DISTRICT
Pat Sutherland, Secretary
Board of Commissioners

INSTRUCTIONS TO BIDDERS

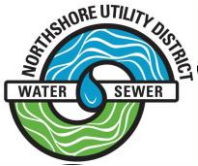
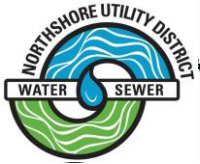


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Section 1 - Instructions to Bidders

1.0 GENERAL

Plans and specifications are on file at:

Northshore Utility District
6830 NE 185th Street
Kenmore, WA 98028

Free-of-charge access to project bid documents (plans, specifications, addenda, and Bidders List) is provided to Prime Bidders, Subcontractors, and Vendors by going to Builders Exchange of Washington's web site at the following address: http://www.bxwa.com/bxwa_toc/pub/827.html. This online plan room provides Bidders with fully usable online documents with the ability to: download, view, print, order full/partial plan sets from numerous reprographic sources, and a free online digitizer/take-off tool. It is recommended that Bidders "Register" in order to receive automatic email notification of future addenda and to place themselves on the "Self-Registered Bidders List". Bidders that do not register will not be automatically notified of addenda and will need to periodically check the online plan room for addenda issued on this project. Contact Builders Exchange of Washington at (425) 258-1303 should you require assistance with access or registration.

Bid documents (in PDF format) are also directly available from the District's website at the following address:

<https://www.nud.net/permits-construction/rfp-posts-list/>

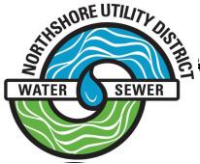
Contact the Project Engineer, Aaron Pease, P.E., Gray & Osborne, Inc. at (206) 312-2851, or apease@g-o.com for any project related questions.

1.1 PROJECT DESCRIPTION

Contract C2503; Building B Bay Door Replacement

The project consists of the following work:

Demolition and removal of existing Building B bay door, installation of new bay door, relocation of personnel door and affected utilities within building, installation of new concrete approach slab and asphalt truck ramp, and site restoration.



1.2 EXAMINATION OF PLANS, SPECIFICATIONS AND SITE

Bidders shall satisfy themselves as to construction conditions by personal examination of the plans, specifications and site of the proposed work and by any other examination and investigation, which they may desire to make as to the nature of the work, estimate of quantities and difficulties to be encountered. Bidders shall consider Federal, State, and local laws and regulations that may affect cost, progress, or performance of the work.

The Bidders are hereby notified that geotechnical investigations were not conducted by the District for this project.

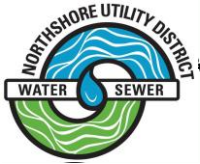
Before submitting a bid, each bidder will, at the bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and underground utilities) at or contiguous to the site or otherwise which may affect cost, progress, or performance of the work in which the bidder deems necessary to determine its bid for performing the work in accordance with the time, price, and other terms and conditions of the Specifications, Proposal and Contract Documents. The bidder shall be responsible for all costs associated with these additional examinations including all restoration work and damages which may be a result of such investigation.

1.3 PROPOSALS

Proposals shall be made on the forms included herewith under the "Proposal" section and shall be provided to the District in a sealed envelope addressed as follows:

Northshore Utility District
6830 NE 185th Street
Kenmore, WA 98028
Attention: Proposal Enclosed

Proposals shall arrive not later than Wednesday, July 08, 2026, at 10:00 a.m., at which time and place they will be opened and publicly read aloud. No proposal may be withdrawn after the time stated above or before award of contract unless said award is delayed for a period exceeding sixty (60) calendar days.



1.4 BID PROPOSAL DEPOSIT

As a guarantee of good faith and as required by law, each bid shall be accompanied by a bid proposal deposit in the form of a certified check, cashier's check, postal money order or surety bond payable to the order of the King County Treasurer, King County Washington for an amount not less than five percent (5%) of the total amount of the bid. The deposits of the three low bidders will be retained until a contract has been entered into between the successful bidder and the District and until a performance bond in an amount of 100 percent of the contract price has been filed as required under these contract documents. The deposits of other bidders will be returned as soon as it is determined that they are not one of the three low bidders.

1.5 BIDDING ERRORS

The District will not consider a claim of error in a proposal unless such claim is made to the District by the close of business on the following business day after the time of bid opening as stated in the "Call for Bids" and unless supporting evidence of such claim, including cost breakdown sheets, is delivered to the District included with claim noted above.

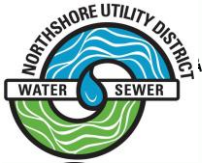
If the District is, at its sole determination, convinced that the bidder has committed an unintentional error, the bidder will be allowed to withdraw, but not correct, its bid.

1.6 COMPLETION TIME AND LIQUIDATED DAMAGES

Subject to time lost due to inclement weather and delay in delivery of materials, should such delay not be the result of the Bidder's actions, the Bidder must agree to reach Substantial Completion of the work within 30 working days, and Physical Completion of the work within 40 working days, all beginning with the date of written "Notice to Proceed" with the work.

In summary, the District's intended schedule for the project is as follows:

Contract Award	Monday, July 20, 2026
Execute Contract	Monday, August 10, 2026
Receive & Review Material Submittals	Tuesday, August 11, 2026
Preconstruction Conference	Tuesday, August 18, 2026
Issue Notice to Proceed	Thursday, August 20, 2026
Contract Suspension for Material Procurement	As Required
Complete Construction	Monday, November 02, 2026



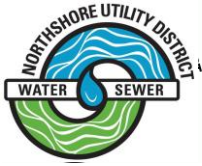
The Bidder agrees to complete the work within the contract time as above-specified plus any Extension as provided for herein ("Completion Time"). Such Extension and events producing them shall not be grounds for claim by the Bidder of damages or for additional costs, expenses, overhead, profit or other compensation. It is the responsibility of the Bidder to complete the work within the Completion Time. The District makes no promise or representation that this can or will be done.

The District and the Bidder recognize that time is of the essence of this Contract and that the District will suffer financial loss if the work is not completed within Completion Time. They also recognize the delays, expense, and difficulties in proving the actual loss suffered by the District if the work is not completed on time. Accordingly, instead of requiring any such proof, the District and the bidder agree that as liquidated damages for delay (but not as a penalty) the bidder shall pay the District \$1,400.00 for each day that expires after Completion Time.

1.7 AWARD OF CONTRACT AND NOTICE TO PROCEED

A contract will not be awarded until the District is satisfied that (1) the successful bidder is reasonably familiar with the class of work contemplated and has the necessary capital, tools and experience to satisfactorily perform the work within the time stated, (2) the successful bidder meets the mandatory responsibility criteria identified in RCW 39.04.350 (for prime contractors) and RCW 39.06.020 (for first tier subcontractors and subcontractors of any tier that are hired by other subcontractors), and (3) the successful bidder demonstrates its compliance with any Supplemental Bidder Responsibility Criteria or requirements identified herein. Completion of the work within Completion Time is essential and prior commitments of the bidder, failure to complete other work on time, or reasonable doubt as to whether the bidder would complete the work on time, would also be cause for the rejection of any bidder as not responsible.

The right is reserved by the District to waive any immaterial bid errors or irregularities in the bidding and reserves the right to correct arithmetical errors or discrepancies between unit prices and extended amounts if the intended bid is ascertainable from the face of the bid. Bidders are also advised that the District may reject any bid or proposal or all bids or proposals for any or no reason, including (1) any bid or proposal that in the opinion of the District is unbalanced or that contains unit prices that fail to reflect the actual cost of construction, (2) any bid or proposal that lacks necessary detail or specificity or is otherwise found to be non-responsive, and (3) any bid that violates the terms of these instructions. Bidders acknowledge that they are not entitled to any compensation, costs or damages related to bid preparation or resulting from District's decision to cancel the procurement, reject any or all bids or otherwise



refuse to execute a contract. District, in its sole discretion, may re-advertise for new proposals or to otherwise carry out the work. The District further reserves the right to delete portions or all of the work or schedules of the work in its sole discretion and thereafter to award a contract to the successful bidder on the remaining portions of the work.

Notice to Proceed will be given after the contract has been executed and the contract bond and evidence of insurance have been approved and filed by the Contracting Agency. The Contractor shall not commence with the work until the Notice to Proceed has been given by the District. The Contractor shall commence construction activities on the project site within ten days of the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

1.8 FAILURE TO EXECUTE CONTRACT

In the event the successful bidder fails to furnish an approved bond and to sign the contract within ten days after notification by the District, an amount equal to 5 percent of the amount of the bid shall be forfeited to the District as liquidated damages. Said liquidated damages shall be paid from the certified check or bid bond submitted with the bid. Other proposals will then be reconsidered for award by the District.

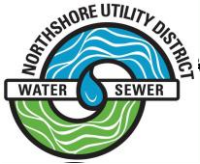
1.9 CORRECTIONS, INTERPRETATIONS AND ADDENDA

Any omissions, discrepancies or need for interpretations or explanations of the Contract Documents shall be in the form of an addendum and no oral statements by the District, District Engineer, District's Consulting Engineer, or other representative of the District shall, in any way, modify these contract documents, whether made before or after letting the contract.

1.10 ENGINEER AND NOTICES

Notices as required shall be mailed to the attention of the project manager as follows:

Northshore Utility District
Attention: Sardar Muntasir
6830 NE 185th Street
Kenmore, WA 98028



1.11 BIDDER RESPONSIBILITY CRITERIA

Bidder must meet the following Bidder Responsibility Criteria (RCW 39.04.350) to be considered a responsible bidder. Bidder will be required to complete and submit the Bidder Responsibility Checklist, included with the “Proposal” section of this document, with the bid. The bidder must:

- (a) Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of bid submittal;
- (b) Have a current Washington Unified Business Identifier (UBI) number;
- (c) Have Industrial Insurance (workers’ compensation) coverage for the bidder’s employees working in Washington, as required in Title 51 RCW;
- (d) Have a Washington Employment Security Department number, as required in Title 50 RCW;
- (e) Have a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW.
- (f) Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3).

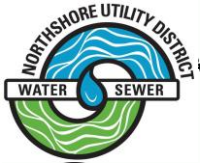
1.12 SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended; or does not meet Supplemental Criteria 1 through 9 in this Section (see Appendix B for additional information):

The District will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1), and Supplemental Criteria 1. Evidence that the Bidder meets Supplemental Criteria 2 through 9 shall be provided by the Bidder as stated later in this Section.

a. Criteria 1 – Federal Debarment

- 1. Criterion: The Bidder shall not currently be debarred or suspended by the Federal government.
- 2. Documentation: The Bidder shall not be listed as having an “active exclusion” on the U.S. government’s “System for Award Management” database (www.sam.gov).

**b. Criteria 2 – Delinquent State Taxes**

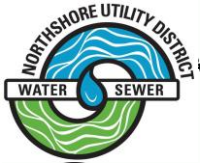
1. Criterion: The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.
2. Documentation: The Bidder shall, if and when required as detailed below, sign a statement (on a form to be provided by the District) that the Bidder does not owe delinquent taxes to the Department of Revenue. If the Bidder owes delinquent taxes, they must submit a written payment plan approved by the Department of Revenue, to the District by the deadline listed below.

c. Criteria 3 – Subcontractor Responsibility

1. Criterion: The Bidder's standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established procedure which it utilizes to validate the responsibility of each of its subcontractors. The Bidder's subcontract form shall also include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also "responsible" subcontractors as defined by RCW 39.06.020.
2. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder complies with the subcontractor responsibility requirements of RCW 39.06.020.

d. Criteria 4 – Claims Against Retainage and Bonds

1. Criterion: The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects in the 3 years prior to the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its Subcontractors, suppliers, and workers, unless there are extenuating circumstances and such circumstances are deemed acceptable to the District.
2. Documentation: The Bidder shall, if and when required as detailed below, sign a statement (on a form to be provided by the District) that the Bidder has not had claims against claims against retainage and bonds in the 3 years prior to the bid submittal date. If the Bidder has had claims against retainage and bonds in the three years prior to the



bid submittal date, they shall submit a list of the public works projects completed in the 3 years prior to the bid submittal date that have had claims against retainage and bonds and include for each project the following information:

- Name of project
- The owner and contact information for the owner;
- A list of claims filed against the retainage and/or payment bond for any of the projects listed;
- A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

e. Criteria 5 – Public Bidding Crime

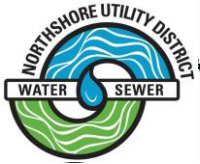
1. Criterion: The Bidder and/or its owners shall not have been convicted of a crime involving bidding on a public works contract in the 5 years prior to the bid submittal date.
2. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the District) that the Bidder and/or its owners have not been convicted of a crime involving bidding on a public works contract.

f. Criteria 6 – Termination for Cause / Termination for Default

1. Criterion: The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in the 5 years prior to the bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the District.
2. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the District) that the Bidder has not had any public works contract terminated for cause or terminated for default by a government agency in the 5 years prior to the bid submittal date; or if Bidder was terminated, describe the circumstances.

g. Criteria 7 – Lawsuits

1. Criterion: The Bidder shall not have lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless



there are extenuating circumstances and such circumstances are deemed acceptable to the District.

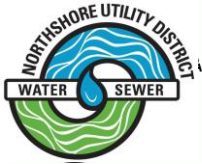
2. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the District) that the Bidder has not had any lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, or shall submit a list of all lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date, along with a written explanation of the circumstances surrounding each such lawsuit. The District shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet of terms of construction related contracts.

h. Criteria 8 – Contract Time (Liquidated Damages)

1. Criterion: The Bidder shall not have had liquated damages assessed on any projects it has completed 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet Contract Time, unless there are extenuating circumstances and such circumstances are deemed acceptable to the District.
2. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the District) that the Bidder has not had liquidated damages assessed on any projects it has completed within the 5 years prior to the bid submittal date, or shall submit a list of projects with assessed liquidated damages along with District contact information, and number of days assessed liquated damages.

i. Criteria 9 – Capacity and Experience

1. Criterion: The Bidder shall have sufficient current capacity and the project superintendent assigned to the project shall have experience to meet the requirements of this project. The Bidder and the project superintendent shall have successfully completed at least two projects as the prime contractor, of a similar size, scope, and complexity during the 5-year period immediately preceding the bid submittal deadline for this project. Similar size is defined as a minimum of 70 percent of the bid amount submitted by the Bidder, as well as having elements of commercial architectural work and site restoration construction.

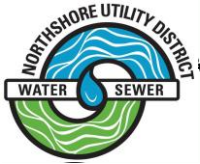


2. Documentation: The Bidder shall, if and when required as detailed below, on a form to be provided by the District, provide the Bidder's gross dollar amount of work currently under contract, the Bidder's gross dollar amount of contracts currently not completed, three major pieces of equipment anticipated to be on the project and whether the equipment is leased or owned, the superintendent assigned to this project and their number of years of experience, and two project references of similar size and scope during the 5-year period immediately preceding the bid submittal deadline for this project. The District may check owner references for the previous projects and may evaluate the owner's assessment of the Bidder performance.

As evidence that the Bidder meets Supplemental Responsibility Criteria 2 through 9 stated above, the apparent two lowest Bidders must submit to the District by 12:00 P.M. (noon) of the second business day following the bid submittal deadline, a written statement verifying that the Bidder meets Supplemental Criteria 2 through 9 together with supporting documentation (sufficient in the sole judgment of the District) demonstrating compliance with Supplemental Responsibility Criteria 2 through 9. The District reserves the right to request further documentation as needed from the low bidder and documentation from other Bidders as well to assess Bidder responsibility and compliance with all bidder responsibility criteria. The District also reserves the right to obtain information from third-parties and independent sources of information concerning a Bidder's compliance with the mandatory and Supplemental Criteria, and to use that information in their evaluation. The District may consider mitigating factors in determining whether the Bidder complies with the requirements of the Supplemental Criteria.

The basis for evaluation of Bidder compliance with these mandatory and Supplemental Criteria shall include any documents or facts obtained by District (whether from the Bidder or third parties) including but not limited to: (i) financial, historical, or operational data from the Bidder; (ii) information obtained directly by the District from others for whom the Bidder has worked, or other public agencies or private enterprises; and (iii) any additional information obtained by the District which is believed to be relevant to the matter.

If the District determines the Bidder does not meet the bidder responsibility criteria above and is therefore not a responsible Bidder, the District shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within 2 business days of the District's determination by presenting its appeal and any additional information to the District. The District will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the District will not



execute a contract with any other Bidder until at least 2 business days after the Bidder determined to be not responsible has received the District's final determination.

1.13 SUBCONTRACTORS

Consistent with RCW 39.30.060, each bidder on a project in excess of \$1,000,000 is required to submit the completed "Proposed Subcontractors" list included in the "Proposal" section either with the bid or within one hour of the required bid submittal time as stated in the Call for Bids or by written addendum. The completed list must identify each subcontractor who will perform heating, ventilation and air-conditioning, or plumbing as described in Chapter 18.106 RCW, and electrical as described in Chapter 19.28 RCW, or the contractor must name itself for the work. The form may be submitted in person or by facsimile (FAX number (425) 398-4430) to:

Northshore Utility District
Attention: Sardar Muntasir
6830 NE 185th Street
Kenmore, WA 98028

Receipt of the form by Northshore Utility District within the time prescribed is the responsibility of the bidder.

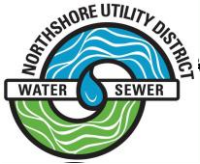
The bidder shall not list more than one subcontractor for each category of work identified, unless subcontractors vary with bid alternates, in which case the bidder must indicate which subcontractor will be used for which alternates.

Failure of the bidder to submit as part of the bid the names of such subcontractors, or name itself to perform such work, or the naming of two or more subcontractors to perform the work, shall render the bidder's bid as nonresponsive and therefore void.

1.14 SUBCONTRACTOR RESPONSIBILITY CRITERIA

To comply with RCW 39.06.020, the following is required:

- (a) The successful bidder shall provide documentation to District demonstrating that the first-tier subcontractor meets the Subcontractor Responsibility Criteria below. The requirements of this subsection apply to all subcontractors regardless of tier.



- (b) At the time of subcontract execution, the successful bidder to whom the Contract is to be awarded shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:
1. Have a current certificate of registration in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;
 2. Have a current Washington Unified Business Identifier (UBI) number;
 3. Have Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW;
 4. A Washington Employment Security Department number, as required in Title 50 RCW;
 5. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
 6. An electrical contractor license, if required by Chapter 19.28 RCW;
 7. An elevator contractor license, if required by Chapter 70.87 RCW.
 8. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3).
- (c) Bidder will be required to complete and submit the "Subcontractor Responsibility Criteria" form, included in the "Proposal" section of this document, either with the bid or within two hours of the required bid submittal time.

1.15 NON-COLLUSION DECLARATION

Submit the non-collusion declaration as part of the bid. No person, firm, or corporation shall be allowed to make, file, or be interested in more than one proposal for the same work, unless alternative proposals are invited. A person, firm, or corporation who has submitted a sub-proposal to a bidder, or who has quoted prices on materials to a bidder, is not thereby disqualified from submitting a proposal, or quoting prices to other bidders.

Reasonable grounds for believing that any bidder is interested in more than one proposal for the work will cause the rejection of all proposals in which said bidder is interested. If there is reason to believe that collusion exists among the bidders, none of the participants in such collusion will be considered.

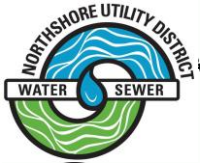
SPECIAL PROVISIONS

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Section 2 – Special Provisions

2.1 OBSERVATION OF THE WORK

Work will not be allowed on Saturdays, Sundays or legally recognized holidays without written permission from the Engineer. If the Contractor is granted permission for such work, then the District may, at the District's sole discretion, deduct moneys from the Contractor in the amount of One Thousand Four Hundred Dollars (\$1,400) per day or fraction thereof for reimbursement to the District for its reasonable inspection and engineering fees.

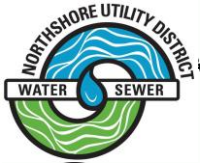
District Holidays

- New Year's Day..... January 1
- Martin Luther King Day..... Third Monday in January
- President's Day Third Monday in February
- Memorial Day Last Monday in May
- Juneteenth..... June 19
- Independence Day July 4
- Labor Day..... First Monday in September
- Veteran's Day..... November 11
- Thanksgiving Day..... Fourth Thursday in November
- Day After Thanksgiving Fourth Friday in November
- Christmas Day..... December 25

2.2 THE CONTRACT PLANS

The Contract Plans consist of the following sheets:

SHEET NUMBER	TITLE
G-1	COVER SHEET
C-1	SHEET INDEX, NOTES, AND LEGEND
C-2	EXISTING OVERALL SITE PLAN
C-3	DEMOLITION SITE PLAN, MODIFICATION SITE PLAN, AND DETAILS
A-1	BUILDING "B" DEMO FLOOR PLAN
A-2	BUILDING "B" FLOOR PLAN
A-3	BUILDING "B" ENLARGED DEMO AND NEW FLOOR PLANS
A-4	BUILDING "B" DEMOLITION AND NEW ELEVATIONS
S-1	STRUCTURAL NOTES, SUPPLEMENTAL STRUCTURAL ABBREVIATIONS, AND STRUCTURAL LEGEND



SHEET NUMBER	TITLE
S-2	SPECIAL INSPECTION SCHEDULES AND TYPICAL DETAIL
S-3	DEMOLITION ELEVATION
S-4	RECONFIGURATION ELEVATION AND DETAILS
E-1	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E-2	EXISTING BUILDING ELECTRICAL PLAN AND MODIFIED CONNECTION DIAGRAM
E-3	BAY DOOR EXTERIOR AND INTERIOR DETAIL PHOTOS
E-4	ELECTRICAL EQUIPMENT AND CONDUITS DETAIL PHOTOS

2.3 PERMITS

The District has obtained the Building permit from the following public agencies:

- City of Kenmore: Building

The permit with any required conditions is included in Appendix A. The Contractor shall also be responsible for acquiring plumbing, mechanical and electrical L&I permits, as required for the work of subcontractors.

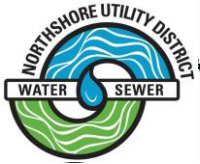
2.4 CERTIFICATE OF INSURANCE

The Contractor shall specifically note and comply with the limits of liability amounts, additional insured named and terms of cancellation included in Subsection 8.9 of the General Conditions. Additional insureds shall include Northshore Utility District, its agents and representatives, and the City of Kenmore: Building. All Risk Builders' Risk coverage will be required for this Project.

The Insurance Questionnaire and Endorsement included at the end of this section must be completed in addition to the Certificate of Insurance.

2.5 PAYMENT FOR MATERIALS ON HAND

Payment for materials on hand will not be provided on this project.



Insurance Coverage Questionnaire

This Questionnaire must be completed and attached to Certificate of Insurance.

Name of Contractor: _____

Contract Number: Contract C2503; Building B Bay Door Replacement

Project Owner: Northshore Utility District

Are the following coverage's and/or conditions in effect?

Please circle "yes" or "no" regarding the applicable policy		
This Policy Form is ISO Commercial General Liability form CG 00 01 or CG 00 02 (circle one). If no, attach a copy of the policy with required coverage clearly identified.	Yes	No
Products and Completed Operation Coverage	Yes	No
Cross Liability Clause (or equivalent wording)	Yes	No
Personal Injury Liability Coverage (with Employee Exclusion Deleted)	Yes	No
Broad Form Property Damage with X, C, U Hazards Included	Yes	No
Blanket Contractual Liability Coverage Applying to this Contract	Yes	No
Employers Liability - Stop Gap	Yes	No

	GL	AL	Excess
Deductibles or SIR's			
Insurer's A.M. Best Rating			

This Questionnaire is issued as a matter of information. This questionnaire is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies indicated on the attached Certificate of Insurance.

Agency/Broker

Completed by (print name)

Address

Completed by (signature)

Name of Person to Contact

Phone Number

SECTION 3

ENGINEERING SPECIFICATIONS

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SECTION 3

ENGINEERING SPECIFICATIONS

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Division 16 Electrical		
Not Used		

DIVISION 1

GENERAL TECHNICAL REQUIREMENTS

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes requirements that apply to all equipment and materials supplied on the Project.

The Contractor shall be responsible for the accuracy and completeness of the information contained in each submittal and shall assure that the material, equipment or method of work shall be as described in the submittal. The Contractor shall verify that all features of all products conform to the requirements of the Contract Documents. Submittal documents shall be clearly edited to indicate only those items, models, or series of equipment that are being submitted for review. All extraneous materials shall be crossed out or otherwise obliterated. The Contractor shall ensure that there is no conflict with other submittals and notify the Engineer in each case where their submittal may affect the work of another contractor or the Owner. The Contractor shall ensure coordination of submittals among the related crafts and subcontractors and shall verify such coordination on all submittals.

Where noted in the Contract Documents, the structural, mechanical, and electrical designs associated with the indicated equipment items are specific to the manufacturer and model number specified. Any structural, mechanical, or electrical modifications required to utilize an approved substitution to the specified equipment shall be made by the Contractor at no additional cost to the Owner. Where approved substitutions of specified equipment affect other materials or equipment, mechanical, structural, or electrical work, the Contractor shall note in the equipment submittal any necessary changes to accommodate the substituted equipment. It shall also be the responsibility of the Contractor to coordinate other mechanical, structural, or electrical equipment submittals to make sure that all changes necessary to accommodate the substituted equipment are addressed in these submittals as well. See General Condition 3.04.3.

1.2 WORK INCLUDED

Submittals required for this work shall include any or all of the following as required by the particular specification section and the submittal schedule:

- A. Schedules and Plans

B. PRODUCT SUBMITTALS

1. Manufacturer's Literature
2. Shop Drawings
3. Color and Material Samples
4. Design Calculations
5. Test Reports

C. Equipment Operation and Maintenance Manuals

D. Record Drawings

1.3 SUBMITTAL INFORMATION

Shop, catalog, and other appropriate drawings and information shall be submitted to the Engineer for review prior to fabrication or ordering of all equipment and materials specified. The number of copies of submittal information to be submitted shall be as indicated below.

All submittal information shall be sent to the Engineer through the Contractor. The Contractor shall assign a separate submittal number to each item or group of items that relate to each specification section. Submittal numbers shall be assigned in consecutive ascending order, with the first project submittal assigned the number "1." Resubmittals shall be numbered using the same number followed by an alphabetical suffix. All submittals shall bear the Contractor's certification that they have reviewed, checked, and approved the submittal information prior to transmitting to the Engineer. The submittal number and related specification section shall be marked on each submittal.

PART 2 PRODUCTS

2.1 GENERAL

Submittals shall be provided electronically in tabbed, searchable, pdf format and should include a table of contents bookmarked to provide a navigation link to each section of the submittal. Information should be clear and legible. Information pertaining to the specific materials proposed for use on the project shall be highlighted.

2.2 PRODUCT SUBMITTALS

A. GENERAL

When indicated in the Contract Documents the contractor shall submit product data for review by the Engineer. Unless otherwise specified, within 14 calendar days after receipt of the submittal, the Engineer shall review the submittal and return three copies of the marked-up submittal. The reproducible original will be retained by the Engineer. The returned submittal shall indicate one of the following actions:

1. If the review indicates that the material, equipment, or work method complies with the project Specifications, submittal copies will be marked “NO EXCEPTIONS TAKEN.” In this event, the Contractor may begin to implement the work method or incorporate the material or equipment covered by the submittal.
2. If the review indicates limited corrections are required, copies will be marked “MAKE CORRECTIONS NOTED.” The Contractor may begin implementing the work method or incorporating the material and equipment covered by the submittal in accordance with the noted corrections. Where submittal information will be incorporated in operation and maintenance data, a corrected copy shall be provided.
3. If the review reveals that the submittal is insufficient or contains incorrect data, copies will be marked “AMEND AND RESUBMIT.” Except at their own risk, the Contractor shall not undertake work covered by this submittal until it has been revised, resubmitted, and returned marked either “NO EXCEPTIONS TAKEN” or “MAKE CORRECTIONS NOTED.”
4. If the review indicates that the material, equipment, or work method does not comply with the project Specifications, copies of the submittal will be marked “REJECTED - SEE REMARKS.” Submittals with deviations that have not been identified clearly may be rejected. Except at their own risk, the Contractor shall not undertake the work covered by such submittals until a new submittal is made and returned marked either “NO EXCEPTIONS TAKEN” or “MAKE CORRECTIONS NOTED.”

B. MANUFACTURER'S LITERATURE

Where the contents of submitted literature include data not pertinent to the submittal, the portion(s) of the contents being submitted for the Engineer's review shall be clearly indicated.

C. SHOP DRAWINGS

Shop drawings shall be submitted in the form of blue-line or black-line prints of each sheet. Blueprint submittals will not be acceptable.

All shop drawings shall be accurately drawn to a scale sufficiently large enough to show pertinent features and method of connection or joining. On all shop drawings, figure dimensions shall be used as opposed to scaled dimensions.

D. COLOR AND MATERIAL SAMPLES

All material samples shall be of the exact article proposed to be furnished for the work and shall be submitted in the quantity required. Samples shall be returned to the Contractor, with one retained by the Engineer.

Unless the precise color is specifically described in the Contract Documents, or whenever a choice of color or pattern is available in a specified product, accurate color charts shall be submitted to the Engineer for their review and selection.

E. DESIGN CALCULATIONS

Where required in the Specifications, design calculations shall be submitted to the Engineer. Design calculations shall be complete, concise, and in an easy-to-read format. All design calculations shall be stamped by a Professional Engineer licensed in the State of Washington.

F. TEST REPORTS

Copies of all test reports shall be submitted to the Engineer.

2.3 EQUIPMENT MANUALS

A. GENERAL

For all items of equipment, manufacturer's equipment operation and maintenance manuals shall be submitted to the Engineer for review. One copy will be returned to the Contractor with comments.

All operation and maintenance information shall be comprehensive and detailed, and shall contain information adequately covering all normal operation and maintenance procedures.

For ease of identification, each manufacturer's brochure and manual shall be appropriately labeled with the equipment name and equipment specification number as it appears in the project Specifications. The information shall be organized in binders. The binders shall be provided with a table of contents and tab sheets to permit easy location of desired information.

Lubricants shall be described in detail, including type, recommended manufacturer, and manufacturer's specific compound to be used.

It shall be the responsibility of the Contractor to ensure that all operation and maintenance materials are obtained. Material submitted must meet the approval of the Engineer prior to project acceptance.

The following information shall be furnished for all items of equipment installed on the project requiring operational and/or maintenance procedures, and for any additional items indicated by the Engineer.

1. Lubrication Information

This shall consist of the manufacturer's recommendations regarding the lubricants to be used and the lubrication schedule to be followed.

2. Electrical and Control Diagrams

Diagrams shall show internal and connection wiring.

3. Startup Procedures

These instructions consist of equipment manufacturer's recommendations for installation, adjustment, calibration, and troubleshooting.

4. Operating Procedures

These instructions consist of the equipment manufacturer's recommended step-by-step procedures for starting, operating, and stopping the equipment under specified modes of operation.

5. Preventive Maintenance Procedures

These instructions consist of the equipment manufacturer's recommended steps and schedules for maintaining the equipment.

6. Overhaul Instructions

These instructions consist of the manufacturer's directions for the disassembly, repair, and reassembly of the equipment and any safety precautions that must be observed while performing the work.

7. Parts List

This list consists of the generic title and identification number of each component part of the equipment.

8. Spare Parts List

This list consists of the manufacturer's recommendations of number of parts, which should be stored by the Owner and any special storage precautions, which may be required.

9. Exploded View

Exploded or cut views of equipment shall be provided if available as a standard item of the manufacturer's information. When exploded or cut views are not available, plan and section views shall be provided with detailed callouts.

10. Test Documentation

Reports, records, data and forms documenting the results of equipment factory tests, including pump and blower performance curves, shall be provided, with the operating points for the specific equipment designated. When a special factory test of the supplied equipment is not performed, the manufacturer's standard performance reports and curves, with specified operating points, shall be provided for the supplied equipment.

11. Specific Information

Where items of information not included in the above list are required, they will be provided as described in the specifications for the equipment.

12. Warranty Information

B. EXTRANEOUS DATA

Where the contents of the manuals include manufacturers' standard brochures or catalog pages, the exact item(s) used in this installation shall be clearly indicated and all manufacturers' data which is extraneous shall be clearly deleted.

C. FINAL EQUIPMENT MANUALS

The Contractor shall be responsible for tracking and coordinating each separate manufacturer's equipment operation and maintenance manual submittal and shall resubmit, as necessary, until the Engineer's review indicates that the submittal is acceptable. The Contractor shall maintain equipment manual files until final approval copies are delivered to the Engineer. The Contractor shall be responsible for collating the approved operation and maintenance submittal sections into complete final manufacturers' equipment operation and maintenance manuals bound in post binders which are indexed to the Specifications. The Contractor shall deliver the complete final operation and maintenance manuals to the Engineer prior to project completion. All copies final manufacturers' equipment manuals submitted will be retained by the Engineer or Owner.

PART 3 EXECUTION

3.1 IDENTIFICATION OF SUBMITTALS

A. GENERAL

Each submittal shall be accompanied by a letter of transmittal showing the date of transmittal, specification section, or drawing number to which the submittal pertains, submittal number, and a brief description of the material submitted.

B. RESUBMITTALS

When material is resubmitted for any reason, it shall be submitted under a new letter of transmittal and referenced to the previous submittal.

3.2 REVIEW OF SUBMITTALS

The Engineer will review all submittals for general conformance with the design and other requirements of the Contract Documents. Markings or comments shall not be construed as relieving the Contractor from compliance with the Contract Documents. Submittals may be rejected based on inadequate information and/or not meeting the requirements of the Contract Documents. Rejection of submittals requires action on the part of the Contractor to correct the reason for the rejection. The Contractor remains responsible for details and accuracy, for confirming and correlating all quantities and dimensions, for selecting fabrication processes, and for techniques of assembly and installation.

3.3 COORDINATION OF PRODUCT SUBMITTALS

A. GENERAL

Prior to submittal for review by the Engineer, all data shall be fully coordinated, including the following:

1. All field dimensions and conditions.
2. All trades and public agencies involved, including necessary approvals.
3. All deviations from the Contract Documents.

B. GROUPING OF SUBMITTALS

1. All submittals shall be grouped with associated items, unless otherwise specifically permitted by the Engineer.
2. The Engineer may reject the submittals in their entirety or any part thereof, if not in accordance with the Contract Documents.

C. CERTIFICATION

Submittals shall bear the Contractor's certification that they has reviewed, checked, and approved the shop drawings prior to forwarding them to the Engineer.

3.4 TIMING OF PRODUCT SUBMITTALS

A. GENERAL

1. All submittals shall be made far enough in advance of installation to provide all required time for reviews and securing necessary approvals.
2. In scheduling, the Contractor shall allow for the time indicated in Part 2.2A for the Engineer's review following their receipt of the submittal.

B. DELAYS

No additional or separate payment will be made for costs of delays occasioned by tardiness of submittals on the part of the Contractor.

3.5 EQUIPMENT MANUALS

The preliminary copies of the manufacturer's equipment manuals shall be delivered to the Engineer for review not later than the time of equipment delivery to the project site.

Final copies of the manufacturer's equipment manuals shall be delivered to the Engineer at least 14 calendar days prior to requesting payment in excess of 90 percent completion for the project. Prior to submittal of the final equipment manuals, the Contractor shall check the manuals for accuracy and completeness and shall verify that prior review comments have been addressed.

***** END OF SECTION *****

SECTION 01385

DOCUMENTATION OF EXISTING CONDITIONS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the video recording requirements for the project.

The Contractor shall provide the Engineer with a digital format of the project area prior to and upon completion of all construction. The video recording shall utilize equipment that will visually document an accurate audio-visual description of the existing and post-construction conditions.

The Contractor shall notify the Engineer prior to the recording to allow the Engineer to witness the video recording. The Contractor shall provide preconstruction video recording of the existing conditions for the entire project site.

Upon completion of the work, the Contractor shall provide video recording in the same manner and vantage point as the preconstruction video recordings. The intent of this Specification section is to provide a comparison between existing and post-construction conditions.

The rate of speed the documentation will be video recorded at, the panning rates, and the zoom-in/zoom-out rates will be controlled so that playback will produce a clear television picture of the areas video recorded.

The video recording shall be accomplished during a period of good visibility. Unless otherwise directed by the Engineer, video recording will not be allowed during times of precipitation or poor visibility.

When available light is not sufficient to produce a clear television image, additional lighting shall be supplied by the photographer to ensure good picture quality. The camera crew shall be able to work independent of any power source, utilizing battery power to operate the camera, and lighting.

***** END OF SECTION *****

SECTION 01400

QUALITY CONTROL

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the control tests, test sample collection, required field-testing, and special inspections as specified herein, and indicated on the Plans.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
02700	Gravel Materials
02740	Hot Mix Asphalt
03300	Reinforced Concrete

1.3 PAYMENT

All testing as required by this Section shall be coordinated and scheduled by the Contractor with the Owner's designated testing agency. The Owner will contract with, and pay for, a testing agency to conduct all field and laboratory tests and special inspections as designated herein.

Retesting and reinspection required because of defective work and testing performed for the convenience of the Contractor shall also be paid for by the Contractor. Costs for retesting (beyond that which is required herein) will be reimbursed to the Owner in the form of a credit on a change order at the time of project acceptance.

All costs for scheduling, sampling, coordinating, and retesting of defective work shall be considered as incidental to the work and merged into the respective unit and lump sum prices bid.

PART 2 PRODUCTS

2.1 EARTHWORK AND GRANULAR MATERIALS

A. COMPACTION CONTROL

Optimum moisture content and maximum density tests shall be determined by the following method:

ASTM D1557 – Laboratory Compaction Characteristics of Soil Using Modified Effort

B. IN-PLACE TESTS

In-place density and moisture content tests shall be made by an independent testing laboratory according to the following methods:

ASTM D6938 – Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

2.2 AGGREGATES

All aggregates shall be tested in accordance with applicable WSDOT test methods:

<u>Title</u>	<u>Test Method</u>
Sampling	AASHTO T2
Sieve Analysis of Fine and Coarse Aggregates	104A
Material Finer than No. 200 Sieve in Aggregates	102A
Percentage of Particles Smaller than 0.025 mm and 0.005 mm	603A
Organic Impurities	111A
Abrasion of Coarse Aggregates by Use of the Los Angeles Machine	101A
Sand Equivalent	109A

2.3 CAST-IN-PLACE CONCRETE

Cast-in-place concrete shall be tested in accordance with applicable parts of Chapter 16 of ACI 301. Concrete reinforcement and concrete special inspections shall be performed in accordance with local Building Official and WABO requirements.

2.4 HOT MIX ASPHALT

Paving asphalt shall be tested in accordance with the current version of WSDOT Standard Specification Section 9-02.

PART 3 EXECUTION

3.1 SAMPLING AND TESTING FREQUENCY

A. GENERAL

The Contractor shall be responsible for the coordination and scheduling of a certified independent testing laboratory employed by the Owner to provide the following quality control tests at the number and frequency described herein. The precise location of the tests shall be designated by the Engineer. The Contractor shall cooperate with laboratory personnel employed to conduct the density testing, sampling of material(s), and special inspections. The Contractor shall provide safe access within the work site for laboratory personnel such that density testing and visual inspection can be performed. The Contractor shall provide samples of materials to be tested in the quantities required and herein specified to the appropriate laboratory personnel. The Contractor shall furnish all labor, equipment, tools, and materials necessary to obtain and deliver samples as herein designated. They shall also provide and repair any test holes required in order to facilitate the testing and sampling and to provide for the testing laboratory's exclusive use for storage and curing of test samples until removed to the laboratory.

Any areas tested and further failing compliance with the Specifications shall be recompacted and retested at the Contractor's expense, until a successful density test indicating compliance with these Specifications has been achieved.

B. SOIL TESTING

The Contractor shall schedule and coordinate with the Owner-employed independent testing laboratory to conduct the following quality control tests at the given frequency:

<u>Material</u>	<u>Test</u>	<u>Minimum Sampling & Testing Frequency</u>
Backfill for foundations, walls, trenches and roads ¹	Gradation	One for every 500 cy or one per day, whichever is more frequent, for each type of soil or fill material with quantities exceeding 25 cy. For trenches, one per day and one every 250 feet of trench.
	In-Place Density ^{2,3,4}	One every 500 cy or one per day for each type of soil or fill material with quantities exceeding 25 cy. For trenches, one per day and one every 250 feet of trench.
	Moisture-Density Relationship ³	One prior to start of backfilling operation, one every 20 densities and any time material type changes.

1. All acceptance tests shall be conducted from in-place samples.
2. Additional tests shall be conducted when variations occur due to the Contractors, operations, weather conditions, site conditions, etc.
3. The nuclear densometer, if properly calibrated, may be used but only to supplement the required testing frequency and procedures. The densometer shall be calibrated and is recommended for use when the time for complete results becomes critical.
4. Depending on soil conditions, it is anticipated that compaction tests shall be required at depths of 2 feet above the pipe and at each additional 5 feet to the existing surface plus a test at the surface.

C. HOT MIX ASPHALT TESTING FREQUENCY

The following hot mix asphalt quality control tests shall be completed at the given frequency:

Hot Mix Asphalt

Material	Test	Minimum Sampling & Testing Frequency
Commercial HMA and ATB	Rice Density	1 – project.
Commercial HMA	Compaction ⁽¹⁾	1 – 100 TN.

Hot Mix Asphalt Aggregate⁽³⁾

Material	Test	Minimum Sampling and Testing Frequency
Aggregate	SE, Fracture	1 – 2,000 TN.

- (1) All acceptance tests shall be conducted from in place samples.
- (2) A minimum of three samples, on a random basis, shall be taken and tested
- (3) Hot mix asphalt aggregate tests are not required for Commercial HMA that has a project quantity of ≤ 400 tons.

D. CONCRETE TESTING

All testing shall conform to applicable portions of ACI. Special inspections of concrete and concrete reinforcement shall comply with WABO requirements.

All concrete must meet the specified requirements for minimum 28-day compressive strength.

All concrete cylinders shall be molded and tested for strength by an independent testing laboratory employed by the Contractor.

The Contractor shall furnish all concrete required for molding of the cylinders. In cases where cylinders are stored at the project site, the Contractor shall provide storage and protection for the cylinders in accordance with ACI requirements.

Concrete tests and testing frequency shall be in accordance with the more stringent of the testing requirements specified in Section 03300-3.17 of these Specifications, and the following table:

<u>Material</u>	<u>Test</u>	<u>Minimum Sampling & Testing Frequency</u>
Coarse Aggregate (for each grading size) ¹	Gradation	One test every 500 cy of concrete.
	Deleterious Substances	One test initially and thereafter when appearance makes the material suspect.
	L.A. Abrasion	One every 2,000 tons of aggregate.
	Moisture specific gravity and absorption ¹	One initially and every 250 cy thereafter. One moisture to be conducted prior to any batching and more frequently if hauling and storage does not provide a consistent moisture content.
Fine Aggregate ¹	Gradation and fineness modules	One every 250 cy of concrete.
	Deleterious Substances	(same as coarse aggregate).
	Moisture, specific gravity and absorption ¹	(same as coarse aggregate).
Concrete	Slump	Conduct one test every day of placement and one additional test for every 50 cy placed and more frequently if batching appears inconsistent. Conduct in conjunction with taking concrete cylinders.
	Entrained Air	Conduct with each slump test.
	Ambient and concrete temperatures	Conduct with each slump test.

<u>Material</u>	<u>Test</u>	<u>Minimum Sampling & Testing Frequency</u>
Concrete	Compressive strength and evaluation of results per ACI 214. (includes unit weight of each cylinder)	For all concrete placement, take one set of four cylinders per day and one additional set of cylinders for every 50 cy of each class of structural concrete. Cylinders shall be 4 inch by 8 inch. Test one cylinder at 7 days and two at 28 days. Fourth cylinder shall be held in reserve. A plot and statistical evaluation shall be maintained in accordance with ACI 214 for compressive strength results. Field cure cylinders shall be made when insitu strengths are required to be known.

1. Aggregate moisture tests are to be conducted in conjunction with concrete strength tests for water/cement (w/c) calculations.

E. SPECIAL INSPECTIONS

Contractor shall coordinate and schedule all required Special Inspections per WABO requirements (Chapter 17 of the IBC) with the Owner designated testing agency. Special inspections include cast-in-place concrete, concrete reinforcement, structural welded connections, bolted connections, concrete masonry units (CMU), compaction testing for building and structure foundations, and epoxy adhesive bolting.

***** END OF SECTION *****

SECTION 01500

TEMPORARY FACILITIES

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the temporary facilities required for this project, but not necessarily limited to:

- A. Sanitary facilities.
- B. Off-site staging and off-site parking.
- C. Temporary enclosures such as fences, tarpaulins, barricades, and canopies.

PART 2 PRODUCTS

2.1 SANITARY FACILITIES

The Contractor shall provide toilet and wash-up facilities for their workforce and the Engineer at the site of work. They shall comply with applicable laws, ordinances, and regulations pertaining to the public health and sanitation of dwellings and camps.

2.2 OFF-SITE STAGING AND PARKING

The Contractor shall note that space is limited throughout the construction site. Employees of the Contractor, all subcontractors, vendors, suppliers, and associated personnel shall not be allowed to park onsite during the course of construction without prior approval from the Owner. It shall be the responsibility of the Contractor to provide sufficient parking facilities in authorized area(s) other than the construction site for the above-mentioned personnel.

The Contractor shall not be allowed to stockpile and store equipment and materials throughout the construction site. The Contractor shall coordinate their schedule so that all equipment and materials shall be brought to the construction site only when they are to be installed/utilized.

The Contractor shall provide storage of equipment and materials at an offsite, bonded warehouse, to be approved by the Engineer. The Contractor shall pay all costs associated with off-site delivery, storage, and transfer to the construction site.

2.3 ENCLOSURES

The Contractor shall furnish, install, and maintain during the project time all required scaffolds, tarpaulins, barricades, canopies, warning signs, steps, bridges, platforms, and other temporary construction necessary for proper completion of the work in compliance with all pertinent safety and other regulations.

PART 3 EXECUTION

All temporary facilities and controls shall be maintained as long as required for the safe and proper completion of the work. The Contractor shall remove such temporary facilities and controls as rapidly as progress of the work will permit or as directed by the Owner.

***** END OF SECTION *****

SECTION 01505

MOBILIZATION AND DEMOBILIZATION

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section consists of mobilization and demobilization. Mobilization consists of preconstruction activities and preparatory work for the project necessary to mobilize labor, materials, and equipment to the project site. Demobilization consists of activities to remove materials and equipment from the project site upon project completion, including final cleanup. Items which are not considered mobilization or demobilization include but are not limited to:

- A. On-going activities throughout the duration of construction.
- B. Profit, interest on borrowed money, overhead, or management costs.

PART 2 PRODUCTS

Products and materials required for mobilization and demobilization are described in the various sections of Division 1 and in other parts of the Contract Documents.

PART 3 EXECUTION

Complete mobilization and demobilization as required by the various sections of Division 1 and other parts of the Contract Documents.

***** END OF SECTION *****

SECTION 01720

RECORD DRAWINGS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the record drawings, which shall be maintained and annotated by the Contractor during construction.

1.2 INFORMATION PROVIDED BY THE OWNER

The Contractor will be provided with the following items to maintain record drawings for the project:

- A. One full size paper set of Plans.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall maintain the following record drawings for the project:

- A. A neat and legibly marked set of Contract Plans showing the final location of piping, equipment, electrical conduits, outlet boxes and cables;
- B. Additional documents such as schedules, lists, drawings, and electrical and instrumentation diagrams included in the Contract Documents; and
- C. Contractor layout and installation drawings.

Unless otherwise specified, record drawings shall be full size and maintained in a clean, dry, and legible condition. Record documents shall not be used for construction purposes and shall be available for review by the Engineer during normal working hours at the Contractor's field office. At the completion of the work, prior to final payment, a paper copy and a scanned pdf of all record drawings shall be submitted to the Engineer.

Marking of the drawings shall be kept current and shall be done at the time the material and equipment are installed. Annotations to the record documents shall be made with an erasable colored pencil conforming to the following color code:

- A. Additions - Red
- B. Deletions - Green
- C. Comments - Blue
- D. Dimensions - Graphite

Legibly mark drawings to record actual depths, horizontal and vertical location of underground raceways, cables, and appurtenances referenced to permanent surface improvements.

The Contractor's record drawings (full-size hard-copy) will be reviewed monthly for completeness by the Engineer prior to preparing the progress estimate for payment. If the record drawings do not reflect the work performed, payment for that item of work will not be included in the progress estimate.

***** END OF SECTION *****

SECTION 01740

CLEANUP

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the maintenance of the building, structures, and site(s) in a standard of cleanliness throughout the construction period as described herein.

Throughout the construction period, the Contractor shall maintain the cleanliness of the site and structures as described herein. The Contractor is also to maintain access to all existing, operating equipment such that the equipment may be serviced and operated.

Dust of all kinds, including concrete dust produced by construction activities, shall be controlled to avoid damage to existing, operating equipment. Enclosures, ventilation, and air scrubbing may be required where significant potential for damage is determined by the Engineer.

1.2 RELATED WORK SPECIFIED ELSEWHERE

In addition to standards described in this Section, comply with all requirements for cleaning up when described in other sections of these Contract Documents.

1.3 QUALITY ASSURANCE

A. INSPECTION

The Contractor shall conduct daily site inspections, and more often if necessary, to verify that requirements are being met.

B. CODES AND STANDARDS

In addition to the standards described in this Section, comply with all pertinent requirements of governmental agencies having jurisdiction.

PART 2 PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

Provide all required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.2 COMPATIBILITY

Use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material or as approved by the Engineer.

PART 3 EXECUTION

3.1 PROGRESS CLEANING

A. GENERAL

Retain all stored materials and equipment in an orderly fashion allowing maximum access, not impeding drainage or traffic, and providing protection.

Do not allow the accumulation of scrap, debris, waste material, and other items not required for this work.

At least twice each month, and more often if necessary, completely remove all scrap, debris, and waste material from the project site.

Provide adequate storage for all materials awaiting removal from the project site, observing all requirements for fire protection and protection of the environment.

B. SITE

Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Move these items into a place designated for their storage until disposal becomes available.

Weekly, and more often if necessary, inspect all arrangements of materials stored on the site, restack, arrange, or otherwise service all arrangements to meet the requirements above.

Maintain the site in a neat and orderly condition at all times so as to meet the approval of the Engineer.

C. STRUCTURES

Weekly, and more often if necessary, inspect the structures and pick up all scrap, debris and waste material. Move these items into a place designated for their storage until disposal becomes available.

Weekly, and more often if necessary, sweep clean all interior spaces. “Clean” shall be interpreted to mean free from dust and other materials that can be swept with a broom using reasonable diligence.

In preparing to install succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material. Use all equipment and materials required to achieve the required cleanliness.

D. STREETS

All paved and unpaved streets in the vicinity of the project shall be kept free of material tracked from the project site(s) or dropped from vehicles entering and leaving the site(s). The Contractor shall inspect roads in each active area daily, and all material deposited on the road from the Contractor’s activities shall be removed prior to the end of the workday. This shall include sweeping, as required, to collect any mud, dirt and dust from the surface. All catch basins and culverts in the work area shall be inspected before completion and cleaned as directed by the Engineer.

3.2 FINAL CLEANING

A. DEFINITION

Except as otherwise specifically provided, “clean” shall be interpreted as meaning the level of cleanliness generally provided by commercial building maintenance equipment and materials.

B. GENERAL

Prior to final inspection, remove from the jobsite all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final project cleaning as described below.

C. STRUCTURES

1. Exterior

Visually inspect all exterior surfaces and remove all traces of soil, waste, smudges, and other foreign matter. Remove all traces of splashed materials from adjacent surfaces. If necessary to achieve a uniform degree of exterior cleanliness, hose down the exterior of the structure. In the event of stubborn stains not removable with water, the Engineer may require light sandblasting or other cleaning at no additional cost to the Owner.

2. Interior

Visually inspect all interior surfaces and remove all traces of soil, waste, smudges, and other foreign matter. Remove all traces of splashed materials from adjacent surfaces. Remove all paint droppings, spots, stains, and dirt from finished surfaces. Use only appropriate cleaning materials and equipment.

3. Glass

Clean all glass inside and outside.

D. TIMING

Schedule final cleaning as approved by the Engineer to enable the Owner to accept a completely clean project, ready for occupancy.

***** END OF SECTION *****

SECTION 01900

SALVAGE AND DEMOLITION

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section covers the demolition of existing structures, piping, equipment, and sitework, and the salvage of existing materials and equipment as indicated on the Plans and as specified herein.

All areas and facilities of the existing Building “B” outside of the immediate project area, which are not to be removed, must remain in continuous operation during the work. Demolition and salvage work shall create a minimum of interference with the operation of Building “B”.

The Plans show the major items to be demolished and removed. In addition to these items, the Contractor shall remove any other incidental above-grade items which are not to be used in the completed project.

1.2 DEMOLITION

The Contractor shall be responsible for compliance with current City, County, State, and Federal codes and regulations related to demolition.

The Contractor shall notify all affected utilities and comply with their respective requirements for abandonment of such utilities including power, telephone, natural gas, water, sanitary sewer, and storm sewer utilities.

The Contractor shall maintain access for the Owner’s employees during the demolition period and provide barricades, fences, etc., as required for job site safety.

Demolition of concrete, masonry, roofing, asphalt, and other materials shall be done so as to avoid damage to existing structures intended to remain. Demolition or cutting required to add to or modify existing structures shall be done in such a manner that the appearance and utility of the existing structure is not impaired and so that a neat transition from new to old material may occur.

All piping and appurtenances located less than 4 feet below finished grade shall be removed and hauled to an approved disposal site. All piping and appurtenances located four feet or more below finished grade may be abandoned in place, unless shown otherwise on the Plans, as long as Contractor fully seals all pipe and appurtenance openings with grout.

All waste materials from demolition or cutting shall become the property of the Contractor and shall be removed from the site and hauled to an approved waste disposal site, if declared surplus by the Owner. All materials and equipment, however, are property of the Owner unless declared surplus. Some equipment and materials scheduled for salvage and delivery to the Owner are noted on the Plans.

***** END OF SECTION *****

DIVISION 2

SITEWORK

SECTION 02050

LOCATE EXISTING UTILITIES

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the anticipated conflicts, which may exist with existing utilities. A reasonable attempt has been made to locate the existing utilities; however, the exact location, and/or depth are unknown in most instances. Locations and dimensions shown in the Plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification. It shall be the responsibility of the Contractor to locate existing utilities and their depth.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
Section 4	Measurement and Payment

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall determine the difficulties to be encountered in constructing the Project and their utility locate effort based upon the information provided on the Plans, field investigation, and the Contractor's contacts with the existing utility companies. The Contractor shall determine the extent of exploration required to first prevent damage to those existing utilities, and secondly to determine if the proposed improvements are in conflict with existing utilities.

The Contractor shall call the Utility Location Request Center (One Call Center), for field location, not less than 2 nor more than 10 business days before the scheduled date for commencement of excavation that may affect underground utility facilities, unless otherwise agreed upon by the parties involved. A business day is defined as any day other than Saturday, Sunday, or a legal local, State, or Federal holiday. The telephone number for the One Call Center for this project is (800) 424-5555. If no one-number locator service is available, notice shall be provided individually to those owners known to or suspected of having underground facilities within the area of the proposed excavation.

The Contractor is alerted to the existence of Chapter 19.122 RCW, a law relating to underground utilities. Any cost to the Contractor incurred as a result of this law shall be at the Contractor's expense.

No excavation shall begin until all know facilities in the vicinity of the excavation area have been located and marked.

***** END OF SECTION *****

SECTION 02370

EROSION CONTROL

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the temporary erosion and sedimentation control (TESC) in and around the site caused by the actions of the Contractor as shown on the Plans and as specified herein.

Work under this Section shall be directed towards site areas disturbed during construction as well as all off-site storage and parking areas maintained by the Contractor.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
Section 4	Measurement and Payment
01300	Submittals

1.3 SUBMITTALS

The Contractor's Certified Erosion and Sediment Control Lead (CESCL) shall prepare a Stormwater Pollution Prevention Plan (SWPPP) for the project and shall submit the Plan in accordance with these Specifications.

The SWPPP shall be submitted to the Owner for approval at the pre-construction conference.

1.4 CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL)

The Contractor shall designate a CESCL for this project. The CESCL shall have, for the life of this Contract, a current Certificate of Training in Construction Site Erosion and Spill Control signed by the WSDOT Water Quality Program Manager.

Duties of the CESCL shall include, but are not limited to:

- A. Inspecting temporary erosion and spill control Best Management Practice (BMPs) for proper location, installation, maintenance, and repair. Inspections shall be made as noted on the Plans and after each significant precipitation event, including those that occur during weekends and after working hours. A TESC Inspection Report shall be prepared for each

inspection and shall be included in the TESC file. The inspection report shall include, but not be limited to:

1. When BMPs are installed, removed or changed;
2. Repairs needed or made;
3. Turbidity monitoring results;
4. Observations of BMP effectiveness and proper placement; and
5. Recommendations for improving performance of BMPs.

B. Prepare and maintain a TESC file on site that includes, but is not limited to:

1. Temporary Erosion and Spill Control Inspection Reports;
2. Contractor's SWPPP;
3. Spill Prevention, Control, and Countermeasures (SPCC) Plan;
4. All project permits, including but not limited to grading permits and Hydraulics Project Approval;
5. Manufacturer instructions for all products used for TESC BMPs; and
6. Washington State Department of Ecology's Stormwater Management Manual for Western Washington, Chapter 4, Volume II, current edition.

1.5 STORMWATER POLLUTION PREVENTION PLAN

The CESCL Contractor shall be responsible for preparing a SWPPP. The intent of the SWPPP is to reflect the Contractor's operations by supplementing the TESC drawings, details, and notes shown on the Plans to provide comprehensive pollution control at the construction site, staging areas, stockpiles, and borrow sites.

No work shall begin until the Contractor's SWPPP, as approved by the Owner, is implemented. The SWPPP shall address, at least, the following items:

- Identification of construction haul routes and location of BMPs (e.g., stabilized construction entrance, silt fences, storm drain inlet protection).

- Waste disposal methods and locations.
- Detailed construction sequence and schedule, including identifying dates scheduled for BMP installation, removal, clearing, grading, seeding, and landscaping.
- Details for any temporary flow diversions, dewatering systems, and BMPs (in accordance with the current edition of the Washington State Department of Ecology’s Stormwater Management Manual for Western Washington) proposed by the Contractor.
- Calculations for temporary sedimentation ponds, if used.
- A list of products to be used, including Material Safety Data Sheets.
- Identification of stockpile and staging areas, and BMPs to be implemented at these locations.

The SWPPP shall be prepared in accordance with Chapter 4, Volume II Chapter 7 – BMPs from the current edition of the Washington State Department of Ecology’s Stormwater Management Manual for Western Washington, which are hereby referenced and made a part of the Contract Documents. Only those sections of the Stormwater Management Manual for Western Washington that address preparation, implementation, and maintenance of permanent and temporary erosion and sedimentation control BMPs are applicable.

The SWPPP shall include best management practices to control windblown dust.

PART 2 PRODUCTS

2.1 SILT FENCES

Silt fences shall conform to the details shown on the Plans and the fabric shall conform meet the requirements of Geotextile for Temporary Silt Fence of Section 9-33 of the WSDOT Standard Specifications.

2.2 STORM DRAIN INLET (CATCH BASIN) PROTECTION

Storm drain inlet protection shall be with a “silt sack,” as manufactured by ACF Environmental or equal.

2.3 EROSION CONTROL BLANKET

On all disturbed slopes steeper than 2:1 (H:V), an erosion control blanket shall be placed and secured per manufacturer's recommendation with a biodegradable means. The erosion control blanket shall be temporary, biodegradable and is to remain in place. The erosion control blanket shall be "Biomac C" as manufactured by MacCaferri, Inc. or "Curlex II," as manufactured by American Excelsior Co., or Equal.

PART 3 EXECUTION

3.1 PREPARATION

Site preparation work shall be performed only during periods when beneficial results can be obtained. When drought, excessive moisture or other unsatisfactory conditions prevail, the work shall be stopped.

3.2 BEST MANAGEMENT PRACTICES

Silt fences shall be constructed to control erosion and migration of soils disturbed during construction. The fences and dams shall provide temporary protection and shall be removed only upon approval of the Owner.

All areas or drainage ways downstream of the construction site shall have BMPs installed prior to the beginning of any clearing activities. Runoff from cleared or disturbed area shall be directed through the BMPs. Disturbed ground shall be stabilized at the end of each work day. Permanent soil stabilization and erosion and sedimentation control shall be implemented upon reaching finish grade. Slope protection shall be immediately implemented upon any soils showing signs of erosion. This shall be done in a manner approved by the Owner.

All BMPs shall be inspected, maintained and kept in a condition sufficient to provide effective erosion and sedimentation control at all times. The site shall be inspected to ensure the BMPs are properly located, constructed and operating as designed during the first storm. Any necessary adjustments or repairs shall be made immediately and be approved by the Owner. The BMPs shall be inspected thereafter as noted on the Plans and after all significant storm events. Turbidity monitoring will be required on a weekly basis at a minimum, or more frequently if necessary as determined by the CESCL.

All BMPs shall be removed no later than 30 consecutive calendar days after final site stabilization has been achieved as determined by the Owner. BMPs such as storm drain inlet protection, straw bales, silt fences and supports and plastic coverings shall be removed and properly disposed of offsite by the Contractor. Areas disturbed by removal of these BMPs shall be immediately stabilized in a manner approved by the Owner.

***** END OF SECTION *****

SECTION 02700

GRAVEL MATERIALS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the various types of granular materials that are to be used in trenches and other excavations as shown on the Plans and as specified herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
Section 4	Measurement and Payment
01300	Submittals

1.3 SUBMITTALS

The Contractor shall provide certificates of laboratory tests in accordance with Section 01300, indicating particle size distribution for review for each type of granular material furnished and proctor test reports for all material to be placed as pipe bedding material, trench backfill, backfill under and around structures and underneath crushed surfacing and asphalt concrete pavements.

The certificates and proctor test reports shall be provided to the Owner at least 5 calendar days prior to placement.

PART 2 PRODUCTS

2.1 GRAVEL BASE

Provide gravel base in paved areas as backfill material as indicated on the Plans. Gravel base shall be in conformance with Section 9-03.10. The material shall contain particles of less than 4 inches maximum dimension, with less than 7 percent passing the U.S. No. 200 size sieve.

During period of wet weather the allowable fines content of the gravel base materials shall be no more than 5 percent passing the U.S. No. 200 size sieve.

2.2 CRUSHED SURFACING

Crushed surfacing base course and top course shall conform to Section 9-03.9(3) of the WSDOT Standard Specifications.

PART 3 EXECUTION

3.1 GRAVEL BASE

Gravel base shall be used where excavated material is unsuitable or unavailable for the backfill of trenches, around manholes, vaults and structures, as approved by the Engineer, as shown on the Plans and as specified herein.

3.2 CRUSHED SURFACING

Crushed surfacing base course and/or top course shall be placed underneath asphalt paving, to the lines and grades shown on the Plans or as required by the Plans and shall be compacted to a dense, unyielding state of at least 95 percent of the maximum dry density, using the modified Proctor, per ASTM D1557.

***** END OF SECTION *****

SECTION 02740

HOT MIX ASPHALT PAVING

PART 1 GENERAL

1.1 SCOPE

The work in this section shall be accomplished in accordance with the Standard Specifications for Road, Bridge and Municipal Construction, 2018 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). Delete section 5-04 of the Standard Specifications, with the exception of 5-04.2(1), and replace it with the following:

The work specified in this Section includes providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections shown in the Plans. The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

This work also consists of adjusting castings to grade, furnishing and installing temporary cold mix per the details in the Contract Plans.

HMA shall be composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
Section 4	Measurement and Payment
01300	Submittals
01400	Quality Control

1.3 SUBMITTALS

A. MIX DESIGN

The number of ESALs for the design and acceptance of the HMA shall be 0.3 million.

No paving shall begin prior to the approval of the mix design by the Engineer.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of HMA mixture accepted by commercial evaluation will be at the option of the Project Engineer.

Commercial Evaluation Mix Design. Approval of a mix design for “Commercial Evaluation” will be based on a review of a Mix Design from the current WSDOT QPL. At the discretion of the Engineer, agencies may accept verified mix designs older than 12 months from the original verification date with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design. Testing of the HMA by the Contracting Agency for mix design approval is not required.

Using Warm Mix Asphalt Processes. The Contractor may elect to use additives that reduce the optimum mixing temperature or serve as a compaction aid for producing HMA. Additives include organic additives, chemical additives and foaming processes. The use of Additives is subject to the following:

- Do not use additives that reduce the mixing temperature more than allowed in subsection 3.3 F. in the production of mixtures.
- Before using additives, obtain the Engineer’s approval using WSDOT Form 350-076 to describe the proposed additive and process.

PART 2 PRODUCTS

2.1 HMA PAVEMENT

HMA pavement or Commercial HMA shall be HMA Cl. 1/2" PG 58H-22.

A. MATERIALS

Materials shall meet the requirements of the following sections of the Standard Specifications:

Asphalt Binder	9-02.1(4)
Cationic Emulsified Asphalt	9-02.1(6)
Anti-Stripping Additive	9-02.4

HMA Additive	9-02.5
Aggregates	9-03.8
Recycled Asphalt Pavement	9-03.8(3)B
Mineral Filler	9-03.8(5)
Recycled Material	9-03.21
Portland Cement	9-01
Sand	9-03.1(2).
(As noted in subsection 3.3D.1. for crack sealing)	
Joint Sealant	9-04.2
Foam Backer Rod	9-04.2(3)A

The Contract documents may establish that the various mineral materials required for the manufacture of HMA will be furnished in whole or in part by the Contracting Agency. If the documents do not establish the furnishing of any of these mineral materials by the Contracting Agency, the Contractor shall be required to furnish such materials in the amounts required for the designated mix. Mineral materials include coarse and fine aggregates, and mineral filler.

The Contractor may choose to utilize recycled asphalt pavement (RAP) in the production of HMA. The RAP may be from pavements removed under the Contract, if any, or pavement material from an existing stockpile.

The Contractor may use up to 20 percent RAP by total weight of HMA. The asphalt content and gradation test data shall be reported to the Contracting Agency when submitting the mix design for approval on the QPL. The Contractor shall include the RAP as part of the mix design as defined in these Specifications.

The grade of asphalt binder shall be as required by the Contract. Blending of asphalt binder from different sources is not permitted.

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 20 percent or less RAP by total weight of HMA. The Contractor shall submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

Production of aggregates shall comply with the requirements of Section 3-01 of the Standard Specifications.

Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall comply with the requirements of Section 3-02 of the Standard Specifications.

B. HMA TOLERANCES AND ADJUSTMENTS

1. Job Mix Formula (JFM) Tolerances

After the JMF is determined as required in subsection 3.6A. The constituents of the mixture at the time of acceptance shall conform to the following tolerances:

Aggregate, percent passing	Commercial Evaluation
1", 3/4", 1/2", and 3/8" sieves	±8%
U.S. No. 4 sieve	±8%
U.S. No. 8 sieve	±8%
U.S. No. 200 sieve	±3.0%
Asphalt Binder	±0.7%

These tolerance limits constitute the allowable limits as described in Standard Specification Section 1-06.2. The tolerance limit for aggregate shall not exceed the limits of the control points section, except the tolerance limits for sieves designated as 100 percent passing will be 99-100. The tolerance limits on sieves shall only apply to sieves with control points.

2.2 TEMPORARY HMA AND TEMPORARY COLD MIX

Cold-mix material shall be MC-2 asphaltic concrete commonly referred to as “cold-mix,” (EZ Street or approved equal).

Temporary HMA material shall meet the requirements for Commercial HMA.

PART 3 EXECUTION

3.1 GENERAL

Where paving occurs on a facility, the Contractor shall maintain access to the facility at all times. The Contractor shall provide 1-week notification to the Contracting Agency prior to paving and shall coordinate all work with the Contracting Agency to ensure their paving plan does not interfere with the Contracting Agency’s on-going operations.

When paving occurs on a roadway open to traffic, the requirements of subsection 3.3B. apply.

The Contractor shall provide, place and maintain all temporary markings and signage as required to warn and direct facility traffic as necessary during their paving operations.

3.2 HMA PLACEMENT

A. WEATHER LIMITATIONS

Do not place HMA for wearing course on any Traveled Way beginning October 1st through March 31st of the following year without written concurrence from the Engineer.

Do not place HMA on any wet surface, or when the average surface temperatures are less than those specified below, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

Minimum Surface Temperature for Paving

Compacted Thickness (Feet)	Wearing Course	Other Courses
Less than 0.10	55 degrees F	45 degrees F
0.10 to .20	45 degrees F	35 degrees F
More than 0.20	35 degrees F	35 degrees F

B. PAVING UNDER TRAFFIC

When the Roadway being paved is open to traffic, the requirements of this Section shall apply.

The Contractor shall keep intersections open to traffic at all times except when paving the intersection or paving across the intersection. During such time, and provided that there has been an advance warning to the public, the intersection may be closed for the minimum time required to place and compact the mixture. In hot weather, the Engineer may require the application of water to the pavement to accelerate the finish rolling of the pavement and to shorten the time required before reopening to traffic.

Before closing an intersection, advance warning signs shall be placed and signs placed marking the detour or alternate route.

During paving operations, temporary pavement markings shall be maintained throughout the project. Temporary pavement markings shall be installed on the Roadway prior to opening to traffic. Temporary pavement markings shall be in accordance with Standard Specifications Section 8-23.

All costs in connection with performing the Work in accordance with these requirements shall be included in the unit Contract prices for the various Bid items involved in the Contract.

C. EQUIPMENT

1. Mixing Plant

Plants used for the preparation of HMA shall conform to the following requirements:

a. Equipment for Preparation of Asphalt Binder

Tanks for the storage of asphalt binder shall be equipped to heat and hold the material at the required temperatures. The heating shall be accomplished by steam coils, electricity, or other approved means so that no flame shall be in contact with the storage tank. The circulating system for the asphalt binder shall be designed to ensure proper and continuous circulation during the operating period. A valve for the purpose of sampling the asphalt binder shall be placed in either the storage tank or in the supply line to the mixer.

b. Thermometric Equipment

An armored thermometer, capable of detecting temperature ranges expected in the HMA mix, shall be fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit. The thermometer location shall be convenient and safe for access by Inspectors. The plant shall also be equipped with an approved dial-scale thermometer, a mercury actuated thermometer, an electric pyrometer, or another approved thermometric instrument placed at the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates. This device shall be in full view of the plant operator.

c. Heating of Asphalt Binder

The temperature of the asphalt binder shall not exceed the maximum recommended by the asphalt binder manufacturer nor shall it be below the minimum

temperature required to maintain the asphalt binder in a homogeneous state. The asphalt binder shall be heated in a manner that will avoid local variations in heating. The heating method shall provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25 degrees F. Also, when a WMA additive is included in the asphalt binder, the temperature of the asphalt binder shall not exceed the maximum recommended by the manufacturer of the WMA additive.

d. Sampling and Testing of Mineral Materials

The HMA plant shall be equipped with a mechanical sampler for the sampling of the mineral materials. The mechanical sampler shall meet the requirements of Standard Specification Section 1-05.6 for the crushing and screening operation. The Contractor shall provide for the setup and operation of the field testing facilities of the Contracting Agency as provided for in Standard Specifications Section 3-01.2(2).

e. Sampling HMA

The HMA plant shall provide for sampling HMA by one of the following methods:

- i. A mechanical sampling device attached to the HMA plant.
- ii. Platforms or devices to enable sampling from the hauling vehicle without entering the hauling vehicle.

2. Hauling Equipment

Trucks used for hauling HMA shall have tight, clean, smooth metal beds and shall have a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. Whenever the weather conditions during the work shift include, or are forecast to include, precipitation or an air temperature less than 45 degrees F or when time from loading to unloading exceeds 30 minutes, the cover shall be securely attached to protect the HMA.

The Contractor shall provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Excess release agent shall be drained prior to filling hauling equipment with HMA. Petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA shall not be used. For live bed trucks, the conveyor shall be in operation during the process of applying the release agent.

3. Pavers

HMA pavers shall be self-contained, power-propelled units, provided with an internally heated vibratory screed and shall be capable of spreading and finishing courses of HMA plant mix material in lane widths required by the paving section shown in the Plans.

The HMA paver shall be in good condition and shall have the most current equipment available from the manufacturer for the prevention of segregation of the HMA mixture installed, in good condition, and in working order. The equipment certification shall list the make, model, and year of the paver and any equipment that has been retrofitted.

The screed shall be operated in accordance with the manufacturer's recommendations and shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. A copy of the manufacturer's recommendations shall be provided upon request by the Contracting Agency. Extensions will be allowed provided they produce the same results, including ride, density, and surface texture as obtained by the primary screed. Extensions without augers and an internally heated vibratory screed shall not be used in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Lines shall be placed on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. The grade and slope for intermediate lanes shall be controlled automatically from reference lines or by means of a mat referencing device and a slope control device. When the finish of the grade prepared for paving is superior to the established tolerances and when, in the opinion of the Engineer, further improvement to the line, grade, cross-section, and smoothness can best be achieved without the use of the reference line, a mat referencing device may be substituted for the

reference line. Substitution of the device will be subject to the continued approval of the Engineer. A joint matcher may be used subject to the approval of the Engineer. The reference line may be removed after the completion of the first course of HMA when approved by the Engineer. Whenever the Engineer determines that any of these methods are failing to provide the necessary vertical control, the reference lines will be reinstalled by the Contractor.

The Contractor shall furnish and install all pins, brackets, tensioning devices, wire, and accessories necessary for satisfactory operation of the automatic control equipment.

If the paving machine in use is not providing the required finish, the Engineer may suspend Work as allowed by Standard Specification Section 1-08.6. Any cleaning or solvent type liquids spilled on the pavement shall be thoroughly removed before paving proceeds.

4. Rollers

Rollers shall be of the steel wheel, vibratory, oscillatory, or pneumatic tire type, in good condition and capable of reversing without backlash. Operation of the roller shall be in accordance with the manufacturer's recommendations. When ordered by the Engineer for any roller planned for use on the project, the Contractor shall provide a copy of the manufacturer's recommendation for the use of that roller for compaction of HMA. The number and weight of rollers shall be sufficient to compact the mixture in compliance with the requirements of subsection 3.3J. The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, displacement of the mixture or other undesirable results shall not be used.

D. PRODUCING/STOCKPILING AGGREGATES AND RAP

Aggregates and RAP shall be stockpiled according to the requirements of Standard Specifications Section 3-02. Sufficient storage space shall be provided for each size of aggregate and RAP. Materials shall be removed from stockpile(s) in a manner to ensure minimal segregation when being moved to the HMA plant for processing into the final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

E. MIXING

After the required amount of mineral materials, asphalt binder, recycling agent and anti-stripping additives have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

When discharged, the temperature of the HMA shall not exceed the optimum mixing temperature by more than 25 degrees F as shown on the reference mix design report or as approved by the Engineer. Also, when a WMA additive is included in the manufacture of HMA, the discharge temperature of the HMA shall not exceed the maximum recommended by the manufacturer of the WMA additive. A maximum water content of 2 percent in the mix, at discharge, will be allowed providing the water causes no problems with handling, stripping, or flushing. If the water in the HMA causes any of these problems, the moisture content shall be reduced as directed by the Engineer.

Storing or holding of the HMA in approved storage facilities will be permitted with approval of the Engineer, but in no event shall the HMA be held for more than 24 hours. HMA held for more than 24 hours after mixing shall be rejected. Rejected HMA shall be disposed of by the Contractor at no expense to the Contracting Agency. The storage facility shall have an accessible device located at the top of the cone or about the third point. The device shall indicate the amount of material in storage. No HMA shall be accepted from the storage facility when the HMA in storage is below the top of the cone of the storage facility, except as the storage facility is being emptied at the end of the working shift.

Recycled asphalt pavement (RAP) utilized in the production of HMA shall be sized prior to entering the mixer so that a uniform and thoroughly mixed HMA is produced. If there is evidence of the RAP not breaking down during the heating and mixing of the HMA, the Contractor shall immediately suspend the use of the RAP until changes have been approved by the Engineer. After the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, and RAP is ensured.

F. SPREADING AND FINISHING

The mixture shall be laid upon an approved surface, spread, and struck off to the grade and elevation established. HMA pavers complying with subsection 3.3C. shall be used to distribute the mixture. Unless otherwise directed by the Engineer, the nominal compacted depth of any layer of any course shall not exceed the following:

HMA Class 1"	0.35 feet
HMA Class 3/4" and HMA Class 1/2" wearing course	0.30 feet
HMA Class 3/4" and HMA Class 1/2" other courses	0.35 feet
HMA Class 3/8" wearing course	0.25 feet
HMA Class 3/8" other courses	0.30 feet

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

When more than one job mix formula (JMF) is being utilized to produce HMA, the material produced for each JMF shall be placed by separate spreading and compacting equipment. The intermingling of HMA produced from more than one JMF is prohibited. Each strip of HMA placed during a work shift shall conform to a single JMF established for the class of HMA specified unless there is a need to make an adjustment in the JMF.

G. AGGREGATE ACCEPTANCE PRIOR TO INCORPORATION IN HMA

Sampling and testing of aggregates for HMA accepted by commercial evaluation will be at the option of the Engineer.

H. SURFACE SMOOTHNESS

The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course of the following sections of Roadway shall not vary more than 1/4 inch from the lower edge of a 10-foot straightedge placed on the surface parallel to centerline on all Sections of roadway within the project limits that are posted less than 45 mph.

The completed surface of the wearing course of all other sections of Roadway shall not vary more than 1/8 inch from the lower edge of a 10-foot straightedge placed on the surface parallel to centerline.

The transverse slope of the completed surface of the wearing course shall vary not more than 1/4 inch in 10 feet from the rate of transverse slope shown in the Plans.

When deviations in excess of the above tolerances are found that result from a high place in the HMA, the pavement surface shall be corrected by one of the following methods:

1. Removal of material from high places by grinding with an approved grinding machine; or
2. Removal and replacement of the wearing course of HMA; or
3. By other method approved by the Engineer.

Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances.

Deviations in excess of the above tolerances that result from a low place in the HMA and deviations resulting from a high place where corrective action, in the opinion of the Engineer, will not produce satisfactory results will be accepted with a price adjustment. The Engineer shall deduct from monies due or that may become due to the Contractor the sum of \$500.00 for each and every section of single traffic lane 100 feet in length in which any excessive deviations described above are found.

I. SEALING PAVEMENT SURFACES

Apply a fog seal where shown in the plans. Construct the fog seal in accordance with Standard Specifications Section 5-02.3. Unless otherwise approved by the Engineer, apply the fog seal prior to opening to traffic.

J. HMA ROAD APPROACHES

HMA approaches shall be constructed at the locations shown in the Plans or where staked by the Engineer. The Work shall be performed in accordance with Section 3.3.

3.3 TEMPORARY PAVEMENT REPAIR

During the course of construction, it may be necessary to provide improved temporary vehicle and/or pedestrian access within the project limits. Such temporary access shall be provided by temporarily patching trench crossings or other areas with temporary HMA and temporary cold mix until such time as the

permanent surface restoration is installed. Locations shall include those areas specifically indicated on the Plans, directed by the Engineer or as further specified herein. This material will be furnished, placed, compacted, and removed and wastehailed at various locations throughout the project. The trenches and/or subgrade shall be thoroughly compacted and brought to a smooth grade prior to placing the material. It shall be placed, maintained (daily), and removed and wastehailed by the Contractor. Typical compacted depth will be 4 inches. Temporary HMA and temporary cold mix shall also be used around castings, after grinding, to provide a transition until final lift of HMA paving is installed.

3.4 HMA JOINTS

A. TRANSVERSE JOINTS

The Contractor shall conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed and the roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When the Work is resumed, the previously compacted mixture shall be cut back to produce a slightly beveled edge for the full thickness of the course.

A temporary wedge of HMA constructed on a 20H:1V shall be constructed where a transverse joint as a result of paving or planing is open to traffic. The HMA in the temporary wedge shall be separated from the permanent HMA by strips of heavy wrapping paper or other methods approved by the Engineer. The wrapping paper shall be removed and the joint trimmed to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

The material that is cut away shall be wasted and new mix shall be laid against the cut. Rollers or tamping irons shall be used to seal the joint.

B. LONGITUDINAL JOINTS

The longitudinal joint in any one course shall be offset from the course immediately below by not more than 6 inches nor less than 2 inches. All longitudinal joints constructed in the wearing course shall be located at a lane line or an edge line of the Traveled Way. A notched wedge joint shall be constructed along all longitudinal joints in the wearing surface of new HMA unless otherwise approved by the Engineer. The notched wedge joint shall have a vertical edge of not less than the maximum aggregate size or more than 1/2 of the compacted lift thickness and then taper down

on a slope not steeper than 4H:1V. The sloped portion of the HMA notched wedge joint shall be uniformly compacted.

3.5 QUALITY CONTROL

A. HMA MIXTURE ACCEPTANCE

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Engineer. Sampling and testing of HMA mix accepted by commercial evaluation will be at the option of the Engineer.

The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the approval of the Engineer and may be made in accordance with this section.

1. HMA Tolerances and Adjustments

See Section 2.2 for Job Mix Formula Tolerances.

- a. Job Mix Formula Adjustments – An adjustment to the aggregate gradation or asphalt binder content of the JMF requires approval of the Engineer. Adjustments to the JMF will only be considered if the change produces material of equal or better quality and may require the development of a new mix design if the adjustment exceeds the amounts listed below.
 - i. Aggregates – 2 percent for the aggregate passing the 1-1/2", 1", 3/4", 1/2", 3/8", and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. The adjusted JMF shall be within the range of the control points in Standard Specifications Section 9-03.8(6).
 - ii. Asphalt Binder Content – The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content shall be 0.3 percent.

2. Mixture Acceptance – Commercial Evaluation

If sampled and tested, HMA mix produced under Commercial Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the commercial tolerance limits in the Job Mix Formula shown in Section 2.2, the lot may be subject to rejection. When less than three sublots exist, backup samples of the existing sublots or samples from the street shall be tested to provide a minimum of three sets of results for evaluation.

B. HMA COMPACTION ACCEPTANCE

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train or by testing of roadway cores. Compaction of the HMA mixture to a minimum of 92 percent of the reference maximum density is required for acceptance.

1. HMA Compaction – General Compaction Requirements

Compaction shall take place when the mixture is in the proper condition so that no undue displacement, cracking, or shoving occurs. Areas inaccessible to large compaction equipment shall be compacted by other mechanical means. Any HMA that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt, or is in any way defective, shall be removed and replaced with new hot mix that shall be immediately compacted to conform to the surrounding area.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option, provided the specified densities are attained. Unless the Engineer has approved otherwise, rollers shall only be operated in the static mode when the internal temperature of the mix is less than 175 degrees F. Regardless of mix temperature, a roller shall not be operated in a mode that results in checking or cracking of the mat. Rollers shall only be operated in static mode on bridge decks.

2. HMA Commercial Evaluation Compaction

The location of the HMA compaction tests will be randomly selected by the Engineer.

Tests for the determination of the pavement density will be taken by the Contractor, in accordance with the required procedures for measurement by a nuclear density gauge or roadway cores, after completion of the finish rolling.

HMA mixture accepted by commercial evaluation shall be compacted on the basis of a test point evaluation of the compaction train. The Contractor shall provide the RICE density test results for the HMA mixture, identifying the reference maximum density of the mix, prior to the first day of paving. The test point evaluation shall be performed by the Contractor, in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain a minimum of 92 percent of the reference maximum density, shall be used on all subsequent paving.

If the Contracting Agency uses a nuclear density gauge to determine density the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the mix is placed and prior to opening to traffic.

Alternatively, the HMA mixture accepted by commercial evaluation may be evaluated by testing of roadway cores taken after completion of the finish rolling, resulting in a minimum of 92 percent of the reference maximum density. Roadway cores for density shall be obtained by the Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches minimum, unless otherwise approved by the Engineer. Roadway cores will be tested by the Contractor in accordance with WSDOT FOP for AASHTO T 166. Core locations shall be outside of wheel paths and as determined by the Engineer

If the Contract includes the Bid item "Roadway Core" the cores shall be obtained by the Contractor in the presence of the Engineer on the same day the mix is placed and at locations designated by the Engineer.

C. REJECT WORK

1. Reject Work General

Work that is defective or does not conform to Contract requirements shall be rejected. The Contractor may propose, in writing, alternatives to removal and replacement of rejected

material. Acceptability of such alternative proposals will be determined at the sole discretion of the Engineer.

2. Rejection by Contractor

The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material. Any such new material will be sampled, tested, and evaluated for acceptance.

3. Rejection Without Testing (Mixture or Compaction)

The Engineer may, without sampling, reject any batch, load, or section of Roadway that appears defective. Material rejected before placement shall not be incorporated into the pavement. Any rejected section of Roadway shall be removed.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests that the rejected material be tested.

Commercial Evaluation: If the Contractor elects to have the rejected material tested, a minimum of three representative samples shall be obtained and tested by the Contractor. Acceptance of rejected material will be based on conformance with the commercial evaluation tolerances in Section 2.2. If one or more of the mixture components are out of tolerance then, no payment will be made for the rejected material; in addition, the cost of sampling and testing shall be borne by the Contractor. If the material is rejected before placement and all of the mixture components are within the commercial evaluation tolerances, then compensation for the rejected material will be at the unit Contract price, with an addition of 25 percent of the unit Contract price added for the cost of testing, removal and disposal.

3.6 SAWCUTTING

Where shown on the Plans or where directed in the field by the Contracting Agency, the Contractor shall make a neat vertical sawcut at the boundaries of the area to be removed. Care shall be taken during sawcutting so as to prevent damage to the existing HMA or cement concrete pavement, to remain in place. Any pavement or cement concrete surface that is damaged by the Contractor outside the area scheduled for removal due to the Contractor's operations or negligence shall be repaired or replaced to the Contracting Agency's satisfaction by the Contractor at no additional cost to the Contracting Agency.

All cuts shall be continuous, full depth, and shall be made with saws specifically equipped for this purpose. No skip cutting, wheel cutting or jack hammering will be allowed unless specifically approved otherwise in writing by the Contracting Agency. However, even if preapproved as a method of cutting, no payment will be made for this type of work, and it shall be considered incidental and included in the various unit contract and lump sum prices listed in the Proposal.

The location of all pavement cuts shall be preapproved by the Contracting Agency in the field before cutting commences.

All water and slurry material resulting from sawcutting operations shall not be allowed to enter the storm drainage or sanitary sewer system and shall be removed from the site and disposed of in accordance with the Washington State Department of Ecology regulations.

All existing pavement edges shall be saw cut back to sound material, in uniform lines immediately prior to paving operations. Any edges broken between the time of cutting and placement of new paving shall be recut to the satisfaction of the Contracting Agency at no additional cost to the Contracting Agency. All excess excavated materials shall be hauled to waste.

3.7 HMA TRENCH PATCH

This work shall consist of the preparation, placing and compaction of HMA above trench sections, in accordance with the details included on the plans and the requirements outlined herein. The work shall be in conformance with Section 3.3 herein unless specifically directed otherwise by the Contracting Agency.

The Contractor shall restore all paved surfaces excavated or disturbed to a condition acceptable to the Contracting Agency or the municipality having control of the road. The trench section shall be patched as indicated on the plans and in accordance with the following steps:

- A. Crushed rock/ATB/temporary HMA shall be installed to the top of the existing pavement. Crushed rock shall be installed in the trench section on a daily basis as required to maintain the existing pavement surface elevation. For areas that will be open to traffic, the Contractor shall inspect the condition of the temporary trench patch daily and maintain as directed by the Contracting Agency. Use of steel sheets to provide temporary trench protection for traffic is subject to Contracting Agency approval.
- B. Crushed rock/ATB/temporary HMA shall be removed to the depth of existing pavement or to the depth of the pavement section specified on the plans, whichever is thicker. The trench shall be paved to match the

existing pavement surface. HMA trench patching shall be constructed by the Friday following pipe installation. All trench areas shall be patched and cleaned by close of work that day.

Before any HMA material is placed, all pavement cuts shall be trued so that marginal lines of the patch will form a rectangle with straight edges and vertical faces a minimum of 1 foot back from the maximum trench width.

The HMA shall be placed per subsection 3.3G., Spreading and Finishing. The HMA trench patch thickness shall match existing pavement thickness or the minimum pavement repair section indicated on the plans whichever is thicker.

Seal all joints per Section 3.5, HMA Joints.

3.8 PAVEMENT MARKINGS

In those areas where the proposed work causes existing pavement with striping and/or pavement markings to be removed, the Contractor shall not only replace the pavement, as noted herein, and as shown on the Plans, but shall also remark and restripe the new pavement so as to restore the new pavement to its former condition.

Pavement markings shall conform to Standard Specification Section 8-22.2 and 8-22.3, and the latest edition and amendments thereto of the Manual on Uniform Traffic Control Devices (MUTCD) as adopted by the State of Washington, and shall be constructed as shown in the Plans except as modified herein.

Raised pavement markers shall conform to Standard Specifications Section 8-09.2 and 8-09.3.

3.9 ADJUSTING STRUCTURES TO GRADE

All utility castings and monuments within the existing and/or new pavement area shall be referenced by the Contractor prior to any pavement removal or planing. The Contractor shall keep a record of such references and submit a copy to the Contracting Agency.

Existing structures and new structures shall be adjusted to the finished grade as shown on the Plans and as further specified herein. Existing boxes, rings, grates, covers, and lids shall be reset in a careful and workmanlike manner to conform to the required grades.

The new and existing utility castings and monuments shall be adjusted to grade in the following manner:

As soon as the street has been paved past each structure or casting, the HMA mat shall be scored around the location of the structure or casting. After rolling has been completed and the mat has cooled, it shall be cut along the scored lines. The structure or casting shall then be raised to finished pavement grade and the annular spaces filled as indicated on the Plans. The Contractor shall install the pavement to give a smooth finished appearance. All covers, lids, frames, and grates shall be thoroughly cleaned.

After pavement is in place, all new pavement joints shall be sealed with a 6-inch-wide strip of hot asphalt sealer. A sand blanket shall be applied to the surface of the hot asphalt sealer immediately after the placement of the sealer to help alleviate the tracking of the asphalt. The sealer shall meet the requirements of the Standard Specifications Section 9-04.2(1).

***** END OF SECTION *****

DIVISION 3

CONCRETE

SECTION 03200

CONCRETE REINFORCEMENT

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes reinforcement and associated items for all concrete, including, but not necessarily limited to: reinforcing steel bars, wire fabric, and accessories for cast-in-place concrete.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals
01400	Quality Control
03300	Cast-In-Place Concrete

1.3 REFERENCES

This Section references the latest revisions of the following documents:

<u>Reference</u>	<u>Title</u>
ACI 301	Structural Concrete for Buildings
ACI 318	Building Code Requirements for Structural Concrete
ACI SP-66	American Concrete Institute - Detailing Manual
ANSI/ASTM A82	Cold Drawn Steel Wire for Concrete Reinforcement
ANSI/ASTM A185	Welded Steel Wire Fabric for Concrete Reinforcement
ANSI/AWS D1.4	Structural Welding Code for Reinforcing Steel
ASTM A615	Deformed and Plain Billet Steel Bars for Concrete Reinforcement

1.4 SUBMITTALS

Submit in accordance with provisions of Section 01300.

A. SHOP DRAWINGS

Indicate bar sizes, spacings, locations, and quantities of reinforcing steel and welded wire fabric, bending and cutting schedules, and supporting and spacing devices.

B. MANUFACTURER’S CERTIFICATE

Certify that reinforcing bar and welded wire fabric meet or exceed specified requirements.

Submit certified copies of mill test reports of reinforcement materials analysis.

1.5 QUALITY ASSURANCE

Perform Work in accordance with ACI 301.

1.6 COORDINATION

Coordinate with placement of formwork, formed openings, and other Work.

PART 2 PRODUCTS

2.1 REINFORCEMENT

A. REINFORCING STEEL

ASTM A615, deformed bars: Grade 40 for #3 bars and smaller, Grade 60 for #4 bars and larger, unless noted otherwise on the Plans.

B. WELDED STEEL WIRE FABRIC

ASTM A185 Plain Type; in flat sheets; plain.

2.2 ACCESSORY MATERIALS

A. TIE WIRE

Minimum 16-gauge annealed type.

B. CHAIRS, BOLSTERS, BAR SUPPORTS, SPACERS

Sized and shaped for strength and support of reinforcement during concrete placement conditions including load-bearing pad on bottom where required to prevent vapor barrier puncture.

C. ADHESIVE ANCHORS

Injection adhesive system shall consist of a dual-cylinder adhesive refill pack, a mixing nozzle, and dispenser. The adhesive shall be formulated to include resin and hardeners.

1. Subject to compliance with the requirements, products which may be incorporated in the work include, but are not limited to, the following:
 - a. HIT RE 500 Injection Adhesive Anchor, Hilti, Inc.
 - b. SET-3G, Simpson Strong Tie, Inc.
 - c. Ultrabond HS-1CC, Adhesives Technology Corp.

2.3 FABRICATION

Fabricate concrete reinforcing in accordance with ACI SP-66. Obtain written approval from the Engineer prior to welding reinforcing steel. Weld reinforcement in accordance with ANSI/AWS D1.4.

PART 3 EXECUTION

3.1 PLACEMENT

Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars" for details and methods of reinforcement placement and supports, and as herein specified. Avoiding cutting or puncturing vapor barrier during reinforcement placement and concreting operations.

Clean reinforcement of loose rust and mill scale, earth, ice, and other materials that reduce or destroy bond with concrete. Accurately position, support, and secure reinforcement against displacement by formwork, construction, or concrete placement operations. Locate and support reinforcing by metal/plastic chairs, runners, bolsters, spacers, and hangers, as required.

Install reinforcing bars with clearance indicated on the Plans. Provide laps as shown and stagger locations to minimize the concentration of multiple reinforcing at joints. Bar lap splicing shall have full contact. Where full contact cannot be achieved, the maximum space between the spliced bars shall not exceed 2 inches. Unless noted otherwise on the Plans, provide two #5 minimum trim bars around all openings and penetrations. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations.

Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces. Install welded wire fabric in lengths as long as practicable. Lap adjoining pieces at least one full mesh and lace splices with tie wire. Offset end laps in adjacent widths to prevent continuous laps in either direction.

***** END OF SECTION *****

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes schedules, notes, and details for the construction of cast-in-place concrete structures, landings, equipment piers, housekeeping pads and slabs on grade.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals
01400	Quality Control
03200	Concrete Reinforcement

1.3 REFERENCES

This Section references the latest revisions of the following documents:

<u>Reference</u>	<u>Title</u>
ACI 117	Specifications for Tolerances for Concrete Construction and Materials and Commentary
ACI 212.3	Chemical Admixtures for Concrete
ACI 301	Specifications for Structural Concrete
ACI 304	Guide for Measuring, Mixing, Transporting, and Placing Concrete
ACI 305	Hot Weather Concreting
ACI 306	Cold Weather Concreting
ACI 309	Guide for Consolidation of Concrete
ACI 318	Building Code Requirements for Structural Concrete and Commentary
ACI 350	Code Requirements for Environmental Engineering Concrete Structures and Commentary
ACI 347	Guide to Formwork for Concrete
ACI 350.1	Tightness Testing of Reinforced Engineering Concrete Structures and Commentary
ASTM C31	Making and Curing Concrete Test Specimens in the Field
ASTM C33	Concrete Aggregates
ASTM C39	Compressive Strength of Cylindrical Concrete Specimens

ASTM C42	Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
ASTM C94	Ready-Mixed Concrete
ASTM C131	Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C143	Slump of Hydraulic Cement Concrete
ASTM C150	Portland Cement
ASTM C172	Sampling Freshly Mixed Concrete
ASTM C173	Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C231	Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Air-Entraining Admixtures for Concrete
ASTM C309	Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C494	Chemical Admixtures for Concrete
ASTM C535	Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C618	Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete
ASTM C881	Epoxy-Resin-Base Bonding Systems for Concrete

1.4 SUBMITTALS

Submittals shall be in accordance with Section 01300.

A. GENERAL

The submittal for each included concrete mix shall include, as a complete package, the following as defined below:

1. Concrete Mix Design
2. Certified Test Results
3. Sieve Analysis
4. Product Data

An incomplete concrete mix submittal package may render a rejection of the mix or could delay the review process.

B. CONCRETE MIX DESIGN

Submit mix design for the proposed mix to be used on the Project, indicating components, and proportions by weight, including any admixtures. Mix design shall state chloride content. Mix designs to be provided are:

1. Unspecified Concrete
2. Cement Grout

C. CERTIFIED TEST RESULTS

Submit laboratory test results indicating compressive strength of concrete in compliance with requirements specified herein and in accordance with ACI 301.

D. SIEVE ANALYSIS

Submit sieve analysis for proposed coarse and fine aggregates indicating components, source, gradation, and WSDOT aggregate source approval report, including WSDOT Aggregate Source ID.

E. PRODUCT DATA

Provide product data on all proposed admixtures, accessories, and embedded items to be used on the Project, including, but not limited to:

1. Cement; source and type
2. Air Entraining Agent
3. Water Reducing Admixtures
4. Pozzolans
5. Bonding Agents
6. Curing Compounds/Floor Hardeners
7. Non-Shrink Grout; Non-metallic and Metallic
8. Plastic Joint Formers

For admixtures other than those proposed for air entrainment, submit a letter from the manufacturer describing the benefits of its use for the project and effect of its use on the properties of the concrete. Product data shall expressly state admixtures are chloride free, or the manufacturer shall submit a letter certification stating the same.

F. MATERIAL DELIVERY TICKETS

Provide copies of all concrete and grout material delivery tickets for the Project to the Engineer.

1.5 QUALITY ASSURANCE

Perform work in accordance with ACI 301. Acquire cement and aggregates from same source for all work performed on the Project. Conform to ACI 305 when concreting during hot weather. Conform to ACI 306 when concreting during cold weather. Provide or coordinate field and laboratory testing as described later in this Section and under provisions of Section 01400.

1.6 COORDINATION

Coordinate the placement of embedded items with erection of concrete formwork and placement of form accessories.

PART 2 PRODUCTS

2.1 FORM MATERIALS

A. FORMS FOR EXPOSED FINISH CONCRETE

Plywood, metal, metal-framed plywood faced, or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces. Furnish in largest practicable sizes to minimize number of joints and to conform to joint system shown on the Plans.

B. FORMS FOR UNEXPOSED FINISH CONCRETE

Plywood, lumber, metal, or other acceptable material. Provide lumber dressed on at least two edges and one side for tight fit.

C. **FORM COATINGS**

Provide commercial formulation form-coating compounds that will not bond with, stain, or adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.

D. **FORM TIES**

Factory-fabricated, adjustable-length, removable or snapoff metal form ties, designed to prevent form deflection and to prevent spalling of concrete upon removal. Provide units, which will leave no metal closer than 1-1/2 inches to surface. Unless noted otherwise on Plans, provide ties with plastic cone devices which, when removed, will leave holes not larger than 1-inch diameter in concrete surface.

2.2 CONCRETE MATERIALS

A. **CEMENT**

ASTM C150, Type II – Moderate or Type I - II. Use one brand of cement throughout the project, unless otherwise approved by the Engineer. Provide low alkali cement where Alkali-Silica Reaction (ASR) mitigation measures are required by WSDOT Aggregate Source Approval.

B. **FINE AND COARSE AGGREGATES**

Comply with ASTM C33. Provide aggregates from a single source. Coarse aggregate shall be size designation 67 (Nominal size 3/4-inch to No. 4 sieve) for all concrete. Aggregates shall show a loss of weight not exceeding 35 percent after 500 revolutions in a Los Angeles wear machine, when tested in accordance with ASTM C131 or ASTM C535. Aggregates shall be from a WSDOT approved source.

C. **WATER**

Clean, potable, and not detrimental to concrete, in compliance with ASTM C94.

2.3 ADMIXTURES

Except for air entrainment, use of all other admixtures used shall be subject to approval of the Engineer and at no additional cost to the Owner. Only admixtures expressly stated by the manufacturer as being chloride-free shall be used. Subject to compliance with requirements, products, which may be incorporated into the work include, but are not limited to, the following:

A. AIR ENTRAINMENT

ASTM C260 certified by manufacturer to be compatible with other proposed admixtures.

Master Builders MB AE 90 or MICRO-AIR
Sika AER
W.R. Grace Daravair or Darex Series

B. WATER REDUCING ADMIXTURE

ASTM C494 Type A.

Master Builders PolyHeed
Sika Plastocrete 161
W.R. Grace WRDA Series

C. ACCELERATING ADMIXTURE

ASTM C494 Type C.

Master Builders Pozzoloth NC534
Sika Plastocrete 161 FL
W.R. Grace Polarset or DCI

D. WATER REDUCING, RETARDING ADMIXTURE

ASTM C494, Type D.

Master Builders Pozzoloth 100XR
Sika Plastiment
W.R. Grace Daratard Series

E. WATER REDUCING, ACCELERATING ADMIXTURE

ASTM C494, Type E.

Euclid Chemical Co. Accelguard 80
Master Builders Pozzutec 20
W.R. Grace Daracel

F. HIGH RANGE WATER REDUCER (HRWR)

ASTM C494, Type F.

Master Builders Rheobuild 1000/3000 FC
Sika Sikament 10 ESL
W.R. Grace ADVA 100

G. HIGH RANGE WATER REDUCER AND RETARDER

ASTM C494, Type G.

Master Builders Pozzolith 440N
W.R. Grace Daracem-100

H. POZZOLAN

ASTM C618 - CLASS F, with a CaO maximum content of 10 percent.

2.4 ACCESSORIES

A. BONDING AGENT

ASTM C881, Type I and II, Grade 2, Class C, Epoxy Resin. Subject to Contract requirements, provide one of the following or equal:

Sika Armatec 110
Conspec SpecBond 100
W.R. Meadows Sealtight Rezi Weld 1000

B. CURING COMPOUND

ASTM C309, Type I, Class A and B. Subject to Contract requirements, provide one of the following or equal:

W.R. Meadows Sealtight 1100-Clear
Conspec RX cure
Chemrex, Inc. Masterkure
Burke Spartan-Cote WB

C. CHEMICAL FLOOR HARDENER

Apply per manufacturer's recommendations. Subject to contract requirements, provide the following or equal:

W.R. Meadows Liqui-Hard

D. GENERAL PURPOSE NON-SHRINK NON-METALLIC GROUT

Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2,400 psi (17 Mpa) in 48 hours and 7,000 psi (48 Mpa) in 28 days. Subject to Contract requirements, provide one of the following or equal:

Sika SikaGrout 212
Conspec 100 Non Metallic
Chemrex, Inc. Masterflow 928 Grout
W.R. Meadows Sealtight 588

E. PLASTIC JOINT FORMER

Provide and install, per manufacturer's recommendations, where shown on the Plans or at locations approved by the Engineer. Subject to compliance with requirements, manufacturers offering products, which may be incorporated in the work, include, but are not limited to, the following:

Greenstreak
Vinylex Corporation
W.R. Meadows

2.5 CONCRETE MIX

A. GENERAL

Prepare design mixes for each type and strength of concrete by either laboratory trial batch or field experience methods as specified in ACI 301. If trial batch method is used, use an independent testing facility acceptable to the Engineer for preparing and reporting proposed mix designs. The testing facility shall not be the same as that used for field quality control testing.

The maximum water soluble chloride ion content, expressed as a percent of the cement, contributed from all ingredients of the concrete mix, including water, aggregates, cementitious materials, and admixtures, shall not exceed 0.10 percent. Pozzolans may be counted as part of the total cementitious material in the concrete mix design. The cementitious material is the "minimum cement content" specified in the mix design for each type of concrete. When pozzolans are used as part of this "cement content," the minimum content shall be 15 percent by weight of the total cementitious materials (Portland cement and pozzolans) and not more than 20 percent.

Where ASR mitigation measures are required by WSDOT, provide a minimum of 15 percent pozzolan included in the cementitious material in the design mix.

B. MIX DESIGNS

Provide normal weight concrete with the following properties, unless noted otherwise on the Plans.

1. Unspecified Concrete

Structural concrete of general use in structures, sidewalks, and where no specific class of concrete is designated.

Minimum compressive strength @ 28 days:	3,500 psi
Minimum cement content:	5.5 sacks per cubic yard
Maximum water cement ratio by weight:	0.45
Nominal coarse aggregate size:	3/4" to No. 4 (size designation 67)

2. Cement Grout

Material for filling guard posts, grouting of clarifier bottoms or for other uses as shown on the Plans. Cement grout shall be sand and cement only and shall not contain coarse aggregate.

Minimum compressive strength @ 28 days:	2,500 psi
Minimum cement content:	6.5 sacks per cubic yard
Maximum water cement ratio by weight:	0.54

C. ADMIXTURES

1. Air Entrainment

Use air-entraining admixture complying with ASTM C260 in all exterior exposed concrete. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement in accordance with ASTM C173 or C231 having total air content with a tolerance of plus or minus 1 percent within the following limits:

5.5 percent for 1.5 inch max. coarse aggregate size
6.0 percent for 1.0 inch max. coarse aggregate size
7.0 percent 0.50 inch or less max. coarse aggregate size

2. Other Admixtures

Use of all other admixtures shall be subject to the approval of the Engineer, and shall be in accordance with ACI 212.3 and Manufacturer's recommendations. Only admixtures stated by the manufacturer to be chloride free shall be used.

D. SLUMP LIMITS

Proportion and design mixes to result in concrete slump (1 inch $\pm$ of the maximum) at the point of placement in accordance with ASTM C143 as follows:

Ramps, slabs, and sloping surfaces: 3 inches.

Reinforced foundation systems: 3 inches.

Other concrete: 4 inches.

Concrete containing HRWR admixture (super-plasticizer): Not more than 8 inches after addition of HRWR to site-verified 2- to 3-inch slump concrete.

E. CONCRETE MIXING

Comply with requirements of ASTM C94, and as herein specified.

During hot weather, or under conditions contributing to rapid setting of concrete, a shorter mixing time than that specified in ASTM C94 may be required.

PART 3 EXECUTION

3.1 GENERAL

Coordinate the installation of joint materials and vapor barriers with placement of forms and reinforcing steel.

3.2 FORMS

Design, erect, support, brace, and maintain formwork to support vertical and lateral, static, and dynamic loads that might be applied until such loads can be supported by concrete structure. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation, and position. Maintain formwork construction tolerances complying with ACI 347.

Design formwork to be readily removable without impact, shock, or damage to cast-in-place concrete surfaces and adjacent materials.

Construct forms to sizes, shapes, lines, and dimensions shown, and to obtain accurate alignment, location, grades, level and plumb work in finished structures. Provide for openings, offsets, sinkages, keyways, recesses, moldings, rustications, reglets, chamfers, blocking, screeds, bulkheads, anchorages and inserts, and other features required in the work. Use selected materials to obtain required finishes. Solidly butt joints and provide back up at all joints to prevent leakage of cement paste.

Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast-in-place concrete surfaces. Provide top forms for inclined surfaces where slope is too steep to place concrete with bottom forms only. Provide Kerf wood inserts for forming keyways, reglets, recesses, and the like, to prevent swelling and for easy removal.

Provide temporary openings where interior area of formwork is inaccessible for cleanout, for inspection before concrete placement, and for placement of concrete. Securely brace temporary openings and set tightly to forms to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

Chamfer all exposed corners and edges and other areas shown on the Plans, using wood, metal, PVC, or rubber chamfer strips fabricated to produce uniform smooth lines and tight edge joints.

Provisions for Other Trades: Provide openings in concrete formwork to accommodate work of other trades. Determine size and location of openings, recesses, and chases from trades providing such items. Accurately place and securely support items built into forms.

3.3 JOINTS

A. CONSTRUCTION JOINTS

Locate and install construction joints where indicated, or locate so as not to impair strength and appearance of the structure, as acceptable to the Engineer. Place construction joints perpendicular to main reinforcement. Continue reinforcement across construction joints, except as otherwise shown on the Plans.

B. ISOLATION JOINTS IN SLABS-ON-GRADE

Unless otherwise noted, construct isolation joints in slabs-on-grade at points of contact between slabs-on-grade and vertical surfaces, such as column pedestals, foundation walls, grade beams, and elsewhere as shown on the Plans.

Joint filler and sealant materials are specified in Division 7.

C. SLAB (CONTROL) JOINTS

Construct joints in slabs-on-grade as shown on the Plans. Use saw cuts 1/8 of an inch wide x 1/4 of the slab depth or inserts 1/4-inch wide x 1/4 of the slab depth.

D. PREMOLDED (CONTROL) JOINTS

Insert premolded plastic, hardboard or fiberboard strip into fresh concrete until top surface of strip is flush with slab surface. Tool slab edges round on each side of insert. After concrete has cured, remove inserts and clean groove of loose debris.

E. EDGE FORMS AND SCREED STRIPS FOR SLABS

Set edge forms or bulkheads and intermediate screed strips for slabs to obtain required elevations and contours in finished slab surface. Provide and secure units sufficiently to support types of screed strips by use of strike-off templates or accepted compacting type screeds.

3.4 INSTALLATION OF EMBEDDED ITEMS:

A. GENERAL

Set and build into work anchorage devices and other embedded items required for other work that is attached to, or supported by, cast-in-place concrete. Use installation drawings, diagrams, instructions, and directions provided by suppliers of items to be embedded.

B. CLEANING AND TIGHTENING

Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, or other debris just before concrete is placed. Retighten forms and bracing after concrete placement as required to eliminate mortar leaks and maintain proper alignment.

C. REGLETS

Install reglets to receive top edge of foundation sheet waterproofing, and to receive thru-wall flashing as shown at lintels, relieving angles, and other conditions.

3.5 PLACING REINFORCEMENT

See Section 03200.

3.6 PREPARATION OF FORM SURFACES

Clean reused forms of concrete matrix residue, repair and patch as required to return forms to acceptable surface condition. Coat contact surfaces of forms with a form-coating compound before reinforcement is placed.

Thin form coating compounds only with thinning agent of type, amount, and under conditions of form-coating compound manufacturer's directions. Do not allow excess form-coating material to accumulate in forms or to come into contact with in-place concrete surfaces against which fresh concrete will be placed. Apply in compliance with manufacturer's instructions.

Coat steel forms with a non-staining, rust-preventative form oil or otherwise protect against rusting. Rust-stained steel formwork is not acceptable.

3.7 PREPARATION OF EXISTING CONCRETE SURFACES

The Contractor shall bush hammer all existing concrete surfaces that are to have new concrete cast against them. Apply epoxy bonding agent prior to placing concrete.

3.8 CONCRETE PLACEMENT

A. GENERAL

Comply with ACI 304 and as herein specified.

Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast-in. Notify other crafts to permit installation of their work; cooperate with other trades in setting such work. Apply temporary protective covering to lower 2 feet of finished walls adjacent to poured floor slabs and similar conditions, and guard against spattering during concrete placement.

B. PLACING CONCRETE IN FORMS

Deposit concrete in forms in horizontal layers not deeper than 24 inches and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.

Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI 309.

Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations not farther than visible effectiveness of machine. Place vibrators to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to set. At each insertion limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing segregation of mix.

C. PLACING CONCRETE SLABS

Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until the placing of a panel or section is completed. Consolidate concrete during placing operations so that concrete is thoroughly worked around reinforcement and other embedded items and into corners. Bring slab surfaces to correct level with straightedge and strikeoff. Use bull floats or darbies to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior to beginning finishing operations. Maintain reinforcing in proper position during concrete placement operations.

D. COLD WEATHER PLACING

Protect concrete work from physical damage or reduced strength, which could be caused by frost, freezing actions, or low temperatures, in compliance with ACI 306 and as herein specified.

When air temperature has fallen to or is expected to fall below 40 degrees F (4 degrees C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 degrees F (10 degrees C), and not more than 80 degrees F (27 degrees C) at point of placement.

Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials. Do not use calcium chloride, salt, and other materials containing antifreeze agents or chemical accelerators, unless otherwise accepted in mix designs.

E. **HOT WEATHER PLACING**

When hot weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI 305 and as herein specified.

Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 degrees F (32 degrees C). Mixing water may be chilled, or chopped ice may be used to control temperature provided water equivalent of ice is calculated to total amount of mixing water. Use of liquid nitrogen to cool concrete is at Contractor's option.

Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that steel temperature will not exceed the ambient air temperature immediately before embedment in concrete. Fog spray forms, reinforcing steel, and subgrade just before concrete is placed. Upon approval, water-reducing retarding admixture (Type D) may be used when required by high temperatures, low humidity, or other adverse placing conditions.

3.9 FINISH OF FORMED SURFACES

Provide smooth form finish for all formed concrete surfaces exposed-to-view including all surfaces exposed to water or wastewater, or that are to be covered with a coating material applied directly to the concrete, or a covering material applied directly to concrete, such as veneer plaster, painting, or other similar type of system.

Provide smooth form finish for surfaces to be waterproofed or dampproofed. Surfaces must comply with recommendations of the manufacturer of the product being utilized.

Provide rough form finish for formed concrete surfaces not exposed-to-view in the finished work or by other construction, unless otherwise indicated.

A. **SMOOTH FORM FINISH**

This is to be the as-cast concrete surface obtained utilizing selected form facing material, arranged orderly and symmetrically with a minimum of seams, and as specified herein.

Repair and patch tie holes and defective areas, with all fins or other projections completely removed and smoothed, by one of the following methods:

1. Provide smooth rubbed finish to concrete surfaces after form removal. Moisten concrete surfaces and rub with carborundum brick or other abrasive until a uniform color and texture is produced. Do not apply cement grout other than that created by the rubbing process.
2. Provide grout “sacked” cleaned finish. The sacking grout shall be one part Portland cement to 1-1/2 parts fine sand by volume, and mixed with water to consistency of thick paint. Proprietary additives such as epoxy bonding agents or adhesives may be used at Contractor’s option. Blend standard Portland cement and white Portland cement, amounts to be determined by trial patches, so that final color of dry grout matches adjacent surfaces. Thoroughly wet concrete surfaces and apply grout to coat surfaces and fill small holes. Remove excess grout by scraping and rubbing with clean burlap. Keep sacked surfaces damp by fog spray or other acceptable method so surfaces do not dry out.

B. ROUGH FORM FINISH

This is the concrete surface having texture imparted by form facing material used, with tie holes and defective areas repaired and patched and fins and other projections exceeding 1/8 of an inch in height rubbed down or chipped off. All “bug holes” exceeding 1/2 inch in diameter and exceeding 1/4-inch depth shall be repaired or filled in.

C. RELATED UNFORMED SURFACES

At tops of walls, horizontal offsets, and similar unformed surfaces occurring at adjacent formed surfaces, continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

D. TOLERANCES FOR FORMED SURFACES

1. Variations from the plumb:
 - a. In the lines and surfaces of columns, pier, walls and in arises In any 10 feet of length – 1/4 inch. Maximum for entire length – 1 inch

- | | | |
|----|--|---|
| b. | For exposed corner columns, control-joint grooves, and other conspicuous lines | In any 20 feet of length – 1/4 inch. Maximum for entire length – 1/2 inch |
|----|--|---|
2. Variations from level or from the grades indicated on the Plans:
- | | | |
|----|--|--|
| a. | In slab soffits, ceilings, beam soffits, and in arises, measured before removal of supporting shores | In any 10 feet of length – 1/4 inch. In any bay or opening, or in any 20 feet of length – 3/8 of an inch. Maximum for entire length – 3/4 inch |
| b. | In exposed lintels, sills, parapets, horizontal grooves, and other conspicuous lines | In any bay or opening, or in any 20 feet of length – 1/4 inch. Maximum for entire length – 1/2 inch |
3. Variations in the linear building lines from the established position in plan view
- In 20 feet of length – 1/2 inch. Maximum for entire length – 1 inch
4. Variations in distance between walls, columns and partitions
- In any 10 feet of distance – 1/4 inch. In any bay or opening – 1/2 inch. Maximum total variation – 1-inch.
5. Variations in the sizes and locations of sleeves, floor openings and wall openings
- Minus – 1/4 inch
Plus – 1/2 inch
6. Variations in cross-sectional dimensions of columns and beams and in the thickness of slabs and walls
- Minus – 1/4 inch
Plus – 1/2 inch

7. Variations in footings:

- | | | |
|----|--|---|
| a. | Variation from dimensions on Plans when formed or plus 3-inches when placed against unformed excavations | Minus – 1/2 inch
Plus – 2 inches |
| b. | Misplacement of eccentricity | 2 percent of the footing width in the direction of the misplacement, but not more than 2 inches |
| c. | Reduction in thickness of specified thickness | Minus – 5 percent |

8. Variations in steps:

- | | | |
|----|-----------------------|---|
| a. | In a flight of stairs | Riser – 1/8 of an inch
Tread – 1/4 inch |
| b. | In consecutive steps | Riser – 1/16 of an inch
Tread – 1/8 of an inch |

3.10 MONOLITHIC SLAB FINISHES:

A. SCRATCH FINISH

Apply scratch finish to monolithic slab surfaces that are to receive concrete floor topping, including grout finishes where indicated on plans, or mortar setting beds for tile, portland cement terrazzo, and other bonded applied cementitious finish flooring material, and as otherwise indicated. Slope surfaces uniformly to floor drains where required. After leveling, roughen surface before final set, with stiff brushes, brooms, or rakes.

B. FLOAT FINISH

Apply float finish to monolithic slab surfaces to receive trowel finish and other finishes as hereinafter specified, and slab surfaces which are to be covered with membrane or elastic waterproofing, membrane or elastic roofing, or sand-bed terrazzo, and as otherwise indicated.

After screeding, consolidating, and leveling concrete slabs, do not work surface until ready for floating. Begin floating when surface water has disappeared or when concrete has stiffened sufficiently to permit operation of power-driven floats, or by hand-floating if area is small or inaccessible to power units. Check and level surface plane. Cut down high spots and fill low spots. Uniformly slope surfaces to drains. Immediately after leveling, refloat surface to a uniform, smooth, granular texture.

C. TROWEL FINISH

Apply trowel finish to monolithic slab surfaces to be exposed-to-view, and slab surfaces to be covered with resilient flooring, carpet, ceramic or quarry tile, paint, or other thin film finish coating system. After floating, begin first trowel finish operation using a power-driven trowel. Begin final troweling when surface produces a ringing sound as trowel is moved over surface. Consolidate concrete surface by final hand-troweling operation, free of trowel marks and uniform in texture and appearance. Grind smooth surface defects that would telegraph up through applied floor covering system.

D. TROWEL AND FINE BROOM FINISH

Where ceramic or quarry tile is to be installed with thin-set mortar, apply trowel finish as specified, then immediately follow with slightly scarifying surface by fine brooming.

E. NON-SLIP BROOM FINISH

Apply non-slip broom finish to exterior concrete platforms, landings, steps, and ramps, sidewalks and elsewhere as indicated. Immediately after float finishing, slightly roughen concrete surface by brooming with fiber bristle broom perpendicular to main traffic route. Coordinate required final finish with Owner before application.

F. CHEMICAL-HARDENER FINISH

Apply chemical-hardener finish to interior exposed concrete floors and steps, unless noted otherwise. Apply liquid chemical-hardener after complete curing and drying of the concrete surface. Evenly apply each coat, and allow 24 hours for drying between coats. Apply proprietary chemical hardeners, in accordance with manufacturer's printed instructions. After final coat of chemical-hardener solution is applied and dried, remove surplus hardener by scrubbing and mopping with water.

G. TOLERANCES FOR MONOLITHIC SLAB FINISHES

The flatness of the concrete shall be carefully controlled and the tolerances shall be measured by the straight edge system as specified in paragraph 4.5.7 of ACI 117, using a 10-foot straight edge, within 72 hours after floor slab installation and before shores and/or forms are removed. The tolerances listed below shall be met at any and every location at which the straight edge can be placed.

Bullfloated	1/2 inch
Float Finish	3/16 inch
Trowel Finish	1/8 inch
Straightedges	5/16 inch

3.11 CONCRETE CURING AND PROTECTION

A. GENERAL

Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing. Weather permitting, keep concrete continuously wet for not less than 7 days. Begin final curing procedures immediately following initial curing and before concrete has dried out. Continue final curing for at least 7 days in accordance with ACI 301 curing methods. Avoid rapid drying of concrete at the end of final curing period.

B. CURING METHODS

Perform curing of concrete by use of curing and sealing compound, by moist curing, by moisture-retaining cover curing, or by combinations thereof, as herein specified.

Provide moisture curing by the following methods. Keep concrete surface continuously wet by covering with water, or provide continuous water-fog spray.

Covering concrete surface with absorptive cover, thoroughly saturating cover with water and keeping continuously thoroughly saturating cover with water and keeping continuously wet. Place absorptive cover to provide coverage of concrete surfaces and edges, with 4-inch lap over adjacent absorptive covers.

Provide moisture-cover curing as follows: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in wide as practicable width with sides and ends lapped at least 3 inches and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

Provide curing and sealing compound to exposed interior slabs and to exterior slabs, walls, sidewalks, and curbs, as follows:

Apply curing and sealing compound to concrete slabs and walls as soon as initial curing operations are complete or immediately after the forms have been stripped (within 2 hours). Apply uniformly in continuous operation by power-spray or roller in accordance with manufacturer's directions. Completely cover the concrete surfaces with curing and sealing compound. Recoat areas subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair any damage during curing period.

Do not use membrane curing compounds on surfaces which are to be covered with coating material applied directly to concrete, liquid floor hardener, waterproofing, dampproofing, membrane roofing, flooring (such as ceramic or quarry tile, glue-down carpet), painting, and other coatings and finish materials, unless otherwise acceptable to the Engineer.

C. CURING FORMED SURFACES

Cure formed concrete surfaces, including undersides of beams, supported slabs, and other similar surfaces by moist curing with forms in place for full curing period and until forms are removed. When forms are removed, continue curing by methods specified above, as applicable.

D. CURING UNFORMED SURFACES

Cure unformed surfaces, such as slabs, floor topping, and other flat surfaces by application of an appropriate curing method.

Final cure concrete surfaces to receive liquid floor hardener or finish flooring by use of moisture retaining cover.

3.12 REUSE OF FORMS

Clean and repair surfaces of forms to be reused in work. Split, frayed, delaminated, or otherwise damaged form facing material will not be acceptable for exposed surfaces. Provide new form facing material. Apply new form coating compound as specified for new formwork prior to reuse of forms.

When forms are extended for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, and tighten forms to close joints. Align and secure joint to avoid offsets. Do not use “patched” forms for exposed concrete surfaces, unless approved by the Engineer and acceptable to the Owner.

3.13 MISCELLANEOUS CONCRETE ITEMS

A. FILLING-IN

Fill-in holes and openings left in concrete structures for passage of work by other trades, unless otherwise shown or directed, after work of other trades is in place. Mix, place, and cure concrete as herein specified, to blend with in-place construction. Provide other miscellaneous concrete filling shown or required to complete work. Fill-in all form tie holes and other forming system holes with non-shrink grout.

B. CURBS

Provide monolithic finish to interior curbs by stripping forms while concrete is still green and steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

C. BASE PLATE, EQUIPMENT BASES AND FOUNDATIONS

Provide machine and equipment bases (housekeeping pad/pier) and foundations, as shown on the Plans. Set anchor bolts for machines and equipment with template at correct elevations, complying with certified diagrams or templates of manufacturers furnishing machines and equipment.

Provide 4-inch-high, square or rectangular concrete pad around all conduits and small diameter pipes that penetrate through floor slabs.

Provide leveling grout under base plates and equipment frames using non-metallic, non-shrink grout. Minimum thickness for leveling grout shall be 1/2 inches unless noted otherwise on the Plans or specified by equipment manufacturer.

3.14 CONCRETE SURFACE REPAIRS

A. PATCHING DEFECTIVE AREAS

Repair and patch defective areas immediately after removal of forms. Cut out honeycomb, rock pockets, voids or bugholes over 1/4 inch in any dimension, and holes left by tie rods and bolts, down to solid concrete but, in no case to a depth of less than 1 inch. Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen with water, and brush-coat the area to be patched with specified bonding agent. For water and wastewater containment structures, utilize an epoxy resin bonding agent. Place patching mortar after bonding compound has dried.

For exposed-to-view surfaces, blend white Portland cement and standard Portland cement so that, when dry, patching mortar will match surrounding color. Provide test areas at inconspicuous location to verify mixture and color match before proceeding with patching. Compact mortar in place and strike-off slightly higher than surrounding surface.

B. REPAIR OF FORMED SURFACES

Remove and replace concrete having defective surfaces if defects cannot be repaired to satisfaction of the Engineer. Surface defects, as such, include color and texture irregularities, cracks, spalls, air bubbles, bug holes, honeycomb, rock pockets; fins and other discolorations that cannot be removed by cleaning. Flush out form tie holes and form bolt holes, fill with non-shrink grout, or precast concrete cone plugs or rubber plugs secured in place with bonding agent or epoxy adhesive.

Repair concealed formed surfaces, where possible, that contain defects that affect the durability of concrete. All repairs shall be approved by the Engineer. If defects cannot be repaired, the Contractor shall remove and replace the concrete.

C. REPAIR OF UNFORMED SURFACES

Test unformed surfaces, such as monolithic slabs, for smoothness and verify surface plane to tolerances specified for each surface and finish. Correct low and high areas as herein specified. Test unformed surfaces sloped to drain for trueness of slope, in addition to smoothness using a template having required slope.

Repair finished unformed surfaces that contain defects, which affect durability of concrete. Surface defects, as such, include crazing, cracks in excess of 0.01 inches wide or which penetrate to reinforcement or completely through non-reinforced sections regardless of width, spalling, pop-outs, honeycomb, rock pockets, and other objectionable conditions.

Correct high areas in unformed surfaces by grinding, after concrete has cured at least 14 days. Correct low areas in unformed surfaces during or immediately after completion of surface finishing operations by cutting out low areas and replacing with fresh concrete. Finish repaired areas to blend into adjacent concrete. Proprietary patching compounds may be used when acceptable to the Engineer.

Repair defective areas, except random cracks and single holes not exceeding 1-inch diameter, by cutting out and replacing with fresh concrete. Remove defective areas to sound concrete with clean, square cuts and expose reinforcing steel with at least 3 inches of clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials to provide concrete of same type or class as original concrete. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.

Repair isolated random cracks and single holes not over 1 inch in diameter by dry-pack method. Groove top of cracks and cutout holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Mix dry-pack, consisting of one part Portland cement to 2-1/2 parts fine aggregate passing a No. 16 mesh sieve, using only enough water as required for handling and placing. Place dry pack after bonding agent has dried. Compact dry-pack mixture in place and finish to match adjacent concrete. Keep patched area continuously moist for not less than 72 hours.

Perform structural repairs with prior approval of the Engineer for method and procedure, using specified epoxy adhesive and mortar. Repair methods not specified above may be used, subject to approval of the Engineer. If acceptable repairs cannot be made, the Contractor shall remove and replace the concrete at no cost to the Owner.

3.15 QUALITY CONTROL TESTING DURING CONSTRUCTION

A. GENERAL

Sampling and testing for quality control during placement of concrete shall include the following:

1. Sampling Fresh Concrete

ASTM C172, except modified for slump to comply with ASTM C94.

2. Slump

ASTM C143: one test at point of discharge for each day's placement of each type of concrete; additional tests when concrete consistency seems to have changed.

3. Air Content

ASTM C173, volumetric method for lightweight or normal weight concrete; ASTM C231 pressure method for normal weight concrete; one for each day's placement of each type of air-entrained concrete.

4. Concrete Temperature

Test hourly when air temperature is 40 degrees F (4 degrees C) and below, and when 80 degrees F (27 degrees C) and above; and each time a set of compression test specimens is made.

5. Compressive Strength Tests

ASTM C39; one set for each day's placement exceeding 5 cubic yards plus additional sets for each 50 cubic yards over and above the first 25 cubic yards of each concrete class placed in any 1 day; one specimen tested at 7 days, two specimens tested at 28 days, and one specimen retained in reserve for later testing if required.

When total quantity of a given class of concrete is less than 50 cubic yards, Engineer may waive strength test if, in their judgment, adequate evidence of satisfactory strength is provided.

When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, evaluate current operations and provide corrective procedures for protecting and curing the in-place concrete. Strength level of concrete will be considered satisfactory if averages of sets of three consecutive strength test results equal or exceed specified compressive strength, and no individual strength test result falls below specified compressive strength by more than 500 psi.

Test results will be reported via email to Engineer and Contractor within 24 hours after testing. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials; compressive breaking strength and type of break for both 7-day tests and 28-day tests.

6. Nondestructive Testing

Impact hammer, sonoscope, or other nondestructive device may be permitted but shall not be used as the sole basis for acceptance or rejection of concrete.

7. Additional Tests

The testing service will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in a structure, as directed by the Owner. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42, or by other methods as directed. Contractor shall pay for cost of such tests when unacceptable concrete is verified.

***** END OF SECTION *****

DIVISION 5

METALS

SECTION 05120

STRUCTURAL STEEL

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes structural steel work as shown on the Plans, including schedules, notes, and details to show size and location of members, typical connections, and type of steel required.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals
03300	Cast-In-Place Concrete

1.3 REFERENCES

This Section references the latest revisions of the following documents:

<u>Reference</u>	<u>Title</u>
ASTM A36	Structural Steel
ASTM A53	Hot-Dipped, Zinc-coated Welded and Seamless Steel Pipe
ASTM A123	Zinc (Hot Dipped Galvanized) Coatings on Iron and Steel Products
ASTM A153	Zinc Coating (Hot Dip) on Iron and Steel Hardware
ASTM A276	Stainless Steel Bars and Shapes
ASTM A307	Carbon Steel Externally Threaded Standard Fasteners
ASTM A325	High Strength Bolts for Structural Steel Joints
ASTM A490	Quenched and Tempered Alloy Steel Bolts for Structural Steel Joints
ASTM A500	Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Round and Shapes
ASTM A501	Hot-Formed Welded and Seamless Carbon Steel Structural Tubing
ASTM A572	High-Strength Structural Steel
ASTM A992	High-Strength Structural Steel
AWS A2.4	Standard Welding Symbols
AWS D1.1	Structural Welding Code
AISC	Specification for Structural Steel Buildings
SSPC	Steel Structures Painting Council

1.4 SUBMITTALS

Submit under provisions of Section 01300.

A. SHOP DRAWINGS

Indicate profiles, sizes, spacing, locations, and complete details of structural members, to include openings, cuts, camber, fasteners, connections, and other pertinent data. Indicate welded connections with AWS A2.4 welding symbols. Indicate net weld lengths. Provide setting drawings, templates, and directions for installation of anchor bolts and other anchorages to be installed as work of other sections.

B. MANUFACTURER'S MILL CERTIFICATE

Submit under provisions of Section 01300 certifying that products meet or exceed specified requirements.

C. MILL TEST REPORTS

Submit under provisions of Section 01300 Manufacturer's Certificates, indicating structural strength, destructive and non-destructive test analysis.

D. WELDERS' CERTIFICATES

Submit under provisions of Section 01300 Manufacturer's Certificates, certifying welders employed on the Work, verifying AWS qualifications within the previous 12 months.

1.5 QUALITY ASSURANCE

Codes and Standards: Comply with the provisions of the following, except otherwise indicated:

<u>Standard</u>	<u>Title</u>
AISC	"Code of Standard Practice for Steel Buildings and Bridges"
AISC	"Specifications for Structural Steel Buildings," including "Commentary" and Supplements thereto as issued
AISC	"Specifications for Structural Joints using ASTM A325 or A490 Bolts" approved by the Research Council on Riveted and Bolted Structural Joints of the Engineering Foundation.

American Welding Society (AWS) D1.1 “Structural Welding Code – Steel”

ASTM A6 “General Requirements for Delivery of Rolled Steel Plates, Shapes, Sheet Piling and Bars for Structural Use”

1.6 DELIVERY, STORAGE, AND HANDLING

Deliver material to site at such intervals to ensure uninterrupted progress of work.

Deliver anchor bolts and anchorage devices that are to be embedded in cast-in-place concrete or masonry in ample time as to not delay work.

Store materials to permit easy access for inspection and identification. Keep steel members off ground, using pallets, platforms, or other supports. Protect steel members and packaged materials from erosion and deterioration.

Do not store materials on structure in a manner that might cause distortion or damage to members or supporting structures. Repair or replace damaged materials or structures as directed.

PART 2 PRODUCTS

2.1 MATERIALS

A. STRUCTURAL STEEL SHAPES

ASTM A992, High-Strength Structural Steel.

B. STRUCTURAL STEEL PLATES AND BARS

ASTM A36, unless noted otherwise.

C. STRUCTURAL TUBING

Cold-Formed: ASTM A500, Grade B, Fy=46KSI
Hot-Formed: ASTM A501, Fy=36KSI

D. STEEL PIPE

ASTM A53, Type E or S Grade B.

E. HEADED STUD-TYPE CONNECTORS

ASTM A108, Grade 1015, forged steel, uncoated.

F. HIGH-STRENGTH THREADED FASTENERS

Heavy hexagon structural bolts, as follows:

Quenched and tempered medium carbon steel bolts, nuts and washers complying with ASTM A325.

Quenched and tempered alloy steel bolts, nuts and washers complying with ASTM A490 where indicated.

Heavy hexagon nuts complying with ASTM A563.

Hardened washers complying with ASTM F436.

Provide and install bolts with load indicator devices (load indicator washers or snap-off heads).

G. ANCHOR BOLTS AND THREADED RODS

ASTM F1554, Grade 36, unless noted otherwise. Heavy hexagon nuts complying with ASTM A563 and hardened washers complying with ASTM F436.

ASTM A193 Grade B8, where stainless steel is noted in the plans. Heavy hexagon nuts complying with ASTM A194 Grade 8 and type 304 stainless steel washers.

H. UNFINISHED THREADED FASTENERS

ASTM A307, Grade A, regular low-carbon steel bolts and nuts. Provide hexagonal heads and nuts for all connections.

I. ADHESIVE ANCHORS

1. Injection adhesive system shall consist of a dual-cylinder adhesive refill pack, a mixing nozzle, and dispenser. The adhesive shall be formulated to include resin and hardeners.

Subject to compliance with the requirements products, which may be incorporated in the work include, but are not limited to, the following:

HIT RE 500 V3 Injection Adhesive Anchor, Hilti, Inc.
SET-3G, Simpson Strong Tie, Inc.
Ultrabond HS-1CC, Adhesives Technology Corp.

J. WELDING MATERIALS

AWS A5.1 or A5.5, E70XX; AWS A5.17, E70S-X; AWS A5.20, E70XT-X. Comply with AWS code.

K. GROUTING MATERIALS

Shall comply with Section 03300 "Cast-in-Place Concrete."

L. STRUCTURAL STEEL PRIMER PAINT

Epoxy Primer per Section 09900, SSPC SP-10.

2.2 FABRICATION

A. SHOP FABRICATION AND ASSEMBLY

Fabricate and assemble structural assemblies in shop to greatest extent possible. Fabricate items of structural steel in accordance with AISC Specifications and as indicated on final shop drawings. Provide camber in structural members where indicated.

Properly mark and match-mark materials for field assembly. Fabricate for delivery sequence, which will expedite erection and minimize field handling of materials.

Where finishing is required, complete assembly, including welding of units, before start of finishing operations. Provide finish surfaces of members exposed in final structure free of markings, burrs, and other defects.

B. CONNECTIONS

Weld or bolt shop connections, as indicated on the Plans or as specified.

Bolt field connections, except where welded connections or other connections are indicated.

Provide high-strength threaded fasteners for all bolted connections, except where unfinished bolts are indicated.

C. HIGH-STRENGTH BOLTED CONSTRUCTION

Install high-strength threaded fasteners in accordance with AISC “Specifications for Structural Joints using ASTM A325 or A490 Bolts.”

D. WELDED CONSTRUCTION

Comply with AWS Code for procedures, appearance and quality of welds, and methods used in correcting welding work. Assemble and weld built-up sections where indicated by methods which will produce true alignment of axes without warp.

E. SHEAR CONNECTORS

Prepare steel surfaces as recommended by manufacturer of shear connectors. Shop weld shear connectors, spaced as shown, to beams and girders in composite construction. Use automatic end welding of headed stud shear connectors in accordance with manufacturer’s printed instructions.

2.3 SHOP PAINTING

A. GENERAL

Shop paint structural steel, except those members or portions of members to be embedded in concrete or mortar. Paint embedded steel that is partially exposed, or the exposed portions and initial two inches of embedded areas only. Do not paint surfaces that are to be welded or are high-strength bolted with friction-type connections. Apply two coats of paint complying with Section 09900 to surfaces that are inaccessible after assembly or erection.

B. SURFACE PREPARATION

After inspection and before shipping, clean steelwork to be painted. Remove loose rust, loose mill scale, and spatter, slag or flux deposits. Clean steel in accordance with Steel Structures Painting Council (SSPC) as follows: SP-10 “Near-White Blast Cleaning.”

C. PAINTING

Immediately after surface preparation, apply structural steel primer paint in accordance with Section 09900 and manufacturer's instructions and at a rate to provide dry film thickness of not less than 1.5 mils DFT. Use painting methods, which result in full coverage of joints, corners, edges and exposed surfaces.

2.4 SOURCE QUALITY CONTROL AND TESTS

Testing and analysis of components will be performed under provisions of Section 01400.

PART 3 EXECUTION

3.1 ERECTION

A. GENERAL

Provide temporary shoring and bracing members with connections of sufficient strength to bear imposed loads. Remove temporary members and connections when permanent members are in place and final connections are made. Provide temporary guy lines to achieve proper alignment of structures as erection proceeds.

B. SETTING BASES AND BEARING PLATES

Clean concrete and masonry bearing surfaces of bond-reducing materials and roughen to improve bond to surfaces. Clean bottom surface of base and bearing plates.

Set loose and attached base plates and bearing plates for structural members on wedges or other adjusting devices.

Tighten anchor bolts after supported members have been positioned and plumbed. Do not remove wedges or shims, but if protruding, cut off flush with edge of base or bearing plate prior to packing with grout.

Pack non-shrink grout solidly between bearing surfaces and bases or plates to ensure that no voids remain. Finish exposed surfaces, protect installed materials, and allow to cure. For proprietary grout materials, comply with manufacturer's instructions.

C. FIELD ASSEMBLY

Set structural frames accurately to lines and elevations indicated. Align and adjust various members forming part of complete frame or structure before permanently fastening. Clean bearing surfaces and other surfaces that will be in permanent contact before assembly. Perform necessary adjustments to compensate for discrepancies in elevations and alignment. Level and plumb individual members of structure within specified AISC tolerances.

Splice members only where indicated and accepted on shop drawings.

D. ERECTION BOLTS

On exposed welded construction, remove erection bolts, fill holes with plug welds, and grind smooth at exposed surfaces.

Comply with AISC Specification for bearing, adequacy of temporary connections, alignment, and removal of paint on surfaces adjacent to field welds.

Do not enlarge unfair holes in members by burning or by use of drift pins, except in secondary bracing member. Ream holes that must be enlarged to admit bolts.

E. GAS CUTTING

Do not use gas-cutting torches in field for correcting fabrication errors in primary structural framing. Cutting will be permitted only on secondary members, which are not under stress, as acceptable to the Engineer.

F. TOUCHUP PAINTING

Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint. Apply paint to exposed areas using same material as used for shop painting. Apply by brush or spray to provide minimum dry film thickness of 1.5 mils. Painting shall conform to the requirements of Section 09900.

Cleaning and touchup painting of field welds, bolted connections and abraded areas of shop paint on structural steel is included in Section 09900.

3.2 QUALITY CONTROL

A. GENERAL

Comply with Section 01400 for independent testing and inspection agency to inspect high-strength bolted connections and welded connections and to perform tests and prepare test reports.

Testing agency shall conduct and interpret tests and state in each report whether test specimens comply with requirements, and specifically state any deviations therefrom.

Provide testing agency access to places where structural steel work is being fabricated or produced so that required inspection and testing can be accomplished.

Testing agency may inspect structural steel at plant before shipment; however, the Engineer reserves right, at any time before final acceptance, to reject material not complying with specified requirements.

Correct deficiencies in structural steel work that inspections and laboratory test reports indicate as not in compliance with requirements. The performance of additional tests, at the Contractor's expense, may be necessary to reconfirm any non-compliance of original work, as well as to show compliance of corrected work.

B. SHOP-BOLTED CONNECTIONS

Inspect or test in accordance with AISC specifications.

C. SHOP WELDING

Inspect and test during fabrication of structural steel assemblies, as follows:

Certify welders and conduct inspections and tests as required. Record types and locations of defects found in work. Record work required and performed to correct deficiencies.

Perform visual inspection of all welds.

Perform tests of welds as follows. Inspection procedures listed are to be used at Contractor's option.

CONTRACTOR'S OPTION

Liquid Pentrant Inspection:	ASTM E165
Magnetic Particle Inspection:	ASTM E709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration not acceptable.
Radiographic Inspection:	ASTM E94
Ultrasonic Inspection:	ASTM E164

D. FIELD-BOLTED CONNECTIONS

Inspect in accordance with AISC specifications.

E. FIELD WELDING

Inspect and test during erection of structural steel as follows:

Certify welders and conduct inspections and tests as required. Record types and locations of defects found in work. Record work required and performed to correct deficiencies.

Perform visual inspection of all welds.

Perform tests of welds as follows:

Liquid Pentrant Inspection:	ASTM E165
Magnetic Particle Inspection:	ASTM E709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration not acceptable.
Radiographic Inspection:	ASTM E94
Ultrasonic Inspection:	ASTM E164

***** END OF SECTION *****

DIVISION 7

THERMAL AND MOISTURE PROTECTION

SECTION 07900

CAULKING AND SEALANTS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the furnishing of all labor, materials, tools, and equipment required to install caulking and sealants, as indicated on the Plans and as specified herein.

All exterior wall joints and interior and exterior joints between all differing or dissimilar materials and at windows, doors, roof penetrations, louvers and similar types of openings shall receive sealants to make the joint air and watertight. This includes concrete to CMU, concrete to wood, CMU to wood, concrete to sheet metal, CMU to sheet metal, etc.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals

1.3 REFERENCE STANDARDS

This Section references the latest revisions of the following documents:

<u>Reference</u>	<u>Title</u>
AAMA 800	Sealant Manual, Specifications and Test Methods for Sealants
ASTM C834	Standard Specification for Latex Sealants
ASTM C920	Standard Specification for Elastomeric Joint Sealants
ASTM C1193	Standard Guide for Joint Sealants
ASTM C1311	Standard Specification for Solvent Release Sealants
ASTM D5249	Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints

ASTM D7174 Standard Specification for Preformed Closed-Cell
Polyolefin Expansion Joint Fillers for Concrete Paving and
Structural Construction

NSF/ANSI 61 Drinking Water System Components – Health Effects

PART 2 PRODUCTS

2.1 POLYURETHANE SEALANTS

Provide a one-component, gunnable grade, non-sag, solvent-free polyurethane sealant. The sealant shall cure under the influence of atmospheric moisture. Sealant shall meet ASTM C920, Type S, Grade NS, Class 35, under uses NT, T, M, G, I, A, and O. Performance characteristics shall include a 175 psi 21-day tensile strength, a minimum 500-percent ultimate elongation, and a maximum Shore “A” Hardness of 45.

Polyurethane sealants shall be Sikaflex-1a, as manufactured by the Sika Corporation, or equal by Tremco, Inc. or BASF Corporation.

2.2 SILICONE SEALANTS

Provide a one-component, gunnable grade, neutral cure, silicone sealant. Sealant shall meet ASTM C920, Type S, Grade NS, Class 50, under uses NT, M, G, A and O. Performance characteristics shall include a 200 psi 21-day tensile strength, a minimum 700-percent ultimate elongation, and a maximum Shore “A” Hardness of 25.

Silicone sealants shall be Sikasil WS-295, as manufactured by the Sika Corporation, or equal by Tremco, Inc. or BASF Corporation.

2.3 ACRYLIC LATEX CAULK

Provide a one-component, gunnable grade, pure acrylic latex sealant. Sealant shall meet ASTM C834, Type OP, Grade -18 °C. Performance characteristics shall include a maximum 25-percent shrinkage, and a movement capability of plus/minus 12.5-percent.

Acrylic latex sealants shall be Tremflex 834, as manufactured by the Tremco, Inc. or equal by BASF Corporation.

2.4 PREFORMED FLEXIBLE JOINT MATERIAL

Provide a closed-cell, polyolefin preformed foam joint material. Foam joint material shall meet ASTM D7174. Performance characteristics shall include an expansion recovery greater than 99-percent, a maximum 50-percent compression strength of 15 psi, and a maximum water absorption of 0.25-percent by volume.

Foam joint material shall be Ceramar, as manufactured by W.R. Meadows, or equal.

2.5 PREFORMED FLEXIBLE JOINT BACKER MATERIAL

Provide a closed-cell, polyolefin preformed foam backer rod material. Backer rod material shall meet ASTM D5249 and shall be compatible with the proposed cold-applied sealant.

Backer rod material shall be Kool-Rod, as manufactured by W.R. Meadows, or equal.

2.6 PRIMERS

Provide primer materials made by or recommended by the sealant manufacturer for the conditions of the application, including the materials to be sealed at the joints and the type of sealant or caulking material to be used.

PART 3 EXECUTION

3.1 GENERAL

All sealant and primer work shall comply with ASTM C1193 and with the manufacturer's written instructions.

The Contractor shall confirm that the proposed sealant and primer materials are compatible with any concrete curing compound used, or the Contractor shall lightly sandblast and thoroughly clean concrete joint surfaces prior to application of sealant materials.

All priming and sealant work shall be done under temperature and moisture conditions that are within the requirements of the manufacturer's written instructions.

All exterior dissimilar materials shall be sealed with elastomeric sealants at the joints between the different materials.

3.2 APPLICATION OF SEALANTS

A. PREPARATION OF JOINTS

Inspect profiles and surfaces of all joints prior to application. Verify joint dimensions are adequate for development of the sealant movement capability. All joints shall be solvent cleaned, dry, and free of dust, oils and grease before receiving backing materials and sealant. Floor joints shall be wire brushed, free of laitance or other residues. Aluminum or other metal surfaces to be in contact with sealants shall be wiped clean with xylol or an MEK solvent to remove any coatings or contamination. Joint sealants shall be installed before other surface finishes are applied. Proceed with joint sealant work only once conditions meet the manufacturer's requirements.

B. BACKINGS

Install filler and backer materials in as long of lengths as practicable. Stretch and force into joints with tool designed for that purpose, to a uniform depth, as indicated on the Plans or as required by the manufacturer, allowing for installation of sealant and caulking. Provide filler material in slab shapes for joints 1/2 inch or more in depth, and in 3/4 inch or more wide joints to receive sealing material. Provide extruded rod backer material in all other joints to receive sealant. Filler or backer material shall be of a depth as required to bring the top surface to within 1/2 inch of the slab surface, or as indicated on the Plans. All joints shall include a suitable bond breaker between backing materials and sealant.

C. MASKING

Both sides of joints shall be masked with tape to prevent soiling floor, slab, or wall beyond limits of the joint.

D. PRIMING

Apply primer to all surfaces of joints in contact with sealant materials. Apply full strength and undiluted in a uniform coating of surface. Allow to set or cure prior to proceeding. Do not prime surfaces at back of joint.

E. APPLICATION

Sealant shall be gun applied, giving the joint a full bead of sealant. Skin beads are not acceptable. Tool the bead immediately after application to ensure a firm and full contact with the inner faces of the joint. Joints in

sills and other wash surfaces shall be filled slightly convex to obtain a flush joint when dry. Entire perimeter of openings in concrete surfaces shall be sealed. Do not apply sealants to wet or damp surfaces nor in temperatures below 50 degrees F, and as required by the manufacturer. Strike off excess sealant with tooling stick or a knife so that finished bead is slightly below surface. Remove excess sealant as work progresses. Sealants in masonry wall joints are to be a maximum of 1/2-inch deep and not less than 1/4 inch in each dimension. When applying sealant, do not permit thickness of sealant to exceed 1/2 of the width of the joint. Any joints over 1/2-inch wide shall be reported to the Owner and instructions for correcting the applications will be given.

3.3 CLEANUP

Upon completion, the Contractor shall remove and dispose of masking materials. Remove any excess materials and clean adjacent surfaces free from any soiling or staining resulting from the sealing and caulking operations.

***** END OF SECTION *****

DIVISION 8

DOORS AND WINDOWS

SECTION 08110

HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section covers furnishing and installing hollow metal doors and frames as indicated on the Plans and as specified herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals
08700	Finish Hardware

1.3 REFERENCES

This Section references the latest revisions of the following documents:

<u>Reference</u>	<u>Title</u>
ANSI/SDI A250.8	Specifications for Standard Steel Doors and Frames
ANSI/SDI A250.11	Recommended Erection Instructions for Steel Frames
ANSI Z97.1	Safety Glazing Materials Used in Buildings – Safety Performance Specifications and Methods of Test
ASTM A653	Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
HMMA 840	Guide Specification for Installation and Storage of Hollow Metal Doors and Frames

1.4 QUALITY ASSURANCE

Hollow metal doors and frames shall conform to applicable requirements of ANSI/SDI A250.8.

1.5 SUBMITTALS

Submit shop drawings and product data under provisions of Section 01300.

Indicate frame configuration, anchor types and spacing, location of cutouts for hardware, reinforcement, and finish.

Indicate door elevations and internal reinforcement.

1.6 REGULATORY REQUIREMENTS

Conform to applicable Building Code for frame and door requirements.

PART 2 PRODUCTS

2.1 APPROVED MANUFACTURERS

The hollow metal doors and frames shall be as manufactured by Curries, Ceco, Amweld, Republic, Steelcraft, or any other SDI member.

2.2 DOORS AND FRAMES

<u>Location</u>	<u>Material</u>
Doors and Frames	ANSI/SDI A250.8, Level 3, Model 2

Provide door and frame types and sizes as shown on the Plans.

2.3 DOOR CONSTRUCTION

Insulated doors shall contain a polyurethane core with a minimum U-value as shown on the Plans.

2.4 FABRICATION

Provide fully welded frames for all new construction. Provide fabricated frames of knock down field assembly type for retrofit applications or for existing door openings.

Fabricate frames and doors with hardware reinforcement plates welded in place. Provide mortar guard boxes.

Close top edge of exterior doors flush with inverted steel channel closure. Seal weld all door joints watertight. Caulking of door seams is not acceptable.

2.5 FINISH

Both interior and exterior doors and frames shall be made from galvanealed zinc coating per ASTM A653 or A60 material, with a minimum application rate of 0.60 oz/ft². Finish painting shall be in accordance with Section 09900 of these Specifications.

The inside of the metal frame profile shall be coated per Section 09900 of these Specifications. Provide dissimilar metals system. Coating may be shop or field applied.

PART 3 EXECUTION

3.1 INSTALLATION

Frames shall be installed plumb, level, and rigid in accordance with ANSI/SDI A250.11 and with HMMA 840. Doors shall be installed in accordance with HMMA 840.

Coordinate with all wall construction types for proper anchor placement. All door frames installed in masonry construction shall be completely filled with the masonry mortar utilized to install the masonry units or be fully grouted with non-shrink grout after installation of the frame. All door frames installed in cast-in-place concrete structures shall be fully grouted with non-shrink grout.

Install roll formed steel reinforcement channels between two abutting frames and anchor frames to structure and floor.

Contractor shall protect doors and frames as necessary during construction of the Project.

3.2 CLEARANCES AND TOLERANCES

Clearances between the door and frame head and jambs shall be 1/8 of an inch. Clearances between the meeting edges of pairs of doors shall be 3/16 of an inch plus or minus 1/16. Maximum diagonal distortion shall be 1/8 of an inch, measured with straight edge, from corner to corner. Clearance between the face of the door and the door frame stops shall be 1/16 to 1/8 of an inch.

3.3 ADJUSTING DOORS

Adjust hardware for smooth and balanced door movement.

***** END OF SECTION *****

SECTION 08360

SECTIONAL OVERHEAD DOORS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section consists of furnishing and installing electric operated overhead sectional doors with steel insulated panels as indicated on Plans and specified herein. Contractor shall also provide and install operating hardware and supports.

1.2 RELATED SECTIONS SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals
07900	Caulking and Sealants
09900	Painting

1.3 REFERENCES

<u>Reference</u>	<u>Title</u>
ANSI/DASMA 102	Specifications for Sectional Doors

1.4 SUBMITTALS

A. PRODUCT DATA

Provide component construction, anchorage method, hardware.

B. SHOP DRAWINGS

Submit shop drawings for approval prior to fabrication. Include detailed plans, elevations, details of framing members, required clearances, anchors, and accessories. Include relationship with adjacent materials.

1.5 OPERATION AND MAINTENANCE DATA

The Contractor shall provide manufacturer's operation and maintenance data; include data for transmission, shaft and gearing, lubrication frequency, spare part sources.

1.6 QUALITY ASSURANCE

A. MANUFACTURER

Coiling door shall be manufactured by a firm with a minimum of 10-years experience in the fabrication and installation of coiling doors. Manufacturers proposed for use, which are not named in these Specifications, shall submit evidence of ability to meet performance requirements specified, and include a list of five projects of similar design and complexity completed within the past 5 years.

B. INSTALLER

Installation of coiling door shall be performed by an authorized representative of the manufacturer.

C. SINGLE-SOURCE RESPONSIBILITY

Provide doors, guides, and related primary components from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.

D. PRE-INSTALLATION CONFERENCE

Schedule and convene a pre-installation conference prior to commencement of field operations, to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work.

1.7 DELIVERY, STORAGE, AND HANDLING

Deliver materials and products in labeled protective packages. Store and handle in strict compliance with manufacturer's instructions and recommendations. Protect from damage from weather, excessive temperatures, and construction operations.

1.8 WARRANTY

Provide a manufacturer's 1-year warranty for the door and operator system and 10-year finish warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

Wayne Dalton, or approved equal. Model Thermospan 200 Insulated Sectional Steel Door.

2.2 MATERIALS

A. SHEET STEEL

20-gauge hot-dipped galvanized steel.

B. INSULATION

Insulation shall be CFC-free and HCFC-free polyurethane, fully encapsulated. Insulated sections tested in accordance with ASTM E 84 and achieve a Flame spread Index of 10 or less, and a Smoke Developed Index of 210 or less. Insulation material tested in accordance with ASTM D 1929 and achieve a minimum Flash Ignition temperature of 734 degrees F, and a minimum Self Ignition temperature of 950 degrees F. Insulated sections shall meet all requirements of the UBC 17-5 corner burn. Ends shall be hot-dipped galvanized steel, full height with end caps.

2.3 DOOR CONSTRUCTION

A. SECTIONS

Door Sections shall be of steel/polyurethane/steel sandwich type construction with thermal break. Exterior surface shall be flush with non-repeating random stucco texture and 1/4-inch wide pinstriping exterior surface. Exterior steel shall be 0.015 inch (0.38 mm), hot-dipped galvanized. Sections shall be roll formed with two 1-3/4-inch integral struts sealed with polypropylene rib caps per section. Thermal values shall be R-value of 17.50 and U-value of 0.057, air infiltration shall be 0.07 cfm at 15 mph, and sound transmission class 22 when tested in accordance with ASTM E 413 and outdoor-indoor transmission class 19 when tested in accordance with ASTM E 1332.

B. DOOR NOMINAL THICKNESS

2-inches.

C. FINISH

Steel panels shall receive a two coated baked-on polyester finish, color to be white.

D. WINDLOAD DESIGN

Design and size components to withstand loads caused by pressure and suction of wind acting normal to the plane of wall as calculated in accordance with design parameters shown on the Contract Drawings, current applicable code(s), and for a minimum of 20 PSF.

2.4 DOOR COMPONENTS

A. TRACK

Track shall be horizontal 3-in wide rolled-steel, reinforced with continuous angle of adequate length and gauge to minimize deflection. Configuration shall be the manufacturer's standard lift.

B. HINGE AND ROLLER ASSEMBLIES

Galvanized steel hinges and fixtures. Ball bearing rollers with hardened steel races.

C. LIFT MECHANISM

Sized to weight of the door, with a helically wound, oil tempered torsion spring mounted on a steel shaft; cable drum of die cast aluminum with high strength galvanized aircraft cable. Sized with a minimum 5 to 1 safety factor.

D. SILL WEATHER-STRIPPING

Resilient bulb-type rubber strip, one piece; fitted to bottom of door panel, full length contact.

E. JAMB WEATHER-STRIPPING

Roll formed steel section full height of jamb, fitted with resilient weather-stripping, and placed in moderate contact with door panels.

F. LOCK

Interior slide bolt lock for electric operation with interlock switch for automatic operator.

G. ELECTRIC MOTOR OPERATION

1. Provide UL listed electric operator, size as recommended by manufacturer to move door in either direction at not less than 2/3 foot nor more than 1 foot per second, 1/2 hp, with positive locking/holding system. The electric operator must comply with the following requirements:
 - a. Entrapment Protection: NEMA 4, heavy-duty, dual-sided photo eyes, LiftMaster CPS-UN4, and NEMA 4, dual-sided light curtain, LiftMaster LC-36A.
 - b. Operator Controls: Push-button operated with open, close, and stop buttons at interior locations where indicated on the Plans.
 - c. Motor Voltage: 120, 60 Hz
2. Motors shall be recognized or labeled and listed by a recognized electrical testing laboratory approved by the Washington State Department of Labor and Industries, or the motor shall be specifically approved by the Washington State Department of Labor and Industries for installation on the project.
3. Provide manual chain hoist back up operation in the event of electric operation failure.
4. Provide two remote control door openers for each motorized sectional door.
5. LiftMaster Gearhead Trolley Logic 5.0 Commercial Door Operator, or equal.

PART 3 EXECUTION

3.1 EXAMINATION

The Contractor shall verify that wall openings are ready to receive work and opening dimensions and tolerances and within specified limits. Beginning of installation means installer acceptance of existing surfaces.

3.2 PREPARATION

The Contractor shall prepare opening to permit correct installation of door unit to perimeter air and vapor barrier seal.

3.3 INSTALLATION

Perform work in accordance with ANSI/DASMA 102.

The Contractor shall install door unit assembly in accordance with manufacturer's instructions. Anchor assembly to wall construction and building framing without distortion or stress. Securely brace door tracks suspended from structure. Secure tracks to structural members only. Fit and align door assembly including hardware, level, and plumb, to provide smooth operation. Coordinate installation of sealants and backing materials at frame perimeter as specified in Section 07900.

Provide all electrical conduit and conductors necessary to fully wire and interconnect the door operator control stations and safety devices work in conformance with Division 16 Specifications and the electrical Contract Drawings.

3.4 TOLERANCES

- A. Maintain dimensional tolerances and alignment with adjacent work.
- B. Maximum Variation from Plumb: 1/6 inch.
- C. Maximum Variation from Level: 1/16 inch.
- D. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch with the use of a 10-foot-long straight edge.

3.5 MANUFACTURER'S FIELD SERVICES

Prepare, adjust, and startup system. Ensure the operation and adjustments to door assembly for smooth operation.

3.6 ADJUSTING

The Contractor shall adjust door assembly to smooth operation.

3.7 CLEANING

The Contractor shall clean doors and frames. Remove labels and visible markings. Touchup damaged coatings and finishes and repair minor damage.

3.8 PROTECTION OF FINISHED WORK

The Contractor shall protect finished work after the installation. Do not permit construction traffic through overhead door openings after adjustment and cleaning.

***** END OF SECTION *****

SECTION 08700

FINISH HARDWARE

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section specifies that the Contractor shall provide complete finish hardware and suitable fastenings for the project. Quantities listed in any instance are for supplier convenience only and are not guaranteed.

Finish hardware includes items known commercially as “builders’ hardware” required, for swinging doors. Hardware specified in the same section as the door and/or doorframe will be furnished by the supplier of that Section.

All hardware furnished in this Section shall comply with the requirements of all applicable codes. All items specified in this Section shall be furnished by a factory-authorized distributor maintaining parts, stocks, and services for standard specified items.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals
08110	Hollow Metal Doors and Frames

1.3 REFERENCES

This Section references the latest revisions of the following documents:

<u>Reference</u>	<u>Title</u>
UL	Building Materials List

PART 2 PRODUCTS

2.1 APPROVED MANUFACTURER’S

Finish hardware shall be as manufactured by the suppliers listed in the following sections.

2.2 BUTTS

Butts shall be 4-1/2" x 4-1/2" (minimum 1.4 lbs. each) for 3'-0" and under and 5" x 4-1/2" (minimum 1.67 lbs. each) for over 3'-0", except as required for 180-degree swing and shall be of the type listed. Doors up to and including 90 inches in height shall have 1-1/2 pair and doors over 90 inches in height shall have two pair. For unusual size or weight doors, furnish type, size, and quantity recommended by the butt manufacturer. All exterior-outswinging doors shall have non-removable pins. Concealed bearing hinges shall have bearing designs that eliminate metal-to-metal contact between knuckles and between the pin and barrel. Butts shall be as manufactured by McKinney, or equal.

2.3 LOCKSETS

Locksets shall be Grade 1 mortise locksets with 2-3/4-inch backsets and 3/4-inch antifriction latch bolts, as manufactured by Corbin Russwin, or equal. All locksets and latchsets shall be the product of one manufacturer. All locksets and latchsets shall be heavy-duty mortise type UL approved. Functions as indicated in the hardware groups. Deadbolt functions shall be 1-inch projection.

Locksets and latchsets shall be furnished with sufficient curved strike lips to protect trim. (note: 3/4-inch latch bolts require 3/4-inch minimum clearance for trim, otherwise extended lip strikes must be furnished).

All locks shall have wrought box strikes.

2.4 DOOR CLOSERS, SURFACE

Door closers shall be ANSI A156.4, Grade 1, as manufactured by Corbin Russwin, or equal. Drop plates shall be furnished where required. Hex nuts and bolts shall be furnished for all doors. Closers shall have a 10-year guarantee.

2.5 GASKETS AND THRESHOLDS

Gaskets and thresholds shall be as specified in the hardware groups and shall be as manufactured by Pemko, or equal.

2.6 KEYING

All cylinder items shall be furnished with visual key control with key code stamped on the face of the keys and marked on the back or side of the cylinders. All standard cylinder items shall be furnished with construction-keyed cylinders.

The Contractor shall coordinate the keying for door locks with the Owner for the proper keyway to match the Owner's site standards.

2.7 KEY QUANTITIES

Keys shall be furnished in the following quantities:

<u>Type</u>	<u>Quantity</u>
MKs	6 each
Construction Keys	6 each
Change keys per keyed cylinder	2 each
Control keys	2 each

2.8 HARDWARE GROUPS

A. MANUFACTURER'S LIST

<u>Manufacturer</u>	<u>Abbreviation</u>
Corbin Russwin	CO
McKinney	MK
Pemko	PE
Rockwood	RW
Trimco	TR
Hanchett entry Systems	HES
Adams Rite	AR

B. Refer to door schedule and related information concerning the following hardware groups:

HW1 (exterior insulated single door)

	Butts TCA 3386, 630	MK
1 ea.	Exit Device ED5600L. L9M55, 630	CO
1 ea.	7-Pin IC Cylinder 1080-112-AO2, 630	CO
1 ea.	Door Closer 8210, A12, M71, M73, M75, 630	CO
1 ea.	Threshold 2715 CPK	PE
1 ea.	Door Bottom 210 CPK	PE
1 set	Gaskets 2891, 290 CPK	PE

PART 3 EXECUTION

3.1 INSTALLATION

Refer to A.S.A.H.C., B.H.M.A., and S.D.I. for mounting heights.

Unless a conflict arises, the following are standard mounting heights on some products. If a question or conflict should arise, the hardware supplier, if

requested, shall assist the Contractor and Owner in determining mounting heights. All measurements are from finish floor except top butt.

A. BUTTS

Top 11-3/4-inch center of butt to top of door. Intermediate equal distance between top and bottom butts. Bottom 13-inch center of butt.

B. LATCHES

40-5/16 inch to center of strike.

C. DEADLOCKS

60 inch to center of strike.

D. EXIT DEVICES

40-5/16 inch to center of strike.

E. DOOR CLOSERS

As per manufacturer's instructions.

3.2 ADJUSTING

Hardware shall be adjusted for correct operation.

After installation of hardware and before the building is accepted, Contractor shall inspect the installation and certify that the hardware is correctly installed in accordance with the manufacturer's recommendations. Hardware installer shall make any necessary adjustments.

***** END OF SECTION *****

DIVISION 9

FINISHES

SECTION 09900

PAINTING

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section covers the furnishing and installation of protective coatings, complete-in-place. Special shop coatings and/or factory-applied finishes on manufactured or fabricated items may be specified elsewhere. Regardless of the number of paint coats previously applied, at least two field coats of paint shall be applied to all surfaces unless otherwise specified herein. Field painting is not required for factory prefinished equipment items such as pumps, blowers, motors, etc. Touchup of the factory applied coatings may be required.

The word “paint” as used herein shall be taken to include all protective coatings and incidental materials as required with the exception that anodized aluminum or zinc galvanized coatings shall not be considered as paint.

Unless specifically noted otherwise in these Specifications or on the Plans, all work performed under this Contract (both new work and modifications to existing facilities) shall be painted. If an existing wall or ceiling (or similar surface) is modified in some way, the entire wall or ceiling surface is to be painted.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals
03300	Concrete
07900	Caulking and Sealant
08100	Hollow Metal Doors and Frames
Division 5	Metals

1.3 REFERENCED STANDARDS

The following standards are referenced and shall be considered a part of these Specifications:

American National Standards Institute (ANSI):
A159.1, Surface Preparation Specifications;
Z53.1, Safety Color Code for Marking Physical Hazards

American Society for Testing and Materials (ASTM):

D4263, Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method

E84, Standard Test Method for Surface Burning Characteristics of Building Materials

Steel Structures Painting Council (SSPC):

SP-1, Solvent Cleaning

SP-2, Hand Tool Cleaning

SP-3, Power Tool Cleaning

SP-5, White Metal Blast Clearing

SP-6, Commercial Blast Cleaning

SP-7, Brush-off Blast Cleaning

SP-10, Near-White Blast Cleaning

SP-11, Power Tool Cleaning

SP-13 Surface Preparation for Concrete Surfaces

VIS-89, Visual Standard

1.4 DEFINITIONS

A. PAINT

Includes fillers, primers, sealers, emulsions, oils, alkyds, latex, enamels, thinners, stains, epoxies, vinyls, urethanes, shellacs, varnishes and any other applied coating specified within these Specifications or shown on the Plans.

B. FINISHED ROOM OR SPACE

One that has a finish called for on Room Finish Schedule, or is indicated on the Plans, or is specified herein, to be painted.

C. PAINTING COVERAGE RATE

Coverage's expressed in SF/GAL/coat are the manufacturer's published theoretical coverage's in square feet per gallon per coat.

1.5 SUBMITTALS

In addition to the general submittal requirements listed in Section 01300, the following shall be submitted:

1. Written acknowledgment and certification that products submitted meet requirements of standards referenced in this Section.

2. Manufacturer's application instructions for primer and finish coats.
3. Manufacturer's surface preparation instructions.
4. Manufacturer's full line of color samples for color selection by Owner.
5. If products being used are manufactured by a company other than the specified reference standard, the Contractor must provide a complete comparison of the proposed products with the specified reference products per Part 2.1 requirements, including application procedure, coverage rates, and verification that product is designed for intended use. Information must be provided that demonstrates that manufacturer's products are equal to the performance standards of products manufactured by the Tnemec Company, which is the reference standard.
6. Manufacturer's approval of protective coating systems applicator.
7. List of Applicator's experience and qualifications. A minimum of 5-years of experience in the painting of wastewater treatment plant facilities required.

PART 2 PRODUCTS

2.1 APPROVED MANUFACTURERS

The following is an approved coating systems manufacturers list subject to compliance with the Specifications contained herein:

1. Ameron Protective Coatings Division.
2. Sherwin Williams.
3. Tnemec Company.
4. Or equal.

The specified coating shall be understood as establishing the type and quality of coating desired. Other manufacturers' products will be accepted provided sufficient information is submitted to allow the Engineer to determine that the coatings proposed are equivalent to those named. Proposed coatings shall be submitted for review in accordance with these Specifications. Requests for review of equivalency will not be accepted from anyone except the Contractor, and such requests shall not be considered until after the Contract has been awarded.

No substitutions shall be allowed that change the number of coats, thickness or generic type of paint required. All materials shall be brought to the jobsite in the original sealed and labeled containers of the paint manufacturer and shall be subject to inspection by the Engineer.

No coating materials other than those specified shall be brought to the jobsite. Thinners, driers and oils brought to the jobsite shall be only those recommended and approved by the paint manufacturer.

All paint shall conform to the applicable air quality regulations at the point of application. Any paint material which cannot be guaranteed by the manufacturer to comply, whether specified by product designation or not, shall not be used.

It shall be the responsibility of the Contractor to ensure the compatibility of the field painting products which will be in contact with each other or which will be applied over shop painted or previously painted surfaces. Paint used in successive field coats shall be produced by the same manufacturer. Paint used in the first field coat over shop painted or previously painted surfaces shall cause no wrinkling, lifting, or other damage to the underlying paint.

All paint used for intermediate and finish coats shall be guaranteed by the paint manufacturer to be fumeproof and suitable for industrial architectural applications. Paint shall be lead-free and mercury-free if available, but in no case shall the lead or mercury content cause discoloration in a wastewater plant atmosphere.

Tnemec Company products are the reference standard and Tnemec designations for product type are used herein. Requirements for an approved equal product are listed below:

1. For approval of an equal manufacturer. The Contractor shall provide to the Owner in writing a detailed side-by-side comparison of the proposed equal Products Characteristics, Performance Characteristics, and Application Conditions for each Tnemec coating specified in this specification. For consideration for approval this written comparison shall be certified and notarized by an officer of the proposed manufacturer as true and correct.
2. For Products Characteristics this detailed side-by-side comparison shall include for example, but not limited to, Volume Solids, Weight Solids, VOC, Mix Ratio, Zinc Content in Dry Film (by Weight), Spreading Rate per coat, Drying Schedule, Shelf Life and Flash Point.

3. For Performance Characteristics this detailed side-by-side comparison shall include for example, but not limited to, Abrasion Resistance, Corrosion Weathering, Direct Impact Resistance, Dry Heat Resistance, Flexibility, Moisture Condensation Resistance, Pencil Hardness, Salt Fog Resistance, Slip Coefficient and Wet Heat Resistance
4. In addition to the detailed side-by-side comparison for approval of an equal manufacturer, The Contractor shall provide to the Owner in writing five similar installations that have had the proposed or equal coating system and date coating system was put into service. In addition the installations names, locations, and owner's name with contact person and telephone number shall be provided.
5. For consideration for approval as an equal coating system the detailed side-by-side comparison shall be submit, with successful bidder's Shop Drawing at the time of the Preconstruction Conference, along with any proposed monetary adjustments to the contract price. As with all shop drawings, final approval rests with the Owner.
6. As a minimum standard any equal coating system shall have a 5-year service history on its coating system.

2.2 PAINT SYSTEMS

A. METAL DOORS, FRAMES, TRIM, AND STRUCTURAL STEEL

1. Scope

This Section shall apply to all interior and exterior metal doors, frames, trim, and structural steel.

2. Surface Preparation

Prior to field coat applications, the surface shall be solvent cleaned SSPC-SP-1, and shall be clean, dry and free of all dirt, oil, grease and any other contaminants.

3. Coatings

Primer System:

Coat One

Product: F.C. Typoxy, Tnemec Series 27

MDFT: 3.0 to 5.0 mils

Finish System:

Coat One

Product: Endura-Shield, Tnemec Series 73

MDFT: 3.0 to 5.0 mils

Total MDFT: 6.0 to 10.0 mils

B. EXPOSED TO VIEW EXISTING CONCRETE SURFACES

1. Scope

This section shall apply to all exposed to view concrete surfaces within the work area.

2. Surface Preparation

Surfaces shall be prepared in accordance with section 3.3 of this Specification.

3. Coatings

Finish System:

Two Coats:

Product: Envirocrete, Tnemec Series 156
(Exterior coating shall be textured to match existing)

MDFT 8.0 mils of finish product

2.3 COLORS

Paint colors used shall be selected by the Owner. Color samples shall be submitted to the Owner/Engineer for approval prior to application of any field coatings.

PART 3 EXECUTION

3.1 GENERAL

It is the intent of these Specifications that materials and workmanship be provided such that the highest quality job is obtained. The completed work, prior to acceptance, must be free from runs, skips, mars and any other disfiguring mark due to faulty workmanship or care of the completed work.

It is the responsibility of the Contractor to ensure that all surfaces are prepared in accordance with the written recommendations and directions of the paint manufacturer whose paint is applied.

Approval of conditions shall be obtained from the Engineer prior to applying any or all coats of paint; however, such approval shall not relieve the Contractor of their responsibility of conformance with these Specifications and conformance with the manufacturer's recommendations.

It shall be the responsibility of the Contractor to prevent settling of dust or the occurrence of other conditions detrimental to the finished quality of the job and to repair any damaged paint at no additional cost to the Owner.

Materials or equipment delivered with prime coats shall be touched up as required prior to the application of additional coating(s).

The Contractor shall apply each coating at the rate and in the manner specified by the paint manufacturer. If material has thickened or must be diluted for application by spray gun, the coating shall be built-up to the same thickness achieved with undiluted material. Deficiencies in film thickness shall be corrected by the application of an additional coat(s) of paint. Film thickness shall be determined when dry by the Engineer with a magnetic dry film thickness gauge. The thickness gauge shall be calibrated with test shims.

Where thinning is necessary, only the products of the manufacturer furnishing the paint and for the particular purpose shall be allowed. All thinning shall be done strictly in accordance with the manufacturer's instructions as well as with the full knowledge and approval of the Engineer.

No paint shall be applied when the surrounding air temperature, as measured in the shade, is below 40 degrees F. No paint shall be applied when the temperature of the surface to be painted is below 35 degrees F. Paint shall not be applied to wet or damp surfaces and shall not be applied in rain, snow, fog or mist or when the relative humidity exceeds 85 percent. No paint shall be applied when it is expected that the relative humidity will exceed 85 percent or that the air temperature will drop below 40 degrees F within 18 hours after the application of the paint. Dew or moisture condensation should be anticipated and if such conditions are prevalent, painting shall be delayed until conditions improve to be certain that the surfaces are dry prior to application of paint. No paint shall be applied when the ambient temperature is less than 5 degrees F. above the dewpoint. Further, the day's painting shall be completed well within advance of the probable time of day when condensation will occur, in order to permit the paint film an appreciable drying time prior to the formation of moisture.

Manufacturer's recommended drying time shall be construed to mean "under normal conditions." Where conditions are other than normal because of the weather or because painting must be done in confined spaces, longer drying times shall be necessary. The manufacturer's recommendations for recoating time intervals shall be strictly adhered to.

Adequate ventilation, which will effectively remove solvents, shall be provided for proper drying of paints on interior surfaces. A minimum of 7-consecutive calendar days at 70 degrees F following the application of the final coat on submerged surfaces shall be required before submergence. Longer periods shall be allowed prior to submergence if recommended by the paint manufacturer or if weather conditions require a longer curing time.

3.2 MIXING AND THINNING

Paint shall be thoroughly mixed each time any is withdrawn from the container. Paint containers shall be kept tightly closed except while paint is being withdrawn.

Paint shall be factory mixed to proper consistency and viscosity for hot weather application without thinning. Thinning will be permitted only as necessary to obtain recommended coverage at lower application temperatures. Only thinners approved by the paint manufacturer shall be used. In no case shall the wet film thickness of applied paint be reduced, by addition of paint thinner or otherwise, below the thickness recommended by the paint manufacturer.

3.3 SURFACE PREPARATION

A. GENERAL

Surfaces shall be dry and thoroughly cleaned of foreign materials with all defects filled or removed. All trades employed shall leave the surfaces of their work in such a condition that only minor cleaning, sanding and filling is required of the painting trade for surface preparation.

Hardware, switchplates, machined surfaces, nameplates, lighting fixtures and all other surfaces not to be painted shall be removed or otherwise protected. Drop cloths shall be provided, where necessary, to avoid spotting of surfaces adjacent to the item being painted. Working parts of electrical equipment shall be protected from damage during surface preparation and painting operations.

B. FERROUS METAL, GALVANIZED METAL AND HOLLOW METAL SURFACES

The Contractor shall assure that fabrication, welding or burning is completed prior to the sandblasting operation. The Contractor shall chip or grind off flux, splatter, slag or other laminations left from welding. The Contractor shall remove all mill scale. The Contractor shall grind smooth rough welds and other sharp projections.

The Contractor shall power tool or hand clean in accordance with SSPC SP-2 or SSPC SP-3. The Contractor shall apply prime coat on cleaned surfaces within 2 hours of cleaning.

3.4 APPLICATION

A. GENERAL

The Contractor shall mix and apply coatings by brush, roller or spray in accordance with the manufacturer's installation instructions. Spraying equipment shall be inspected and approved in writing by the coating manufacturer. The Contractor shall provide complete coverage's to the mil thickness specified. The thickness specified shall be dry film mil thickness. All paint systems are "to cover." In situations of discrepancy between the manufacturer's square footage coverage rates and mil thickness, mil thickness requirements govern. When color or undercoats show through, the Contractor shall apply additional coats until paint film is of uniform finish and color. The Contractor shall not apply consecutive coats until the Engineer has had an opportunity to observe and approve previous coats.

The Contractor shall apply materials under adequate illumination, shall evenly spread and flow on to provide full, smooth coverage, shall work each application of material into corners, crevices, joints and other difficult to work areas, shall avoid degradation and contamination of blasted surfaces and avoid intercoat contamination, shall clean contaminated surfaces before applying next coat and shall immediately smooth out runs or sags, or remove and recoat entire surfaces. The Contractor shall assure that preceding coats are dry before recoating, shall recoat within the time limits specified by the coating manufacturer and shall allow coated surfaces to cure prior to allowing traffic or other work to proceed.

The Contractor shall coat all aluminum surfaces in contact with dissimilar materials. All fabricated and structural steel shall have prime coat(s) applied in the shop and finish coat(s) applied in the field.

During application of either prime or finish coats, brush coat all weld seams, edges, angles, fasteners and other irregular surfaces to insure a monolithic film, pinhole free surface. Finish coats of paint shall be uniform in color and sheen without streaks, laps, runs, drips, sags or missed areas.

All submerged or intermittently submerged materials shall have surface preparation and coatings applied prior to installation unless otherwise approved by the Engineer. All pipe, pipe supports, and pipe hangers that will be painted shall have surface preparation and coatings applied prior to installation.

B. PRIME COAT INSTALLATION

The Contractor shall prime all surfaces indicated to be painted, shall touch-up damaged primer coats prior to finish coats and shall assure field-applied coatings are compatible with factory-applied coatings. If coatings are not compatible, and if approved in writing by the Engineer, the Contractor shall apply a 2-mil-thick universal barrier coat recommended by the paint manufacturer prior to applying field coats or completely remove factory coatings and reprime.

The Contractor shall prime ferrous metals bedded in concrete to a minimum of 1 inch below exposed surfaces. The Contractor shall backroll all primer coats applied to existing or new CMU block. The Contractor shall assure sandblasting operations do not result in the embedment of sand particles in paint film. The Contractor shall brush or spray bolts, welds, edges and difficult access areas with primer prior to primer application over the entire surface being coated. The Contractor shall backroll concrete, masonry, gypsum board and plaster surfaces with a roller if the primer has been spray applied.

C. FINISH SCHEDULE

All work performed under this Contract (both new work and modifications to existing facilities) shall be painted. If the finish schedule requires wall surfaces to be painted in a particular space, the Contractor shall paint all appurtenant surfaces unless specifically noted not to be painted on the Plans.

3.5 FIELD QUALITY CONTROL

The Contractor shall be responsible for performing, testing and assuring conformance with all requirements of these Specifications.

The Contractor shall maintain daily records showing:

- Start date of work in each area.
- Date of application for each following coat.
- Moisture content and surface temperature of substrate. Also record weather conditions, ambient air temperature and dew point.
- Provisions utilized to maintain temperature and humidity of work area within paint manufacturer's recommended ranges.

The Contractor shall measure the surface temperature of items to be painted with surface temperature gauges specifically designed for such use. The Contractor shall measure substrate humidity with humidity gauges specifically designed for such use. The Contractor shall measure wet paint with wet film thickness gauges. The Contractor shall measure paint dry film thickness with a Mikrotest gauge calibrated against the National Bureau of Standards "Certified Coating Thickness Calibration Standards." The Engineer may direct measurement of paint thickness at any time during the project to ensure conformance with these Specifications. A sufficient number of dry film thickness measurements shall be made so that there is approximately one measurement for each 100 square feet of surface area painted.

Where a wall or ceiling or other type of surface is disturbed and patched, the Contractor shall repaint entire wall or ceiling. The Contractor shall provide wet paint signs as necessary. The Contractor shall touch up damaged finish coats using the same material as specified for the finish coat.

At the conclusion of all painting activities, Contractor shall submit a painting field test report to the Engineer showing the above information plus results of wet film and dry film thickness tests. Provide four copies of final test report.

3.6 PAINTING SITE

Either shop painting or field painting and surface preparation shall be acceptable when painting work is performed in conformance with this Section, unless the painting is activity specified elsewhere in these Specifications.

3.7 PAINT THICKNESS

All paint thicknesses specified herein are minimum dry film thickness (MDFT). The thickness of paint over metallic surfaces shall be measured with a magnetic thickness gauge; paint thickness over wood or masonry shall vary in accordance with surface texture, but in no case shall the manufacturer's recommended coverage rate be exceeded. The minimum thicknesses given are total coating thickness for the coating specified, including multiple coats of the same material, where applicable.

***** END OF SECTION *****

DIVISION 15
MECHANICAL

SECTION 15300

FIRE PROTECTION SYSTEM

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes designing, detailing, fabricating, furnishing, delivering, storing, installing, and testing of modifications to an existing fire alarm and sprinkler system as specified herein.

The system shall be by an entity specializing in the design, coordination, procurement, and installation of equipment associated with the protection of buildings utilized for commercial and industrial purposes, herein referred to as the Fire Alarm and Sprinkler System Contractor. The fire alarm and sprinkler system modifications shall be provided complete with any and all equipment, appurtenances, and accessories required for a complete and workable system.

1.2 RELATED WORK SPECIFIED ELSEWHERE

<u>Section</u>	<u>Item</u>
01300	Submittals
Division 16	Electrical

1.3 QUALITY ASSURANCE

All equipment and materials covered by this Specification shall be designed, fabricated, manufactured, installed and tested in accordance with all currently approved or accepted provisions of the Codes listed herein, including Occupational Safety and Health Act (OSHA) and all federal, state, or city codes, laws or ordinances of the place of installation of work:

- A. National Fire Protection Association (NFPA 13, 14, 24, and 70)
- B. Underwriters' Laboratories (UL)
- C. American National Standards Institute (ANSI)
- D. American Water Works Association (AWWA)
- E. American Society of Testing Materials (ASTM)
- F. International Building Code (IBC)

- G. International Fire Code (IFC)
- H. All applicable federal, state and county ordinances
- I. Local Fire Marshal or Authority Having Jurisdiction

The Fire Alarm and Sprinkler System Contractor shall coordinate their modifications design and install the systems so that no interferences exist between the fire alarm piping or conduit and equipment and systems designed and installed by others.

The Fire Alarm and Sprinkler System Contractor shall be duly licensed in the State of Washington and regularly engaged in the installation of fire protection systems. All drawings shall be completed by a professional located in the State of Washington and by a professional with minimum of 10 years of design and installation experience for fire protection systems of similar size and scope.

The fire alarm system and security system shall be provided by Western States Fire Protection Co. (Redmond), Columbia Fire (Seattle), Allied Fire & Security (Kent), or equal.

1.4 DEFINITIONS

A. LISTED

Use of the word “listed” for fire protection equipment, components, etc., in this Section shall mean listed by UL and approved for fire protection.

B. APPROVED OR APPROVAL

Use of the word “approved” or “approval” in this Section shall require the approval or acceptance from the authorities having jurisdiction and the District.

1.5 PERMITS, CERTIFICATES, AND FEES

The Fire Alarm and Sprinkler System Contractor shall be responsible for obtaining all permits, certificates, fees, and other approvals required to satisfactorily complete the scope of work described herein and shall forward copies of all permits and Certificates of Inspection to the General Contractor who shall immediately submit them to the Owner.

A Fire Alarm system permit will be required through the Authority Having Jurisdiction (AHJ). The Fire Alarm system Contractor shall obtain all approvals or acceptance of AHJ and must pay all associated costs. Any ordering of material, fabrication or installation initiated prior to receiving approval from the Owner or the AHJ to proceed shall be entirely at the Fire Alarm and Sprinkler System Contractor's risk.

Any additional permits, inspections, or approvals will be the responsibility of the Contractor, in coordination with the Fire Alarm and Sprinkler System Contractor.

1.6 SUBMITTALS

Submittals shall be provided in accordance with Section 01300 of this Specification. In addition to the minimum requirements listed in Section 01300, the Contractor shall provide the following information, which shall be prepared by a qualified professional with expertise in fire alarm and security system design.

A. SYSTEM DESIGN

1. As-building of existing system as required for design of modifications.
2. Proposed system equipment shop drawings.
3. Proposed system floor plan and piping plans.
4. Proposed system wiring diagram.
5. Specifications and technical information for all components of each system to be supplied.

B. SYSTEM CONSTRUCTION

1. Construction floor plan and piping plans.
2. Bill of materials.
3. Location of alarm initiating and notification appliances.
4. Alarm control and trouble signaling equipment.
5. Annunciation.
6. Power connections.

7. Battery calculations (if applicable).
8. Conductor type and size.
9. All technical information for the equipment to be installed including wiring diagrams and/or manufacturer's literature, troubleshooting and/or repair information, maintenance information.
10. Installation details including mounting height, orientation, and required materials.
11. The interface of fire safety control functions.

C. **SYSTEM COMPLETION AND TESTING**

1. Record drawings as required in Section 01720 of this Specification
2. Final wiring diagrams
3. Operation and maintenance manuals
4. Software programming materials as necessary
5. Complete testing and analysis report

PART 2 PRODUCTS

2.1 FIRE ALARM SYSTEM

A. **GENERAL**

The fire alarm system shall utilize new, high-quality materials suitable for installation in a commercial/industrial application.

The information below is provided as the minimum requirement for a complete fire alarm system. It is the responsibility of the Fire Alarm and Sprinkler System Contractor to provide any additional equipment, accessories, or appurtenances that would be required for a complete and workable system as described herein.

The design shall include a list of the required size of all conduit between the fire indicator panel and the individual alarm devices.

The design shall also include a list of the required size of all conductors between the fire indicator panel and the individual alarm devices.

B. FIRE ALARM AND SIGNAL DEVICES

1. Heat Detectors

The fire alarm system shall include heat detectors that will alert occupants in the event of a fire. The detectors will also send an alarm signal to the field indicator panel, which will in turn notify the Owner and the appropriate authorities that a fire alarm has been activated.

The detectors shall be low-profile design, and shall utilize both “rate-of-rise” and temperature set point sensing processes. The devices shall be compatible with the field control panel and all other components provided with the fire alarm system design and shall include at least two Form C dry contacts.

Detectors shall be provided with accessory back boxes required for surface mounting to the building walls/roofing. Back boxes shall include punch outs for direct conduit connection.

2. Audible/Visual Combination Device

The fire alarm system shall include audible-visual strobe devices. Strobe devices shall provide both a visual and audible indication that a fire alarm signal has been triggered.

Strobe devices shall provide field adjustable candela values up to 110 candelas. Horn and strobe devices shall be synchronized to operate in unison should one system receive an alarm signal. Audible tone style and volume shall be field selectable. The strobe device shall be tamperproof and shall be provided with mounting bracket for surface mounting. Mounting bracket shall include punch outs for direct conduit connection. Strobes shall be die-cast metal housing, and shall be painted red according to the manufacturer’s standard coating procedures.

Exterior strobe devices shall be suitable for outdoor installation, and shall be provided with weatherproof, water tight enclosures that will maintain the full function of the visual and audible alarm signals. All conduit and/or back plate connection locations shall be

gasketed to protect against moisture damage. Specialized mounting accessories for any weatherproof enclosures shall also be provided.

Equipment shall be UL listed and must include a 3-year warranty. The strobe devices shall be compatible with the fire indicator control panel specified herein.

3. Manual Pull Stations

The fire alarm system shall include fire alarm manual pull stations. At a minimum, manual pull stations shall be provided as shown on the Plans. Additional stations, as required for fire alarm system approval, shall also be provided. Pull stations shall be provided such that any individual may trigger a fire alarm. If a manual pull station is triggered, the audible/visual strobe devices shall be enabled, and a signal shall be sent to the existing master fire alarm panel.

Pull stations shall be field-programmable, addressable, and shall be the double-action PUSH-PULL type. Stations shall be provided with back boxes and gaskets as required for surface mounting, and shall be suitable for indoor applications. Stations shall be die-cast metal housing, and shall be painted red according to the manufacturer's standard coating procedures. Back boxes shall contain at least two punch outs for direct conduit connection.

Equipment shall be UL listed and shall be provided with a 3-year warranty. The manual pull stations shall be compatible with the fire indicator control panel specified herein.

4. Intercommunication Devices

The design shall include any and all intercommunication devices or modules required for communication between fire alarm equipment and the fire indicator panel. Additional intercommunication equipment shall be specifically called out in during the design and submittal period. Design shall include cellular-based communication for all dial-out features.

C. CONDUIT AND CONDUCTORS

All conductors between devices, and between devices and the field indicator panel shall be in conduit. All conduits and conduit bodies in the Chemical Room shall be PVC-40.

While the Fire Alarm and Sprinkler System Contractor will provide design for the conduits and conductors, the intent for the project is that the General Contractor shall provide and install the conduits and conductors specified by the Fire Alarm and Sprinkler System Contractor in accordance with the approved and permitted design. See Part 3 of this Section for additional information regarding installation.

2.2 FIRE SPRINKLER SYSTEM

A. PIPE AND FITTINGS

Schedule 40 ASTM A53 black steel pipe with 125 psi, UL-rated ASTM A47 malleable iron or ASTM A536 ductile iron fittings and grooved joint couplings, chlorinated butyl gaskets, ASTM A183 nuts and bolts; Central, Victaulic, Gruvlock or equal.

B. SPRINKLER HEADS

Sprinkler heads shall be UL listed institutional type pendent 1/2-inch male thread, bronze finish, ordinary temperature rating, Grinnell Universal model A, or approved. Provide head style as appropriate for installation locations and guards where required by code.

PART 3 EXECUTION

3.1 DELIVERY, STORAGE, AND HANDLING

All equipment shall be completely factory assembled, crated or boxed and delivered to protect against damage during shipment.

All exposed components shall be covered and sealed with shrink-wrap to prevent the entrance of moisture. Finished iron or steel surfaces not painted shall be properly protected to prevent rust and corrosion.

All equipment delivered to the site shall be stored in accordance with the manufacturer's recommendations.

3.2 INSTALLATION

Installation shall be as shown on the approved submittal documents and shall be in strict accordance with the equipment manufacturer's recommendations. Installation shall also be in accordance with current "best practices" of the industry. Installation of piping, cable and conduit for each system shall be coordinated with other trades to ensure adequate space for piping placement. System installers and Contractors shall thoroughly review plans, specifications and shop drawings of other trades to coordinate work, and any conflicts that arise as a result of the proposed system equipment placement shall be brought to the attention of the Engineer.

Conduit installation and pulling of conductors shall be by the electrical contractor performing the work on the rest of the project. Terminations shall be by those with all certifications required for fire and security installations.

Piping installation shall be in accordance with NFPA 13 to include hangers, supports and seismic bracing. Piping shall be installed straight, true, and plumb. Hangers, flexible connectors and earthquake bracing shall be in compliance with NFPA 13 and the AHJ.

Provide fire proofing of penetrations as required by the Building Codes and the AHJ.

Install accurately cut steel piping to measurements established at the jobsite, free of fins and burrs. Install using full pipe length; random pipe lengths joined by couplings will not be accepted. Clean all piping before placing in position and maintain in a clean condition. Work into place without springing or forcing. Support pipe from structural members only. For pipe joints, provide full; cut threads. Apply pipe compound on male threads only. Connect joints so that not more than three threads on the pipe remain exposed.

Install drips and drains where necessary to discharge to standard interior floor drains or sinks, to standpipe drains or to sumps. Do not direct connect to any of the sewer systems. Install drain valves at low points of all piping to permit complete drainage of the system without disconnection of any piping.

Provide chrome-plated escutcheon plates at exposed pipe penetrations of ceilings, floors and walls.

3.3 CLEANUP

At the completion of each portion of work, all waste material, rubbish, equipment, and surplus material shall be removed from the site. The Fire Alarm and Sprinkler System Contractor is responsible for the daily clean up of their work.

3.4 SYSTEM TESTING

A. FIRE SYSTEM OPERATIONAL TESTING

Contractor shall perform thorough operational testing of all equipment in order to verify that all equipment is fully operational and has been installed correctly. A checklist of all equipment, whether or not this equipment was tested, and whether or not the equipment successfully completed the operational testing phase shall be provided. Once testing is completed, provide written certification to the Engineer that all equipment has successfully passed the operational testing within five working days of test completion.

B. FIRE SYSTEM ACCEPTANCE TESTING

The Contractor shall perform final acceptance testing of all fire protection system equipment in the presence of the Owner, and if desired, the Engineer. Acceptance testing shall verify that the fire protection equipment components are able to operate as complete, workable systems and will provide their necessary function(s). The Contractor shall be responsible for providing all personnel, lifts, tools, testing devices, radios, and all other equipment that may be necessary to complete the testing procedures. After completion of the acceptance testing, all noted deficiencies shall be remedied within 72 hours. Depending on the number of deficiencies noted, the Owner may request additional acceptance testing. All associated costs incurred as a result of additional acceptance testing shall be the responsibility of the Contractor.

3.5 TRAINING

Training shall be provided by factory trained representatives from the fire alarm system manufacturer. Training shall cover the operation, maintenance, and troubleshooting of each type of device provided. At a minimum, training shall include arming, disarming, activation, resetting of zones or equipment, and basic operational functions for the typical regular use of the respective equipment.

3.6 MANUFACTURER'S SERVICES

The services of a factory-trained representative of the fire protection equipment manufacturer shall be provided by the Contractor. Services shall include 8 hours on-site (over multiple visits) for each system for the supervision of equipment startup, testing and instruction of the Owner's personnel in the operation and maintenance of the equipment. A minimum of one trip shall be for installation inspection, certification and testing; and a minimum of one trip shall be for startup and training. Instruction and training of the Owner's personnel shall not take place until startup is completed and the equipment is fully operational and shall be at a time and location agreed to by the Owner. The cost of these services shall be included in the bid price.

***** END OF SECTION *****

MEASUREMENT AND PAYMENT

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SECTION 4

MEASUREMENT AND PAYMENT

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Section 4 - Measurement and Payment

Bid Item Introduction

It is the intent of these Specifications that the performance of all work under the bid items shall result in the complete construction, in proper operating condition, of the facilities described. It is understood that any additional material or work required to place the facilities in operating condition shall be provided by the Contractor as work covered by the listed bid items and shall be considered incidental thereto.

Submittals, shop drawings, calculations, startup, testing, training, warranties, and operation and maintenance manuals as required shall be considered incidental to the various items of work and no additional compensation will be allowed.

Mobilization

The lump sum price bid for MOBILIZATION shall be full compensation for all labor, equipment, tools and materials required for preparatory work and operations, including, but not limited to the following items:

1. The movement of personnel, equipment, supplies and incidentals to the project site as related to project mobilization, demobilization and cleanup.
2. The establishment of field offices and material storage areas.
3. Purchase, delivery and storage of pipe, fittings, appurtenances, and all other materials required for the project.
4. Insurance, bonding, submittals and other work and operations that must be performed or costs incurred before beginning contract work.
5. Mobilization costs for subcontracted work.

Payment for MOBILIZATION shall be as follows:

25% Payment: When Contractor has mobilized on-site and temporary facilities are in place.

25% Payment: When 5 percent of the total pay items are completed (not including payment for materials on hand).

25% Payment: When 50 percent of the total pay items are completed (not including payment for materials on hand).

25% Payment: When Project is completed and recommended for acceptance.

In no event shall the amount bid or allowed for Mobilization exceed 5% of the total Contract Price for all other items listed in the Bid.

Minor Changes

Measurement will be negotiated prior to commencing any such work under this pay item and shall be for work to remedy unforeseen conditions or for additional work requested by the Owner.

Payment or credits for changes amounting to \$15,000 or less may be made under the Bid Item MINOR CHANGE. At the discretion of the Owner, this procedure for Minor Changes may be used in lieu of the more formal procedure as outlined in General Conditions Section 8.23. The Contractor will be provided a copy of the completed order for Minor Changes. The agreement for the Minor Changes will be documented by signature of the Contractor or notation of the verbal agreement. If the Contractor is in disagreement with anything required by the order for Minor Changes, the Contractor may protest the order as provided in General Conditions Section 8.23.

Payments or credits will be determined in accordance with General Conditions Section 8.23. All Minor Change work will be within the scope of the Contract Work and will not change Contract Time. For the purpose of providing a common Proposal for all Bidders, the Owner has entered an amount for MINOR CHANGE in the Proposal to become part of the total Bid by the Contractor.

Demolition and Disposal

Measurement shall be by lump sum. The lump sum contract price for DEMOLITION AND DISPOSAL shall include all costs for labor, materials, tools and equipment to demolish existing structural and architectural building and site elements as shown on the Plans and described in Section 01900 of these Specifications.

Sectional Overhead Door

Measurement shall be by lump sum. The lump sum contract price for SECTIONAL OVERHEAD DOOR shall include all labor, materials, tools and equipment to furnish and install the motorized sectional overhead door as shown on the Plans and described in Section 08360 of these Specifications.

Building Improvements

Measurement shall be by lump sum. The lump sum contract price for BUILDING IMPROVEMENTS shall include all labor, materials, tools and equipment to furnish and install the necessary Building B improvements required for this project

including, but not necessarily limited to, the new personnel door, structural improvements, modifications to fire sprinkler system, and painting, as shown on the Plans and as specified herein.

Cross Bracing Reinstallation

Measurement shall be by lump sum. The lump sum contract price for CROSS BRACING REINSTALLATION shall include all labor, materials, tools and equipment to reinstall (relocate) the removed structural "X"-bracing as shown on the Plans.

Concrete

Measurement shall be by lump sum. The lump sum contract price for CONCRETE shall include all labor, materials, tools and equipment to furnish and install the concrete approach slab, concrete driveway, concrete curb, concrete curb and gutter, and concrete sidewalk including concrete testing, vegetation removal, removing and capping effected sprinkler system elements, and crushed surfacing beneath concrete as shown on the Plans and as specified herein.

Bollards

Measurement shall be per each. The unit contract price per each for BOLLARDS, shall include all labor, materials, tools and equipment to furnish and install bollards and bollard caps as shown on the Plans and as specified herein.

HMA

Measurement shall be ton. The unit contract price bid for HMA, shall include all labor, materials, tools and equipment to provide hot mix asphalt including, but not limited to, sawcutting, planing of asphalt surface, placing and testing hot mix asphalt, tack coat, cleaning and sealing joints, compaction, pavement markings, and adjusting castings to grade, as shown on the Plans and as described in Section 02740 of these Specifications.

General Restoration

Measurement shall be by lump sum. The lump sum contract price for GENERAL RESTORATION shall include all labor, material, tools and equipment to restore disturbed ground surfaces and existing improvements to their pre-construction condition or better, not including work covered by other bid items. This item shall include, but not be limited to, miscellaneous surface restoration, grading, protection and/or replacement of landscaping.

Electrical

Measurement shall be by lump sum. The lump sum contract price for ELECTRICAL shall include all labor, materials, tools and equipment to furnish and install electrical modifications required for construction of the project as shown on the Plans and as specified herein.

PROPOSAL

SECTION 5

Proposal

Honorable Commissioners
Northshore Utility District
King County, Washington

Dear Members of the Board:

The undersigned has examined the site, specifications, plans, laws and ordinances covering the improvements contemplated. In accordance with the terms, provisions and requirements of the foregoing, the following lump sums and unit prices are tendered as an offer to perform the work and furnish the equipment, materials, appurtenances and guarantees, where required, complete in place, in good working order.

As evidence of good faith, cash, bid bond, cashier's check, certified check, or postal money order made payable to the King County Treasurer is attached hereto. The undersigned understands and here agrees that, should this offer be accepted and the undersigned fail or refuse to enter into a contract and furnish the required construction performance bond and necessary liability insurance, the undersigned will forfeit to the District an amount from the "good faith token", equal to five percent (5%) of the amount bid as liquidated damages, all as provided for in the specifications.

The undersigned hereby proposes to undertake and complete the work embraced in this improvement, in accordance with the terms of the specifications and contract documents, at the following lump sum and unit prices.

Please find attached the itemized listing for said lump sum and unit prices, receipt of addenda, non-collusion declaration, the bidder responsibility checklist, the subcontractor responsibility checklist, the statement of bidder's qualifications, and the proposed subcontractors list for Contract C2503; Building B Bay Door Replacement.

ATTACHMENTS
C2503; BUILDING B BAY DOOR REPLACEMENT

Item	Item Description	Units	Quantity	Unit Price	Amount
1.	Mobilization	LS	1		
2.	Minor Changes	EST	1	\$15,000.00	\$15,000.00
3.	Demolition and Disposal	LS	1		
4.	Sectional Overhead Door	LS	1		
5.	Building Improvements	LS	1		
6.	Cross Bracing Reinstallation	LS	1		
7.	Concrete	LS	1		
8.	Bollards	EA	2		
9.	HMA	TN	60		
10.	General Restoration	LS	1		
11.	Electrical	LS	1		
Subtotal					\$
10.3% Sales Tax					\$
Total					\$

Receipt of Addenda

Addendum No.	Date Received	Name of Recipient

Note: Failure to acknowledge receipt of the addenda will be considered an irregularity in the proposal.

BIDDER RESPONSIBILITY CHECKLIST

The following checklist is used in documenting that a bidder meets the mandatory Bidder Responsibility Criteria. Please print a copy of documentation from the appropriate website to be included with the submittal.

General Information	
Project Name: Contract C2503; Building B Bay Door Replacement.	Project Number:
Bidder's Business Name:	Bid Submittal Deadline:
Contractor Registration	
License Number:	Status: Active: Yes ☐ No ☐
Effective Date (must be effective on or before Bid Submittal Deadline):	Expiration Date:
Contractor and Plumber Infraction List	
Is Bidder on Infraction List?	Yes ☐ No ☐
Current UBI Number	
UBI Number:	Account Closed: Open ☐ Closed ☐
Industrial Insurance Coverage	
Account Number:	Account Current: Yes ☐ No ☐
Employment Security Department Number	
Employment Security Department Number:	
Please provide a copy of your latest correspondence, containing your account number, with Employment Security Department. Please do not provide document containing personal information such as social security numbers.	
State Excise Tax Registration Number	
Tax Registration Number:	Account Closed: Open ☐ Closed ☐
Not Disqualified from Bidding	
Is the Bidder listed on the "Contractors Not Allowed to Bid" list of the Department of Labor and Industries? Yes ☐ No ☐	
Contractor Public Works Training (RCW 39.04.350 & RCW 39.06.020)	
Has the Bidder satisfied the PW training requirements? Yes ☐ No ☐	
Information Supplied by:	
Print Name of Bidder Representative:	Date:
Verified by:	
Signature of District Employee:	Date:

SUBCONTRACTOR RESPONSIBILITY CHECKLIST

The following checklist is used in documenting that a subcontractor of any tier meets the subcontractor responsibility Criteria. Bidder must complete one of these forms for each of the first-tier subcontractor. Please print a copy of the documentation from the appropriate website to be included with the submittal.

General Information	
Project Name: Contract C2503; Building B Bay Door Replacement.	Project Number:
Subcontractor's Business Name:	Subcontract Execution Date:
Contractor Registration	
License Number:	Status: Active: Yes ☐ No ☐
Effective Date (must be effective on or before Subcontract Bid Submittal Deadline):	Expiration Date:
Contractor and Plumber Infraction List	
Is Subcontractor on Infraction List? Yes ☐ No ☐	
Current UBI Number	
UBI Number:	Account Closed: Open ☐ Closed ☐
Industrial Insurance Coverage	
Account Number:	Account Current: Yes ☐ No ☐
Employment Security Department Number	
Employment Security Department Number:	
• Has Subcontractor provided account number on the Bid Form? Yes ☐ No ☐ • And/or have you asked the Subcontractor for documentation from Employment Security Department on account number? Yes ☐ No ☐	
State Excise Tax Registration Number	
Tax Registration Number:	Account Closed: Open ☐ Closed ☐
Not Disqualified from Bidding	
Is the Subcontractor listed on the "Contractors Not Allowed to Bid" list of the Department of Labor and Industries? Yes ☐ No ☐	
Contractor Licenses	
<u>Electrical:</u> If required by Chapter 19.28 RCW, does the Subcontractor have an Electrical Contractor's License? Yes ☐ No ☐	<u>Elevator:</u> If required by Chapter 70.87 RCW, does the Subcontractor have an Elevator Contractor's License? Yes ☐ No ☐
Contractor Public Works Training (RCW 39.04.350 & RCW 39.06.020)	
Has the Subcontractor satisfied the PW training requirements? Yes ☐ No ☐	
Information Supplied by:	
Print Name of ☐ Contractor ☐ Subcontractor Representative:	Date:
Verified by:	
Signature of District Employee:	Date:

STATEMENT OF BIDDER'S QUALIFICATIONS

Contracting Firm Name:
Number of years Contractor has been in the construction business under the present firm name:
Present gross dollar amount of work under contract: \$
Present gross dollar amount of contracts not yet completed: \$
General type of work performed by firm:

List the five major pieces of equipment to be used on this project:	Owned	Leased	Rented
1.			
2.			
3.			
4.			
5.			

List the general superintendents or other supervisory employees at your firm:	# of Years at Firm
Employee 1:	
Employee 2.:	
Employee 3:	

Bank Reference:
Have you changed bonding companies within the last three years?
If so, why? (optional)

PROPOSED SUBCONTRACTORS

Consistent with RCW 39.30.060, each Bidder on a project in excess of \$1,000,000 is required to submit the completed Subcontractors list included in the proposal section with the bid. The completed list must identify each subcontractor who will perform heating, ventilation and air-conditioning (HVAC), or plumbing work as described in Chapter 18.106 RCW, electrical work as described in Chapter 19.28 RCW, or the contractor must name itself for the work. The requirement to name the Bidder's proposed HVAC, plumbing and electrical subcontractor applies only to those subcontractors who will contract directly with the Bidder (i.e. first-tier subcontractors only, even if that first-tier subcontractor intends to hire a sub-tier contractor to perform all or part of the HVAC, plumbing or electrical work

The Bidder shall not list more than one subcontractor for each category of work identified, unless subcontractors vary with bid alternates, in which case the Bidder must indicate which subcontractor will be used for which alternates.

Failure of the Bidder to submit as part of the bid the names of such subcontractors, or name itself to perform such work, or the naming of two or more subcontractors to perform the work, shall render the Bidder's bid it nonresponsive and therefore void.

In completing the form, Bidders are advised that: 1) Ventilation is typically required to meet safety requirements for enclosed spaces and tunnels or certain shafts, but it may be incidental to other parts of the work, and may be required for the temporary construction facilities; 2) No plumbing work within buildings (as described in Chapter 18.106 RCW) has been specified in the contract, however plumbing work may be required for the temporary construction facilities and elsewhere in the contract documents; 3) Electrical work may be incidental to the work such as encountered with traffic control systems, electrical service to buildings and street lights, distribution wiring, conduit and junction box installation, generators, temporary electrical service and wiring for construction equipment and dewatering systems. In each instance above, the Bidder should list the work in the table(s) above. Other areas may be identified by the Bidder in the contract documents as well.

The subcontractors list may be submitted with the Bid, or 1) HVAC, Plumbing, or Electrical may be submitted separately within one hour of the time and date for Bid submittal stated in the Call for Bids or by addendum; 2) Structural Steel Installation and Rebar Installation may be submitted within 48 hours of the time and date for Bid submittal stated in the Call for Bids or by addendum. The form may be submitted in person or by facsimile (FAX number (425) 398-4430) to:

Northshore Utility District
Attention: Sardar Muntasir
6830 NE 185th St
Kenmore, WA 98028

STRUCTURAL STEEL INSTALLATION	
Firm Name:	% of Project:
Contact Person:	
Address:	
City, State, Zip Code:	
Phone #:	Fax #:
E-mail Address:	

REBAR INSTALLATION	
Firm Name:	% of Project:
Contact Person:	
Address:	
City, State, Zip Code:	
Phone #:	Fax #:
E-mail Address:	

HVAC SUBCONTRACTOR	
Firm Name:	% of Project:
Contact Person:	
Address:	
City, State, Zip Code:	
Phone #:	Fax #:
E-mail Address:	

PLUMBING SUBCONTRACTOR	
Firm Name:	% of Project:
Contact Person:	
Address:	
City, State, Zip Code:	
Phone #:	Fax #:
E-mail Address:	

ELECTRICAL SUBCONTRACTOR	
Firm Name:	% of Project:
Contact Person:	
Address:	
City, State, Zip Code:	
Phone #:	Fax #:
E-mail Address:	

Subject to the time lost due to inclement weather and delay in delivery of materials, should such delay not be the result of the undersigned's actions, the undersigned agrees to complete all of the work embraced in this contract in 30 working days, all beginning with the date of written Notice to Proceed with the work.

The undersigned fully understands and agrees to the provisions of the Information for Bidders and herewith further agrees that the liquidated damages shall be \$1,400.00 per day for each and every working day required beyond the construction time allowed above to complete this project.

Contractor Name:	
Contact Name:	
Mailing Address:	
Office Phone #:	
Cell Phone #:	
E-mail:	

NON-COLLUSION DECLARATION

I, by signing the proposal, hereby declare, under penalty of perjury under the laws of the United States that the following statements are true and correct:

1. That the undersigned person(s), firm, association or corporation has (have) not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this proposal is submitted.
2. That by signing the signature page of this proposal, I am deemed to have signed and to have agreed to the provisions of this declaration.

Signature: _____

Print Name: _____

Title: _____

Date Signed: _____

BID BOND FORM

Herewith find deposit in the form of a certified check, cashier's check, cash, or bid bond in amount of \$_____, which amount is not less than five percent (5%) of the total bid.

SIGN HERE _____

BID BOND for Contract: Contract C2503; Building B Bay Door Replacement.

KNOW ALL MEN BY THESE PRESENTS: That we,
_____, as Principal, and

_____,
as Surety are held and firmly bound unto the King County Treasurer, King County, Washington, as Obligee in the penal sum of _____ for the payment of which the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

The conditions of the obligation are such that, if the Obligee shall make any award to the Principal for _____, according to the terms of said proposal or bid and award and shall give bond for the faithful performance thereof, with Surety or Sureties approved by the Obligee; or if the Principal shall, in case of failure so to do, pay and forfeit to the Obligee the penal amount of the deposit specified in the Call for Bids, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect and the surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this bond.

SIGNED, SEALED AND DATED this _____ day of _____, 20____.

By _____
Principal

By _____
Surety

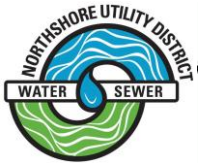
Received return of deposit in the sum of \$ _____,
on _____, 20____.

BIDDER'S CHECKLIST

This checklist is intended to assist the Bidder in completing the Proposal. The Bidder should carefully review the Proposal form and Contract Documents to ensure a responsive bid is submitted.

- ☐ Bidders must bid on all items contained in the Proposal. Fill in the bid proposal form(s) included in this section, entering the unit price and total amount for each bid item. Verify all math.
- ☐ Only use the bid proposal form(s) included in this document or those issued with an addenda.
- ☐ Acknowledge receipt of any addenda.
- ☐ Fill out the *Non-Collusion Declaration*.
- ☐ Fill out the *Bidder Responsibility Checklist*.
- ☐ Fill out the *Subcontractor Responsibility Checklist*.
- ☐ Fill out the *Statement of Bidder's Qualifications*.
- ☐ Fill out the *Proposed Subcontractors* list.
- ☐ Sign and date the proposal on the final page of the proposal and include all of the contact information as indicated.
- ☐ Submit the bid security (in the form of a certified check, cashier's check, cash or bid bond, with amount is not less than 5% of the bid total) with the proposal and fill out the Bid Bond Form.
- ☐ Submit the entire Proposal section from the contract documents as your bid documents.
- ☐ Within 2 business days, provide Supplemental Bidder Criteria Checklist as included in Appendix B.

CONTRACT



SECTION 6

Contract

THIS CONTRACT is dated this _____ day of _____, 20____, by and between Northshore Utility District, ("District"), a Washington municipal corporation, and _____ ("Contractor"), a _____.

In consideration of the mutual covenants hereinafter set forth, District and Contractor agree as follows:

ARTICLE 1. DESCRIPTION OF WORK.

The Contractor shall complete the work as specified under the Bid Schedule(s) of Section 5 – Proposal & Bid Bond of the District's Contract Documents entitled Contract C2503; Building B Bay Door Replacement. The work is generally described as follows:

Project Description

Contract C2503; Building B Bay Door Replacement

The project consists of the following work:

Demolition and removal of existing Building B bay door, installation of new bay door, relocation of personnel door and affected utilities within building, installation of new concrete approach slab and asphalt truck ramp, and site restoration.

ARTICLE 2. WORK COMPLETION TIME.

The work shall be completed within 30 working days from the commencement date stated in the "Notice to Proceed" as described in Section 7 – Definitions and Abbreviations.

ARTICLE 3. LIQUIDATED DAMAGES.

District and the Contractor recognize that time is of the essence of this Contract and that the District will suffer financial loss if the work is not completed within the time period specified in Article 2 herein, plus any Extension thereof allowed in accordance with Section 8 – General Conditions. They also recognize the delays, expense, and difficulties involved in proving in a legal proceeding, the actual loss suffered by the District if the work is not completed on time. Accordingly, instead of requiring any such proof, the District and the Contractor



agree that as liquidated damages for delay (but not as a penalty), the Contractor shall pay the District \$1,400.00 for each day that expires after the work completion time specified in Article 2 herein.

ARTICLE 4. CONTRACT PRICE

District shall pay Contractor for completion of the work in accordance with the Contract Documents in current funds the amount set forth in the Bid Schedule(s) of Section 5 – Proposal & Bid Bond.

ARTICLE 5. CONTRACT DOCUMENTS.

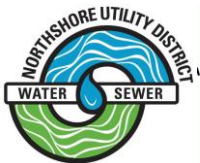
The Contract Documents which comprise the entire agreement between District and Contractor concerning the work consist of this Contract and the following attachments to this Contract:

- Section 1 Instructions to Bidders
- Section 2 Special Provisions
- Section 3 Engineering Specifications
- Section 4 Measurement and Payment
- Section 5 Proposal
- Section 6 Contract
- Section 7 Definitions and Abbreviations
- Section 8 General Conditions
- Section 9 Supplementary General Conditions
- Plans consisting of 16 sheets, as listed in the Special Provisions.
- Addenda numbers _____ inclusive.
- Change Orders, which may be delivered or issued after the date of this Contract, are not attached hereto.
- Permit and easement stipulations.

There are no Contract Documents other than those listed in this Article.

ARTICLE 6. MISCELLANEOUS.

An assignment by a party hereto of any rights under or interests in the Contract Documents will not be binding on the other party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such consent, and unless specifically stated to the contrary in any written consent to an assignment, an assignment will not release or discharge the assignor from any duty or responsibility under the Contract Documents.



District and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

IN WITNESS WHEREOF, District and Contractor have caused this Contract to be executed the day and year first above written.

DISTRICT

CONTRACTOR

By Ethan Maiefski,
its General Manager

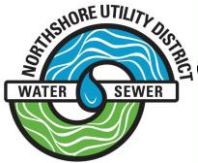
By _____
its: _____

Address for giving notices:

6830 NE 185th Street,
Kenmore, WA 98028

Address for giving notices:

License No.:



MANAGEMENT OF RETAINED PERCENTAGE

The Contractor shall declare an option for management of statutory retained percentage of this Contract by initialing and dating the applicable box below:

Option 1 ☐

The Contractor hereby elects to have the retained percentage of this Contract held in a non-interest bearing fund by Northshore Utility District until sixty (60) days (minimum) following formal Acceptance of the work. The time of release of the retained percentage shall depend upon final receipt by the District of all required releases from the State of Washington.

Option 2 ☐

The Contractor hereby elects to have Northshore Utility District place the retained percentage of the Contract in escrow from time to time as such retained percentage accrues. Contractor hereby designates the following bank or trust company as the repository for said funds:

Name of Financial Institution: _____

Address of Financial Institution: _____

Escrow Account Number: _____

The Contractor understands that the District will issue a check or checks representing the retained percentage payable to the financial institutions and the Contractor jointly. This check shall be converted into bonds and securities chosen by the Contractor and approved by the District and the bonds and securities shall be held in escrow. Interest on the bonds and securities shall be paid to the Contractor as the interest accrues. Contractor agrees to be fully responsible for payment of all costs or fees incurred as a result of placing said retained percentage in escrow and investing it as authorized by statute. Northshore Utility District shall not be responsible for any cost, fees or loss in connection therewith.

Option 3 ☐

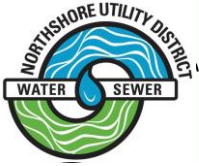
The Contractor hereby elects to have Northshore Utility District place the retained percentage of the Contract in an interest bearing account in a bank, mutual savings bank or savings and loan association. Contractor hereby designates the following bank or trust company as the repository for said funds:

Name of Financial Institution: _____

Address of Financial Institution: _____

Escrow Account Number: _____

Interest on moneys deposited into said fund by the District shall be paid to the Contractor. Contractor agrees to be fully responsible for payment of all costs or fees incurred as a result of placing said retained percentage in said account. Northshore Utility District shall not be responsible for any cost, fees or loss in connection therewith.

**Option 4**

Contractor hereby elects to post a retainage bond in the amount of 5% of the total bid, not including tax, in lieu of Northshore Utility District withholding the retained percentage from the monies earned by the Contractor. Contractor hereby designates the following surety company as bondholder (a copy of the bond must be attached to this form):

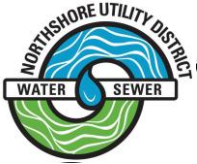
Name of Financial Institution: _____

Contact Name and Phone No.: _____

Address of Financial Institution: _____

Contractor's Signature

Date



PERFORMANCE, PAYMENT & GUARANTY BOND

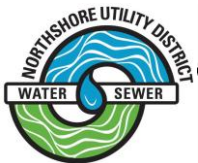
KNOW ALL MEN BY THESE PRESENTS: That we,
_____, the Contractor named in the contract
hereinafter referred to as Principal, and
_____, as
SURETY, are held and firmly bound unto the NORTHSHORE UTILITY
DISTRICT, hereinafter called and also being the DISTRICT named in said
contract,

Contract C2503; Building B Bay Door Replacement. in the full sum of
_____ Dollars, (\$_____) lawful
money of the United States of America, for the payment of which sum well and
truly to be made, we bond ourselves, our heirs, executors, assigns,
administrators and successors jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that, **WHEREAS,** the
Principal entered into a certain contract with the District, dated
_____, 20____ for construction of sanitary sewers and
appurtenances including restoration, in connection with the District's construction
of **Contract C2503; Building B Bay Door Replacement** in the County of King,
State of Washington.

NOW, THEREFORE, if the Principal shall well and truly and faithfully perform all
of the provisions and fulfill all of the undertakings, covenants, terms, conditions
and agreements of said contract during the period of the original contract and
any Extension thereof that may be granted by the District, with or without notice
to the Surety; and during the life of any guaranty required under the contract; and
shall also well and truly perform and fulfill all of the undertakings, covenants,
terms, conditions and agreements of any and all duly authorized modifications of
said contract that may hereafter be made; notice of which modifications to the
Surety being hereby waived; and furthermore shall pay all laborers, mechanics
and subcontractors and material men and all persons who shall supply such
person or persons and such Principal or subcontractors with provisions and
supplies for the carrying on of such work, shall indemnify and save harmless
District from all cost and damage by reason of the Principal's default or failure to
do so, and shall pay the State of Washington sales and use taxes, and amounts
due said State pursuant to Titles 50 and 51 of the Revised Code of Washington,
then this obligation to be void; otherwise to remain in full force and effect.

THIS BOND shall be continued in force for a period of two (2) years after
completion of the contract and acceptance by the District, and thereafter for such
additional period as shall be required for the performance by the Contractor



under this guaranty provision, or otherwise, of the contract.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their separate seals this _____ day of _____, 20____, the name and corporate seal of each corporate party hereto affixed, and these presents duly signed by its undersigned representatives pursuant to authority of its governing body.

Principal

Surety

By

By

Title

Title

Attest: (If Corporation)

Address:

By

Title

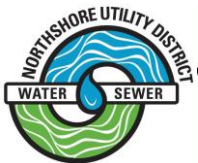
Corporate Seal:

Witness

1:

Witness

2:



Certificate as to Corporate Seal

I hereby certify that I am the (Assistant) Secretary of the Corporation named as Principal in the within Bond; that

_____, who signed the said Bond on behalf of the Principal, was _____ (title) of said Corporation; that I know its signature thereto is genuine and that said Bond was duly signed, sealed, and attested for and in behalf of said Corporation by authority of its governing body.

Secretary or Assistant Secretary

DEFINITIONS AND ABBREVIATIONS



SECTION 7

Definitions and Abbreviations

DEFINITIONS

The following terms as used in this Contract shall be defined and interpreted as follows:

Acceptance - The District's formal, written notice acknowledging completion and acceptance of the Work. Acceptance commences the time for submission of any third-party claims against performance or payment bonds under Chapter 39.08 RCW and statutory retention under Chapter 60.28 RCW.

Addendum - A written or graphic document issued by the District prior to the Proposal opening date that clarifies, corrects, or changes a document contained or referenced within the Bid Documents.

Adjusted Contract Work - The Contract Work as adjusted by any additive or deductive Change Orders executed prior to the District's termination of the Work or any portion thereof for convenience in accordance with Section 8.31 of the General Conditions.

As-Built Plans - A neatly and legibly marked set of Plans that reflect the manner in which the Work has been performed in the field. The requirements for the As-Built Plans are separately set forth in the Specifications.

Bidder - An entity that submits a Proposal for potential award of the Contract.

Bid Documents - All Contract Documents, excluding Change Orders, but including the Call for Bids.

Change Order - A document which is signed by Contractor and District and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Time, issued on or after the effective date of the Contract.

Claim - A written demand or assertion by the Contractor in accordance with Section 8.23 of the General Conditions after denial of a Request for Change Order seeking, as a matter of right, adjustment of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract.



Contract Documents - The Contract Documents shall consist of the following and, in case of conflicting provisions, the first mentioned shall have precedence:

- Change Orders
- Addenda
- Contract
- Measurement and Payment
- Standard Provisions
- General Conditions
- Special Provisions
- Engineering Specifications – Materials of Construction
- Engineering Specifications – Standards for Installation
- Reference Specifications
- Plans
- Instructions To Bidders
- Bid Proposal
- Permit and easement stipulations
- Performance, Payment, and Guaranty Bond

Contractor - The entity contracting to do the Work under these Contract Documents.

Contractor's Equipment - All equipment remaining in the Contractor's ownership and removed from the Site upon completion of the Project.

Contract - The written form executed by the District and Contractor that binds the Contractor to perform the Work in accordance with the Contract Documents.

Contract Price - The total amount payable by the District to the Contractor for performance of the Work in accordance with the Contract Documents.

Contract Time - The time allotted in the Contract for the Substantial Completion of the Work. The Contract Time begins upon Notice to Proceed and ends on the date of Substantial Completion of the Work by the Contractor.

Day - The term Day shall mean a calendar day unless otherwise specifically designated.

District - The entity that is a party to the Contract, contracting under the official name Northshore Utility District.

Engineer - The person identified in the Invitation to Bid responsible for administration of the Contract for the benefit of the District in accordance with the Contract Documents.



Equipment - The machinery, accessories, appurtenances, and manufactured articles to be furnished and/or installed under the Contract.

Inspector - A representative of the Engineer that is assigned to make inspections and record the progress of Contractor's performance of the Work. The Inspector has no authority to bind the District to any modification of the Contract Documents or liabilities of any kind.

Materials - Manufactured articles, materials of construction (fabricated or otherwise) and any other classes of material to be furnished in connection with the Contract.

Notice of Award - The official notice from the District that it intends to execute the Contract with the selected responsible, responsive Bidder.

Notice to Proceed - Written notice issued by the District that indicates that the Contractor can mobilize on the Site and begin all, or a designated part, of the Work. Notice to Proceed starts the running of the Contract Time.

Or Equal - Equal or better function, quality and performance to that specified in the Contract Documents. An item is not Or Equal if it is materially different, with respect to other constraints or requirements in the Contract Documents, in size, weight or other aspect from the item specified in the Contract Documents. Similarly, an item is not Or Equal if it is expected to have significantly higher total cost of ownership over the life of the completed Work.

Permit - Any and all permits required to comply with local, State, and Federal laws and regulations in performance of the Work.

Physical Completion - The time at which all of the Work has progressed to the point where (a) Contractor has achieved Substantial Completion, (b) the Contractor has completed all items identified on the Punch List to the District's satisfaction and (c) the Contractor has submitted and the District has accepted all required As-Built Plans.

Plans - All official drawings or reproductions of drawings made or to be made pertaining to the Work provided for in the Contract.

Project - The Work to be constructed in whole or in part through the performance of the Contract.

Project Records - All records that document the performance and/or cost of the Work as well as any materials as more fully defined in Section 8.7 of the General Conditions.

Proposal - The offer of a Bidder, on the prescribed bid form, properly executed, setting forth the price or prices for the Work to be performed.



Punch List - A list(s) of the physical construction that remains to be completed after the achievement of Substantial Completion of the Work, which must be satisfactorily completed in order to attain Physical Completion.

Reference Specifications - The technical specifications of other agencies incorporated or referred to herein.

Request for Information (RFI) - The written document by which the Contractor requests clarification, verification or information concerning a portion of the Work.

Responsible - A responsible Contractor or Subcontractor who complies with the requirements of RCW 39.04.010, 39.04.350, and 39.06.020 and any requirements of any applicable supplemental bidder responsibility criteria and who is determined to have: adequate financial resources to perform the Contract; the ability to comply with the required delivery or performance schedule; a satisfactory performance record; a satisfactory record of integrity; the necessary organization, experience, accounting and operational controls, and technical skills; the necessary construction equipment and facilities; and be otherwise qualified and eligible to be awarded the Contract under applicable laws and regulations.

Schedule - The plan prepared by the Contractor in accordance with the requirements of the Contract and reviewed by the Engineer setting forth the logical sequence of activities required for the Contractor's orderly performance and completion of the Work in accordance with the Contract. The Schedule includes updates – whether by progress schedule(s), recovery schedule(s) or otherwise – required by the Contract.

Shop Drawing - All shop details of structural steel, pipe, machinery, equipment, schedules and bending diagrams of reinforcing steel, and other detail drawings furnished by the Contractor as required and provided for in the Submittal requirements of the Contract Documents.

Site - The location(s) where the Work will be performed or constructed by the Contractor as set forth in the Plans and Specifications. The Site may at the District's option include areas identified by the District for Contractor's logistics or staging but does not include any areas separately secured by the Contractor, a Subcontractor of any tier, or supplier for use in connection with the Work (e.g. Contractor's home office, an off-site fabrication plant, etc.).

Specifications - The written requirements for contract administration, Materials, Equipment, systems, standards, and workmanship for the Work and for the performance of any related services.

Subcontractor - A business entity that has a direct contract with the Contractor to perform a portion of the Work. Unless the context clearly requires otherwise, the term Subcontractor includes all of the Subcontractor's authorized representatives.



Submittal - Written or graphic document (including electronic) or sample that is required by the Contract Documents and is prepared for the Work by the Contractor or a Subcontractor or supplier at any tier, and submitted to the District by the Contractor, including Shop Drawings, product data, samples, certificates, schedules of material or other data. Submittals are not Contract Documents.

Substantial Completion - The stage in the progress of the Work where:

1. The District has full and unrestricted use and benefit of the facilities for the purpose intended;
2. All the systems and parts of the Work are functional;
3. Utilities are connected and operate normally;
4. Only minor incidental Work or correction or repair remains to complete all applicable Contract requirements; and,
5. At the District's option, the Contractor has provided all applicable occupancy Permits and easement releases.

As provided in the Contract, the District at its sole option may also require or grant Substantial Completion to specific Schedules, milestones or subsystems or portions of the Work. The date(s) of Substantial Completion shall be determined, in writing, by the District.

Surety - Any firm or corporation executing a surety bond or bonds payable to the District, securing the performance of the Contract, either in whole or in part.

Work - The construction to be completed under the terms of this Contract as detailed more fully in the Plans and Specifications. Work specifically includes the furnishing of all labor, Materials, Equipment, and all incidentals necessary to the successful completion of the construction, whether expressly required by or reasonably inferable from the Contract Documents, whether they are temporary or permanent, and whether they are incorporated into the finished Work or not. Work also includes all other obligations imposed on the Contractor by the Contract. The Work is sometimes generally referred to as the "Project."

Working Day – The Contractor shall complete all physical Contract Work within the number of "working days" stated in the Section 1.6 or as extended by the Engineer in accordance with Section 8.26. Every day will be counted as a "working day" unless it is a nonworking day, or an Engineer determined unworkable day. A nonworking day is defined as a Saturday, a Sunday, a whole or half day on which the Contract specifically prohibits Work on the critical path of the Contractor's approved progress schedule, or one of the holidays listed in Section 2.1. When any of these holidays fall on a Sunday, the following Monday shall be counted a nonworking day. When the holiday falls on a Saturday, the preceding Friday shall



be counted a nonworking day. The days between December 25 and January 1 will be classified as nonworking days.

An unworkable day is defined as a half or whole day the Engineer declares to be unworkable because of weather or conditions caused by the weather that prevents satisfactory and timely performance of the Work shown on the critical path of the Contractor's approved progress schedule. Other conditions beyond the control of the Contractor may qualify for an extension of time in accordance with Section 8.23.

Each working day shall be charged to the Contract as it occurs, until the Contract Work is physically complete.

The Engineer will furnish the Contractor with a weekly report showing:

1. The number of Working Days charged against the Contract Time for the preceding week
2. The Contract Time in Working Days
3. The number of Working Days remaining in the Contract Time
4. The revised Physical Completion Date as applicable
5. The number of Non-Working Days
6. Any whole Days during the immediately preceding week that the Engineer declared to be an Unworkable Day.

Usage of Certain Words and Phrases - Whenever the words, "as directed", "as required", "as permitted", or words of like effect are used, it shall be understood that the direction, requirement or permission of the District and Engineer is intended. The words, "sufficient", "necessary", "proper", and the like shall mean sufficient, necessary or proper in the judgment of the District and Engineer. The words, "approved", "acceptable", "satisfactory", or words of like import shall mean approved by or acceptable to the District and Engineer.



ABBREVIATIONS

Whenever the following abbreviations are used on the Plans, Specifications, Proposal and Contract, they shall be construed to mean the words and terms as listed below:

A	Acre
AC	Asbestos Cement
AF	Acre-Feet
Adj	Adjust
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AITC	American Institute of Timber Construction
APWA	American Public Works Association
Asp. Pav.	Asphalt Pavement
Asp.Conc.Pav.	Asphalt Concrete Pavement
ASTM	American Society of Testing and Material
ATB	Asphalt Treated Base
AVE	Avenue
AWS	American Welding Society
AWWA	American Water Works Association
Bldv	Boulevard
BO	Blow Off
BTU	British Thermal Unit
CB	Catch Basin
CB Inlet	Curb Inlet
CFS	Cubic Feet per Second
CI	Cast Iron
CIP	Cast Iron Pipe
CL	Centerline
CMP	Corrugated Metal Pipe
CMU	Concrete Mason Unit
Conc	Concrete
Conc. Cb.	Concrete Curb
Conc. Pav.	Concrete Pavement
Conc.Ret.Wall	Concrete Retaining Wall
Conc. Swr	Concrete Sewer
Cond.	Conduit
Conn	Connect
Cr	Cross
CTB	Cement Treated Base
Cu	Cubic



ABBREVIATIONS

Continued

DFPA	Douglas Fir Plywood Association
DI	Ductile Iron
Dr	Drive or Driveway
E	East
Elev.	Elevation
Exist.	Existing
Exc	Excavation
FBM	Foot Board Measure
FH	Fire Hydrant
FL	Flange
FT, FT ² , FT ³	Foot, Square Feet, Cubic Feet
GIP	Galvanized Iron Pipe
GPAD	Gallons Per Acre Day
GPH	Gallons Per Hour
GPM	Gallons per Minute
G Stl P	Galvanized Steel Pipe
GV	Gate Valve
Hyd	Hydrant
Hyd Ext	Hydrant Extension
ID	Inside Diameter
In, In ² , In ³	Inch, Square Inch, Cubic Inch
L	Length
Lbs	Pounds
LF	Lineal Feet
Max	Maximum
Mon	Monument Case
Min	Minimum
MG	Million Gallons
MGD	Million Gallons per Day
MH	Manhole
MJ	Mechanical Joint
N	North
NIC	Not in Contract
No.	Number
NRS	Non Rising Stem
OD	Outside Diameter
Pav	Pavement
PC	Point of Curvature
PJM	Premolded Expansion Joint Material



ABBREVIATIONS

Continued

PL	Property Line
Pl	Place
Plk	Planking
Pos	Position
PP	Power Pole
Pri	Primary
Prop	Proposed
PS	Permastran
PSF	Pounds per Square Foot
PSI	Pounds per Square Inch
PT	Point of Tangency
PVC	Polyvinyl chloride
R	Radius
RC	Reinforced Concrete
RCP	Reinforced Concrete Pipe
Rem	Remove
Repl	Replace
RS	Rising Stem
S	South
Sec	Secondary
Swr	Sewer
Sp	Special
Sq	Square
SS	Side Sewer
SSPC	Steel Structure Painting Council
Std	Standard
Stl	Steel
Temp	Temporary
Trans	Transformer
VC	Vertical Curve
W	West
WM	Water Main
Yd	Yard

GENERAL CONDITIONS



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Section 8 – General Conditions

8.1 EXECUTION, CORRELATION AND INTENT OF CONTRACT DOCUMENTS

The Contract Documents are complementary and what is called for by any one shall be as binding as if called for by all. The intent of the Contract Documents is to prescribe the complete Work. The Contractor shall furnish all labor, Materials, Equipment and incidentals necessary to complete all parts of the Work. Where the Contractor is directed to provide something as part of the Work, that term specifically includes everything necessary to furnish, install, connect, adjust, test and make ready for use or occupancy. Compensation for the cost of the complete Work and for full performance of the Contract is included in the Contract Price. Materials, Equipment, or Work described in words which so applied have a well-known technical or trade meaning shall be held to refer to such recognized standards.

It is intended that Work not covered under any heading, section, branch, class or trade of the Specifications shall be supplied if it is shown on Plans or is reasonably inferable as being necessary to produce the intended results. Minor items of Work, Materials, or Equipment omitted from the original Plans or Specifications, but clearly inferable from the information presented and which are called for by accepted good practice shall be provided and/or performed by the Contractor as part of its original cost.

Where the Contract Documents refer to Reference Specifications, such specifications shall be applicable to technical provisions only, unless otherwise designated.

The Contract represents the entire and integrated agreement between the District and the Contractor. It supersedes all prior discussions, negotiations, representations or agreements pertaining to the Work, whether written or oral.

8.2 PLANS AND SPECIFICATIONS - OMISSIONS AND DISCREPANCIES

Upon receipt of Notice of Award of the Contract, the Contractor shall carefully study and compare all Plans, Specifications and other instructions and shall, prior to ordering Materials or performing Work, report in writing to the Engineer any error, inconsistency or omission in respect to design, mode of construction or cost which the Contractor may discover. If the Contractor, in the course of this study or in the accomplishment of the Work, finds any discrepancy between the Plans and the physical condition of the locality as represented in the Plans, or any such errors or omissions in respect to design, mode of construction or cost in Plans or in the layout as given by points and instructions, it shall be its duty to provide timely notice thereof in accordance with Section 8.23 below. The Contractor shall



make all reasonable efforts to mitigate any impact resulting from such error, inconsistency, omission or variance. Any Work done after such discovery, until correction of Plans or authorization of extra Work is given, if the Engineer finds that extra Work is involved, will be done at the Contractor's risk. If extra Work is involved, the procedure shall be as provided in Section 8.23 below.

8.3 EXAMINATION OF SITE OF WORK

Before submitting its bid, the Contractor shall examine the Site of the Work and ascertain for itself all the physical conditions in relation thereto. In making a Proposal under these Contract Documents, the Contractor represents and warrants that it has satisfied itself as to construction conditions by personal examination of the Plans, Specifications and Site of the proposed Work, and by appropriate examination and investigation as to the nature of the soil and construction problems which may be encountered by reason thereof. Contractor also warrants and represents itself to be experienced and an expert in the construction contemplated. Contractor further understands that, in making the Contract award, District is relying upon the representations and warranties of Contractor herein contained.

Contractor's failure to examine the Plans, Specifications, and Site shall not relieve the Contractor from entering into a Contract nor excuse it from performing the Work in strict accordance with the terms of the Contract and Specifications. The Contractor will not be entitled to additional compensation if it subsequently finds the conditions to require other methods or equipment that it did not anticipate in making its Proposal. Any statement or representation (whether written or oral) made by an officer, agent or employee of the District (or by any third party consultant of the District) with respect to the physical or geotechnical conditions at the Site of the Work shall not be binding upon the District.

8.4 STATUS OF ENGINEER

- (a) The Engineer shall act as advisor and consultant to the District in engineering matters relating to the Contract; provided, however, nothing contained herein or elsewhere in the Contract Documents shall be construed as requiring or authorizing the Engineer to direct the method or manner of performing any Work by the Contractor under this Contract. The Engineer has authority to stop the Work whenever, in its opinion, such stoppage may be necessary to ensure the proper execution of the Contract. The Engineer may reject all Work, Materials, or Equipment which, in its opinion, do not conform to the Contract.
- (b) It is understood and agreed by and between the parties hereto that the Work included in the Contract is to be done to the complete satisfaction of the Engineer, and that the decision of the Engineer as to the true construction and meaning of the Contract, Plans, Specifications and estimates, and as to all questions arising as to proper performance of the



Work shall be final. The Engineer shall determine the unit quantities and the classification of all Work done and Materials and Equipment furnished under the provisions of this Contract and its determination thereof shall be final and conclusive and binding upon the Contractor.

- (c) The Engineer shall decide any and all questions which may arise as to the quality or acceptability of Materials and Equipment furnished and Work performed and as to the rate of progress of the Work, and all questions as to acceptable fulfillment and performance of the Contract on the part of the Contractor and as to compensation. The decision of the Engineer in such matters shall be final.
- (d) The Engineer shall have authority to make changes in the Work, not inconsistent with the purpose of the Work. Except in any emergency endangering life or property, no extra Work or change shall be made unless pursuant to a Change Order executed by the Engineer. If the District or Contractor believes that a Change Order justifies an adjustment in the Contract Price and/or Contract Time, the value of any such extra Work shall be determined as set forth in Sections 8.22 and 8.23.
- (e) The Engineer has no authority to waive the obligation of the Contractor to perform the Work in accordance with the Contract Documents. Failure or omission on the part of the Engineer to reject unsuitable, inferior or defective Work and/or labor or Materials or Equipment furnished under the Contract shall not release the Contractor or its bond from performing the Work in accordance with the Contract Documents.

8.5 INSPECTION AND TESTS

- (a) All Work and all Materials and Equipment furnished shall be subject to inspection by the Engineer and/or Inspector. The Engineer and/or Inspector shall, at all times, have access to the Work to observe the progress and quality wherever it is in preparation or progress, and the Contractor shall provide proper facilities for such access and for necessary inspection and testing. If any Work should be covered up without approval or consent of the Engineer or Inspector, it must, if required by the Engineer, be uncovered for inspection at the Contractor's expense.
- (b) The Contractor shall make reasonable tests of the Work at the Contractor's expense upon Engineer's request and shall maintain a record of such tests. Prior to the time scheduled for a performance test to be observed by the Engineer, the Contractor shall make whatever preliminary tests are necessary to assure that the Work is in accordance with the Specifications. If, for any reason, the test observed by the Engineer is unsatisfactory, the Contractor shall pay all costs incurred by the Engineer for the inspection of the unsatisfactory test.



- (c) Inspections, tests, measurements, or other acts or functions performed for or by the District are recognized as being solely to assist the Engineer in determining that the Work complies with the Contract requirements. Such activities shall in no manner whatsoever be construed to relieve the Contractor from the responsibility for performing its own inspections and tests as necessary to ensure compliance with the Contract. In addition, any inspection, test or measurement by or for the District does not constitute or imply acceptance of the Work by the District or waive any rights of the District to require the Work be completed in strict accordance with the Contract and does not impair the District's authority to reject non-conforming Work or evoke any remedy to which it may be entitled.
- (d) The Work may be subject to inspection by various governmental agencies or utility owners. The Contractor shall cooperate and make the Site available for all such persons or agencies with regard to their inspections, including providing access for inspection by way of safe and proper facilities. Such inspection shall in no way make such agencies or persons parties to this Contract and shall not constitute an interference with the Work or the rights of either the District or the Contractor. In its scheduling and planning the Contractor shall allow sufficient time for such inspections. Required certificates of inspection by any authority other than the Engineer shall be secured by the Contractor.
- (e) Except as provided herein, the District will at its cost observe performance of the Work during normal working days or hours during the Contract Time and any modification or extension of the Contract Time authorized by the District in approved Change Orders. If the Contractor is authorized by the District to work more than 8 hours per Day, or more than 5 Days per week, or on holidays, during the course of the Contract Time, then Section 2.1 of the Special Provisions governs.

8.6 PLANS, SPECIFICATIONS, SUBMITTALS, AND SHOP DRAWINGS ACCESSIBLE; RFIs

The Contractor shall keep at least one copy of the Plans, Specifications, Submittals, and Shop Drawings constantly accessible at the construction Site.

If the Contractor discovers, or in the exercise of reasonable diligence should have discovered, that the Work to be performed is not sufficiently detailed or explained in the Contract Documents, or that there is a conflict or inconsistency between any part of the Contract Documents, the Contractor shall promptly apply to the Engineer for such further written explanation(s) as may be necessary using a Request for Information (RFI) form to be provided or approved by the Engineer. The Engineer will address the RFI in writing. Before submitting a RFI, the Contractor shall diligently and thoroughly examine the Contract Documents. The Contractor shall also plan its Work in an efficient manner so as to allow for timely



responses to RFIs. If requested by the Engineer, the Contractor shall prioritize its RFIs and explain the reasons for such priority. District will reply to the RFI with reasonable promptness which on average is defined to mean twenty (20) Days. If Contractor submits an RFI on an activity and reasonably believes that a response from District within up to twenty (20) Days will cause a delay to the Work, Contractor shall denominate such particular RFI as "Priority" and indicate Contractor's preferred reasonable response date. Responses by the District to RFIs are not changes to the Contract. If Contractor believes a response to an RFI constitutes changed Work or causes an adverse impact to performance of the Work or construction schedule, the Contractor is required to submit a request for change in accordance with the requirements of the Contract.

8.7 AUDIT RECORDS

- a) The Contractor and all Subcontractors shall keep and maintain comprehensive records and documentation relating to the Work under this Contract, as well as documents related to the Contractor's Proposal and Project cost accounting records for this Contract, for an audit period of six (6) years. The Project Records shall include, but are not limited to, Contract Documents, subcontracts, purchase orders, employment records, payrolls, Project cost accounting records, prevailing wage records, Plans, Specifications, Addenda, Submittals, Shop Drawings, Change Orders and all working documents leading to Change Orders, field test records, quality control documents, daily construction logs by all field supervisors and Project management personnel, correspondence relating to the Contract, and As-Built Plans.
- b) Contractor and its Subcontractors shall segregate and separately record at the time incurred all costs resulting in any way from any event, act, omission or condition for which Contractor or its Subcontractors seek an adjustment to the Contract Price, Contract Time and/or monetary compensation of any kind. Any costs claimed to be delay or impact costs, acceleration costs, loss of productivity or inefficiency costs, increased costs of onsite or home office overhead or any similar costs shall be separately recorded at the time and shall be fairly and accurately allocated to each such event, act, omission or condition and to other causes of such costs. The Contractor shall be entitled to make a Claim or obtain extra compensation for any such event, act, omission or condition only to the extent the Project Records are kept in full compliance with all Contract requirements and the cost allocations support entitlement to such compensation.
- c) The Contractor and Subcontractors shall permit the District to audit, inspect, examine, and copy the Project Records and/or other documents related to any Claim or issue related to performance of the Work maintained by Contractor (including all Proposal documentation) or any affiliated company involved in the project (collectively, "Audit Records") at any reasonable time



and shall provide such assistance as may be reasonably required in the course of such inspection, including the right to interview personnel. The Contractor shall in no event dispose of, destroy, alter, or mutilate said Audit Records in any manner whatsoever for six (6) years after final payment and until all pending matters are closed. No additional compensation will be provided to the Contractor for compliance with the requirements of this subsection.

8.8 OWNERSHIP OF DOCUMENTS; NO WARRANTIES BY THE DISTRICT

All Plans, Specifications and copies thereof prepared or furnished by the District are its property. They are not to be used on other work.

The Reference Documents and any other information, records, or reports that may be made available by the District to the Contractor are provided solely for the convenience of the Contractor. The District makes no representations or warranties, express or implied, regarding the content of the Reference Documents or any other information, records, or reports. No information derived from inspection of Reference Documents or other information, records, or reports will in any way relieve the Contractor from its responsibility to properly perform its obligations under the Contract. The Contractor shall make its own conclusions and interpretations from the data supplied, information available from other sources, and the Contractor's own observations.

8.9 INSURANCE

The Contractor shall obtain and keep in force during the term of the Contract, Commercial General Liability insurance policies with insurance companies which have an A.M. Best's rating of A VII or better and who are approved by the Insurance Commissioner of the State of Washington pursuant to Title 48 RCW.

Prior to the execution of the Contract, the Contractor shall purchase and maintain during the term of this project a Commercial General Liability insurance policy meeting the requirements set forth herein. The Contractor shall file with the District either a certified copy of all policies with endorsements attached, or a certificate of insurance with endorsements attached as are necessary to comply with these specifications. Failure of the Contractor to fully comply with the requirements regarding insurance will be considered a material breach of Contract.

The Contractor shall not begin Work under the Contract or under any special condition until all required insurances have been obtained and until such insurances have been approved by the District. Said insurance shall provide coverage for the Contractor, its Subcontractors and the District. The coverage so provided shall protect against claims from bodily injuries, including accidental death, as well as claims for property damage which may arise from any act or



omission of the Contractor, its Subcontractors, or by anyone directly or indirectly employed by either of them.

The insurance policies shall specifically name the District, its elected or appointed officials, officers, employees, volunteers and King County (or as needed – City of Kenmore, Bothell, Kirkland, Lake Forest Park, etc.), as insured(s) with regard to damages and defense of claims arising from:

- Activities performed by or on behalf of the Contractor; and
- Products and completed operations of the Contractor; and
- Premises owned leased or used by the Contractor.

It is hereby understood and agreed that Northshore Utility District, its commissioners, officers, and employees, while acting within the scope of their duties as such, are named as additional insured. The insurance shall be maintained in full force and effect at the Contractor's expense throughout the term of the Contract and for any extended period after Acceptance as may be required hereunder.

The District shall be given at least 45 Days' written notice of cancellation, non-renewal, material reduction or modification of coverage. Such notice shall be by certified mail to the District.

The coverages provided by the Contractor's insurance policies are to be primary to any insurance maintained by the District. Any insurance that might cover this Contract which is maintained by the District shall be in excess of the Contractor's insurance and shall not contribute with the Contractor's insurances.

The Contractor's insurance policies shall protect each insured in the same manner as though a separate policy had been issued to each. The inclusion of more than one insured shall not affect the rights of any insured as respects any claim, suit or judgment made or brought by or for any other insured or by or for any employee of any other insured. However, this provision shall not increase the limits of the insurer's liability.

The General Aggregate provision of the Contractor's insurance policies shall be amended to show that the General Aggregate Limit of the policies applies separately to this Project.

The Contractor's insurance policies shall not contain deductibles or self-insured retentions in excess of \$10,000 (unless approved by the District) and Contractor shall be responsible for any such deductible or SIR if the loss arises from its operations or those of its Subcontractors or suppliers at any tier.



The Contractor's insurance policies shall contain a provision that the District has no obligation to report events which might rise to a claim until a claim has been filed with the District's Board of Commissioners.

Types and Limits of Insurance Required:

Commercial General Liability

- \$2,000,000 each occurrence Bodily Injury and Property Damage Liability.
- \$2,000,000 annual aggregate
- Employees and volunteers as Additional Insured(s)
- Premises and operations
- Broad form property damage including:
 - Underground
 - Explosion
 - Collapse Hazards (XCU)
 - Products completed operations
 - Blanket contractual
 - Subcontractors
- Personal injury with employee exclusion deleted
- Employers liability (Stop gap)

Automobile Liability

- \$1,000,000 per accident bodily injury and property damage liability, including:
 - any owned automobiles,
 - hired automobiles,
 - non-owned automobile.

Umbrella Liability

- \$2,000,000 per occurrence
- \$2,000,000 aggregate

Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" policy form in the amount of the Contract Price, as adjusted by Change Orders. This insurance shall include interests of the District, the Contractor and Subcontractors on the Project. Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage,



theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements. Maximum deductible shall be \$10,000 and Contractor shall be responsible for such deductible if the loss arises from its operations of those of any Subcontractor.

District, Contractor and Subcontractors waive all rights against each other for damages caused by fire or other causes of loss to the extent of proceeds actually paid by property insurance obtained pursuant to this Section 8.9 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the District as fiduciary. The District or Contractor, as appropriate, shall require Subcontractors, by appropriate agreements, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

As an alternative to the above indicated Commercial General Liability and Umbrella Liability insurance policies the Contractor may provide the District with an Owners and Contractors Protective (OCP) policy with a limit of coverage of \$5,000,000 on terms and conditions acceptable to the District.

The Contractor shall additionally provide the District with evidence that the District has been named as additional insured on the Contractor's Commercial General Liability Policy through Acceptance plus six (6) additional years (inclusive of completed operations coverage).

Providing of coverage on the stated amounts shall not be construed to relieve the Contractor from liability in excess of such limits.

In addition, the Contractor shall have its insurance agent/representative complete the Insurance Coverage Questionnaire contained in the Special Provisions and attach it to the Certificate of Insurance for District's approval. The Contractor shall maintain Workers Compensation insurance and/or Longshore and Harbor Workers insurance as required by State or Federal statute for all of its employees to be engaged in Work on the Project under this Contract and, in case any such Work is sublet, the Contractor shall require the Subcontractor similarly to provide Workers Compensation insurance and/or Longshore and Harbor Workers Insurance for all of the latter's employees to be engaged in such Work. The Contractor's Department of Labor & Industries account number shall be noted on the certificate of insurance.

In the event any class of employees engaged in the Work under this Contract is not covered under Workers Compensation insurance or Longshore and Harbor Workers insurance as required by State and Federal statute, the Contractor shall



maintain and cause each Subcontractor to maintain, Employers Liability insurance for limits of at least \$1,000,000 each employee for disease or accident, and shall furnish the District with satisfactory evidence of such.

The contractual coverage of the Contractor's policy shall be sufficiently broad enough to insure the provisions of the HOLD HARMLESS AND INDEMNIFICATION AGREEMENT of this Contract.

Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's responsibility for payment of damages resulting from its operations under this Contract.

8.10 SCHEDULE AND PRE-CONSTRUCTION CONFERENCE

(a) The Schedule shall set forth the order in which the Contractor plans to perform the Work. The Schedule and any supplemental Schedule shall show:

1. Substantial Completion of all Work within the specified Contract Time,
2. The proposed order of Work, and
3. Projected starting and completion times for major phases of the Work and for the total Project.

The Schedule shall also reflect any phasing, sequencing, or timing restrictions set forth in the Contract Documents.

The District allocates resources to a Contract based on the total time allowed in the Contract. The District will accept a Schedule indicating an early Substantial Completion date, but cannot guarantee the District's resources will be available to meet the accelerated Schedule. No additional compensation will be allowed if the Contractor is not able to meet its accelerated Schedule due to the unavailability of the District's resources or for other reasons beyond the District's control.

The Contractor shall submit supplemental Schedules when requested by the Engineer or as required by any provision of the Contract. The supplemental Schedules shall reflect any changes in the proposed order of Work, any construction delays, or other conditions that may affect the progress of the Work. The Contractor shall provide the Engineer with the supplemental Schedules within ten (10) Days of receiving written notice of the request.

The original and all supplemental Schedules shall not conflict with any time and order-of-work requirement in the Contract.



If the Engineer deems that the original or any necessary supplemental Schedule does not provide the information required in this subsection, the District may withhold progress payments until a Schedule containing the required information has been submitted by the Contractor and approved by the Engineer.

- (b) The Schedule may be in graph or tabular form and shall include the date of submission for approval of Plans as may be required, starting dates for construction of the several parts of the Work, and estimated completion dates of such parts, and completion date of the Project. Review by the Engineer of the Schedule shall not in any event excuse the Contractor of the obligation to complete the Work within the time specified in the Contract or of complying with all terms, conditions and provisions of the Contract Documents. Failure of the Contractor to follow the Schedule submitted and accepted, including revisions thereof, shall relieve the District of any and all responsibility for furnishing and making available all or any portion of the Site from time to time and will relieve the District of any responsibility for delays to Contractor in the performance of the Work.
- (c) A pre-construction conference shall be held at a time and place fixed by the Engineer which will generally be within one month from date of Notice of Award. The Contractor must be prepared for a thorough discussion and review of the following:
 - Schedule
 - Materials and Equipment
 - Traffic Control
 - Job Procedures
 - Inspection Procedures
 - Plans and Specifications
 - Shop Drawings
 - Schedule of Values of Lump Sum Work
 - Safety
 - Other Matters pertaining to Performance of the Work

8.11 SCHEDULE OF VALUES OF LUMP SUM WORK

If payments are to be made on lump sum items, the Contractor shall submit a schedule of values of the various parts of the Work, including quantities, aggregating the total Contract Price. When approved by the Engineer, the schedule of values shall be used as the basis for certificates for payment unless it is found to be in error. In applying for payments for lump sum Work, the Contractor shall submit estimates of the percentage of Work completed and payment will be based upon the schedule of values for lump sum Work.



8.12 MATERIALS AND EQUIPMENT FURNISHED BY CONTRACTOR

The Contractor shall furnish all Materials and Equipment for the completion of the Work to be performed under this Contract and shall be fully responsible for all Materials and Equipment until the completed Project is delivered to and accepted by the District.

The Contractor shall, at its own expense, secure and maintain a storage place for Materials and Equipment. Contractor shall protect Materials and Equipment against damage from careless handling, exposure to weather, mixture with foreign matter, and all other causes. The District will reject and refuse to test Materials and Equipment improperly handled or stored.

- (a) All Materials and Equipment required to be incorporated into the Work shall be new and in accordance with the Plans and Specifications, except as otherwise provided in the Contract Documents. All such Materials and Equipment shall be applied, installed, connected, erected, used, cleaned, maintained and conditioned in accordance with the instructions of the applicable manufacturer, fabricator or processor, except as otherwise provided in the Contract Documents. Upon the request of the Engineer, the Contractor shall furnish satisfactory evidence as to the kind, quality and manufacturer of Materials and Equipment. The Contractor shall furnish the District with copies of the supplier's warranty and adopt the same as the warranty of the Contractor and shall also be liable thereon to the District.
- (b) The Contractor shall furnish for approval all samples as directed by the Contract Documents. The finished Work shall be in accordance with approved samples. Approval of samples by the Engineer does not relieve the Contractor of performance of the Work in accordance with the Contract Documents.
- (c) Substitutions requested by the Contractor will be subject to the District's prior written acceptance and at the District's sole discretion. For each proposed substitution, the Contractor shall submit samples, descriptive and technical data, and reports of tests to the District for approval. The Contractor shall also indicate the difference in Contract Price and/or Contract Time by reason of the proposed substitutions. All costs of any redesign or modification to other systems, parts, equipment or components of the Project or Work, which result from the substitution, shall be borne by the Contractor.
- (d) When the District approves a substitution proposed by the Contractor, the Contractor shall guarantee the substituted Materials or Equipment to be equal to, or better than, those originally specified and shall be compatible with all other systems, parts, Materials, Equipment, or components of the Project and Work. The District has the right to order an unaccepted,



substituted article removed and replaced without additional cost to the District.

- (e) When Materials or Equipment are specified by one or more patents, brand names, or catalog numbers, it shall be understood that this is for the purpose of defining the performance or other salient requirements and shall, unless otherwise expressly stated, be understood as if followed by the words Or Equal whether or not such words appear. If the Contractor proposes to furnish Or Equal Materials or Equipment, then Contractor shall demonstrate (1) conformance to the specified performance, testing, quality, life-cycle or dimensional requirements and (2) suitability of the Materials or Equipment for the use intended. Intended use of any Or Equal Materials or Equipment shall be specifically identified as part of the submittal process, and the Engineer must accept the Contractor's proposed Or Equal Materials or Equipment before it may be used. Any such acceptance shall not relieve Contractor of its obligations to achieve the specified performance, testing, quality, life-cycle or dimensional requirements and suitability of any accepted the Or Equal Materials or Equipment for the use intended under this Contract.
- (f) In the event that the Contractor proposes an alternate design or designs for some portion of the Work, the District may at its option allow the Contractor to proceed on the condition that the Contractor assume full responsibility for the alternate design.

8.13 MATERIALS AND EQUIPMENT FURNISHED BY DISTRICT

- (a) Unless otherwise specifically provided in the Contract Documents, if the Contract requires that the Contractor install Materials and Equipment provided by the District, in the absence of a reasonably apparent defect, such Materials and Equipment shall be considered compliant with the Contract Documents.
- (b) If the Contractor discovers defects in the District-furnished Materials or Equipment the Contractor shall immediately notify the District in writing.
- (c) After such discovery, the Contractor shall not proceed with Work involving such District-furnished Materials and Equipment unless otherwise authorized in writing by the District.
- (d) Contractor's failure to provide immediate written notice of any defects in District-furnished Materials or Equipment shall constitute acceptance of such Materials and Equipment as fit for incorporation into the Work.
- (e) Contractor shall be responsible for any damages or delays resulting from Contractor's failure to provide timely written notice or Contractor's improper



incorporation of such defective District-furnished Materials or Equipment into the Work.

8.14 SUBMITTALS

- (a) The Contractor shall perform no portion of the Work requiring Submittals until the Submittals have been reviewed and returned by the District with one of the following annotations: (1) "No Exception Taken" or (2) "Make Corrections Noted" or (3) "Revise and Resubmit" or (4) "Rejected" or (5) "Submit Specified Item".
- (b) Prior to furnishing the Submittals to the District, the Contractor shall: (1) review all Contractor and Subcontractor Submittals for accuracy, completeness, and compliance with the Contract; (2) coordinate all Submittals with all Contract Work by other trades and with field measurements; and (3) indicate approval on the Submittals as a representation that it has complied with its obligation to review and coordinate Submittals. Where required by law or by the Contract, an appropriate licensed professional shall stamp Submittals. Submittals lacking required stamps or evidence of Contractor review and approval will be returned without review by the District for resubmission. Submittals shall be sequentially numbered.
- (c) When submitting information, the Contractor shall identify and state reasons for any alteration, variation, addition, deviation, or omission from the Contract. The Contractor shall not perform work that alters, varies, adds, deviates, or omits Work without prior specific written acceptance by the District.
- (d) The Contractor shall provide Submittals with reasonable promptness and in such sequence as to facilitate the timely completion of the Contract. The Contractor shall prepare and keep current, for review by the District, a schedule of Submittals which is coordinated with the Contractor's Project Schedule and allows the District reasonable time for review.
- (e) The District shall review the Contractor's Submittals and respond in writing with reasonable promptness. Unless otherwise agreed, no delay to the Contractor's Work shall be attributable to the failure by the District to respond to a Submittal until thirty (30) Days after the Submittal is received by the District, and then only if failure by the District to respond is unreasonable and affects the Substantial Completion date.
- (f) If the Contractor is required to resubmit a Submittal, any revisions on resubmittals, shall be specifically identified in writing and the resubmitted Submittal shall be sequentially alpha denoted and note revisions in numerical order. The cost of the review of the initial Submittal and the first revised Submittal shall be borne by the District. The costs of all additional



revised Submittals shall be charged to the Contractor. The cost of review shall include, without limitation, administrative, design, and engineering activities directly related to review of Submittals. The District may deduct these costs from any amounts due the Contractor.

- (g) The District shall review the Contractor's Submittals only for conformance with the design of the Work and compliance with the Contract Documents. Review of the Submittals are not conducted to verify the accuracy of dimensions, quantities, or calculations, the performance of Materials, systems, or Equipment, or construction means, methods, techniques, sequences, or procedures, all of which remain the Contractor's responsibility. Failure by the District to take exception to a Submittal shall not relieve the Contractor from any duty, including its responsibility for errors or omissions in Submittals, its duty to make Submittals and its duty to perform the Work according to the requirements of the Contract. The District's review of a Submittal shall not alter or waive the requirements of the Contract unless the District has issued prior written approval of such change or alteration of the Contract requirements.
- (h) The Contractor's failure to identify any error, deviation, or omission and subsequent acceptance of the Submittal by the District shall not relieve the Contractor from the obligation to comply with the all requirements in the Contract Documents.

8.15 LABOR AND FACILITIES

- (a) The Contractor shall provide and pay for all labor, water, tools, light, power, transportation and other facilities necessary for the execution and completion of the Work, except as otherwise stipulated in the Contract Documents.
- (b) Necessary sanitation conveniences for the use of workmen on the Site, properly secluded from public observation, shall be provided and maintained by the Contractor.
- (c) The Contractor shall, at all times, enforce strict discipline and good order among its employees and shall not employ on the Work any person unfit or not skilled in the Work assigned to him. At the Engineer's written request, the Contractor shall immediately remove and replace any incompetent, careless, or negligent employee.
- (d) The Contractor shall remain onsite whenever the Work is under way. Before the Work begins, the Contractor shall name in writing an experienced superintendent who understands the Contract and is able to continuously supervise the Work. This superintendent shall have full authority to represent and act for the Contractor. Any superintendent who repeatedly fails to follow the Engineer's written or oral orders, directions, instructions, or determinations shall be subject to removal from the Project.



Upon the written request of the Engineer, the Contractor shall immediately remove such superintendent and name a replacement in writing.

- (e) During the term of this Contract, neither party shall employ nor hire any employee of the other party, nor of the Engineer, without the written consent of the other party or of the Engineer. The Contractor shall not use any Work performed or any information obtained from any employee hired in violation of this provision in making a claim against the District or Engineer and shall also be liable to the District as liquidated damages in an amount equal to double the amount of salary or wages paid to any such employee so hired in violation hereof.

8.16 ROYALTIES AND PATENTS

The Contractor shall be liable for all suits brought against the District by reason of infringement of patent rights or licenses on any Materials, Equipment, or process used on the Work or incorporated into the finished Project, except where specifically exempted by the Special Provisions. Prices named in the Proposal shall include payment of royalties, if any. Contractor shall defend and hold District harmless from any such suit, costs of defense and any judgment which may be made or entered against District thereon.

8.17 PROJECT SITE; PERMITS, LAWS, AND REGULATIONS

The District will furnish the Site and rights-of-way necessary for carrying out this Contract and completion of the Work herein contemplated and will use due diligence in acquiring said lands and rights-of-way as speedily as possible. If the District's right of access to any lands for the Site, Permits, or rights-of-way is delayed for any reason, Contractor shall exercise reasonable efforts to mitigate consequences and work around the delay. If Contractor believes it is entitled to a change in the Contract Time and/or Contract Price by reason of such delay, Contractor shall comply with the notice and Claim requirements provided in Section 8.23. Nothing in this section shall limit the District's right to terminate as provided in Section 8.31.

Contractor's Work shall be confined to the District's premises, including easements and construction Permit limits. The Contractor shall not enter upon or place Materials or Equipment on other property except by written consent of the individual property owners and the Contractor shall save District harmless from all suits and actions of every kind and description that might result from its use of property other than that of the District.

The Contractor shall be responsible for obtaining all Permits except those specified herein or in the Special Provisions.

The Contractor shall keep fully informed concerning all governmental requirements, including but not limited to all State, Federal, county and municipal laws, ordinances and regulations which in any manner affect the performance of



the Work or the Materials and Equipment used in the Work, or which in any way affect those employed to work in connection with the Project, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same including the specific legal requirements referenced in the Contract Documents (collectively, the "Governmental Requirements"). The Contractor shall at all times comply with, and shall cause all the Contractor's agents, employees and Subcontractors to comply with all such Governmental Requirements, and shall indemnify, defend and hold harmless District and all of its commissioners, officers, agents, and employees against all claims, liabilities, losses, damages and expenses (including attorney's fees and related costs) arising from or based on the violation of any such Governmental Requirement whether by the Contractor or contractor's agents, employees or Subcontractors. If any discrepancy or inconsistency is discovered in the Contract Documents for the work in relation to any such Governmental Requirements, the Contractor shall immediately report the same to the Engineer in writing.

Wherever the law of the place of construction requires a sales, consumer, use or similar tax, the Contractor shall pay such tax.

8.18 PAYMENT OF PREVAILING WAGES

The wage rates to be paid all laborers, workers and mechanics who perform any part of this Contract shall meet or exceed the prevailing wage rates as required by Chapter 39.12 of the Revised Code of Washington, as amended. This requirement applies to laborers, workers and mechanics whether they are employed by the Contractor, Subcontractors, sub-Subcontractors, or any other person who performs a portion of the Work contemplated by this Contract.

The current prevailing wage rates as provided to the District by the Industrial Statistician of the Washington State Department of Labor and Industries are available at the following location: <https://lni.wa.gov/licensing-permits/public-works-projects/prevailing-wage-rates/>. In referencing such rates, the District does not imply or warrant that the Contractor will find labor available at those rates. It is the Contractor's sole responsibility to determine the wage rates it will actually have to pay.

In case any dispute arises as to what are the prevailing rates of wages for work of a similar nature and such dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the Director of the Department of Labor and Industries of the State and the Director's decision therein shall be final and conclusive and binding on all parties involved in the dispute, as provided for by Section 39.12.060 of the Revised Code of Washington, as amended.

In connection with this Contract, the Contractor will be required, pursuant to Section 39.12.040 of the Revised Code of Washington to file with the District a "Statement of Intent to Pay Prevailing Wages" and an "Affidavit of Wages Paid" for



itself and all Subcontractors and sub-Subcontractors. The Statements require the “approval” of, and the Affidavits the “certification” of, the industrial statistician of the State Department of Labor and Industries before the Statements or Affidavits are to be presented to the District. The Department of Labor and Industries charges a fee for such approval and certification, which fee shall be paid by the Contractor. Any change in the fee will not be grounds for revision in Contract Price.

All workers delivering fill, sand, gravel, crushed rock, transit/concrete mix, asphalt or other similar Materials and all workers removing any Materials from the Site as required by the Specifications are subject to the provisions of RCW Chapter 39.12 and are entitled to the appropriate prevailing wage rate. For purposes of this Contract, such Materials are for specified future use and per WAC 296-127-018, delivery and pick-up of the above listed Materials constitutes incorporation.

The Contractor is required to include this provision in all subcontracts and shall require that it be placed in all sub-subcontracts at any tier.

8.19 PROTECTION OF WORK, PERSONS, AND PROPERTY

The Contractor shall be solely and completely responsible for conditions of the Site, including protecting all persons and property, during performance of the Work. The Contractor shall maintain the Site and perform the Work in a manner which meets all statutory and common law requirements or other specific contractual requirements for the provision of a safe place to work and which adequately protects the safety of all persons and property on or near the Site. This obligation shall apply continuously and shall not be limited to normal working hours. The District’s inspection of the Work or presence at the Site does not and shall not be construed to include review of the adequacy of the Contractor’s safety measures in, on or near the site of the Work.

Unless otherwise required in the Contract Documents, the Contractor shall protect and be responsible for any damage or loss to the Work, or to the Materials and Equipment associated with the Work until the date of Substantial Completion. The Contractor remains responsible for any damage or loss caused directly or indirectly by the acts or omissions of the Contractor, Subcontractors, suppliers or third parties authorized or allowed on the Site by the Contractor until Acceptance. The Contractor shall repair or replace without cost to the District any damage or loss that may occur, except damages or loss caused by the acts or omissions of the District.

Contractor shall take adequate precautions to protect existing lawns, trees and shrubs, sidewalks, curbs, pavements, adjoining property, and structures, and to avoid damage thereto. The Contractor shall, at its own expense, completely repair any damage thereto caused by its operations to the satisfaction of the Engineer, except as otherwise provided elsewhere in the Contract Documents. The Contractor shall be solely and completely responsible for damages arising from the Work that affect property adjacent to the Site.



Whenever it is necessary in the course of construction to remove or disturb culverts, driveways, roadways, pipelines, or other existing improvements, without limiting the generality thereof and whether on private or public property, they shall be replaced to a condition equal to that existing before they were so removed and disturbed and all such costs for this replacement shall be borne by the Contractor and considered incidental to the construction and Work covered by the Contract Documents.

The Contractor shall erect and maintain adequate signs, fencing, barricades, lights or security measures and persons to protect the Work until the Engineer authorizes in writing the removal of signs, fencing, barricades, lights or security measures.

8.20 SAFETY

The Contractor shall take all reasonable precautions for the safety of all employees working on this Contract and all other persons who may be affected by such Work. The Contractor shall designate a responsible member of its organization at the Site whose duty shall be to manage and coordinate the Safety Programs and to prevent accidents of the Contractor and Subcontractor and suppliers.

Except as otherwise stated in the Contract, if the Contractor encounters on the Site material reasonably believed to be Hazardous Material including but not limited to asbestos, lead, or polychlorinated biphenyl (PCB), the Contractor shall immediately stop Work in the area affected and give notice of the condition to the District. Work in the affected area shall not be resumed without written direction by the District.

In order to protect the lives and health of persons performing Work under this Contract, the Contractor shall comply with the Federal Occupational Safety and Health Act of 1970 (OSHA), including all revisions, amendments and regulations issued thereunder, and the provisions of the Washington Industrial Safety Act of 1973 (WISHA), including all revisions, amendments and regulations issued thereunder by the Washington State Department of Labor and Industries. The WISHA regulations shall apply, without limitation, to all excavation, tunneling, trenching and ditching operations. In case of conflict between any such requirements, the more stringent regulation or requirement shall apply. There is no acceptable deviation from these safety requirements, regardless of practice in the construction industry. Any violation of OSHA, WISHA or other safety requirements applicable to the Work may be considered a breach of this Contract.

8.21 UTILITIES

In connection with any underground and utility Work, the Contractor shall strictly comply with Chapter 19.122 of the Revised Code of Washington. Any cost or



scheduling impact resulting from the Contractor's failure to comply with these statutory provisions shall be borne by the Contractor.

Unless specified otherwise by the Contract, Contractor shall plan and execute its Work to prevent outages in existing utilities or disruption of service. Where removal or relocation of known or disclosed utilities or temporary utility connections are necessary to accommodate the Work, such removal, relocation or temporary connections shall be performed at the Contractor's sole expense unless it is specified in the Contract Documents that it will be performed by the District or by others.

The District or utility owner may enter the Site from time to time to make changes as may be necessary for the relocation of utilities or to make necessary connections or repairs. Where the utility owner is identified as being responsible for removing or relocating utilities, the Contractor shall make timely arrangements with the utility owner to schedule such work to accommodate the Work. The Contractor shall also cooperate with and facilitate any necessary access to or on the Site by the forces engaged in such work and shall conduct its operations in such a manner as to avoid delay or hindrance to the work being performed by such other forces.

Contractor shall not commence any excavations until existing utilities have been staked or marked by the utility owner. The District will provide utility locates for District-owned utilities. The Contractor may encounter underground utilities adjacent to their Work operations. It shall be the Contractor's responsibility to protect these utilities from damage. If the Contractor discovers the presence of any unknown/unidentified utilities at the Site, the Contractor shall provide the District oral or written notice promptly (and in no event more than 24 hours after discovery). If any underground utility not identified in the Contract Documents must be relocated to accommodate the Project, the Engineer will either arrange for the relocation of such utility or provide a Change Order to the Contractor to do such work. If the Contractor asserts that the discovery entitles it to a change in Contract Price and/or Time, written notification shall be made in accordance with Section 8.24.

The Contractor may request District approval for changes or rearrangement to any utility for the Contractor's convenience in order to facilitate construction of the Work. The District shall be the sole judge of whether the proposed change or rearrangement is acceptable. The Contractor shall be responsible for any delay or cost resulting from this request.

Loss of time, if any, suffered by the Contractor due to delays in removal or relocation of any utilities by others may be considered in relation to a request by the Contractor for an adjustment to the Contract Time in accordance with Sections 8.23 and 8.26.



Utilities damaged by the Contractor shall be repaired by the Contractor to their original condition at the Contractor's expense. The Contractor shall notify the Engineer of any such damage promptly (and in no event more than 24 hours after the damage occurs) and shall begin repairs immediately and work continuously until the utility is restored to the satisfaction of the Engineer.

8.22 DISTRICT-INITIATED CHANGES IN THE WORK

- (a) The District, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the Work. The District reserves the right to make such alterations in the Plans or in the quantities of Work as may be considered necessary. Such alterations shall be in writing by the District and shall not be considered a waiver of any condition of the Contract nor invalidate any of the provisions thereof.
- (b) All such changes in the Work shall be authorized and directed by Change Order.
- (c) Unless the District in its sole discretion agrees otherwise in writing by way of Change Order, an alteration that only increases or decreases the quantity of bid item units to be installed shall not modify or adjust the unit prices set forth in the Proposal or contained in the Contract Price.
- (d) Subject to the limitation set forth above in (c), any modification to the Contract Price due to such changed Work shall be determined, in order of precedence, in the following methods:
 - 1. By unit or lump sum prices set by the Contract.
 - 2. If method (1) does not apply, by prices mutually agreed upon.
 - 3. If no agreement is reached under method (2), such Work will be paid for under Force Account rules established pursuant to Section 8.25 of these General Conditions. In such cases, the Contractor shall keep and present in such form as the Engineer may direct a correct account of such costs, together with supporting time cards and vouchers. The Engineer shall evaluate and determine the amount due Contractor.
- (e) This Section 8.22 applies only to District-initiated changes in the Work.

8.23 CONTRACTOR REQUESTS FOR CHANGE / CLAIMS

If the Contractor believes it is entitled to any additional compensation or time extension for any reason, the Contractor shall comply with the terms and conditions of this Section 8.23. In general, as described further below, the Contractor must adhere to a three-step process in making any request for additional compensation and/or time extension: (1) a timely written Notice of Intent



(2) a timely and properly documented Request for Change Order and, if such Request is denied (3) a timely and properly documented submission of a Claim.

Step 1: If the Contractor claims that the cost to perform the Work has been increased through any act or omission believed to be the District's responsibility (including without limitation District instructions, Plans, Site conditions or any alleged interference or impact by the District) the Contractor shall give the Engineer written Notice of Intent within five (5) Days after the receipt of any such instructions, or occurrence of any other act, omission or impact, and in any event before proceeding to execute the Work (except in emergency endangering life or property). The Notice of Intent shall describe (1) the date, circumstances, and source of the direction, instruction, interpretation, determination by the District and/or the event or impact to the Project (2) reasonable order of magnitude estimate of the change to the Contract Price (3) reasonable order of magnitude estimate of the time impact to the Contract Time; and (4) Contract provisions and substantive basis to support entitlement. Contractor's failure to provide the Notice of Intent as required by this Section 8.23 will act as a waiver of any right to bring any Claim related to the act, omission or impact in question.

Step 2: Within no more than 14 Days of submitting its Notice of Intent, The Contractor shall provide a detailed Request for Change Order to the Engineer. The Request for a Change Order shall include:

- Specific dollar amount covering all costs associated with the requested Change Order calculated in accordance with the Contract;
- Specific request for time extension (number of days);
- All documentation supporting the Request for a Change Order, including but not limited to all cost records and any schedule analysis.

Contractor's failure to provide the Request for Change Order as required by this Section 8.23 will act as a waiver of any right to bring any Claim related to the act, omission or impact in question.

The District will review each submitted Request for Change Order within thirty (30) Days after receipt and will respond in writing approving or denying the Request.

Step 3: If the Request for Change Order is denied, the Contractor within no more than thirty (30) Days of the denial shall file a written Claim. At a minimum, a fully documented Claim must contain the following information:

- A detailed statement of the Claim providing all necessary details, locations, and items of Work affected;
- The date on which the incident arose that gave rise to the Claim;



- The name of each person employed or associated with the Contractor, Subcontractors, suppliers, and/or the District with knowledge about the event or condition which gave rise to the Claim;
- Copies of documents and a written description of the substance of any oral communications that concern or relate to the Claim;
- The specific provisions of the Contract Documents on which the Claim is based;
- If an adjustment in the Contract Price is sought, the exact amount sought, calculated in accordance with the Contract and accompanied by all records supporting the Claim;
- If an adjustment in the Contract Time is sought, the specific days and dates for which it is sought; the specific reason the Contractor believes an adjustment in the Contract Time should be granted; and the Contractor's analyses of its Schedule, any specific Schedule analysis as required by the Contract Documents, and all updates to demonstrate the reason for the adjustment in Contract Time; and,
- A statement certifying, under penalty of perjury, that after the exercise of reasonable diligence and investigation the Claim is made in good faith, that the supporting cost and pricing data are true and accurate to the best of the Contractor's knowledge and belief, that the Claim is fully supported by the accompanying data, and that the amount requested accurately reflects the adjustment in the Contract Price or Contract Time for which the Contractor believes the District is liable.

Failure to comply with the time requirements set for filing a Claim shall constitute acceptance by the Contractor, on behalf of itself and its Subcontractors and suppliers, of the District's denial of a Request for Change Order. Such acceptance shall be considered complete, full, and final settlement of all costs, damages, and Claims related to or arising from the Request for Change Order.

Any modification to the Contract made on account of any Request for Change Order or Claim shall be determined, in order of precedence, in the following ways:

1. By unit or lump sum prices set by the Contract.
2. If method (1) does not apply, by prices mutually agreed upon.
3. If no agreement is reached under method (2), payment for the Request for Change Order or Claim will be made under Force Account rules established pursuant to Section 8.25 of these General Conditions. In such cases, the Contractor shall keep and present in such form as the Engineer may direct a correct account of such costs, together with supporting time cards and vouchers.

After the Contractor has submitted a fully documented Claim that complies with this provision, the District shall respond, in writing, to the Contractor within thirty



(30) Days from the date of receipt of the fully documented Claim. If the District denies the Claim, the Contractor's sole remedy is as set forth in Section 8.46 (Venue/Limitation).

8.24 DIFFERING SITE CONDITIONS

If the Notice of Intent, Request for Change Order or Claim arises from an alleged Differing Site Condition, the requirements of this Section will apply in addition to those set forth in Section 8.23. In the event this Section imposes requirements, deadlines or rules more stringent than those set forth in Section 8.23, the requirements, deadlines or rules of this Section will govern.

The Contractor shall within 24 hours of discovery notify the Engineer in writing of: (1) pre-existing subsurface or latent physical conditions differing materially from those indicated in the Contract, or (2) pre-existing unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work of the character provided for in the Contract. This 24-hour Notice of Intent is in place of the 5 Day Notice of Intent listed in Section 8.23. Provided Contractor complies with this 24 hour Notice of Intent requirement and wishes to pursue relief, it must then comply with Step 2 and Step 3 set forth in Section 8.23. Contractor shall at all times preserve (and not dispose) the physical conditions or materials constituting the alleged Differing Site Condition and upon request make them available to the District for review and/or inspection.

Any geotechnical reports provided to Contractor shall have the following order of precedence: (1) Geotechnical Baseline Report (GBR) and/or Geotechnical Baselines described in the Specifications; (2) Geotechnical Data Report (GDR); (3) Geotechnical Design Report; (4) other soils reports, borings, test pits or additional investigative data. Baseline statements in the GBR and/or Geotechnical Baselines described in the Specifications shall take absolute precedence over any data in the GDR or elsewhere (or any inference or interpolation from such data) even if the baseline statements exceed the physical conditions identified in the data.

8.25 FORCE ACCOUNT

Except as provided herein, Force Account will be paid under the terms and conditions of Section 1-09.6 of the latest published Standard Specifications for Road, Bridge and Municipal Construction of the Washington State Department of Transportation. Notwithstanding the foregoing, the following provisions for Contractor Owned Equipment and Standby shall apply to all Force Account work performed under this contract:

Contractor Owned Equipment: For equipment owned by the Contractor, payment shall be made on the basis of Actual Cost. The term Actual Cost means the ownership and operating cost of the equipment as determined



by the District based on records made available by the Contractor. The District in determining Actual Cost may consider the equipment's acquisition cost, the equipment's useful life, any indirect costs associated with ownership of the equipment, depreciation and other commercially reasonable factors. It is the responsibility of the Contractor to provide cost records to the District upon request to assist with determining the Actual Cost for the equipment. If the Contractor did not keep and maintain such cost records or fails to comply with the document request made by the District, the District may at its option make a reasonable determination of the Actual Cost. If the Contractor disagrees with this determination, it must file a written Notice of Intent and pursue a Request for Change Order as set forth in Section 8.23.

Standby: Payment for equipment during any standby time or shutdown caused by the District shall be paid at: (i) 25% of Actual Cost (for owned equipment) or (ii) 100% of the applicable rental rate (for rental equipment) for a period not to exceed ten (10) Days.

8.26 DELAYS AND EXTENSION OF TIME

- (a) If the Contractor seeks an extension of the Contract Time or additional compensation due to an allegedly compensable impact to the Contract Time, its sole remedy is to comply with the Notice of Intent / Request for Change Order / Claim process identified in Section 8.23. The remainder of this Section 8.26 describes the general rules applicable to any timely-filed Notice of Intent / Request for Change Order / Claim related to Contract Time.
- (b) Non-Excusable and Non-Compensable Delays. Delays in the prosecution of the Work that could have been avoided by the exercise of due care, coordination and diligence on the part of the Contractor, its Subcontractors or its suppliers at any tier are neither excusable nor compensable under the Contract. No extension of Contract Time or increase in the Contract Price shall be allowed for any claimed delay that is caused by or results from the breach, fault, negligence, or collusion of the Contractor, or its Subcontractors, sub-Subcontractors, or suppliers.
- (c) Excusable and Non-compensable Delays. The Contract Time may be extended without compensation by the District for a period equivalent to the time that the Engineer determines that the Contractor was delayed in the Work by one or more of the following causes, beyond the control of the District and the Contractor, occurring during the performance of the Work:
 - 1. Fire or other casualty for which the Contractor is not at fault or otherwise responsible;
 - 2. Riot, war, or civil disorder;



3. Unusual and severe weather
4. General industry strikes or labor disputes beyond the reasonable control of Contractor,
5. Unreasonable delay in issuance of a permit by the agency having jurisdiction, and
6. Delay to the Work resulting from causes beyond the control of Contractor and District and that could not have been avoided by Contractor with the exercise of coordination, foresight and diligence.

Such non-compensable extensions of Contract Time will be allowed only to the extent that Substantial Completion of the Work is unreasonably delayed through no fault of the Contractor, which must in all cases be substantiated by impact to the Work on the Schedule. Any extension of the Contract Time by the District will be set forth in a Change Order, which shall specify the Days by which the Contract Time is to be increased.

(d) Excusable and Compensable Delays. The Contract Time may be extended and the Contract Price increased in the event that:

1. The Work was delayed by reason of changes made by the District or by any unreasonable act or omission of the District,
2. The Contractor was not concurrently responsible for the delay in the Work,
3. The Contractor has suffered actual losses as a result of the delay in the Work,
4. The delay in the Work could not have been mitigated despite the Contractor taking reasonable work-around actions, and
5. The delay in the Work was not within the contemplation of the Contract.

In that event, the Contract Time will be extended for a period equivalent to the time that the Engineer determines that the Contractor was delayed in the Work and the Contract Price will be increased to compensate the Contractor for its loss from such delay and associated disruption. Any extension of the Contract Time and increase in the Contract Price by the District will be set forth in a Change Order, which shall specify the Days by which the Contract Time is to be increased and the amount by which the Contract Price is to be increased.



8.27 COMPLETION AND/OR CORRECTION OF WORK

- (a) If the Contractor should neglect to prosecute the Work properly and/or fail to perform any provision of this Contract, the District, after five (5) Days' written notice to the Contractor, may, without prejudice to any other remedy it may have, make good such deficiencies and deduct the cost thereof from payments then or thereafter due the Contractor.
- (b) The Contractor shall promptly remove from the construction Site all Materials and/or Equipment rejected by the Engineer as failing to conform to the Contract, whether incorporated in the Work or not; and the Contractor shall promptly replace and re-execute its own Work in accordance with the intent of the Contract and without expense to the District and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement. If the Contractor does not remove such rejected Work and Materials and/or Equipment and commence re-execution of the Work within five (5) Days of notice from the Engineer, the District may correct the same as otherwise provided herein.
- (c) If the Contractor does not remove such rejected Work and Materials and/or Equipment within the period herein above described, the District may remove and store any such Materials and/or Equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal within ten (10) Days from the notice to Contractor of the fact of such removal, the District may, upon an additional ten (10) Days' written notice, sell such Materials and/or Equipment at public or private sale, and deduct all costs and expenses incurred, including costs of sale, accounting to the Contractor for the net proceeds remaining, and District may bid at any such sale. Contractor shall be liable to District for the amount of deficiency remaining between the costs incurred and the proceeds of sale. District may deduct the costs of such removal, storage and sale and/or remaining deficiency from any funds otherwise due the Contractor.

8.28 DEFECTS ARISING IN TWO YEARS AND REMEDIES

- (a) The Contractor shall be responsible for correcting all defects in workmanship and Materials and/or Equipment within two (2) years after Acceptance. When corrections of defects are made, Contractor shall be responsible for correcting all defects in workmanship and/or Materials and Equipment in the corrected Work for two years after proper completion of the correction. The Contractor shall start work to remedy such defects within seven (7) Days of mailing notice of discovery thereof by District and shall complete such work within a reasonable time. In emergencies, where damage may result from delay or where loss of service may result, such corrections may be made by the District, in which case the cost shall be borne by the Contractor. In the event the Contractor does not accomplish



corrections at the time specified, the Work will be otherwise accomplished and the cost of same shall be paid by the Contractor.

- (b) The Contractor shall be liable for any costs, losses, expenses, or damages, including consequential damages suffered by the District resulting from defects in the Work including, but not limited to, cost of Materials and labor extended by District in making emergency repairs and cost of engineering, inspection and supervision by District or Engineer. The Contractor shall hold the District harmless from any and all claims which may be made against the District as a result of any defective Work and the Contractor shall defend any such claims at its own expense.

8.29 SUSPENSION OF WORK

- (a) The District may order the Contractor, in writing, to suspend all or any part of the Work of this Contract for the period of time that the District determines appropriate for the convenience of the District. The Contractor shall not suspend the Work without written direction from the District specifically authorizing the suspension of Work.
- (b) Upon receipt of a written notice suspending the Work, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize costs attributable to such suspension. The District may require the Contractor to furnish temporary roads, patches, safety barricades, restorative work, or other measures to protect the Work, the Site, property adjacent to the Site, and public safety. Within a period up to 120 Days after the suspension notice is received by the Contractor, or within any extension of that period which the District requires, the District shall either:
 - 1. Cancel the written notice suspending the Work; or
 - 2. Terminate the Work for either Default or Convenience as provided in Sections 8.30 and 8.31.
- (c) If a written notice suspending the Work is canceled or the period of the Suspension or any extension thereof expires, the Contractor shall resume Work as required by the District.
- (d) If the performance of all or any part of the Work is, for an unreasonable period of time, suspended by the written direction of the District, and if the cause of the suspension is not the fault, breach or negligence of the Contractor or those for whom Contractor is responsible, the Contractor may be entitled to an adjustment in the Contract Price and/or Contract Time for increases in the time or cost of performance directly attributable to such unreasonably long suspension and provided that the Contractor sufficiently documents all costs and time impacts attributable to the suspension. No adjustments to Contract Price and/or Contract Time shall be allowed unless



the Contractor can demonstrate that the unreasonable period of suspension caused by the District impacted the Work and delayed the Contractor from completing the Work within the Contract Time. The Contractor shall comply with the requirements of Sections 8.23 and 8.26 in seeking an adjustment. Any sums paid to Contractor on account of suspension shall be determined in accordance with the order of precedence described in Section 8.23. Failure to comply with these requirements shall constitute a waiver of Contractor's rights to any adjustment in Contract Time and/or Contract Price.

- (e) No adjustment shall be made under this provision for any suspension to the extent that (1) Contractor's performance would have been suspended, delayed, or interrupted as a result of actions, omissions, fault or negligence caused, in whole or in part, by the Contractor or any of its Subcontractors and suppliers, (2) Contractor failed to diligently pursue the Work before the suspension, (3) the District suspended the Work due to Contractor's failure to comply with the Contract or the Engineer's orders, or (4) an equitable adjustment is provided for or excluded under any other provision of the Contract.
- (f) When ordered by the Engineer to suspend or resume Work, the Contractor shall do so immediately.
- (g) Before and during any suspension the Contractor shall protect the Work from damage or deterioration. Suspension shall not relieve the Contractor from anything the Contract requires unless this section states otherwise.

8.30 DISTRICT'S RIGHT TO TERMINATE CONTRACT FOR DEFAULT

- (a) The District may terminate the Contract and take possession of the premises and of all Materials and Equipment thereon and finish the Work by whatever methods it may deem expedient, upon the occurrence of any one or more of the events hereafter specified, and receipt of the certificate by the Engineer that sufficient cause exists to justify such action:
 - If the Contractor is insolvent, files a petition for bankruptcy protections, is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency.
 - If the Contractor fails to supply a sufficient number of properly skilled workmen or proper Materials or Equipment for completion of the Work.
 - If the Contractor fails to prosecute the Work or any portion thereof with such diligence as will ensure Substantial Completion within the original Contract Time and any extensions of time which may have been granted to the Contractor by Change Order or otherwise.



- If the Contractor fails to prosecute the Work or any portion thereof with such diligence as will ensure Physical Completion of the Work in a timely manner.
- If the Contractor fails in a material way to repair, replace, or correct Work not in conformance with the Contract.
- If the Contractor fails to make prompt payment to its employees or Subcontractors and suppliers.
- If the Contractor disregards laws, ordinances, rules, codes, regulations, orders or similar requirements of any public entity having jurisdiction over the Contractor, the Work, or the Site.
- If Contractor fails to comply with any Contract safety requirement.
- If the Contractor otherwise materially breaches any provisions or requirements of the Contract or persistently disregards instructions of Engineer.

District shall give Contractor five (5) Days' written notice to cure the default and, if not cured to the satisfaction of District as certified by Engineer, the District may, upon three (3) Days' written notice, elect to so terminate. Any such termination shall be without prejudice to any other right or remedy which District may have against Contractor.

- (b) If Contractor fails to cure the default to the District's satisfaction within the five (5) Day cure period, or if the Contractor abandons the Work undertaken under the Contract, District may, at its option, upon ten (10) Days' written notice to the Surety and without any written notice to Contractor, transfer the employment of said Work from Contractor to Surety. Upon receipt of such notice, the Surety shall enter upon the premises and take possession of all Materials, Equipment, tools and appliances thereon for the purpose of completing the Work included under this Contract and employ, by contract or otherwise, any person or persons to finish the Work and provide the Materials and Equipment therefore, without termination of the continuing full force and effect of the Contract. In case of transfer of such employment to the Surety, the Surety shall be paid in its own name on estimates covering the Work subsequently performed under the terms of the Contract and according to the terms hereof, without any right of Contractor to make any claim for the same or any part thereof.
- (c) In the event that the Contract is terminated for default by the District, Contractor shall not be entitled to receive any further balance of the amount to be paid under this Contract until the Work shall have been fully finished. At such time, if the unpaid balance of the amount to be paid under this Contract exceeds the expense incurred by District in finishing the Work, and all damages sustained or which may be sustained by District by reason of such refusal, neglect, failure of discontinuance of employment, such excess



shall be paid by District to Contractor. If such expense and damages shall exceed the unpaid balance, Contractor and its Surety and each thereof shall be jointly and severally liable therefore to District and shall pay the difference to District. Such expense and damage shall include all reasonable legal costs incurred by District in the employment of attorneys to protect the rights and interests of District under the Contract.

8.31 DISTRICT'S RIGHT TO TERMINATE CONTRACT FOR CONVENIENCE

- (a) Upon written notice to the Contractor, the District may terminate the Work, or any part of it, without prejudice to any right or remedy of the District inclusive of all audit rights in the Contract, for the convenience of the District.
- (b) If the District terminates the Work or any portion thereof for convenience, Contractor shall be entitled to be paid, at applicable Contract rates and prices, for Adjusted Contract Work executed in conformance with the Contract and completed prior to the effective date of the termination.
- (c) Termination for Convenience shall not enlarge, expand, modify, alter or in any way subsume or convert the rights or remedies (if any) of Contractor with respect to any Claim, Request for Change Order, Notice of Intent or other request for any revision to the Contract Price or Contract Time asserted or accrued at the time of the termination (collectively, "Pending Requests"). Without limiting the foregoing, the termination for convenience shall not have the effect of converting the Pending Requests into no-fault or assumed liabilities of the District. Following any Termination for Convenience, Contractor's rights or remedies (if any) to any extra compensation, change in the Contract Price or additional Contract Time for any Pending Requests shall continue to be subject to and governed by the same Contract provisions, legal rules and processes, defenses and burdens of proof that would apply but for the termination.
- (d) Except as provided for above in Section 8.31(b) or (c), the Contractor shall not be entitled to any other costs or damages whatsoever (including without limitation profit or overhead on the terminated Work). The total sum payable upon termination shall also not exceed the Contract Price reduced by prior payments.
- (e) If it appears that due to any cause or reason the Contractor would have incurred a loss on the entire Contract had it been completed, the District shall not reimburse Contractor for any indirect costs for the Adjusted Contract Work completed and shall reduce the settlement to reflect the indicated rate of loss.
- (f) If the payments made by the District prior to the effective date of the termination exceed the reasonable direct cost of the Adjusted Contract



Work completed as of the effective date of the termination (as in, for example, a mobilization payment that exceeds direct mobilization costs or other similar front-loaded payments), the District shall at its option be entitled to a credit for the overpayment. The Contractor shall cooperate with any audit the District elects to conduct pursuant to the terms of the Contract.

- (g) The rights and remedies of the District in this provision are in addition to any other rights and remedies provided by law or under this Contract, inclusive specifically of all audit rights.

8.32 CONTRACTOR'S OBLIGATIONS DURING TERMINATION

Unless the District directs otherwise, after receipt of a written notice of Termination for Default or Termination for Convenience, Contractor shall promptly:

- (a) Stop performing Work on the date and as specified in the notice of termination;
- (b) Place no further orders or subcontracts for Materials, Equipment, services or facilities, except as may be necessary for completion of such portion of the Work not terminated;
- (c) Cancel all orders and subcontracts, upon terms acceptable to the District, to the extent that they relate to the performance of Work terminated;
- (d) Assign as specifically requested by the District all of the rights, title, and interest of Contractor in all orders and subcontracts;
- (e) Take such action as may be necessary or as directed by the District to preserve and protect the Site and any other property related to this Project in the possession of Contractor in which the District has an interest;
- (f) Continue performance of the Work only to the extent not terminated;
- (g) If notified to do so by the District, promptly remove any part or all of its Equipment, Materials, and supplies from the Site; and,
- (h) Take any other steps required by the District with respect to the Project.

If Contractor fails to remove its Equipment, Materials, or supplies within three (3) Days of District's notice to do so, District shall have the right to remove such Equipment, Materials, and supplies at the expense of Contractor, deducting the cost thereof from any funds otherwise due Contractor.



8.33 USE OF COMPLETED PORTION OF WORK

District shall have the right to take possession of and use any completed or partially completed portions of the Work, notwithstanding that the time may not have expired for completing the entire Work. Such taking possession and use shall not be deemed to be completion of the Contract in respect to such Work nor shall the same be deemed to be Acceptance of the Work.

8.34 APPLICATION FOR PAYMENT

On or about the first business day of each month, the Contractor shall submit to the District an Application for Payment. Each application shall be on a form acceptable to the District and designated as an "Application for Payment." The Contractor shall include with each Application for Payment:

1. Current schedule of values reflecting the Work done since the last Application for Payment and the cumulative Work completed to date;
2. Project Schedule and the most current updates; and,
3. Affidavits signed by all Subcontractors performing Work as of the last Application for Payment, stating that each of them has been paid, less earned retainage, as their interests appeared in the last Application For Payment.

The Contractor is not entitled to payment for any Work unless the Application for Payment includes all required documentation. The District reserves the right to withhold payment pursuant to Section 8.38 if it is subsequently determined that all required documentation was not provided by the Contractor or any of the documentation provided by the Contractor was inaccurate or otherwise objectionable. At the District's option, no payments will be made after the date of expiration of the Contract Time, as established in the Contract, until final payment.

The Application for Payment shall correlate the amount requested with the schedule of values and with the state of completion of the Work, as measured by the current Project Schedule. In addition to Work performed by the Contractor, Applications for Payment may include the cost of Materials suitably stored on the Site in accordance with Section 8.35.

The District shall comply with RCW 39.76, as amended, and promptly review each Application for Payment and identify in writing any cause for disapproval within eight (8) working days. In addition to withholding payment for unsatisfactory performance or failure to comply with Contract requirements, if the Contractor's Application for Payment fails to recognize any back-charges, off-sets, credits, change orders, or deductions in payment made in accordance with Section 8.35, the District shall have the right to revise or disapprove Contractor's Application For



Payment because the Application For Payment is not considered a properly completed invoice.

8.35 PROGRESS PAYMENTS

Progress payments will be made no more often than monthly following Contractor's Application for Payment. Payment shall be based upon the actual quantities of Work performed as verified and agreed by the Engineer according to the Contract Documents. Payment shall be based upon invoices approved by the Engineer. Progress payments will be made within forty-five (45) Days of the District's receipt of the properly prepared invoice (Application for Payment). Monthly progress payments will be made to the Contractor during the working period but not after the Substantial Completion date. Five per cent (5%) of the amount of the estimated progress payment will be retained by the District as provided in Chapter 60.28 RCW. The statutory retained percentage shall be managed by the District as specified by the Contractor in the Proposal form of the Bid Documents.

The Contractor is required to make payment to all Subcontractors and suppliers for all Work included within the progress payment within ten (10) Days from the receipt of the progress payment. Furthermore, the Contractor shall require all subcontracts issued under this contract to all Subcontractors and suppliers at all tiers to also make all due payments within ten (10) Days of their receipt of payment. The Contractor must justify to the District in writing any intent to withhold payment of monies due to any Subcontractor or supplier.

The cost of Materials, properly stored, protected and insured at the Site of the Work, will be paid on monthly estimates only when provided for in the Special Provisions, and then only for the specific Materials listed therein for partial payment. In preparing the monthly estimates, advancement will be made therein for ninety per cent (90%) of the cost of such Materials, as evidenced by invoices to Contractor. Advances will not be made for any item of Material amounting to less than five hundred dollars (\$500.00). All Materials must conform to the requirements of the Specifications. However, advancement for Materials will not constitute acceptance of same, and any faulty Materials will be condemned although advancement may have been made for same in the estimates. Deductions at the same rates and equal in amount to the advancements, will be made on the estimates as the Materials are used. All Materials for which costs are allowed under this subparagraph must be substantiated by written documentation from the Material supplier that the Material has been paid for.

8.36 FINAL PAYMENT

The District will make final payment, excluding held retention, to the Contractor following (1) Physical Completion and (2) final resolution by settlement, mediation or litigation of all Requests for Change Orders or Claims. Final payment shall include the entire sum found to be due hereunder after deducting therefrom such



amounts as the terms of the Contract permit. Prior estimates and payments, including those relating to unit price Work, extra Work or Work omitted, shall be subject to review and correction by the final payment. Final payment will be made only for Materials actually incorporated in the Work; and, all Materials remaining for which progress payments have been made shall revert to the Contractor, unless otherwise agreed, and progress payments made for these items shall be deducted from the final payment for the Work.

By accepting final payment, the Contractor shall be deemed thereby to have released the District from all claims of Contractor and all liability to the Contractor for things done or furnished in connection with the Work and for every act and neglect of the District and others relating to or arising out of the Work, other than release and held retention. Final payment by the District shall not release the Contractor or its Surety from any obligation under the Contract or under the performance and payment bonds or under any warranty obligations.

Neither the final payment nor any part of the retained percentage shall become due until Contractor, if requested, shall deliver to District a complete release of all liens arising out of this Contract, or receipts in full in lieu thereof, and, if required in either case, an affidavit that so far as it has knowledge or information, the release and receipts include all labor and Material for which a lien could be filed; but Contractor may, if any Subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to Engineer to indemnify District against any lien. If any lien remains unsatisfied after all payments are made, Contractor shall reimburse to District all moneys that the latter may be compelled to pay in discharging such lien, including all costs and reasonable engineer's and attorney's fees.

8.37 ACCEPTANCE AND RELEASE OF RETAINAGE

Following issuance of the Notice of Physical Completion and the completion of all closeout administrative requirements, the District will formally accept the Project. Once the District determines that the Contractor has fulfilled these requirements, the Engineer will issue a formal Notice of Acceptance.

Promptly following Acceptance, the District will prepare the Notice of Completion of Public Works Contract and submit it to the relevant Washington State agencies.

Release of the retainage will be made no sooner than sixty (60) Days after issuing the Notice of Completion of a Public Works Contract provided the following conditions are met:

1. On Contracts totaling more than \$35,000, a release has been obtained from the Washington State Department of Revenue (RCW 60.28.051);
2. Receipt of a certificate of Payment of Contributions Penalties and Interest on Public Works Contract from the Washington State Employment Security Department;



3. Receipt of a certificate from Washington State Department of Labor and Industries showing the Contractor is current with payments of industrial insurance and medical aid premiums;
4. All claims, as provided by law, filed against the retainage have been resolved. In the event claims are filed and provided the conditions of 1 through 3 above are met, the Contractor will be paid such retained percentage less an amount sufficient to pay any such claims together with a sum determined by the District sufficient to pay the cost of foreclosing on claims and to cover attorney's fees.

It is the responsibility and a condition of this Contract that Contractor promptly notifies all Subcontractors and suppliers of the commencement of the period and of the final day for submitting any liens. As a further condition of this Contract the Contractor is required to place within all subcontracts a clause that states that this shall be done. The Contractor shall by letter inform the District of the compliance with this provision. Failure of the Contractor to comply with this provision may be used by the District as a basis to withhold retainage to ensure payment to uninformed Subcontractors. Failure to comply will also be made a matter of record for future determinations of Bidder responsibility.

8.38 DISTRICT'S RIGHT TO WITHHOLD PAYMENTS

In addition to moneys retained pursuant to RCW 60.28 and without waiver of any other available remedies, the District at its sole option has the right to recapture, withhold, nullify, or back-charge, in whole or in part, any payments due to Contractor or payments made to the Contractor on the following grounds:

1. The Work for which the Contractor is claiming payment was not performed in accordance with the Contract;
2. The Contractor's pay request does not contain the required documentation or is otherwise not in conformance with the requirements of the Contract;
3. There is a good faith dispute over all or a portion of the amount due, in accordance with 39.04.250 RCW;
4. Failure of the Contractor to make payments owed to Subcontractors, or for labor, Materials, or Equipment;
5. Failure of the Contractor to submit Schedule(s), schedule(s) of value or update any schedules as required by the Contract;
6. Failure to prosecute progress of the Work in a timely manner or failure to take necessary steps to regain time or deliver the Work in the prescribed Contract Time;
7. A reasonable doubt that the Contract can be completed for the balance then unpaid;



8. Cost or liability that may occur to the District as the result of the Contractor's or Subcontractor's acts, omissions, fault, or negligence;
9. Failure of the Contractor to repair damaged materials, equipment, property, or Work;
10. Imposition of any liquidated or other delay damages under the Contract;
11. Payments made by mistake; or
12. Payments made erroneously and/or in excess of the sum actually due under the Contract.

The withholding, nullification, or back-charge of any payment(s) by the District shall in no way relieve the Contractor of any of its obligations under this Contract. In the event the District withholds all or a part of a payment for deficiencies in either performance, or in a payment request, the District will notify the Contractor in accordance with RCW 39.76. The Contractor shall have the right to correct all deficiencies that are the basis for the withholding and resubmit the pay request at any time for reconsideration.

8.39 HOLD HARMLESS AGREEMENT

The Contractor shall protect, defend, indemnify and hold harmless the District, its officers, officials, separate contractors, employees, agents, and successors and assigns, (collectively "the Indemnified Parties") from any and all liability, claims, demands, suits, penalties, losses, damages, judgments, or costs of any kind whatsoever (hereinafter "claims"), arising out of or in any way, whether direct, indirect or consequential (including, but not limited to, attorneys' and consultants' fees and other expenses of litigation or arbitration) resulting from the Contractor's and/or Subcontractor's and supplier's of all tiers acts or omissions, performance or failure to perform this Contract, to the maximum extent permitted by law or as defined by RCW 4.24.115, now enacted or as hereinafter amended; provided, however, that if the provisions of RCW 4.24.115 apply to the Work and any injuries to persons or property arising out of performance of this Contract are caused by or result from the concurrent negligence of the Contractor or its Subcontractors, agents or employees, and an Indemnified Party, the indemnification applies only to the extent of the negligence of the Contractor and its Subcontractors, agents or employees. This Paragraph shall not be construed so as to require the Contractor to defend, indemnify, or hold harmless the District from such claims, damages, losses or expenses caused by or resulting from the sole negligence of the District or its agents.

The Contractor specifically assumes potential liability for actions brought by the Contractor's own employees or former employees against any Indemnified Party, and for that purpose the Contractor specifically waives all immunity and limitations on liability under the workers compensation act, RCW Title 51, or any industrial insurance act, disability benefit act or other employee benefit act of any jurisdiction



that would otherwise be applicable in the case of such claim. The Contractor recognizes that this waiver was specifically entered into and was the subject of mutual negotiation. Provided, however, the Contractor's waiver of immunity by the provisions of this paragraph extends only to claims against the Contractor by District, and does not include, or extend to, any claims by the Contractor's employee directly against the Contractor.

The District may, in its sole discretion, (1) withhold amounts sufficient to pay the amount of any claim for injury, and/or (2) pay any claim for injury of which the District may have knowledge, regardless of the formalities of notice of such claim, arising out of the performance of this Contract. Any amount withheld will be held until the Contractor secures a written release from the claimant, obtains a court decision that such claim is without merit, or satisfies any judgment on such claim. In addition, the Contractor shall reimburse and otherwise be liable for claims costs incurred by the District, including, without limitation, attorneys' fees and costs and costs for claims adjusting services, engineering, and administration.

In the event the District incurs any judgment, award, and/or costs arising therefrom, including attorneys' fees, to enforce the provisions of this article, all such fees, expenses, and costs shall be recoverable from the Contractor.

The foregoing indemnities and duties to defend shall survive the termination of this Contract and final payment hereunder, and are in addition to any other rights or remedies which District and/or any of the Indemnified Parties may have by law or under this Contract.

8.40 PERFORMANCE AND PAYMENT BOND

The Contractor shall furnish a surety bond in compliance with RCW 39.08 in the full amount of the Contract Price which shall guarantee the faithful performance of the Contract and the payment of all labor, mechanics, Subcontractors and Material suppliers. This bond shall remain in force until all obligations of the Contract are extinguished or until the expiration of all applicable statutes of repose or limitation, whichever is later. Without limiting the foregoing, this bond shall cover, for a period of two (2) years after Physical Completion, all faulty workmanship and Materials or items of Work warranted by Contractor. This bond shall be furnished by a corporate surety company rated A-VII or higher by A. M. Best, authorized to do business in the State of Washington, acceptable to the District, and subject to the approval of the District's attorney as to form.

8.41 ASSIGNMENT AND SUBCONTRACTING

- (a) Contractor shall not assign the Contract in whole or in part without the written consent of District, nor shall Contractor assign any moneys due or to become due to him hereunder without the prior written consent of District.



- (b) Contractor agrees that it is fully responsible to District for the acts or omissions of Subcontractors and persons either directly or indirectly employed by Subcontractors, as well as for the acts and omissions of persons directly employed by Contractor. District's consent to subcontracting parts of the Work shall in no way release Contractor from responsibility for performance of the Work. Contractor will be held, in all aspects, accountable for subcontracted Work as if no consent had been given. Contractor shall be required to give its personal attention to the Work that is subcontracted. Nothing contained in the Contract Documents shall create any contractual relation between any Subcontractor and District.

8.42 SEPARATE CONTRACT - INTERFERENCE WITH OTHER CONTRACTORS

- (a) District reserves the right to perform work with its own forces or to let other contracts for work under similar general conditions in connection with this Project, of which the work awarded to one or more contractors under separate contracts is a part. Contractor shall afford District and other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their respective work and shall properly connect and coordinate its Work with theirs.
- (b) If the performance of any contract for the Project is likely to be interfered with by the simultaneous execution of some other contract or contracts, Engineer shall decide which contractor shall cease work temporarily and which contractor shall continue or whether the work under the contractor can be coordinated so that the contractors may proceed simultaneously. District shall not be responsible for any damages suffered or extra costs incurred by Contractor resulting directly or indirectly from the award, performance, or attempted performance of any other contract or contracts on the Project or caused by any decision or omission of Engineer respecting the order of precedence in the performance of the contractors other than for an extension of Contract Time.

8.43 CLEANUP

- (a) During performance of the Work, Contractor shall frequently clean up all refuse, rubbish, scrap material and debris caused by its operations. The Site of the Work shall present a neat, orderly and workmanlike appearance at all times.
- (b) Upon completion of the Work, Contractor shall remove all rubbish, scrap material, tools, scaffolding and surplus Materials and Equipment used in and about the Work. Before the Contract shall be considered complete and prior to final payment, Contractor shall remove all surplus Materials and Equipment, falseworks, temporary structures, including foundations thereof, plants of any description, and debris of every nature, resulting from its



operations, shall clean out all ditches that may have been filled during the Work, replace damaged surfacing, and put the Site in a neat, orderly condition and, in respect to structures, shall clean all windows and leave buildings broom clean.

8.44 PROPERTY RESTORATION RELEASE

The Contractor shall obtain a written release from each property owner upon whose property Work has been performed or Materials stored. A sample form of such release is included in the Special Provisions section.

8.45 PREVENTION OF ENVIRONMENTAL POLLUTION

The Contractor shall comply with all Federal, State and local statutes, ordinances and regulations dealing with the prevention of environmental pollution and preservation of public human resources that affect or are affected by this Project including, but not limited to, the State Environmental Policy Act of 1971, the National Environmental Policy Act of 1969, King County Council Ordinance No. 1700, King County Council Motion 1335, and any current amendments thereto which are hereby incorporated into the Contract as if written herein in full. All costs for compliance shall be included in the unit or lump sum prices bid for the several items of Work as indicated in the Proposal.

8.46 VENUE/LIMITATION

The exclusive venue for any litigation arising from or relating to this Contract or the Project is King County Superior Court, Seattle, Washington. This Contract and all provisions hereof shall be interpreted in accordance with the laws of the State of Washington.

No legal action against the District may be filed on account of a Claim or other liability arising out of or related to this Contract unless:

1. The requirements of Sections 8.23, 8.24, and 8.26 have been strictly complied with;
2. The procedures of Sections 8.23 and 8.24 have been exhausted; and,
3. The lawsuit is filed in the exclusive venue specified above and served on the District within 180 Days of the date of Substantial Completion.

The Contractor's failure to strictly comply with all requirements of this Section shall be a complete bar to any lawsuit.

APPENDICES

APPENDIX A

PERMITS

Permits Are in Process

APPENDIX B

**SUPPLEMENTAL BIDDER
CRITERIA CHECKLIST**

APPENDIX B

SUPPLEMENTAL BIDDER RESPONSIBILITY CRITERIA FORMS BUILDING B BAY DOOR REPLACEMENT PROJECT

These forms shall be completed in their entirety and submitted by the apparent two lowest Bidders to the Northshore Utility District by 12:00 p.m. (noon) of the second business day following the bid submittal deadline.

Failure to submit and meet the requirements as stated in Section 1.12 of the Instructions to Bidders shall be grounds for rejection of the bid. The Northshore Utility District will be the sole judge in determining if the prospective contractor meets the minimum experience requirements.

Contractor:

Name: _____

Address: _____

Phone: _____

Contact Person: _____

2. Delinquent State Taxes

Instructions to Bidders: Check the appropriate box

- ☐ The Bidder does not owe delinquent taxes to the Washington State Department of Revenue.
- ☐ Alternatively, the Bidder does owe delinquent taxes to the Washington State Department of Revenue.

If the Bidder owes delinquent taxes, they must submit a written payment plan approved by the Department of Revenue, to the Contracting Agency.

(Date)

(Signature)

(Print Name)

(Title)

3. Subcontractor Responsibility:

Instructions to Bidders: Check all boxes that apply

- ☐ The Bidder's standard subcontract form includes the subcontractor responsibility language required by RCW 39.06.020.
- ☐ The Bidder has a procedure for validating the responsibility of subcontractors with which the Bidder contracts.
- ☐ The Bidder's subcontract form includes a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also "responsible" subcontractors as defined by RCW 39.06.020.

If the Bidder is unable to check all of the above boxes, provide an explanation as to how the bidder will comply with RCW 39.06.020.

(Date)

(Signature)

(Print Name)

(Title)

4. Claims Against Retainage and Bonds:

Instructions to Bidders: Check the appropriate box

- ☐ The Bidder has not had claims against retainage and bonds in the 3 years prior to the bid submittal date.
- ☐ Alternatively, the Bidder has had claims against retainage and bonds in the 3 years prior to the bid submittal date.

If the Bidder has had claims against retainage and bonds in the 3 years prior to the bid submittal date, submit a list of public works projects completed during this period that have had claims against retainage and bonds and include name of Project, contact information for the Owner, a list of claims filed against retainage and/or payment bond for any of the projects listed; and a written explanation of circumstances surrounding each claim and the ultimate resolution of the claim.

(Date)

(Signature)

(Print Name)

(Title)

5. Public Bidding Crime:

Instructions to Bidders: Check the appropriate box

- ☐ The undersigned certifies that the Bidder and/or its Owners have not been convicted of a crime involving bidding on a public works contract in the 5 years prior to the bid submittal date.
- ☐ Alternatively, the undersigned confirms that the Bidder and/or its Owners have been convicted of a crime involving bidding on a public works contract in the 5 years prior to the bid submittal date.

If the Bidder and/or its Owners have been convicted of a crime involving bidding on a public works contract, provide a written explanation identifying the date of the conviction and a description of the circumstances surrounding the conviction.

(Date)

(Signature)

(Print Name)

(Title)

6. Termination for Cause/Termination for Default

Instructions to Bidders: Check the appropriate box

- ☐ The undersigned certifies that the Bidder has not had any public works contracts terminated for cause or terminated for default by a government agency in the 5 years prior to the bid submittal date.
- ☐ Alternatively, the undersigned confirms that the Bidder has had public works contracts terminated for cause or terminated for default by a government agency in the 5 years prior to the bid submittal date.

If the Bidder has had any public works contracts terminated for cause or terminated for default in the 5 years prior to the bid submittal date, provide a written explanation for all contracts terminated for cause or terminated for default by identifying the project contract that was terminated, the government agency which terminated the Contract, the date of the termination, and a description of the circumstances surrounding the termination.

(Date)

(Signature)

(Print Name)

(Title)

7. Lawsuits

Instructions to Bidders: Check the appropriate box

- ☐ The undersigned certifies that the Bidder has not had any lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts.
- ☐ Alternatively, the undersigned confirms that the Bidder has had any lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts.

If the Bidder has had any lawsuits with judgments entered against the Bidder in the 5 years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, submit a list of lawsuits along with a written explanation of the circumstances surrounding each lawsuit. The Contracting Agency shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet the terms of contracts.

(Date)

(Signature)

(Print Name)

(Title)

8. Contract Time (Liquidated Damages)

Instructions to Bidders: Check the appropriate box

- ☐ The undersigned certifies that the Bidder has not had liquidated damages assessed on any project it has completed in the 5 years prior to the bid submittal date.
- ☐ Alternatively, the undersigned confirms that the Bidder has had liquidated damages assessed on projects in the 5 years prior to the bid submittal date.

If the Bidder has had liquidated damages assessed against projects in the 5 years prior to the bid submittal dated, submit a list of projects along with Owner contact information, and number of days assessed liquidated damages. The Contracting Agency shall determine whether the Contractor has a pattern of failing to complete projects within Contract Time.

(Date)

(Signature)

(Print Name)

(Title)

9. Capacity and Experience

The Bidder shall have sufficient current capacity and the project superintendent assigned to the project shall have experience to meet the requirements of this project. The Bidder and the project superintendent shall have successfully completed at least two projects as the prime contractor, of a similar size, scope, and complexity during the 5-year period immediately preceding the bid submittal deadline for this project. Similar size is defined as a minimum of 70 percent of the bid amount submitted by the Bidder, as well as having elements of commercial/architectural construction, electrical, paving, and concrete restoration.

A. Capacity

- i. Gross dollar amount of work currently under contract:

- ii. Gross dollar amount of contracts currently not completed:

- iii. List five major pieces of equipment which are anticipated to be used on this project by the Contractor and note which items are owned by the Contractor and which are to be leased or rented from others:

- iv. Number of superintendents on Bidder's staff:

B. Experience

i. General character of work performed by firm:

ii. Identify who will be the superintendent on this project and years of experience. Also, list the number of years this person has been with your firm.

iii. Similar Size and Scope Projects Completed in the Past 5 Years

#1 Owner's Name and Contact Information: _____

Owner is a Government Agency? ____ Yes ____ No

Superintendent's Name: _____

Project Name: _____

Awarded Contract Amount: _____

Final Contract Amount: _____

Completion Date: _____

Project Description: _____

#2 Owner's Name and Contact Information: _____

Owner is a Government Agency? ____ Yes ____ No

Superintendent's Name: _____

Project Name: _____

Awarded Contract Amount: _____

Final Contract Amount: _____

Completion Date: _____

Project Description: _____

#3 Owner's Name and Contact Information: _____

Owner is a Government Agency? ____ Yes ____ No

Superintendent's Name: _____

Project Name: _____

Awarded Contract Amount: _____

Final Contract Amount: _____

Completion Date: _____

Project Description: _____